



# ANALYTICAL REPORT

## PREPARED FOR

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North Water District Laboratory Services  
8725 Fawn Trail  
Conroe, Texas 77385

Generated 6/8/2023 10:59:10 PM

## JOB DESCRIPTION

General Project

## JOB NUMBER

860-49141-1

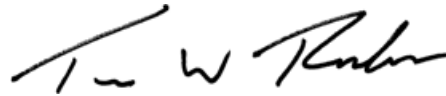
# Eurofins Houston

## Job Notes

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

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



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# Definitions/Glossary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

### GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
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, high biased.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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# Case Narrative

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Job ID: 860-49141-1**

**Laboratory: Eurofins Houston**

## Narrative

### Job Narrative 860-49141-1

#### Receipt

The samples were received on 5/16/2023 2:39 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 6.6°C

#### GC/MS Semi VOA

Method Organotins\_SIM: Elevated reporting limits are provided for the following samples due to insufficient sample provided for Organotins preparation/analysis: 23E2845-41 (860-49141-41), 23E2845-42 (860-49141-42), 23E2845-43 (860-49141-43), 23E2845-44 (860-49141-44), 23E2845-45 (860-49141-45), (860-49141-B-42 MS) and (860-49141-B-42 MSD).

Method Organotins\_SIM: The following samples were prepared outside of preparation holding time: 23E2845-1 (860-49141-1), 23E2845-2 (860-49141-2), 23E2845-3 (860-49141-3), 23E2845-4 (860-49141-4) and 23E2845-5 (860-49141-5).

Method Organotins\_SIM: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 570-330477 and analytical batch 570-333269 recovered outside control limits for the following analyte(s): Monobutyltin. Monobutyltin has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method Organotins\_SIM: Surrogate recovery for the following samples were outside control limits: 23E2845-1 (860-49141-1), 23E2845-2 (860-49141-2), 23E2845-3 (860-49141-3), 23E2845-4 (860-49141-4) and 23E2845-5 (860-49141-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method Organotins\_SIM: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 570-330818 and analytical batch 570-335191 recovered outside control limits for the following analyte(s): Monobutyltin. Monobutyltin has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method Organotins\_SIM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 570-333420 and analytical batch 570-335580 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method Organotins\_SIM: The following samples were prepared outside of preparation holding time : 23E2845-41 (860-49141-41), 23E2845-42 (860-49141-42), 23E2845-43 (860-49141-43), 23E2845-44 (860-49141-44), 23E2845-45 (860-49141-45) and (MB 570-333420/1-A).

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

#### GC Semi VOA

Method TX\_1005: Sample <8g23E2845-1 (860-49141-1), 23E2845-1 (860-49141-1[MS]), 23E2845-1 (860-49141-1[MSD]), 23E2845-2 (860-49141-2), 23E2845-3 (860-49141-3), 23E2845-4 (860-49141-4), 23E2845-5 (860-49141-5), 23E2845-6 (860-49141-6), 23E2845-8 (860-49141-8), 23E2845-9 (860-49141-9), 23E2845-10 (860-49141-10), 23E2845-11 (860-49141-11), 23E2845-13 (860-49141-13), 23E2845-14 (860-49141-14), 23E2845-15 (860-49141-15), 23E2845-16 (860-49141-16), 23E2845-17 (860-49141-17), 23E2845-18 (860-49141-18), 23E2845-19 (860-49141-19), 23E2845-20 (860-49141-20) and 23E2845-21 (860-49141-21)

Method TX\_1005: The following samples were received outside of holding time: 23E2845-1 (860-49141-1), 23E2845-1 (860-49141-1[MS]), 23E2845-1 (860-49141-1[MSD]), 23E2845-2 (860-49141-2), 23E2845-3 (860-49141-3), 23E2845-4 (860-49141-4), 23E2845-5 (860-49141-5), 23E2845-6 (860-49141-6), 23E2845-8 (860-49141-8), 23E2845-9 (860-49141-9), 23E2845-10 (860-49141-10), 23E2845-11 (860-49141-11), 23E2845-13 (860-49141-13), 23E2845-14 (860-49141-14), 23E2845-15 (860-49141-15), 23E2845-16 (860-49141-16), 23E2845-17 (860-49141-17), 23E2845-18 (860-49141-18), 23E2845-19 (860-49141-19), 23E2845-20 (860-49141-20) and 23E2845-21 (860-49141-21).

Method TX\_1005: Sample <8g23E2845-7 (860-49141-7), 23E2845-7 (860-49141-7[MS]), 23E2845-7 (860-49141-7[MSD]), 23E2845-22 (860-49141-22), 23E2845-23 (860-49141-23), 23E2845-24 (860-49141-24), 23E2845-25 (860-49141-25), 23E2845-26 (860-49141-26),

## Case Narrative

Client: North Water District Laboratory Services  
Project/Site: General Project

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#### Laboratory: Eurofins Houston (Continued)

23E2845-27 (860-49141-27), 23E2845-28 (860-49141-28), 23E2845-29 (860-49141-29), 23E2845-30 (860-49141-30), 23E2845-31 (860-49141-31), 23E2845-32 (860-49141-32), 23E2845-33 (860-49141-33), 23E2845-34 (860-49141-34), 23E2845-35 (860-49141-35), 23E2845-36 (860-49141-36), 23E2845-38 (860-49141-38), 23E2845-39 (860-49141-39), 23E2845-40 (860-49141-40) and 23E2845-46 (860-49141-46)

Method TX\_1005: The following samples were received outside of holding time: 23E2845-7 (860-49141-7), 23E2845-7 (860-49141-7[MS]), 23E2845-7 (860-49141-7[MSD]), 23E2845-22 (860-49141-22), 23E2845-23 (860-49141-23), 23E2845-24 (860-49141-24), 23E2845-25 (860-49141-25), 23E2845-26 (860-49141-26), 23E2845-27 (860-49141-27), 23E2845-28 (860-49141-28), 23E2845-29 (860-49141-29), 23E2845-30 (860-49141-30), 23E2845-31 (860-49141-31), 23E2845-32 (860-49141-32), 23E2845-33 (860-49141-33), 23E2845-34 (860-49141-34), 23E2845-35 (860-49141-35), 23E2845-36 (860-49141-36), 23E2845-38 (860-49141-38), 23E2845-39 (860-49141-39), 23E2845-40 (860-49141-40) and 23E2845-46 (860-49141-46).

Method TX\_1005: Surrogate 1-Chlorooctane (Surr) recovery for the following samples were outside the upper control limit: 23E2845-29 (860-49141-29), 23E2845-35 (860-49141-35) and 23E2845-46 (860-49141-46). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method TX\_1005: The following sample was received outside of holding time: 23E2845-34 (860-49141-34).

Method TX\_1005: Sample <8g 23E2845-12 (860-49141-12), 23E2845-12 (860-49141-12[MS]), 23E2845-12 (860-49141-12[MSD]), 23E2845-47 (860-49141-47), 23E2845-48 (860-49141-48), 23E2845-49 (860-49141-49), 23E2845-50 (860-49141-50), 23E2845-51 (860-49141-51), 23E2845-52 (860-49141-52), 23E2845-53 (860-49141-53), 23E2845-54 (860-49141-54), 23E2845-55 (860-49141-55), 23E2845-56 (860-49141-56), 23E2845-57 (860-49141-57), 23E2845-58 (860-49141-58), 23E2845-59 (860-49141-59), 23E2845-60 (860-49141-60) and 23E2845-61 (860-49141-61)

Method TX\_1005: Sample >10g 23E2845-41 (860-49141-41), 23E2845-43 (860-49141-43), 23E2845-44 (860-49141-44) and 23E2845-45 (860-49141-45)

Method TX\_1005: The following samples were received outside of holding time: 23E2845-12 (860-49141-12), 23E2845-12 (860-49141-12[MS]), 23E2845-12 (860-49141-12[MSD]), 23E2845-41 (860-49141-41), 23E2845-43 (860-49141-43), 23E2845-44 (860-49141-44), 23E2845-45 (860-49141-45), 23E2845-47 (860-49141-47), 23E2845-48 (860-49141-48), 23E2845-49 (860-49141-49), 23E2845-50 (860-49141-50), 23E2845-51 (860-49141-51), 23E2845-52 (860-49141-52), 23E2845-53 (860-49141-53), 23E2845-54 (860-49141-54), 23E2845-55 (860-49141-55), 23E2845-56 (860-49141-56), 23E2845-57 (860-49141-57), 23E2845-58 (860-49141-58), 23E2845-59 (860-49141-59), 23E2845-60 (860-49141-60) and 23E2845-61 (860-49141-61).

Method TX\_1005: Sample <8g 23E2845-37 (860-49141-37), 23E2845-37 (860-49141-37[MS]), 23E2845-37 (860-49141-37[MSD]), 23E2845-62 (860-49141-62), 23E2845-63 (860-49141-63), 23E2845-64 (860-49141-64), 23E2845-65 (860-49141-65), 23E2845-66 (860-49141-66), 23E2845-67 (860-49141-67), 23E2845-68 (860-49141-68), 23E2845-69 (860-49141-69), 23E2845-70 (860-49141-70), 23E2845-71 (860-49141-71), 23E2845-72 (860-49141-72), 23E2845-73 (860-49141-73), 23E2845-74 (860-49141-74), 23E2845-75 (860-49141-75), 23E2845-76 (860-49141-76), 23E2845-77 (860-49141-77), 23E2845-78 (860-49141-78) and 23E2845-79 (860-49141-79)

Method TX\_1005: Sample <8g 23E2845-42 (860-49141-42) and 23E2845-80 (860-49141-80)

Method TX\_1005: Sample >10g 23E2845-42 (860-49141-42[MS]) and 23E2845-42 (860-49141-42[MSD])

Method TX\_1005: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 860-104348 and analytical batch 860-104453 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method TX\_1005: The following samples were received outside of holding time: 23E2845-37 (860-49141-37), 23E2845-37 (860-49141-37[MS]), 23E2845-37 (860-49141-37[MSD]) and 23E2845-75 (860-49141-75).

Method TX\_1005: The following samples were received outside of holding time: 23E2845-62 (860-49141-62), 23E2845-63

# Case Narrative

Client: North Water District Laboratory Services  
Project/Site: General Project

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### Laboratory: Eurofins Houston (Continued)

(860-49141-63), 23E2845-64 (860-49141-64), 23E2845-65 (860-49141-65), 23E2845-66 (860-49141-66), 23E2845-67 (860-49141-67), 23E2845-68 (860-49141-68), 23E2845-69 (860-49141-69), 23E2845-70 (860-49141-70), 23E2845-71 (860-49141-71), 23E2845-72 (860-49141-72), 23E2845-73 (860-49141-73), 23E2845-76 (860-49141-76), 23E2845-77 (860-49141-77), 23E2845-78 (860-49141-78) and 23E2845-79 (860-49141-79).

Method TX\_1005: The following sample was received outside of holding time: 23E2845-80 (860-49141-80).

Method TX\_1005: The following samples were received outside of holding time: 23E2845-42 (860-49141-42), 23E2845-42 (860-49141-42[MS]) and 23E2845-42 (860-49141-42[MSD]).

Method TX\_1005: The following sample was received outside of holding time: 23E2845-74 (860-49141-74).

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



# Detection Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-1

## Lab Sample ID: 860-49141-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	97.1	H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	60.1	J H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	157		90.7	38.3	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-2

## Lab Sample ID: 860-49141-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	141	H H3	97.3	41.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	65.2	J H H3	97.3	41.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	206		97.3	41.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-3

## Lab Sample ID: 860-49141-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	116	H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	60.5	J H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	177		97.7	41.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-4

## Lab Sample ID: 860-49141-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	96.3	J H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	48.0	J H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	144		96.9	40.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-5

## Lab Sample ID: 860-49141-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	113	H H3	99.4	41.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	51.0	J H H3	99.4	41.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	164		99.4	41.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-6

## Lab Sample ID: 860-49141-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	51.0	J H H3	95.2	40.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	51.0	J	95.2	40.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-7

## Lab Sample ID: 860-49141-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	363	H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	141	H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	504		97.7	41.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-8

## Lab Sample ID: 860-49141-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	72.9	J H H3	94.9	40.0	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

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## Detection Summary

Client: North Water District Laboratory Services  
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Job ID: 860-49141-1

### Client Sample ID: 23E2845-8 (Continued)

Lab Sample ID: 860-49141-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	72.9	J	94.9	40.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-9

Lab Sample ID: 860-49141-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	251	H H3	98.4	41.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	80.5	J H H3	98.4	41.5	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	332		98.4	41.5	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-10

Lab Sample ID: 860-49141-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	577	H H3	94.3	39.8	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	137	H H3	94.3	39.8	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	714		94.3	39.8	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-11

Lab Sample ID: 860-49141-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	788	H H3	95.4	40.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	177	H H3	95.4	40.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	965		95.4	40.3	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-12

Lab Sample ID: 860-49141-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2580	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	615	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	3200		99.6	42.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-13

Lab Sample ID: 860-49141-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	198	H H3	98.6	41.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	82.2	J H H3	98.6	41.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	280		98.6	41.6	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-14

Lab Sample ID: 860-49141-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	113	H H3	95.8	40.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	50.9	J H H3	95.8	40.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	164		95.8	40.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-15

Lab Sample ID: 860-49141-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	128	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	61.3	J H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Detection Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-15 (Continued)

Lab Sample ID: 860-49141-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	189		99.6	42.0	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-16

Lab Sample ID: 860-49141-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	107	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	54.2	J H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	161		98.0	41.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-17

Lab Sample ID: 860-49141-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	119	H H3	94.0	39.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	52.4	J H H3	94.0	39.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	171		94.0	39.7	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-18

Lab Sample ID: 860-49141-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	244	H H3	91.1	38.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	75.7	J H H3	91.1	38.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	320		91.1	38.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-19

Lab Sample ID: 860-49141-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	167	H H3	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	63.6	J H H3	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	231		96.3	40.7	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-20

Lab Sample ID: 860-49141-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	152	H H3	95.2	40.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	53.0	J H H3	95.2	40.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	205		95.2	40.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-21

Lab Sample ID: 860-49141-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	235	H H3	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	65.9	J H H3	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	301		96.3	40.7	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-22

Lab Sample ID: 860-49141-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2100	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	342	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

## Detection Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

### Client Sample ID: 23E2845-22 (Continued)

Lab Sample ID: 860-49141-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	2440		97.1	41.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-23

Lab Sample ID: 860-49141-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1880	H H3	94.0	39.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	272	H H3	94.0	39.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2150		94.0	39.7	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-24

Lab Sample ID: 860-49141-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1870	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	300	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2170		98.0	41.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-25

Lab Sample ID: 860-49141-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2060	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	305	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2370		99.6	42.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-26

Lab Sample ID: 860-49141-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1730	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	327	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2060		97.1	41.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-27

Lab Sample ID: 860-49141-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	460	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	145	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	605		98.0	41.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-28

Lab Sample ID: 860-49141-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	897	H H3	95.6	40.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	270	H H3	95.6	40.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	1170		95.6	40.3	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-29

Lab Sample ID: 860-49141-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2510	H H3	91.2	38.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	388	H H3	91.2	38.5	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-29 (Continued)

Lab Sample ID: 860-49141-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	2900		91.2	38.5	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-30

Lab Sample ID: 860-49141-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2560	H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	462	H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	3020		96.9	40.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-31

Lab Sample ID: 860-49141-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2520	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	413	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2930		98.0	41.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-32

Lab Sample ID: 860-49141-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2310	H H3	97.8	41.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	413	H H3	97.8	41.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2720		97.8	41.3	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-33

Lab Sample ID: 860-49141-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2060	H H3	96.5	40.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	371	H H3	96.5	40.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2430		96.5	40.7	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-34

Lab Sample ID: 860-49141-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1240	H H3	98.6	41.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	191	H H3	98.6	41.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	1430		98.6	41.6	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-35

Lab Sample ID: 860-49141-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2100	H H3	96.0	40.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	409	H H3	96.0	40.5	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2510		96.0	40.5	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-36

Lab Sample ID: 860-49141-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	853	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	323	H H3	97.1	41.0	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

## Detection Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

### Client Sample ID: 23E2845-36 (Continued)

Lab Sample ID: 860-49141-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	1180		97.1	41.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-37

Lab Sample ID: 860-49141-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	85.9	J H F2 H3 F1	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	49.0	J H H3	96.3	40.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	135		96.3	40.7	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-38

Lab Sample ID: 860-49141-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2280	H H3	95.6	40.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	781	H H3	95.6	40.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	3060		95.6	40.3	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-39

Lab Sample ID: 860-49141-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1770	H H3	99.2	41.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	377	H H3	99.2	41.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	2150		99.2	41.9	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-40

Lab Sample ID: 860-49141-40

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	2730	H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	520	H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	3250		96.9	40.9	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-41

Lab Sample ID: 860-49141-41

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	13.0	J H H3	24.7	10.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	20.5	J H H3	24.7	10.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	33.5		24.7	10.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-42

Lab Sample ID: 860-49141-42

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	40.3	J H H3	92.9	39.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	40.3	J	92.9	39.2	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-43

Lab Sample ID: 860-49141-43

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	98.2	H H3	24.8	10.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	24.0	J H H3	24.8	10.5	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

## Detection Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

### Client Sample ID: 23E2845-43 (Continued)

Lab Sample ID: 860-49141-43

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	122		24.8	10.5	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-44

Lab Sample ID: 860-49141-44

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C28-C35 Range Hydrocarbons	12.9	J H H3	24.5	10.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	12.9	J	24.5	10.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-45

Lab Sample ID: 860-49141-45

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	151	H H3	24.6	10.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	24.0	J H H3	24.6	10.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	175		24.6	10.4	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-46

Lab Sample ID: 860-49141-46

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	698	H H3	93.8	39.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	165	H H3	93.8	39.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	863		93.8	39.6	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-47

Lab Sample ID: 860-49141-47

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	433	H H3	91.9	38.8	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	92.6	H H3	91.9	38.8	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	526		91.9	38.8	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-48

Lab Sample ID: 860-49141-48

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	418	H H3	90.1	38.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	86.3	J H H3	90.1	38.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	504		90.1	38.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-49

Lab Sample ID: 860-49141-49

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	570	H H3	91.7	38.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	115	H H3	91.7	38.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	685		91.7	38.7	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-50

Lab Sample ID: 860-49141-50

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	407	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	102	H H3	98.0	41.4	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-50 (Continued)

Lab Sample ID: 860-49141-50

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	509		98.0	41.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-51

Lab Sample ID: 860-49141-51

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	837	H H3	93.1	39.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	139	H H3	93.1	39.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	976		93.1	39.3	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-52

Lab Sample ID: 860-49141-52

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	646	H H3	91.6	38.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	102	H H3	91.6	38.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	748		91.6	38.6	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-53

Lab Sample ID: 860-49141-53

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	620	H H3	90.3	38.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	104	H H3	90.3	38.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	724		90.3	38.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-54

Lab Sample ID: 860-49141-54

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	618	H H3	92.8	39.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	108	H H3	92.8	39.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	726		92.8	39.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-55

Lab Sample ID: 860-49141-55

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1350	H H3	92.9	39.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	213	H H3	92.9	39.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	1560		92.9	39.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-56

Lab Sample ID: 860-49141-56

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	328	H H3	94.7	40.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	112	H H3	94.7	40.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	440		94.7	40.0	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-57

Lab Sample ID: 860-49141-57

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	464	H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	99.1	H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

## Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

### Client Sample ID: 23E2845-57 (Continued)

Lab Sample ID: 860-49141-57

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	563		90.7	38.3	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-58

Lab Sample ID: 860-49141-58

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	795	H H3	91.4	38.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	144	H H3	91.4	38.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	939		91.4	38.6	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-59

Lab Sample ID: 860-49141-59

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	365	H H3	90.6	38.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	90.9	H H3	90.6	38.2	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	456		90.6	38.2	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-60

Lab Sample ID: 860-49141-60

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	547	H H3	89.8	37.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	98.1	H H3	89.8	37.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	645		89.8	37.9	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-61

Lab Sample ID: 860-49141-61

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	1030	H H3	96.0	40.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	152	H H3	96.0	40.5	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	1180		96.0	40.5	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-62

Lab Sample ID: 860-49141-62

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	405	H H3	96.5	40.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	71.7	J H H3	96.5	40.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	477		96.5	40.7	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-63

Lab Sample ID: 860-49141-63

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	500	H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	77.5	J H H3	99.6	42.0	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	578		99.6	42.0	mg/Kg	1		TX 1005	Total/NA

### Client Sample ID: 23E2845-64

Lab Sample ID: 860-49141-64

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	57.6	J H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	48.0	J H H3	90.7	38.3	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston



# Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-64 (Continued)

Lab Sample ID: 860-49141-64

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	106		90.7	38.3	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-65

Lab Sample ID: 860-49141-65

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	408	H H3	92.1	38.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	65.5	J H H3	92.1	38.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	474		92.1	38.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-66

Lab Sample ID: 860-49141-66

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	317	H H3	93.5	39.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	63.1	J H H3	93.5	39.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	380		93.5	39.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-67

Lab Sample ID: 860-49141-67

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	441	H H3	89.4	37.7	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	67.8	J H H3	89.4	37.7	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	509		89.4	37.7	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-68

Lab Sample ID: 860-49141-68

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	301	H H3	91.4	38.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	60.1	J H H3	91.4	38.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	361		91.4	38.6	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-69

Lab Sample ID: 860-49141-69

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	41.4	J H H3	93.1	39.3	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	41.4	J	93.1	39.3	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-70

Lab Sample ID: 860-49141-70

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	310	H H3	94.5	39.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	59.7	J H H3	94.5	39.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	370		94.5	39.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-71

Lab Sample ID: 860-49141-71

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	350	H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	80.8	J H H3	97.7	41.2	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-71 (Continued)

Lab Sample ID: 860-49141-71

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	431		97.7	41.2	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-72

Lab Sample ID: 860-49141-72

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	575	H H3	91.6	38.6	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	79.3	J H H3	91.6	38.6	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	654		91.6	38.6	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-73

Lab Sample ID: 860-49141-73

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	368	H H3	95.1	40.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	70.7	J H H3	95.1	40.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	439		95.1	40.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-74

Lab Sample ID: 860-49141-74

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	492	H H3	97.5	41.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	49.8	J H H3	97.5	41.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	542		97.5	41.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-75

Lab Sample ID: 860-49141-75

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	452	H H3	95.1	40.1	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	115	H H3	95.1	40.1	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	567		95.1	40.1	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-76

Lab Sample ID: 860-49141-76

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	345	H H3	93.5	39.4	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	64.7	J H H3	93.5	39.4	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	410		93.5	39.4	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-77

Lab Sample ID: 860-49141-77

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	411	H H3	94.5	39.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	82.1	J H H3	94.5	39.9	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	493		94.5	39.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-78

Lab Sample ID: 860-49141-78

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	359	H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	68.2	J H H3	96.9	40.9	mg/Kg	1		TX 1005	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Detection Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-78 (Continued)

Lab Sample ID: 860-49141-78

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Petroleum Hydrocarbons (C6-C35)	427		96.9	40.9	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-79

Lab Sample ID: 860-49141-79

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
>C12-C28 Range Hydrocarbons	300	H H3	98.2	41.5	mg/Kg	1		TX 1005	Total/NA
>C28-C35 Range Hydrocarbons	77.4	J H H3	98.2	41.5	mg/Kg	1		TX 1005	Total/NA
Total Petroleum Hydrocarbons (C6-C35)	377		98.2	41.5	mg/Kg	1		TX 1005	Total/NA

## Client Sample ID: 23E2845-80

Lab Sample ID: 860-49141-80

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Houston

# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-1**

**Lab Sample ID: 860-49141-1**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.62	U H H3	3.00	1.62	ug/Kg		05/22/23 13:49	05/31/23 16:06	1
Tributyltin	<1.39	U H H3	3.00	1.39	ug/Kg		05/22/23 13:49	05/31/23 16:06	1
Dibutyltin	<1.27	U H H3	3.00	1.27	ug/Kg		05/22/23 13:49	05/31/23 16:06	1
Monobutyltin	<0.536	U H *- H3	3.00	0.536	ug/Kg		05/22/23 13:49	05/31/23 16:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	13	S1-	39 - 150				05/22/23 13:49	05/31/23 16:06	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.3	U H H3	90.7	38.3	mg/Kg		05/17/23 12:40	05/17/23 21:51	1
>C12-C28 Range Hydrocarbons	97.1	H H3	90.7	38.3	mg/Kg		05/17/23 12:40	05/17/23 21:51	1
>C28-C35 Range Hydrocarbons	60.1	J H H3	90.7	38.3	mg/Kg		05/17/23 12:40	05/17/23 21:51	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>157</b>		90.7	38.3	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130				05/17/23 12:40	05/17/23 21:51	1
o-Terphenyl (Surr)	100		70 - 130				05/17/23 12:40	05/17/23 21:51	1

**Client Sample ID: 23E2845-2**

**Lab Sample ID: 860-49141-2**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.60	U H H3	2.97	1.60	ug/Kg		05/22/23 13:49	05/31/23 16:24	1
Tributyltin	<1.38	U H H3	2.97	1.38	ug/Kg		05/22/23 13:49	05/31/23 16:24	1
Dibutyltin	<1.26	U H H3	2.97	1.26	ug/Kg		05/22/23 13:49	05/31/23 16:24	1
Monobutyltin	<0.531	U H *- H3	2.97	0.531	ug/Kg		05/22/23 13:49	05/31/23 16:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	12	S1-	39 - 150				05/22/23 13:49	05/31/23 16:24	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.1	U H H3	97.3	41.1	mg/Kg		05/17/23 12:40	05/17/23 23:52	1
>C12-C28 Range Hydrocarbons	141	H H3	97.3	41.1	mg/Kg		05/17/23 12:40	05/17/23 23:52	1
>C28-C35 Range Hydrocarbons	65.2	J H H3	97.3	41.1	mg/Kg		05/17/23 12:40	05/17/23 23:52	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>206</b>		97.3	41.1	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130				05/17/23 12:40	05/17/23 23:52	1
o-Terphenyl (Surr)	101		70 - 130				05/17/23 12:40	05/17/23 23:52	1

# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-3**

**Lab Sample ID: 860-49141-3**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.62	U H H3	3.00	1.62	ug/Kg		05/22/23 13:49	05/31/23 16:43	1
Tributyltin	<1.39	U H H3	3.00	1.39	ug/Kg		05/22/23 13:49	05/31/23 16:43	1
Dibutyltin	<1.27	U H H3	3.00	1.27	ug/Kg		05/22/23 13:49	05/31/23 16:43	1
Monobutyltin	<0.536	U H *- H3	3.00	0.536	ug/Kg		05/22/23 13:49	05/31/23 16:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	8	S1-	39 - 150				05/22/23 13:49	05/31/23 16:43	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.2	U H H3	97.7	41.2	mg/Kg		05/17/23 12:40	05/18/23 00:33	1
>C12-C28 Range Hydrocarbons	116	H H3	97.7	41.2	mg/Kg		05/17/23 12:40	05/18/23 00:33	1
>C28-C35 Range Hydrocarbons	60.5	J H H3	97.7	41.2	mg/Kg		05/17/23 12:40	05/18/23 00:33	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>177</b>		97.7	41.2	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130				05/17/23 12:40	05/18/23 00:33	1
o-Terphenyl (Surr)	102		70 - 130				05/17/23 12:40	05/18/23 00:33	1

**Client Sample ID: 23E2845-4**

**Lab Sample ID: 860-49141-4**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.60	U H H3	2.97	1.60	ug/Kg		05/22/23 13:49	05/31/23 17:20	1
Tributyltin	<1.38	U H H3	2.97	1.38	ug/Kg		05/22/23 13:49	05/31/23 17:20	1
Dibutyltin	<1.26	U H H3	2.97	1.26	ug/Kg		05/22/23 13:49	05/31/23 17:20	1
Monobutyltin	<0.531	U H *- H3	2.97	0.531	ug/Kg		05/22/23 13:49	05/31/23 17:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	26	S1-	39 - 150				05/22/23 13:49	05/31/23 17:20	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.9	U H H3	96.9	40.9	mg/Kg		05/17/23 12:40	05/18/23 00:53	1
>C12-C28 Range Hydrocarbons	96.3	J H H3	96.9	40.9	mg/Kg		05/17/23 12:40	05/18/23 00:53	1
>C28-C35 Range Hydrocarbons	48.0	J H H3	96.9	40.9	mg/Kg		05/17/23 12:40	05/18/23 00:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>144</b>		96.9	40.9	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130				05/17/23 12:40	05/18/23 00:53	1
o-Terphenyl (Surr)	102		70 - 130				05/17/23 12:40	05/18/23 00:53	1

# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-5**

**Lab Sample ID: 860-49141-5**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.62	U H H3	3.00	1.62	ug/Kg		05/22/23 13:49	05/31/23 17:39	1
Tributyltin	<1.39	U H H3	3.00	1.39	ug/Kg		05/22/23 13:49	05/31/23 17:39	1
Dibutyltin	<1.27	U H H3	3.00	1.27	ug/Kg		05/22/23 13:49	05/31/23 17:39	1
Monobutyltin	<0.536	U H *- H3	3.00	0.536	ug/Kg		05/22/23 13:49	05/31/23 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	33	S1-	39 - 150				05/22/23 13:49	05/31/23 17:39	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.9	U H H3	99.4	41.9	mg/Kg		05/17/23 12:40	05/18/23 01:13	1
>C12-C28 Range Hydrocarbons	113	H H3	99.4	41.9	mg/Kg		05/17/23 12:40	05/18/23 01:13	1
>C28-C35 Range Hydrocarbons	51.0	J H H3	99.4	41.9	mg/Kg		05/17/23 12:40	05/18/23 01:13	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>164</b>		99.4	41.9	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130				05/17/23 12:40	05/18/23 01:13	1
o-Terphenyl (Surr)	100		70 - 130				05/17/23 12:40	05/18/23 01:13	1

**Client Sample ID: 23E2845-6**

**Lab Sample ID: 860-49141-6**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.2	U H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 01:33	1
>C12-C28 Range Hydrocarbons	51.0	J H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 01:33	1
>C28-C35 Range Hydrocarbons	<40.2	U H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 01:33	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>51.0</b>	<b>J</b>	95.2	40.2	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130				05/17/23 12:40	05/18/23 01:33	1
o-Terphenyl (Surr)	106		70 - 130				05/17/23 12:40	05/18/23 01:33	1

**Client Sample ID: 23E2845-7**

**Lab Sample ID: 860-49141-7**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.2	U H H3	97.7	41.2	mg/Kg		05/18/23 15:59	05/18/23 21:27	1
>C12-C28 Range Hydrocarbons	363	H H3	97.7	41.2	mg/Kg		05/18/23 15:59	05/18/23 21:27	1
>C28-C35 Range Hydrocarbons	141	H H3	97.7	41.2	mg/Kg		05/18/23 15:59	05/18/23 21:27	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>504</b>		97.7	41.2	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	115		70 - 130				05/18/23 15:59	05/18/23 21:27	1
o-Terphenyl (Surr)	117		70 - 130				05/18/23 15:59	05/18/23 21:27	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-8**

**Lab Sample ID: 860-49141-8**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.0	U H H3	94.9	40.0	mg/Kg		05/17/23 12:40	05/18/23 01:53	1
>C12-C28 Range Hydrocarbons	72.9	J H H3	94.9	40.0	mg/Kg		05/17/23 12:40	05/18/23 01:53	1
>C28-C35 Range Hydrocarbons	<40.0	U H H3	94.9	40.0	mg/Kg		05/17/23 12:40	05/18/23 01:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>72.9</b>	<b>J</b>	94.9	40.0	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130				05/17/23 12:40	05/18/23 01:53	1
o-Terphenyl (Surr)	106		70 - 130				05/17/23 12:40	05/18/23 01:53	1

**Client Sample ID: 23E2845-9**

**Lab Sample ID: 860-49141-9**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.5	U H H3	98.4	41.5	mg/Kg		05/17/23 12:40	05/18/23 02:13	1
>C12-C28 Range Hydrocarbons	251	H H3	98.4	41.5	mg/Kg		05/17/23 12:40	05/18/23 02:13	1
>C28-C35 Range Hydrocarbons	80.5	J H H3	98.4	41.5	mg/Kg		05/17/23 12:40	05/18/23 02:13	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>332</b>		98.4	41.5	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130				05/17/23 12:40	05/18/23 02:13	1
o-Terphenyl (Surr)	103		70 - 130				05/17/23 12:40	05/18/23 02:13	1

**Client Sample ID: 23E2845-10**

**Lab Sample ID: 860-49141-10**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.8	U H H3	94.3	39.8	mg/Kg		05/17/23 12:40	05/18/23 02:33	1
>C12-C28 Range Hydrocarbons	577	H H3	94.3	39.8	mg/Kg		05/17/23 12:40	05/18/23 02:33	1
>C28-C35 Range Hydrocarbons	137	H H3	94.3	39.8	mg/Kg		05/17/23 12:40	05/18/23 02:33	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>714</b>		94.3	39.8	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130				05/17/23 12:40	05/18/23 02:33	1
o-Terphenyl (Surr)	89		70 - 130				05/17/23 12:40	05/18/23 02:33	1

**Client Sample ID: 23E2845-11**

**Lab Sample ID: 860-49141-11**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.3	U H H3	95.4	40.3	mg/Kg		05/17/23 12:40	05/18/23 04:14	1
>C12-C28 Range Hydrocarbons	788	H H3	95.4	40.3	mg/Kg		05/17/23 12:40	05/18/23 04:14	1
>C28-C35 Range Hydrocarbons	177	H H3	95.4	40.3	mg/Kg		05/17/23 12:40	05/18/23 04:14	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>965</b>		95.4	40.3	mg/Kg			05/23/23 14:19	1

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# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-11

## Lab Sample ID: 860-49141-11

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130	05/17/23 12:40	05/18/23 04:14	1
o-Terphenyl (Surr)	95		70 - 130	05/17/23 12:40	05/18/23 04:14	1

## Client Sample ID: 23E2845-12

## Lab Sample ID: 860-49141-12

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<42.0	U H H3	99.6	42.0	mg/Kg		05/19/23 14:50	05/19/23 20:32	1
>C12-C28 Range Hydrocarbons	2580	H H3	99.6	42.0	mg/Kg		05/19/23 14:50	05/19/23 20:32	1
>C28-C35 Range Hydrocarbons	615	H H3	99.6	42.0	mg/Kg		05/19/23 14:50	05/19/23 20:32	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>3200</b>		99.6	42.0	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130	05/19/23 14:50	05/19/23 20:32	1
o-Terphenyl (Surr)	106		70 - 130	05/19/23 14:50	05/19/23 20:32	1

## Client Sample ID: 23E2845-13

## Lab Sample ID: 860-49141-13

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.6	U H H3	98.6	41.6	mg/Kg		05/17/23 12:40	05/18/23 02:53	1
>C12-C28 Range Hydrocarbons	198	H H3	98.6	41.6	mg/Kg		05/17/23 12:40	05/18/23 02:53	1
>C28-C35 Range Hydrocarbons	82.2	J H H3	98.6	41.6	mg/Kg		05/17/23 12:40	05/18/23 02:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>280</b>		98.6	41.6	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130	05/17/23 12:40	05/18/23 02:53	1
o-Terphenyl (Surr)	104		70 - 130	05/17/23 12:40	05/18/23 02:53	1

## Client Sample ID: 23E2845-14

## Lab Sample ID: 860-49141-14

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.4	U H H3	95.8	40.4	mg/Kg		05/17/23 12:40	05/18/23 03:14	1
>C12-C28 Range Hydrocarbons	113	H H3	95.8	40.4	mg/Kg		05/17/23 12:40	05/18/23 03:14	1
>C28-C35 Range Hydrocarbons	50.9	J H H3	95.8	40.4	mg/Kg		05/17/23 12:40	05/18/23 03:14	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>164</b>		95.8	40.4	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130	05/17/23 12:40	05/18/23 03:14	1
o-Terphenyl (Surr)	101		70 - 130	05/17/23 12:40	05/18/23 03:14	1



# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-15**

**Lab Sample ID: 860-49141-15**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<42.0	U H H3	99.6	42.0	mg/Kg		05/17/23 12:40	05/18/23 03:34	1
>C12-C28 Range Hydrocarbons	128	H H3	99.6	42.0	mg/Kg		05/17/23 12:40	05/18/23 03:34	1
>C28-C35 Range Hydrocarbons	61.3	J H H3	99.6	42.0	mg/Kg		05/17/23 12:40	05/18/23 03:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>189</b>		99.6	42.0	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130	05/17/23 12:40	05/18/23 03:34	1
o-Terphenyl (Surr)	104		70 - 130	05/17/23 12:40	05/18/23 03:34	1

**Client Sample ID: 23E2845-16**

**Lab Sample ID: 860-49141-16**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.4	U H H3	98.0	41.4	mg/Kg		05/17/23 12:40	05/18/23 04:34	1
>C12-C28 Range Hydrocarbons	107	H H3	98.0	41.4	mg/Kg		05/17/23 12:40	05/18/23 04:34	1
>C28-C35 Range Hydrocarbons	54.2	J H H3	98.0	41.4	mg/Kg		05/17/23 12:40	05/18/23 04:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>161</b>		98.0	41.4	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130	05/17/23 12:40	05/18/23 04:34	1
o-Terphenyl (Surr)	104		70 - 130	05/17/23 12:40	05/18/23 04:34	1

**Client Sample ID: 23E2845-17**

**Lab Sample ID: 860-49141-17**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.7	U H H3	94.0	39.7	mg/Kg		05/17/23 12:40	05/18/23 04:55	1
>C12-C28 Range Hydrocarbons	119	H H3	94.0	39.7	mg/Kg		05/17/23 12:40	05/18/23 04:55	1
>C28-C35 Range Hydrocarbons	52.4	J H H3	94.0	39.7	mg/Kg		05/17/23 12:40	05/18/23 04:55	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>171</b>		94.0	39.7	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130	05/17/23 12:40	05/18/23 04:55	1
o-Terphenyl (Surr)	102		70 - 130	05/17/23 12:40	05/18/23 04:55	1

**Client Sample ID: 23E2845-18**

**Lab Sample ID: 860-49141-18**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.4	U H H3	91.1	38.4	mg/Kg		05/17/23 12:40	05/18/23 05:15	1
>C12-C28 Range Hydrocarbons	244	H H3	91.1	38.4	mg/Kg		05/17/23 12:40	05/18/23 05:15	1
>C28-C35 Range Hydrocarbons	75.7	J H H3	91.1	38.4	mg/Kg		05/17/23 12:40	05/18/23 05:15	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>320</b>		91.1	38.4	mg/Kg			05/23/23 14:19	1

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# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-18

Lab Sample ID: 860-49141-18

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130	05/17/23 12:40	05/18/23 05:15	1
o-Terphenyl (Surr)	98		70 - 130	05/17/23 12:40	05/18/23 05:15	1

## Client Sample ID: 23E2845-19

Lab Sample ID: 860-49141-19

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.7	U H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 05:35	1
>C12-C28 Range Hydrocarbons	167	H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 05:35	1
>C28-C35 Range Hydrocarbons	63.6	J H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 05:35	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>231</b>		96.3	40.7	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130	05/17/23 12:40	05/18/23 05:35	1
o-Terphenyl (Surr)	95		70 - 130	05/17/23 12:40	05/18/23 05:35	1

## Client Sample ID: 23E2845-20

Lab Sample ID: 860-49141-20

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.2	U H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 05:55	1
>C12-C28 Range Hydrocarbons	152	H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 05:55	1
>C28-C35 Range Hydrocarbons	53.0	J H H3	95.2	40.2	mg/Kg		05/17/23 12:40	05/18/23 05:55	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>205</b>		95.2	40.2	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	97		70 - 130	05/17/23 12:40	05/18/23 05:55	1
o-Terphenyl (Surr)	97		70 - 130	05/17/23 12:40	05/18/23 05:55	1

## Client Sample ID: 23E2845-21

Lab Sample ID: 860-49141-21

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.7	U H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 06:15	1
>C12-C28 Range Hydrocarbons	235	H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 06:15	1
>C28-C35 Range Hydrocarbons	65.9	J H H3	96.3	40.7	mg/Kg		05/17/23 12:40	05/18/23 06:15	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>301</b>		96.3	40.7	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130	05/17/23 12:40	05/18/23 06:15	1
o-Terphenyl (Surr)	106		70 - 130	05/17/23 12:40	05/18/23 06:15	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-22**

**Lab Sample ID: 860-49141-22**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.0	U H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/18/23 23:28	1
>C12-C28 Range Hydrocarbons	2100	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/18/23 23:28	1
>C28-C35 Range Hydrocarbons	342	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/18/23 23:28	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2440</b>		97.1	41.0	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	130		70 - 130	05/18/23 15:59	05/18/23 23:28	1
o-Terphenyl (Surr)	117		70 - 130	05/18/23 15:59	05/18/23 23:28	1

**Client Sample ID: 23E2845-23**

**Lab Sample ID: 860-49141-23**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.7	U H H3	94.0	39.7	mg/Kg		05/18/23 15:59	05/18/23 23:48	1
>C12-C28 Range Hydrocarbons	1880	H H3	94.0	39.7	mg/Kg		05/18/23 15:59	05/18/23 23:48	1
>C28-C35 Range Hydrocarbons	272	H H3	94.0	39.7	mg/Kg		05/18/23 15:59	05/18/23 23:48	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2150</b>		94.0	39.7	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	126		70 - 130	05/18/23 15:59	05/18/23 23:48	1
o-Terphenyl (Surr)	120		70 - 130	05/18/23 15:59	05/18/23 23:48	1

**Client Sample ID: 23E2845-24**

**Lab Sample ID: 860-49141-24**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.4	U H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 00:08	1
>C12-C28 Range Hydrocarbons	1870	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 00:08	1
>C28-C35 Range Hydrocarbons	300	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 00:08	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2170</b>		98.0	41.4	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	126		70 - 130	05/18/23 15:59	05/19/23 00:08	1
o-Terphenyl (Surr)	110		70 - 130	05/18/23 15:59	05/19/23 00:08	1

**Client Sample ID: 23E2845-25**

**Lab Sample ID: 860-49141-25**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<42.0	U H H3	99.6	42.0	mg/Kg		05/18/23 15:59	05/19/23 00:28	1
>C12-C28 Range Hydrocarbons	2060	H H3	99.6	42.0	mg/Kg		05/18/23 15:59	05/19/23 00:28	1
>C28-C35 Range Hydrocarbons	305	H H3	99.6	42.0	mg/Kg		05/18/23 15:59	05/19/23 00:28	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2370</b>		99.6	42.0	mg/Kg			05/23/23 14:19	1

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# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-25

Lab Sample ID: 860-49141-25

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	124		70 - 130	05/18/23 15:59	05/19/23 00:28	1
o-Terphenyl (Surr)	116		70 - 130	05/18/23 15:59	05/19/23 00:28	1

## Client Sample ID: 23E2845-26

Lab Sample ID: 860-49141-26

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.0	U H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 00:49	1
>C12-C28 Range Hydrocarbons	1730	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 00:49	1
>C28-C35 Range Hydrocarbons	327	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 00:49	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2060</b>		97.1	41.0	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	127		70 - 130	05/18/23 15:59	05/19/23 00:49	1
o-Terphenyl (Surr)	121		70 - 130	05/18/23 15:59	05/19/23 00:49	1

## Client Sample ID: 23E2845-27

Lab Sample ID: 860-49141-27

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.4	U H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 01:09	1
>C12-C28 Range Hydrocarbons	460	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 01:09	1
>C28-C35 Range Hydrocarbons	145	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 01:09	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>605</b>		98.0	41.4	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	05/18/23 15:59	05/19/23 01:09	1
o-Terphenyl (Surr)	110		70 - 130	05/18/23 15:59	05/19/23 01:09	1

## Client Sample ID: 23E2845-28

Lab Sample ID: 860-49141-28

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.3	U H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 01:29	1
>C12-C28 Range Hydrocarbons	897	H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 01:29	1
>C28-C35 Range Hydrocarbons	270	H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 01:29	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>1170</b>		95.6	40.3	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	121		70 - 130	05/18/23 15:59	05/19/23 01:29	1
o-Terphenyl (Surr)	119		70 - 130	05/18/23 15:59	05/19/23 01:29	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-29**

**Lab Sample ID: 860-49141-29**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.5	U H H3	91.2	38.5	mg/Kg		05/18/23 15:59	05/19/23 01:49	1
>C12-C28 Range Hydrocarbons	2510	H H3	91.2	38.5	mg/Kg		05/18/23 15:59	05/19/23 01:49	1
>C28-C35 Range Hydrocarbons	388	H H3	91.2	38.5	mg/Kg		05/18/23 15:59	05/19/23 01:49	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2900</b>		91.2	38.5	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	132	S1+	70 - 130				05/18/23 15:59	05/19/23 01:49	1
o-Terphenyl (Surr)	127		70 - 130				05/18/23 15:59	05/19/23 01:49	1

**Client Sample ID: 23E2845-30**

**Lab Sample ID: 860-49141-30**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.9	U H H3	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 02:29	1
>C12-C28 Range Hydrocarbons	2560	H H3	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 02:29	1
>C28-C35 Range Hydrocarbons	462	H H3	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 02:29	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>3020</b>		96.9	40.9	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	123		70 - 130				05/18/23 15:59	05/19/23 02:29	1
o-Terphenyl (Surr)	119		70 - 130				05/18/23 15:59	05/19/23 02:29	1

**Client Sample ID: 23E2845-31**

**Lab Sample ID: 860-49141-31**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.4	U H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 02:49	1
>C12-C28 Range Hydrocarbons	2520	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 02:49	1
>C28-C35 Range Hydrocarbons	413	H H3	98.0	41.4	mg/Kg		05/18/23 15:59	05/19/23 02:49	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2930</b>		98.0	41.4	mg/Kg			05/23/23 14:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130				05/18/23 15:59	05/19/23 02:49	1
o-Terphenyl (Surr)	110		70 - 130				05/18/23 15:59	05/19/23 02:49	1

**Client Sample ID: 23E2845-32**

**Lab Sample ID: 860-49141-32**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.3	U H H3	97.8	41.3	mg/Kg		05/18/23 15:59	05/19/23 03:09	1
>C12-C28 Range Hydrocarbons	2310	H H3	97.8	41.3	mg/Kg		05/18/23 15:59	05/19/23 03:09	1
>C28-C35 Range Hydrocarbons	413	H H3	97.8	41.3	mg/Kg		05/18/23 15:59	05/19/23 03:09	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2720</b>		97.8	41.3	mg/Kg			05/23/23 14:19	1

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# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-32

Lab Sample ID: 860-49141-32

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	118		70 - 130	05/18/23 15:59	05/19/23 03:09	1
o-Terphenyl (Surr)	121		70 - 130	05/18/23 15:59	05/19/23 03:09	1

## Client Sample ID: 23E2845-33

Lab Sample ID: 860-49141-33

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.7	U H H3	96.5	40.7	mg/Kg		05/18/23 15:59	05/19/23 03:29	1
>C12-C28 Range Hydrocarbons	2060	H H3	96.5	40.7	mg/Kg		05/18/23 15:59	05/19/23 03:29	1
>C28-C35 Range Hydrocarbons	371	H H3	96.5	40.7	mg/Kg		05/18/23 15:59	05/19/23 03:29	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2430</b>		96.5	40.7	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130	05/18/23 15:59	05/19/23 03:29	1
o-Terphenyl (Surr)	105		70 - 130	05/18/23 15:59	05/19/23 03:29	1

## Client Sample ID: 23E2845-34

Lab Sample ID: 860-49141-34

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.6	U H H3	98.6	41.6	mg/Kg		05/18/23 15:59	05/19/23 11:38	1
>C12-C28 Range Hydrocarbons	1240	H H3	98.6	41.6	mg/Kg		05/18/23 15:59	05/19/23 11:38	1
>C28-C35 Range Hydrocarbons	191	H H3	98.6	41.6	mg/Kg		05/18/23 15:59	05/19/23 11:38	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>1430</b>		98.6	41.6	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	126		70 - 130	05/18/23 15:59	05/19/23 11:38	1
o-Terphenyl (Surr)	103		70 - 130	05/18/23 15:59	05/19/23 11:38	1

## Client Sample ID: 23E2845-35

Lab Sample ID: 860-49141-35

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.5	U H H3	96.0	40.5	mg/Kg		05/18/23 15:59	05/19/23 04:09	1
>C12-C28 Range Hydrocarbons	2100	H H3	96.0	40.5	mg/Kg		05/18/23 15:59	05/19/23 04:09	1
>C28-C35 Range Hydrocarbons	409	H H3	96.0	40.5	mg/Kg		05/18/23 15:59	05/19/23 04:09	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2510</b>		96.0	40.5	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	133	S1+	70 - 130	05/18/23 15:59	05/19/23 04:09	1
o-Terphenyl (Surr)	120		70 - 130	05/18/23 15:59	05/19/23 04:09	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-36**

**Lab Sample ID: 860-49141-36**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.0	U H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 04:30	1
>C12-C28 Range Hydrocarbons	853	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 04:30	1
>C28-C35 Range Hydrocarbons	323	H H3	97.1	41.0	mg/Kg		05/18/23 15:59	05/19/23 04:30	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>1180</b>		97.1	41.0	mg/Kg			05/23/23 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	115		70 - 130	05/18/23 15:59	05/19/23 04:30	1
o-Terphenyl (Surr)	104		70 - 130	05/18/23 15:59	05/19/23 04:30	1

**Client Sample ID: 23E2845-37**

**Lab Sample ID: 860-49141-37**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.7	U H H3	96.3	40.7	mg/Kg		05/22/23 16:49	05/23/23 14:05	1
>C12-C28 Range Hydrocarbons	85.9	J H F2 H3 F1	96.3	40.7	mg/Kg		05/22/23 16:49	05/23/23 14:05	1
>C28-C35 Range Hydrocarbons	49.0	J H H3	96.3	40.7	mg/Kg		05/22/23 16:49	05/23/23 14:05	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>135</b>		96.3	40.7	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	110		70 - 130	05/22/23 16:49	05/23/23 14:05	1
o-Terphenyl (Surr)	119		70 - 130	05/22/23 16:49	05/23/23 14:05	1

**Client Sample ID: 23E2845-38**

**Lab Sample ID: 860-49141-38**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.3	U H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 04:50	1
>C12-C28 Range Hydrocarbons	2280	H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 04:50	1
>C28-C35 Range Hydrocarbons	781	H H3	95.6	40.3	mg/Kg		05/18/23 15:59	05/19/23 04:50	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>3060</b>		95.6	40.3	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	123		70 - 130	05/18/23 15:59	05/19/23 04:50	1
o-Terphenyl (Surr)	126		70 - 130	05/18/23 15:59	05/19/23 04:50	1

**Client Sample ID: 23E2845-39**

**Lab Sample ID: 860-49141-39**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.9	U H H3	99.2	41.9	mg/Kg		05/18/23 15:59	05/19/23 05:10	1
>C12-C28 Range Hydrocarbons	1770	H H3	99.2	41.9	mg/Kg		05/18/23 15:59	05/19/23 05:10	1
>C28-C35 Range Hydrocarbons	377	H H3	99.2	41.9	mg/Kg		05/18/23 15:59	05/19/23 05:10	1

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# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-39**

**Lab Sample ID: 860-49141-39**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>2150</b>		99.2	41.9	mg/Kg			05/24/23 10:12	1
<b>Surrogate</b>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	114		70 - 130				05/18/23 15:59	05/19/23 05:10	1
o-Terphenyl (Surr)	116		70 - 130				05/18/23 15:59	05/19/23 05:10	1

**Client Sample ID: 23E2845-40**

**Lab Sample ID: 860-49141-40**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.9	U H H3	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 05:30	1
>C12-C28 Range Hydrocarbons	<b>2730</b>	<b>H H3</b>	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 05:30	1
>C28-C35 Range Hydrocarbons	<b>520</b>	<b>H H3</b>	96.9	40.9	mg/Kg		05/18/23 15:59	05/19/23 05:30	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>3250</b>		96.9	40.9	mg/Kg			05/24/23 10:12	1
<b>Surrogate</b>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	128		70 - 130				05/18/23 15:59	05/19/23 05:30	1
o-Terphenyl (Surr)	130		70 - 130				05/18/23 15:59	05/19/23 05:30	1

**Client Sample ID: 23E2845-41**

**Lab Sample ID: 860-49141-41**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<3.17	U H H3	5.88	3.17	ug/Kg		05/31/23 16:43	06/08/23 13:47	1
Tributyltin	<2.73	U H H3	5.88	2.73	ug/Kg		05/31/23 16:43	06/08/23 13:47	1
Dibutyltin	<2.49	U H H3	5.88	2.49	ug/Kg		05/31/23 16:43	06/08/23 13:47	1
Monobutyltin	<1.05	U H *- H3	5.88	1.05	ug/Kg		05/31/23 16:43	06/08/23 13:47	1
<b>Surrogate</b>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	146		39 - 150				05/31/23 16:43	06/08/23 13:47	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<10.4	U H H3	24.7	10.4	mg/Kg		05/19/23 14:50	05/19/23 21:33	1
>C12-C28 Range Hydrocarbons	<b>13.0</b>	<b>J H H3</b>	24.7	10.4	mg/Kg		05/19/23 14:50	05/19/23 21:33	1
>C28-C35 Range Hydrocarbons	<b>20.5</b>	<b>J H H3</b>	24.7	10.4	mg/Kg		05/19/23 14:50	05/19/23 21:33	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>33.5</b>		24.7	10.4	mg/Kg			05/24/23 10:12	1
<b>Surrogate</b>									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	94		70 - 130				05/19/23 14:50	05/19/23 21:33	1
o-Terphenyl (Surr)	103		70 - 130				05/19/23 14:50	05/19/23 21:33	1



# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-42**

**Lab Sample ID: 860-49141-42**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<1.62	U H H3	3.00	1.62	ug/Kg		05/31/23 16:43	06/08/23 17:31	1
Tributyltin	<1.39	U H H3	3.00	1.39	ug/Kg		05/31/23 16:43	06/08/23 17:31	1
Dibutyltin	<1.27	U H H3	3.00	1.27	ug/Kg		05/31/23 16:43	06/08/23 17:31	1
Monobutyltin	<0.536	U H F2 F1 *- H3	3.00	0.536	ug/Kg		05/31/23 16:43	06/08/23 17:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	87		39 - 150				05/31/23 16:43	06/08/23 17:31	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.2	U H H3	92.9	39.2	mg/Kg		05/23/23 15:00	05/24/23 13:17	1
>C12-C28 Range Hydrocarbons	40.3	J H H3	92.9	39.2	mg/Kg		05/23/23 15:00	05/24/23 13:17	1
>C28-C35 Range Hydrocarbons	<39.2	U H H3	92.9	39.2	mg/Kg		05/23/23 15:00	05/24/23 13:17	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>40.3</b>	<b>J</b>	92.9	39.2	mg/Kg			05/24/23 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	94		70 - 130				05/23/23 15:00	05/24/23 13:17	1
o-Terphenyl (Surr)	99		70 - 130				05/23/23 15:00	05/24/23 13:17	1

**Client Sample ID: 23E2845-43**

**Lab Sample ID: 860-49141-43**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<3.17	U H H3	5.88	3.17	ug/Kg		05/31/23 16:43	06/08/23 14:24	1
Tributyltin	<2.73	U H H3	5.88	2.73	ug/Kg		05/31/23 16:43	06/08/23 14:24	1
Dibutyltin	<2.49	U H H3	5.88	2.49	ug/Kg		05/31/23 16:43	06/08/23 14:24	1
Monobutyltin	<1.05	U H *- H3	5.88	1.05	ug/Kg		05/31/23 16:43	06/08/23 14:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tripentyltin	146		39 - 150				05/31/23 16:43	06/08/23 14:24	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<10.5	U H H3	24.8	10.5	mg/Kg		05/19/23 14:50	05/19/23 21:53	1
>C12-C28 Range Hydrocarbons	98.2	H H3	24.8	10.5	mg/Kg		05/19/23 14:50	05/19/23 21:53	1
>C28-C35 Range Hydrocarbons	24.0	J H H3	24.8	10.5	mg/Kg		05/19/23 14:50	05/19/23 21:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>122</b>		24.8	10.5	mg/Kg			05/24/23 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130				05/19/23 14:50	05/19/23 21:53	1
o-Terphenyl (Surr)	107		70 - 130				05/19/23 14:50	05/19/23 21:53	1

# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-44**

**Lab Sample ID: 860-49141-44**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<3.11	U H H3	5.77	3.11	ug/Kg		05/31/23 16:43	06/08/23 15:34	1
Tributyltin	<2.67	U H H3	5.77	2.67	ug/Kg		05/31/23 16:43	06/08/23 15:34	1
Dibutyltin	<2.45	U H H3	5.77	2.45	ug/Kg		05/31/23 16:43	06/08/23 15:34	1
Monobutyltin	<1.03	U H *- H3	5.77	1.03	ug/Kg		05/31/23 16:43	06/08/23 15:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	133		39 - 150				05/31/23 16:43	06/08/23 15:34	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<10.4	U H H3	24.5	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:33	1
>C12-C28 Range Hydrocarbons	<10.4	U H H3	24.5	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:33	1
>C28-C35 Range Hydrocarbons	12.9	J H H3	24.5	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:33	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>12.9</b>	<b>J</b>	24.5	10.4	mg/Kg			05/24/23 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	96		70 - 130				05/19/23 14:50	05/19/23 22:33	1
o-Terphenyl (Surr)	105		70 - 130				05/19/23 14:50	05/19/23 22:33	1

**Client Sample ID: 23E2845-45**

**Lab Sample ID: 860-49141-45**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	<3.17	U H H3	5.88	3.17	ug/Kg		05/31/23 16:43	06/08/23 15:53	1
Tributyltin	<2.73	U H H3	5.88	2.73	ug/Kg		05/31/23 16:43	06/08/23 15:53	1
Dibutyltin	<2.49	U H H3	5.88	2.49	ug/Kg		05/31/23 16:43	06/08/23 15:53	1
Monobutyltin	<1.05	U H *- H3	5.88	1.05	ug/Kg		05/31/23 16:43	06/08/23 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Triphenyltin	103		39 - 150				05/31/23 16:43	06/08/23 15:53	1

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<10.4	U H H3	24.6	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:53	1
>C12-C28 Range Hydrocarbons	151	H H3	24.6	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:53	1
>C28-C35 Range Hydrocarbons	24.0	J H H3	24.6	10.4	mg/Kg		05/19/23 14:50	05/19/23 22:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>175</b>		24.6	10.4	mg/Kg			05/24/23 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130				05/19/23 14:50	05/19/23 22:53	1
o-Terphenyl (Surr)	107		70 - 130				05/19/23 14:50	05/19/23 22:53	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-46**

**Lab Sample ID: 860-49141-46**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.6	U H H3	93.8	39.6	mg/Kg		05/18/23 15:59	05/18/23 23:08	1
>C12-C28 Range Hydrocarbons	<b>698</b>	<b>H H3</b>	93.8	39.6	mg/Kg		05/18/23 15:59	05/18/23 23:08	1
>C28-C35 Range Hydrocarbons	<b>165</b>	<b>H H3</b>	93.8	39.6	mg/Kg		05/18/23 15:59	05/18/23 23:08	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>863</b>		93.8	39.6	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	136	S1+	70 - 130	05/18/23 15:59	05/18/23 23:08	1
o-Terphenyl (Surr)	123		70 - 130	05/18/23 15:59	05/18/23 23:08	1

**Client Sample ID: 23E2845-47**

**Lab Sample ID: 860-49141-47**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.8	U H H3	91.9	38.8	mg/Kg		05/19/23 14:50	05/19/23 23:13	1
>C12-C28 Range Hydrocarbons	<b>433</b>	<b>H H3</b>	91.9	38.8	mg/Kg		05/19/23 14:50	05/19/23 23:13	1
>C28-C35 Range Hydrocarbons	<b>92.6</b>	<b>H H3</b>	91.9	38.8	mg/Kg		05/19/23 14:50	05/19/23 23:13	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>526</b>		91.9	38.8	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/19/23 14:50	05/19/23 23:13	1
o-Terphenyl (Surr)	107		70 - 130	05/19/23 14:50	05/19/23 23:13	1

**Client Sample ID: 23E2845-48**

**Lab Sample ID: 860-49141-48**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.0	U H H3	90.1	38.0	mg/Kg		05/19/23 14:50	05/19/23 23:34	1
>C12-C28 Range Hydrocarbons	<b>418</b>	<b>H H3</b>	90.1	38.0	mg/Kg		05/19/23 14:50	05/19/23 23:34	1
>C28-C35 Range Hydrocarbons	<b>86.3</b>	<b>J H H3</b>	90.1	38.0	mg/Kg		05/19/23 14:50	05/19/23 23:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>504</b>		90.1	38.0	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130	05/19/23 14:50	05/19/23 23:34	1
o-Terphenyl (Surr)	104		70 - 130	05/19/23 14:50	05/19/23 23:34	1

**Client Sample ID: 23E2845-49**

**Lab Sample ID: 860-49141-49**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.7	U H H3	91.7	38.7	mg/Kg		05/19/23 14:50	05/19/23 23:53	1
>C12-C28 Range Hydrocarbons	<b>570</b>	<b>H H3</b>	91.7	38.7	mg/Kg		05/19/23 14:50	05/19/23 23:53	1
>C28-C35 Range Hydrocarbons	<b>115</b>	<b>H H3</b>	91.7	38.7	mg/Kg		05/19/23 14:50	05/19/23 23:53	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>685</b>		91.7	38.7	mg/Kg			05/24/23 10:12	1

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# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-49

Lab Sample ID: 860-49141-49

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	05/19/23 14:50	05/19/23 23:53	1
o-Terphenyl (Surr)	104		70 - 130	05/19/23 14:50	05/19/23 23:53	1

## Client Sample ID: 23E2845-50

Lab Sample ID: 860-49141-50

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.4	U H H3	98.0	41.4	mg/Kg		05/19/23 14:50	05/20/23 00:13	1
>C12-C28 Range Hydrocarbons	407	H H3	98.0	41.4	mg/Kg		05/19/23 14:50	05/20/23 00:13	1
>C28-C35 Range Hydrocarbons	102	H H3	98.0	41.4	mg/Kg		05/19/23 14:50	05/20/23 00:13	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>509</b>		98.0	41.4	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/19/23 14:50	05/20/23 00:13	1
o-Terphenyl (Surr)	109		70 - 130	05/19/23 14:50	05/20/23 00:13	1

## Client Sample ID: 23E2845-51

Lab Sample ID: 860-49141-51

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.3	U H H3	93.1	39.3	mg/Kg		05/19/23 14:50	05/20/23 03:34	1
>C12-C28 Range Hydrocarbons	837	H H3	93.1	39.3	mg/Kg		05/19/23 14:50	05/20/23 03:34	1
>C28-C35 Range Hydrocarbons	139	H H3	93.1	39.3	mg/Kg		05/19/23 14:50	05/20/23 03:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>976</b>		93.1	39.3	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130	05/19/23 14:50	05/20/23 03:34	1
o-Terphenyl (Surr)	115		70 - 130	05/19/23 14:50	05/20/23 03:34	1

## Client Sample ID: 23E2845-52

Lab Sample ID: 860-49141-52

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.6	U H H3	91.6	38.6	mg/Kg		05/19/23 14:50	05/20/23 00:34	1
>C12-C28 Range Hydrocarbons	646	H H3	91.6	38.6	mg/Kg		05/19/23 14:50	05/20/23 00:34	1
>C28-C35 Range Hydrocarbons	102	H H3	91.6	38.6	mg/Kg		05/19/23 14:50	05/20/23 00:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>748</b>		91.6	38.6	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	98		70 - 130	05/19/23 14:50	05/20/23 00:34	1
o-Terphenyl (Surr)	105		70 - 130	05/19/23 14:50	05/20/23 00:34	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-53**

**Lab Sample ID: 860-49141-53**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.1	U H H3	90.3	38.1	mg/Kg		05/19/23 14:50	05/20/23 03:54	1
>C12-C28 Range Hydrocarbons	620	H H3	90.3	38.1	mg/Kg		05/19/23 14:50	05/20/23 03:54	1
>C28-C35 Range Hydrocarbons	104	H H3	90.3	38.1	mg/Kg		05/19/23 14:50	05/20/23 03:54	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>724</b>		90.3	38.1	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	104		70 - 130	05/19/23 14:50	05/20/23 03:54	1
o-Terphenyl (Surr)	111		70 - 130	05/19/23 14:50	05/20/23 03:54	1

**Client Sample ID: 23E2845-54**

**Lab Sample ID: 860-49141-54**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.1	U H H3	92.8	39.1	mg/Kg		05/19/23 14:50	05/20/23 04:15	1
>C12-C28 Range Hydrocarbons	618	H H3	92.8	39.1	mg/Kg		05/19/23 14:50	05/20/23 04:15	1
>C28-C35 Range Hydrocarbons	108	H H3	92.8	39.1	mg/Kg		05/19/23 14:50	05/20/23 04:15	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>726</b>		92.8	39.1	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	100		70 - 130	05/19/23 14:50	05/20/23 04:15	1
o-Terphenyl (Surr)	108		70 - 130	05/19/23 14:50	05/20/23 04:15	1

**Client Sample ID: 23E2845-55**

**Lab Sample ID: 860-49141-55**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.2	U H H3	92.9	39.2	mg/Kg		05/19/23 14:50	05/20/23 03:14	1
>C12-C28 Range Hydrocarbons	1350	H H3	92.9	39.2	mg/Kg		05/19/23 14:50	05/20/23 03:14	1
>C28-C35 Range Hydrocarbons	213	H H3	92.9	39.2	mg/Kg		05/19/23 14:50	05/20/23 03:14	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>1560</b>		92.9	39.2	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	128		70 - 130	05/19/23 14:50	05/20/23 03:14	1
o-Terphenyl (Surr)	123		70 - 130	05/19/23 14:50	05/20/23 03:14	1

**Client Sample ID: 23E2845-56**

**Lab Sample ID: 860-49141-56**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.0	U H H3	94.7	40.0	mg/Kg		05/19/23 14:50	05/20/23 00:54	1
>C12-C28 Range Hydrocarbons	328	H H3	94.7	40.0	mg/Kg		05/19/23 14:50	05/20/23 00:54	1
>C28-C35 Range Hydrocarbons	112	H H3	94.7	40.0	mg/Kg		05/19/23 14:50	05/20/23 00:54	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>440</b>		94.7	40.0	mg/Kg			05/24/23 10:12	1

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# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-56

Lab Sample ID: 860-49141-56

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130	05/19/23 14:50	05/20/23 00:54	1
o-Terphenyl (Surr)	104		70 - 130	05/19/23 14:50	05/20/23 00:54	1

## Client Sample ID: 23E2845-57

Lab Sample ID: 860-49141-57

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.3	U H H3	90.7	38.3	mg/Kg		05/19/23 14:50	05/20/23 01:14	1
>C12-C28 Range Hydrocarbons	464	H H3	90.7	38.3	mg/Kg		05/19/23 14:50	05/20/23 01:14	1
>C28-C35 Range Hydrocarbons	99.1	H H3	90.7	38.3	mg/Kg		05/19/23 14:50	05/20/23 01:14	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>563</b>		90.7	38.3	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130	05/19/23 14:50	05/20/23 01:14	1
o-Terphenyl (Surr)	110		70 - 130	05/19/23 14:50	05/20/23 01:14	1

## Client Sample ID: 23E2845-58

Lab Sample ID: 860-49141-58

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.6	U H H3	91.4	38.6	mg/Kg		05/19/23 14:50	05/20/23 01:34	1
>C12-C28 Range Hydrocarbons	795	H H3	91.4	38.6	mg/Kg		05/19/23 14:50	05/20/23 01:34	1
>C28-C35 Range Hydrocarbons	144	H H3	91.4	38.6	mg/Kg		05/19/23 14:50	05/20/23 01:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>939</b>		91.4	38.6	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	121		70 - 130	05/19/23 14:50	05/20/23 01:34	1
o-Terphenyl (Surr)	108		70 - 130	05/19/23 14:50	05/20/23 01:34	1

## Client Sample ID: 23E2845-59

Lab Sample ID: 860-49141-59

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.2	U H H3	90.6	38.2	mg/Kg		05/19/23 14:50	05/20/23 02:14	1
>C12-C28 Range Hydrocarbons	365	H H3	90.6	38.2	mg/Kg		05/19/23 14:50	05/20/23 02:14	1
>C28-C35 Range Hydrocarbons	90.9	H H3	90.6	38.2	mg/Kg		05/19/23 14:50	05/20/23 02:14	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>456</b>		90.6	38.2	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130	05/19/23 14:50	05/20/23 02:14	1
o-Terphenyl (Surr)	109		70 - 130	05/19/23 14:50	05/20/23 02:14	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-60**

**Lab Sample ID: 860-49141-60**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<37.9	U H H3	89.8	37.9	mg/Kg		05/19/23 14:50	05/20/23 02:34	1
>C12-C28 Range Hydrocarbons	547	H H3	89.8	37.9	mg/Kg		05/19/23 14:50	05/20/23 02:34	1
>C28-C35 Range Hydrocarbons	98.1	H H3	89.8	37.9	mg/Kg		05/19/23 14:50	05/20/23 02:34	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>645</b>		89.8	37.9	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/19/23 14:50	05/20/23 02:34	1
o-Terphenyl (Surr)	101		70 - 130	05/19/23 14:50	05/20/23 02:34	1

**Client Sample ID: 23E2845-61**

**Lab Sample ID: 860-49141-61**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.5	U H H3	96.0	40.5	mg/Kg		05/19/23 14:50	05/20/23 02:54	1
>C12-C28 Range Hydrocarbons	1030	H H3	96.0	40.5	mg/Kg		05/19/23 14:50	05/20/23 02:54	1
>C28-C35 Range Hydrocarbons	152	H H3	96.0	40.5	mg/Kg		05/19/23 14:50	05/20/23 02:54	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>1180</b>		96.0	40.5	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	05/19/23 14:50	05/20/23 02:54	1
o-Terphenyl (Surr)	115		70 - 130	05/19/23 14:50	05/20/23 02:54	1

**Client Sample ID: 23E2845-62**

**Lab Sample ID: 860-49141-62**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.7	U H H3	96.5	40.7	mg/Kg		05/22/23 16:49	05/23/23 05:41	1
>C12-C28 Range Hydrocarbons	405	H H3	96.5	40.7	mg/Kg		05/22/23 16:49	05/23/23 05:41	1
>C28-C35 Range Hydrocarbons	71.7	J H H3	96.5	40.7	mg/Kg		05/22/23 16:49	05/23/23 05:41	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>477</b>		96.5	40.7	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130	05/22/23 16:49	05/23/23 05:41	1
o-Terphenyl (Surr)	114		70 - 130	05/22/23 16:49	05/23/23 05:41	1

**Client Sample ID: 23E2845-63**

**Lab Sample ID: 860-49141-63**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<42.0	U H H3	99.6	42.0	mg/Kg		05/22/23 16:49	05/23/23 06:02	1
>C12-C28 Range Hydrocarbons	500	H H3	99.6	42.0	mg/Kg		05/22/23 16:49	05/23/23 06:02	1
>C28-C35 Range Hydrocarbons	77.5	J H H3	99.6	42.0	mg/Kg		05/22/23 16:49	05/23/23 06:02	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>578</b>		99.6	42.0	mg/Kg			05/24/23 10:12	1

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# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-63

Lab Sample ID: 860-49141-63

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/22/23 16:49	05/23/23 06:02	1
o-Terphenyl (Surr)	110		70 - 130	05/22/23 16:49	05/23/23 06:02	1

## Client Sample ID: 23E2845-64

Lab Sample ID: 860-49141-64

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.3	U H H3	90.7	38.3	mg/Kg		05/22/23 16:49	05/23/23 06:22	1
>C12-C28 Range Hydrocarbons	57.6	J H H3	90.7	38.3	mg/Kg		05/22/23 16:49	05/23/23 06:22	1
>C28-C35 Range Hydrocarbons	48.0	J H H3	90.7	38.3	mg/Kg		05/22/23 16:49	05/23/23 06:22	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>106</b>		90.7	38.3	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130	05/22/23 16:49	05/23/23 06:22	1
o-Terphenyl (Surr)	115		70 - 130	05/22/23 16:49	05/23/23 06:22	1

## Client Sample ID: 23E2845-65

Lab Sample ID: 860-49141-65

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.9	U H H3	92.1	38.9	mg/Kg		05/22/23 16:49	05/23/23 06:42	1
>C12-C28 Range Hydrocarbons	408	H H3	92.1	38.9	mg/Kg		05/22/23 16:49	05/23/23 06:42	1
>C28-C35 Range Hydrocarbons	65.5	J H H3	92.1	38.9	mg/Kg		05/22/23 16:49	05/23/23 06:42	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>474</b>		92.1	38.9	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130	05/22/23 16:49	05/23/23 06:42	1
o-Terphenyl (Surr)	116		70 - 130	05/22/23 16:49	05/23/23 06:42	1

## Client Sample ID: 23E2845-66

Lab Sample ID: 860-49141-66

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.4	U H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 07:02	1
>C12-C28 Range Hydrocarbons	317	H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 07:02	1
>C28-C35 Range Hydrocarbons	63.1	J H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 07:02	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>380</b>		93.5	39.4	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130	05/22/23 16:49	05/23/23 07:02	1
o-Terphenyl (Surr)	116		70 - 130	05/22/23 16:49	05/23/23 07:02	1



# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-67**

**Lab Sample ID: 860-49141-67**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<37.7	U H H3	89.4	37.7	mg/Kg		05/22/23 16:49	05/23/23 07:42	1
>C12-C28 Range Hydrocarbons	441	H H3	89.4	37.7	mg/Kg		05/22/23 16:49	05/23/23 07:42	1
>C28-C35 Range Hydrocarbons	67.8	J H H3	89.4	37.7	mg/Kg		05/22/23 16:49	05/23/23 07:42	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>509</b>		89.4	37.7	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	111		70 - 130	05/22/23 16:49	05/23/23 07:42	1
o-Terphenyl (Surr)	120		70 - 130	05/22/23 16:49	05/23/23 07:42	1

**Client Sample ID: 23E2845-68**

**Lab Sample ID: 860-49141-68**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.6	U H H3	91.4	38.6	mg/Kg		05/22/23 16:49	05/23/23 08:02	1
>C12-C28 Range Hydrocarbons	301	H H3	91.4	38.6	mg/Kg		05/22/23 16:49	05/23/23 08:02	1
>C28-C35 Range Hydrocarbons	60.1	J H H3	91.4	38.6	mg/Kg		05/22/23 16:49	05/23/23 08:02	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>361</b>		91.4	38.6	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130	05/22/23 16:49	05/23/23 08:02	1
o-Terphenyl (Surr)	116		70 - 130	05/22/23 16:49	05/23/23 08:02	1

**Client Sample ID: 23E2845-69**

**Lab Sample ID: 860-49141-69**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.3	U H H3	93.1	39.3	mg/Kg		05/22/23 16:49	05/23/23 08:22	1
>C12-C28 Range Hydrocarbons	41.4	J H H3	93.1	39.3	mg/Kg		05/22/23 16:49	05/23/23 08:22	1
>C28-C35 Range Hydrocarbons	<39.3	U H H3	93.1	39.3	mg/Kg		05/22/23 16:49	05/23/23 08:22	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>41.4</b>	<b>J</b>	93.1	39.3	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130	05/22/23 16:49	05/23/23 08:22	1
o-Terphenyl (Surr)	114		70 - 130	05/22/23 16:49	05/23/23 08:22	1

**Client Sample ID: 23E2845-70**

**Lab Sample ID: 860-49141-70**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.9	U H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 08:42	1
>C12-C28 Range Hydrocarbons	310	H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 08:42	1
>C28-C35 Range Hydrocarbons	59.7	J H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 08:42	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>370</b>		94.5	39.9	mg/Kg			05/24/23 10:12	1

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# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-70**

**Lab Sample ID: 860-49141-70**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	106		70 - 130	05/22/23 16:49	05/23/23 08:42	1
o-Terphenyl (Surr)	115		70 - 130	05/22/23 16:49	05/23/23 08:42	1

**Client Sample ID: 23E2845-71**

**Lab Sample ID: 860-49141-71**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.2	U H H3	97.7	41.2	mg/Kg		05/22/23 16:49	05/23/23 09:03	1
>C12-C28 Range Hydrocarbons	350	H H3	97.7	41.2	mg/Kg		05/22/23 16:49	05/23/23 09:03	1
>C28-C35 Range Hydrocarbons	80.8	J H H3	97.7	41.2	mg/Kg		05/22/23 16:49	05/23/23 09:03	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>431</b>		97.7	41.2	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	124		70 - 130	05/22/23 16:49	05/23/23 09:03	1
o-Terphenyl (Surr)	125		70 - 130	05/22/23 16:49	05/23/23 09:03	1

**Client Sample ID: 23E2845-72**

**Lab Sample ID: 860-49141-72**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<38.6	U H H3	91.6	38.6	mg/Kg		05/22/23 16:49	05/23/23 09:23	1
>C12-C28 Range Hydrocarbons	575	H H3	91.6	38.6	mg/Kg		05/22/23 16:49	05/23/23 09:23	1
>C28-C35 Range Hydrocarbons	79.3	J H H3	91.6	38.6	mg/Kg		05/22/23 16:49	05/23/23 09:23	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>654</b>		91.6	38.6	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	107		70 - 130	05/22/23 16:49	05/23/23 09:23	1
o-Terphenyl (Surr)	105		70 - 130	05/22/23 16:49	05/23/23 09:23	1

**Client Sample ID: 23E2845-73**

**Lab Sample ID: 860-49141-73**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.1	U H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 09:43	1
>C12-C28 Range Hydrocarbons	368	H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 09:43	1
>C28-C35 Range Hydrocarbons	70.7	J H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 09:43	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>439</b>		95.1	40.1	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	108		70 - 130	05/22/23 16:49	05/23/23 09:43	1
o-Terphenyl (Surr)	117		70 - 130	05/22/23 16:49	05/23/23 09:43	1

# Client Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-74**

**Lab Sample ID: 860-49141-74**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.1	U H H3	97.5	41.1	mg/Kg		05/22/23 16:49	05/23/23 10:23	1
>C12-C28 Range Hydrocarbons	492	H H3	97.5	41.1	mg/Kg		05/22/23 16:49	05/23/23 10:23	1
>C28-C35 Range Hydrocarbons	49.8	J H H3	97.5	41.1	mg/Kg		05/22/23 16:49	05/23/23 10:23	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>542</b>		97.5	41.1	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130	05/22/23 16:49	05/23/23 10:23	1
o-Terphenyl (Surr)	106		70 - 130	05/22/23 16:49	05/23/23 10:23	1

**Client Sample ID: 23E2845-75**

**Lab Sample ID: 860-49141-75**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.1	U H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 15:26	1
>C12-C28 Range Hydrocarbons	452	H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 15:26	1
>C28-C35 Range Hydrocarbons	115	H H3	95.1	40.1	mg/Kg		05/22/23 16:49	05/23/23 15:26	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>567</b>		95.1	40.1	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	102		70 - 130	05/22/23 16:49	05/23/23 15:26	1
o-Terphenyl (Surr)	111		70 - 130	05/22/23 16:49	05/23/23 15:26	1

**Client Sample ID: 23E2845-76**

**Lab Sample ID: 860-49141-76**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.4	U H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 04:41	1
>C12-C28 Range Hydrocarbons	345	H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 04:41	1
>C28-C35 Range Hydrocarbons	64.7	J H H3	93.5	39.4	mg/Kg		05/22/23 16:49	05/23/23 04:41	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>410</b>		93.5	39.4	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	108		70 - 130	05/22/23 16:49	05/23/23 04:41	1
o-Terphenyl (Surr)	106		70 - 130	05/22/23 16:49	05/23/23 04:41	1

**Client Sample ID: 23E2845-77**

**Lab Sample ID: 860-49141-77**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

**Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.9	U H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 04:21	1
>C12-C28 Range Hydrocarbons	411	H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 04:21	1
>C28-C35 Range Hydrocarbons	82.1	J H H3	94.5	39.9	mg/Kg		05/22/23 16:49	05/23/23 04:21	1
<b>Total Petroleum Hydrocarbons (C6-C35)</b>	<b>493</b>		94.5	39.9	mg/Kg			05/24/23 10:12	1

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# Client Sample Results

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-77

Lab Sample ID: 860-49141-77

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	101		70 - 130	05/22/23 16:49	05/23/23 04:21	1
o-Terphenyl (Surr)	110		70 - 130	05/22/23 16:49	05/23/23 04:21	1

## Client Sample ID: 23E2845-78

Lab Sample ID: 860-49141-78

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<40.9	U H H3	96.9	40.9	mg/Kg		05/22/23 16:49	05/23/23 05:01	1
>C12-C28 Range Hydrocarbons	359	H H3	96.9	40.9	mg/Kg		05/22/23 16:49	05/23/23 05:01	1
>C28-C35 Range Hydrocarbons	68.2	J H H3	96.9	40.9	mg/Kg		05/22/23 16:49	05/23/23 05:01	1
Total Petroleum Hydrocarbons (C6-C35)	427		96.9	40.9	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	105		70 - 130	05/22/23 16:49	05/23/23 05:01	1
o-Terphenyl (Surr)	115		70 - 130	05/22/23 16:49	05/23/23 05:01	1

## Client Sample ID: 23E2845-79

Lab Sample ID: 860-49141-79

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<41.5	U H H3	98.2	41.5	mg/Kg		05/22/23 16:49	05/23/23 05:21	1
>C12-C28 Range Hydrocarbons	300	H H3	98.2	41.5	mg/Kg		05/22/23 16:49	05/23/23 05:21	1
>C28-C35 Range Hydrocarbons	77.4	J H H3	98.2	41.5	mg/Kg		05/22/23 16:49	05/23/23 05:21	1
Total Petroleum Hydrocarbons (C6-C35)	377		98.2	41.5	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	112		70 - 130	05/22/23 16:49	05/23/23 05:21	1
o-Terphenyl (Surr)	122		70 - 130	05/22/23 16:49	05/23/23 05:21	1

## Client Sample ID: 23E2845-80

Lab Sample ID: 860-49141-80

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

### Method: TCEQ TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<39.8	U H H3	94.3	39.8	mg/Kg		05/23/23 15:00	05/24/23 00:45	1
>C12-C28 Range Hydrocarbons	<39.8	U H H3	94.3	39.8	mg/Kg		05/23/23 15:00	05/24/23 00:45	1
>C28-C35 Range Hydrocarbons	<39.8	U H H3	94.3	39.8	mg/Kg		05/23/23 15:00	05/24/23 00:45	1
Total Petroleum Hydrocarbons (C6-C35)	<39.8	U	94.3	39.8	mg/Kg			05/24/23 10:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	84		70 - 130	05/23/23 15:00	05/24/23 00:45	1
o-Terphenyl (Surr)	87		70 - 130	05/23/23 15:00	05/24/23 00:45	1

# Surrogate Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: Organotins SIM - Organotins (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	TPTT (39-150)			
860-49141-1	23E2845-1	13 S1-			
860-49141-2	23E2845-2	12 S1-			
860-49141-3	23E2845-3	8 S1-			
860-49141-4	23E2845-4	26 S1-			
860-49141-5	23E2845-5	33 S1-			
860-49141-41	23E2845-41	146			
860-49141-42	23E2845-42	87			
860-49141-42 MS	23E2845-42	105			
860-49141-42 MSD	23E2845-42	116			
860-49141-43	23E2845-43	146			
860-49141-44	23E2845-44	133			
860-49141-45	23E2845-45	103			
LCS 570-330477/2-A	Lab Control Sample	101			
LCS 570-330818/2-A	Lab Control Sample	101			
LCSD 570-330477/3-A	Lab Control Sample Dup	107			
LCSD 570-330818/3-A	Lab Control Sample Dup	94			
MB 570-330477/1-A	Method Blank	76			
MB 570-330818/1-A	Method Blank	99			
MB 570-333420/1-A	Method Blank	105			

**Surrogate Legend**

TPTT = Triptyl/tin

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO (70-130)	OTPH (70-130)
860-49141-1	23E2845-1	100	100
860-49141-1 MS	23E2845-1	98	103
860-49141-1 MSD	23E2845-1	100	102
860-49141-2	23E2845-2	98	101
860-49141-3	23E2845-3	99	102
860-49141-4	23E2845-4	102	102
860-49141-5	23E2845-5	98	100
860-49141-6	23E2845-6	104	106
860-49141-7	23E2845-7	115	117
860-49141-7 MS	23E2845-7	113	108
860-49141-7 MSD	23E2845-7	104	103
860-49141-8	23E2845-8	104	106
860-49141-9	23E2845-9	104	103
860-49141-10	23E2845-10	99	89
860-49141-11	23E2845-11	100	95
860-49141-12	23E2845-12	99	106
860-49141-12 MS	23E2845-12	93	101
860-49141-12 MSD	23E2845-12	97	103
860-49141-13	23E2845-13	102	104
860-49141-14	23E2845-14	99	101
860-49141-15	23E2845-15	100	104

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# Surrogate Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		1CO (70-130)	OTPH (70-130)
860-49141-16	23E2845-16	100	104
860-49141-17	23E2845-17	98	102
860-49141-18	23E2845-18	104	98
860-49141-19	23E2845-19	102	95
860-49141-20	23E2845-20	97	97
860-49141-21	23E2845-21	107	106
860-49141-22	23E2845-22	130	117
860-49141-23	23E2845-23	126	120
860-49141-24	23E2845-24	126	110
860-49141-25	23E2845-25	124	116
860-49141-26	23E2845-26	127	121
860-49141-27	23E2845-27	112	110
860-49141-28	23E2845-28	121	119
860-49141-29	23E2845-29	132 S1+	127
860-49141-30	23E2845-30	123	119
860-49141-31	23E2845-31	112	110
860-49141-32	23E2845-32	118	121
860-49141-33	23E2845-33	109	105
860-49141-34	23E2845-34	126	103
860-49141-35	23E2845-35	133 S1+	120
860-49141-36	23E2845-36	115	104
860-49141-37	23E2845-37	110	119
860-49141-37 MS	23E2845-37	99	107
860-49141-37 MSD	23E2845-37	95	104
860-49141-38	23E2845-38	123	126
860-49141-39	23E2845-39	114	116
860-49141-40	23E2845-40	128	130
860-49141-41	23E2845-41	94	103
860-49141-42	23E2845-42	94	99
860-49141-42 MS	23E2845-42	93	102
860-49141-42 MSD	23E2845-42	94	101
860-49141-43	23E2845-43	99	107
860-49141-44	23E2845-44	96	105
860-49141-45	23E2845-45	102	107
860-49141-46	23E2845-46	136 S1+	123
860-49141-47	23E2845-47	101	107
860-49141-48	23E2845-48	99	104
860-49141-49	23E2845-49	112	104
860-49141-50	23E2845-50	101	109
860-49141-51	23E2845-51	106	115
860-49141-52	23E2845-52	98	105
860-49141-53	23E2845-53	104	111
860-49141-54	23E2845-54	100	108
860-49141-55	23E2845-55	128	123
860-49141-56	23E2845-56	105	104
860-49141-57	23E2845-57	102	110
860-49141-58	23E2845-58	121	108
860-49141-59	23E2845-59	102	109
860-49141-60	23E2845-60	101	101
860-49141-61	23E2845-61	112	115

# Surrogate Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO (70-130)	OTPH (70-130)
860-49141-62	23E2845-62	105	114
860-49141-63	23E2845-63	101	110
860-49141-64	23E2845-64	107	115
860-49141-65	23E2845-65	109	116
860-49141-66	23E2845-66	107	116
860-49141-67	23E2845-67	111	120
860-49141-68	23E2845-68	107	116
860-49141-69	23E2845-69	106	114
860-49141-70	23E2845-70	106	115
860-49141-71	23E2845-71	124	125
860-49141-72	23E2845-72	107	105
860-49141-73	23E2845-73	108	117
860-49141-74	23E2845-74	109	106
860-49141-75	23E2845-75	102	111
860-49141-76	23E2845-76	108	106
860-49141-77	23E2845-77	101	110
860-49141-78	23E2845-78	105	115
860-49141-79	23E2845-79	112	122
860-49141-80	23E2845-80	84	87
LCS 860-103659/2-A	Lab Control Sample	99	103
LCS 860-103921/2-A	Lab Control Sample	120	127
LCS 860-104095/2-A	Lab Control Sample	97	107
LCS 860-104348/2-A	Lab Control Sample	101	107
LCS 860-104498/2-A	Lab Control Sample	92	105
LCSD 860-103659/3-A	Lab Control Sample Dup	96	101
LCSD 860-103921/3-A	Lab Control Sample Dup	115	125
LCSD 860-104095/3-A	Lab Control Sample Dup	99	106
LCSD 860-104348/3-A	Lab Control Sample Dup	105	113
LCSD 860-104498/3-A	Lab Control Sample Dup	93	100
MB 860-103659/1-A	Method Blank	103	104
MB 860-103921/1-A	Method Blank	119	127
MB 860-104095/1-A	Method Blank	99	107
MB 860-104348/1-A	Method Blank	93	101
MB 860-104498/1-A	Method Blank	98	105

#### Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: Organotins SIM - Organotins (GC/MS SIM)

**Lab Sample ID: MB 570-330477/1-A**  
**Matrix: Solid**  
**Analysis Batch: 333269**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 330477**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrabutyltin	<1.62	U	3.00	1.62	ug/Kg		05/22/23 13:49	05/31/23 17:02	1
Tributyltin	<1.39	U	3.00	1.39	ug/Kg		05/22/23 13:49	05/31/23 17:02	1
Dibutyltin	<1.27	U	3.00	1.27	ug/Kg		05/22/23 13:49	05/31/23 17:02	1
Monobutyltin	<0.536	U	3.00	0.536	ug/Kg		05/22/23 13:49	05/31/23 17:02	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Tripentyltin	76		39 - 150			05/22/23 13:49	05/31/23 17:02	1	

**Lab Sample ID: LCS 570-330477/2-A**  
**Matrix: Solid**  
**Analysis Batch: 333269**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 330477**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Tetrabutyltin	20.0	22.49		ug/Kg		112	10 - 153
Tributyltin	20.0	18.77		ug/Kg		94	10 - 126
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
Tripentyltin	101		39 - 150				

**Lab Sample ID: LCSD 570-330477/3-A**  
**Matrix: Solid**  
**Analysis Batch: 333269**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 330477**

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	
		Result	Qualifier					RPD	Limit
Tetrabutyltin	20.0	23.04		ug/Kg		115	10 - 153	2	30
Tributyltin	20.0	19.08		ug/Kg		95	10 - 126	2	30
LCSD LCSD									
Surrogate	%Recovery	Qualifier	Limits						
Tripentyltin	107		39 - 150						

**Lab Sample ID: MB 570-330818/1-A**  
**Matrix: Solid**  
**Analysis Batch: 331907**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 330818**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrabutyltin	<0.0162	U	0.0300	0.0162	ug/Kg		05/22/23 10:08	05/25/23 16:31	1
Tributyltin	<0.0139	U	0.0300	0.0139	ug/Kg		05/22/23 10:08	05/25/23 16:31	1
Dibutyltin	<0.0127	U	0.0300	0.0127	ug/Kg		05/22/23 10:08	05/25/23 16:31	1
Monobutyltin	<0.00536	U	0.0300	0.00536	ug/Kg		05/22/23 10:08	05/25/23 16:31	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Tripentyltin	99		39 - 150			05/22/23 10:08	05/25/23 16:31	1	



# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-330818/2-A

Matrix: Solid

Analysis Batch: 335191

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 330818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Tetrabutyltin	0.200	0.2417		ug/Kg		121	10 - 153		
Tributyltin	0.200	0.1898		ug/Kg		95	10 - 126		
		<b>LCS</b>	<b>LCS</b>						
Surrogate	%Recovery	Qualifier	Limits						
Tripentyltin	101		39 - 150						

Lab Sample ID: LCSD 570-330818/3-A

Matrix: Solid

Analysis Batch: 335191

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 330818

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	
									RPD	Limit
Tetrabutyltin	0.200	0.2278		ug/Kg		114	10 - 153	6	30	
Tributyltin	0.200	0.1877		ug/Kg		94	10 - 126	1	30	
		<b>LCSD</b>	<b>LCSD</b>							
Surrogate	%Recovery	Qualifier	Limits							
Tripentyltin	94		39 - 150							

Lab Sample ID: MB 570-333420/1-A

Matrix: Solid

Analysis Batch: 335580

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 333420

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
Tetrabutyltin	<1.62	U	3.00	1.62	ug/Kg		05/31/23 16:43	06/08/23 17:50		1	
Tributyltin	<1.39	U	3.00	1.39	ug/Kg		05/31/23 16:43	06/08/23 17:50		1	
Dibutyltin	<1.27	U	3.00	1.27	ug/Kg		05/31/23 16:43	06/08/23 17:50		1	
Monobutyltin	<0.536	U	3.00	0.536	ug/Kg		05/31/23 16:43	06/08/23 17:50		1	
		<b>MB MB</b>									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac					
Tripentyltin	105		39 - 150	05/31/23 16:43	06/08/23 17:50	1					

Lab Sample ID: 860-49141-42 MS

Matrix: Solid

Analysis Batch: 335580

Client Sample ID: 23E2845-42

Prep Type: Total/NA

Prep Batch: 333420

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits	
	Result	Qualifier		Result	Qualifier					
Tetrabutyltin	<1.62	U H H3	40.0	44.15	H H3	ug/Kg		110	10 - 140	
Tributyltin	<1.39	U H H3	40.0	34.14	H H3	ug/Kg		85	10 - 135	
		<b>MS MS</b>								
Surrogate	%Recovery	Qualifier	Limits							
Tripentyltin	105		39 - 150							

Lab Sample ID: 860-49141-42 MSD

Matrix: Solid

Analysis Batch: 335580

Client Sample ID: 23E2845-42

Prep Type: Total/NA

Prep Batch: 333420

Analyte	Sample Sample		Spike Added	MSD MSD		Unit	D	%Rec	%Rec Limits		RPD	
	Result	Qualifier		Result	Qualifier				RPD	Limit		
Tetrabutyltin	<1.62	U H H3	42.6	49.52	H H3	ug/Kg		116	10 - 140	11	40	

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# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

**Lab Sample ID: 860-49141-42 MSD**  
**Matrix: Solid**  
**Analysis Batch: 335580**

**Client Sample ID: 23E2845-42**  
**Prep Type: Total/NA**  
**Prep Batch: 333420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tributyltin	<1.39	U H H3	42.6	39.02	H H3	ug/Kg		92	10 - 135	13	40
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
Tripentyltin	116		39 - 150								

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

**Lab Sample ID: MB 860-103659/1-A**  
**Matrix: Solid**  
**Analysis Batch: 103602**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 103659**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/17/23 12:40	05/17/23 21:31	1
>C12-C28 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/17/23 12:40	05/17/23 21:31	1
>C28-C35 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/17/23 12:40	05/17/23 21:31	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctane (Surr)	103		70 - 130				05/17/23 12:40	05/17/23 21:31	1
o-Terphenyl (Surr)	104		70 - 130				05/17/23 12:40	05/17/23 21:31	1

**Lab Sample ID: LCS 860-103659/2-A**  
**Matrix: Solid**  
**Analysis Batch: 103602**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 103659**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C6-C12 Range Hydrocarbons	999	1016		mg/Kg		102	75 - 125
>C12-C28 Range Hydrocarbons	997	1132		mg/Kg		114	75 - 125
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
1-Chlorooctane (Surr)	99		70 - 130				
o-Terphenyl (Surr)	103		70 - 130				

**Lab Sample ID: LCSD 860-103659/3-A**  
**Matrix: Solid**  
**Analysis Batch: 103602**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 103659**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6-C12 Range Hydrocarbons	999	984.7		mg/Kg		99	75 - 125	3	20
>C12-C28 Range Hydrocarbons	997	1093		mg/Kg		110	75 - 125	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1-Chlorooctane (Surr)	96		70 - 130						
o-Terphenyl (Surr)	101		70 - 130						

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: 860-49141-1 MS**

**Matrix: Solid**

**Analysis Batch: 103602**

**Client Sample ID: 23E2845-1**

**Prep Type: Total/NA**

**Prep Batch: 103659**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	
C6-C12 Range Hydrocarbons	<38.3	U H H3	1820	1840	H H3	mg/Kg		101	75 - 125		
>C12-C28 Range Hydrocarbons	97.1	H H3	1810	2183	H H3	mg/Kg		115	75 - 125		
		<b>MS</b>	<b>MS</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1-Chlorooctane (Surr)	98		70 - 130								
o-Terphenyl (Surr)	103		70 - 130								

**Lab Sample ID: 860-49141-1 MSD**

**Matrix: Solid**

**Analysis Batch: 103602**

**Client Sample ID: 23E2845-1**

**Prep Type: Total/NA**

**Prep Batch: 103659**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	Limits	RPD	Limit
C6-C12 Range Hydrocarbons	<38.3	U H H3	1930	1950	H H3	mg/Kg		101	75 - 125		6	20
>C12-C28 Range Hydrocarbons	97.1	H H3	1920	2317	H H3	mg/Kg		116	75 - 125		6	20
		<b>MSD</b>	<b>MSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>									
1-Chlorooctane (Surr)	100		70 - 130									
o-Terphenyl (Surr)	102		70 - 130									

**Lab Sample ID: MB 860-103921/1-A**

**Matrix: Solid**

**Analysis Batch: 103819**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 103921**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
C6-C12 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/18/23 15:59	05/18/23 19:46			1
>C12-C28 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/18/23 15:59	05/18/23 19:46			1
>C28-C35 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/18/23 15:59	05/18/23 19:46			1
		<b>MB</b>	<b>MB</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>		
1-Chlorooctane (Surr)	119		70 - 130				05/18/23 15:59	05/18/23 19:46	1		
o-Terphenyl (Surr)	127		70 - 130				05/18/23 15:59	05/18/23 19:46	1		

**Lab Sample ID: LCS 860-103921/2-A**

**Matrix: Solid**

**Analysis Batch: 103819**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 103921**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec		
		Result	Qualifier				Limits	Limits	
C6-C12 Range Hydrocarbons	999	1013		mg/Kg		101	75 - 125		
>C12-C28 Range Hydrocarbons	997	1121		mg/Kg		112	75 - 125		
		<b>LCS</b>	<b>LCS</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1-Chlorooctane (Surr)	120		70 - 130						
o-Terphenyl (Surr)	127		70 - 130						

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: LCSD 860-103921/3-A**

**Matrix: Solid**

**Analysis Batch: 103819**

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

**Prep Type: Total/NA**

**Prep Batch: 103921**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
C6-C12 Range Hydrocarbons	999	971.6		mg/Kg		97	75 - 125	4	20	
>C12-C28 Range Hydrocarbons	997	1097		mg/Kg		110	75 - 125	2	20	
<b>LCSD LCSD</b>										
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
1-Chlorooctane (Surr)	115		70 - 130							
o-Terphenyl (Surr)	125		70 - 130							

**Lab Sample ID: 860-49141-7 MS**

**Matrix: Solid**

**Analysis Batch: 103819**

**Client Sample ID: 23E2845-7**

**Prep Type: Total/NA**

**Prep Batch: 103921**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec		Limit
									Limits	RPD	
C6-C12 Range Hydrocarbons	<41.2	U H H3	2000	1932	H H3	mg/Kg		97	75 - 125		
>C12-C28 Range Hydrocarbons	363	H H3	1990	2513	H H3	mg/Kg		108	75 - 125		
<b>MS MS</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1-Chlorooctane (Surr)	113		70 - 130								
o-Terphenyl (Surr)	108		70 - 130								

**Lab Sample ID: 860-49141-7 MSD**

**Matrix: Solid**

**Analysis Batch: 103819**

**Client Sample ID: 23E2845-7**

**Prep Type: Total/NA**

**Prep Batch: 103921**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		Limit
									Limits	RPD	
C6-C12 Range Hydrocarbons	<41.2	U H H3	1950	1748	H H3	mg/Kg		90	75 - 125	10	20
>C12-C28 Range Hydrocarbons	363	H H3	1950	2359	H H3	mg/Kg		102	75 - 125	6	20
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1-Chlorooctane (Surr)	104		70 - 130								
o-Terphenyl (Surr)	103		70 - 130								

**Lab Sample ID: MB 860-104095/1-A**

**Matrix: Solid**

**Analysis Batch: 104022**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 104095**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
										C6-C12 Range Hydrocarbons
>C12-C28 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/19/23 14:49	05/19/23 19:31	1	
>C28-C35 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/19/23 14:49	05/19/23 19:31	1	
<b>MB MB</b>										
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>				
1-Chlorooctane (Surr)	99		70 - 130	05/19/23 14:49	05/19/23 19:31	1				
o-Terphenyl (Surr)	107		70 - 130	05/19/23 14:49	05/19/23 19:31	1				

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: LCS 860-104095/2-A**

**Matrix: Solid**

**Analysis Batch: 104022**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 104095**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
							Lower	Upper
C6-C12 Range Hydrocarbons	999	979.8		mg/Kg		98	75	125
>C12-C28 Range Hydrocarbons	997	1101		mg/Kg		110	75	125
<b>LCS LCS</b>								
Surrogate	%Recovery	Qualifier	Limits					
1-Chlorooctane (Surr)	97		70 - 130					
o-Terphenyl (Surr)	107		70 - 130					

**Lab Sample ID: LCSD 860-104095/3-A**

**Matrix: Solid**

**Analysis Batch: 104022**

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

**Prep Type: Total/NA**

**Prep Batch: 104095**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
							Lower	Upper	RPD	Limit
C6-C12 Range Hydrocarbons	999	996.1		mg/Kg		100	75	125	2	20
>C12-C28 Range Hydrocarbons	997	1106		mg/Kg		111	75	125	0	20
<b>LCSD LCSD</b>										
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane (Surr)	99		70 - 130							
o-Terphenyl (Surr)	106		70 - 130							

**Lab Sample ID: 860-49141-12 MS**

**Matrix: Solid**

**Analysis Batch: 104022**

**Client Sample ID: 23E2845-12**

**Prep Type: Total/NA**

**Prep Batch: 104095**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
									Lower	Upper
C6-C12 Range Hydrocarbons	<42.0	U H H3	1990	1902	H H3	mg/Kg		95	75	125
>C12-C28 Range Hydrocarbons	2580	H H3	1990	4730	H H3	mg/Kg		108	75	125
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane (Surr)	93		70 - 130							
o-Terphenyl (Surr)	101		70 - 130							

**Lab Sample ID: 860-49141-12 MSD**

**Matrix: Solid**

**Analysis Batch: 104022**

**Client Sample ID: 23E2845-12**

**Prep Type: Total/NA**

**Prep Batch: 104095**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
									Lower	Upper	RPD	Limit
C6-C12 Range Hydrocarbons	<42.0	U H H3	1980	1946	H H3	mg/Kg		98	75	125	2	20
>C12-C28 Range Hydrocarbons	2580	H H3	1980	5016	H H3	mg/Kg		123	75	125	6	20
<b>MSD MSD</b>												
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane (Surr)	97		70 - 130									
o-Terphenyl (Surr)	103		70 - 130									

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: MB 860-104348/1-A**  
**Matrix: Solid**  
**Analysis Batch: 104240**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 104348**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C6-C12 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/22/23 16:49	05/22/23 22:39	1
>C12-C28 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/22/23 16:49	05/22/23 22:39	1
>C28-C35 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/22/23 16:49	05/22/23 22:39	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	93		70 - 130				05/22/23 16:49	05/22/23 22:39	1
o-Terphenyl (Surr)	101		70 - 130				05/22/23 16:49	05/22/23 22:39	1

**Lab Sample ID: LCS 860-104348/2-A**  
**Matrix: Solid**  
**Analysis Batch: 104240**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 104348**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits		
		Result	Qualifier				Limits		
C6-C12 Range Hydrocarbons	999	1014		mg/Kg		101	75 - 125		
>C12-C28 Range Hydrocarbons	997	1083		mg/Kg		109	75 - 125		
LCS LCS									
Surrogate	%Recovery	Qualifier	Limits						
1-Chlorooctane (Surr)	101		70 - 130						
o-Terphenyl (Surr)	107		70 - 130						

**Lab Sample ID: LCSD 860-104348/3-A**  
**Matrix: Solid**  
**Analysis Batch: 104240**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 104348**

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits		RPD		
		Result	Qualifier				Limits		RPD	Limit	
C6-C12 Range Hydrocarbons	999	1047		mg/Kg		105	75 - 125		3	20	
>C12-C28 Range Hydrocarbons	997	1129		mg/Kg		113	75 - 125		4	20	
LCSD LCSD											
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane (Surr)	105		70 - 130								
o-Terphenyl (Surr)	113		70 - 130								

**Lab Sample ID: 860-49141-37 MS**  
**Matrix: Solid**  
**Analysis Batch: 104453**

**Client Sample ID: 23E2845-37**  
**Prep Type: Total/NA**  
**Prep Batch: 104348**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits		
				Result	Qualifier				Limits		
C6-C12 Range Hydrocarbons	<40.7	U H H3	1970	1981	H H3	mg/Kg		100	75 - 125		
>C12-C28 Range Hydrocarbons	85.9	J H F2 H3 F1	1970	4263	H F1 H3	mg/Kg		212	75 - 125		
MS MS											
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane (Surr)	99		70 - 130								
o-Terphenyl (Surr)	107		70 - 130								

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: 860-49141-37 MSD**

**Matrix: Solid**

**Analysis Batch: 104453**

**Client Sample ID: 23E2845-37**

**Prep Type: Total/NA**

**Prep Batch: 104348**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
C6-C12 Range Hydrocarbons	<40.7	U H H3	1910	1852	H H3	mg/Kg		97	75 - 125	7	20
>C12-C28 Range Hydrocarbons	85.9	J H F2 H3 F1	1910	2170	H H3 F2	mg/Kg		109	75 - 125	65	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
1-Chlorooctane (Surr)	95		70 - 130								
o-Terphenyl (Surr)	104		70 - 130								

**Lab Sample ID: MB 860-104498/1-A**

**Matrix: Solid**

**Analysis Batch: 104641**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 104498**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C6-C12 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/23/23 15:00	05/24/23 14:59	1
>C12-C28 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/23/23 15:00	05/24/23 14:59	1
>C28-C35 Range Hydrocarbons	<21.1	U	50.0	21.1	mg/Kg		05/23/23 15:00	05/24/23 14:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctane (Surr)	98		70 - 130				05/23/23 15:00	05/24/23 14:59	1
o-Terphenyl (Surr)	105		70 - 130				05/23/23 15:00	05/24/23 14:59	1

**Lab Sample ID: LCS 860-104498/2-A**

**Matrix: Solid**

**Analysis Batch: 104643**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 104498**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
C6-C12 Range Hydrocarbons	996	966.5		mg/Kg		97	75 - 125		
>C12-C28 Range Hydrocarbons	998	1090		mg/Kg		109	75 - 125		
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1-Chlorooctane (Surr)	92		70 - 130						
o-Terphenyl (Surr)	105		70 - 130						

**Lab Sample ID: LCSD 860-104498/3-A**

**Matrix: Solid**

**Analysis Batch: 104643**

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

**Prep Type: Total/NA**

**Prep Batch: 104498**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier				Limits		
C6-C12 Range Hydrocarbons	996	985.8		mg/Kg		99	75 - 125	2	20
>C12-C28 Range Hydrocarbons	998	1060		mg/Kg		106	75 - 125	3	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
1-Chlorooctane (Surr)	93		70 - 130						
o-Terphenyl (Surr)	100		70 - 130						

# QC Sample Results

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

**Lab Sample ID: 860-49141-42 MS**

**Matrix: Solid**

**Analysis Batch: 104643**

**Client Sample ID: 23E2845-42**

**Prep Type: Total/NA**

**Prep Batch: 104498**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
C6-C12 Range Hydrocarbons	<39.2	U H H3	498	482.3	H H3	mg/Kg		97	75 - 125	
>C12-C28 Range Hydrocarbons	40.3	J H H3	499	544.6	H H3	mg/Kg		101	75 - 125	
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane (Surr)	93		70 - 130							
o-Terphenyl (Surr)	102		70 - 130							

**Lab Sample ID: 860-49141-42 MSD**

**Matrix: Solid**

**Analysis Batch: 104643**

**Client Sample ID: 23E2845-42**

**Prep Type: Total/NA**

**Prep Batch: 104498**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
C6-C12 Range Hydrocarbons	<39.2	U H H3	497	488.7	H H3	mg/Kg		98	75 - 125		1	20
>C12-C28 Range Hydrocarbons	40.3	J H H3	498	544.8	H H3	mg/Kg		101	75 - 125		0	20
<b>MSD MSD</b>												
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane (Surr)	94		70 - 130									
o-Terphenyl (Surr)	101		70 - 130									



# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC/MS Semi VOA

### Prep Batch: 330477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-1	23E2845-1	Total/NA	Solid	Organotin Prep	
860-49141-2	23E2845-2	Total/NA	Solid	Organotin Prep	
860-49141-3	23E2845-3	Total/NA	Solid	Organotin Prep	
860-49141-4	23E2845-4	Total/NA	Solid	Organotin Prep	
860-49141-5	23E2845-5	Total/NA	Solid	Organotin Prep	
MB 570-330477/1-A	Method Blank	Total/NA	Solid	Organotin Prep	
LCS 570-330477/2-A	Lab Control Sample	Total/NA	Solid	Organotin Prep	
LCSD 570-330477/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin Prep	

### Prep Batch: 330818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-330818/1-A	Method Blank	Total/NA	Solid	Organotin	
LCS 570-330818/2-A	Lab Control Sample	Total/NA	Solid	Organotin	
LCSD 570-330818/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin	

### Analysis Batch: 331907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-330818/1-A	Method Blank	Total/NA	Solid	Organotins SIM	330818

### Analysis Batch: 333269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-1	23E2845-1	Total/NA	Solid	Organotins SIM	330477
860-49141-2	23E2845-2	Total/NA	Solid	Organotins SIM	330477
860-49141-3	23E2845-3	Total/NA	Solid	Organotins SIM	330477
860-49141-4	23E2845-4	Total/NA	Solid	Organotins SIM	330477
860-49141-5	23E2845-5	Total/NA	Solid	Organotins SIM	330477
MB 570-330477/1-A	Method Blank	Total/NA	Solid	Organotins SIM	330477
LCS 570-330477/2-A	Lab Control Sample	Total/NA	Solid	Organotins SIM	330477
LCSD 570-330477/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins SIM	330477

### Prep Batch: 333420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-41	23E2845-41	Total/NA	Solid	Organotin Prep	
860-49141-42	23E2845-42	Total/NA	Solid	Organotin Prep	
860-49141-43	23E2845-43	Total/NA	Solid	Organotin Prep	
860-49141-44	23E2845-44	Total/NA	Solid	Organotin Prep	
860-49141-45	23E2845-45	Total/NA	Solid	Organotin Prep	
MB 570-333420/1-A	Method Blank	Total/NA	Solid	Organotin Prep	
860-49141-42 MS	23E2845-42	Total/NA	Solid	Organotin Prep	
860-49141-42 MSD	23E2845-42	Total/NA	Solid	Organotin Prep	

### Analysis Batch: 335191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-330818/2-A	Lab Control Sample	Total/NA	Solid	Organotins SIM	330818
LCSD 570-330818/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins SIM	330818

### Analysis Batch: 335580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-41	23E2845-41	Total/NA	Solid	Organotins SIM	333420
860-49141-42	23E2845-42	Total/NA	Solid	Organotins SIM	333420
860-49141-43	23E2845-43	Total/NA	Solid	Organotins SIM	333420

# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 335580 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-44	23E2845-44	Total/NA	Solid	Organotins SIM	333420
860-49141-45	23E2845-45	Total/NA	Solid	Organotins SIM	333420
MB 570-333420/1-A	Method Blank	Total/NA	Solid	Organotins SIM	333420
860-49141-42 MS	23E2845-42	Total/NA	Solid	Organotins SIM	333420
860-49141-42 MSD	23E2845-42	Total/NA	Solid	Organotins SIM	333420

## GC Semi VOA

### Analysis Batch: 103602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-1	23E2845-1	Total/NA	Solid	TX 1005	103659
860-49141-2	23E2845-2	Total/NA	Solid	TX 1005	103659
860-49141-3	23E2845-3	Total/NA	Solid	TX 1005	103659
860-49141-4	23E2845-4	Total/NA	Solid	TX 1005	103659
860-49141-5	23E2845-5	Total/NA	Solid	TX 1005	103659
860-49141-6	23E2845-6	Total/NA	Solid	TX 1005	103659
860-49141-8	23E2845-8	Total/NA	Solid	TX 1005	103659
860-49141-9	23E2845-9	Total/NA	Solid	TX 1005	103659
860-49141-10	23E2845-10	Total/NA	Solid	TX 1005	103659
860-49141-11	23E2845-11	Total/NA	Solid	TX 1005	103659
860-49141-13	23E2845-13	Total/NA	Solid	TX 1005	103659
860-49141-14	23E2845-14	Total/NA	Solid	TX 1005	103659
860-49141-15	23E2845-15	Total/NA	Solid	TX 1005	103659
860-49141-16	23E2845-16	Total/NA	Solid	TX 1005	103659
860-49141-17	23E2845-17	Total/NA	Solid	TX 1005	103659
860-49141-18	23E2845-18	Total/NA	Solid	TX 1005	103659
860-49141-19	23E2845-19	Total/NA	Solid	TX 1005	103659
860-49141-20	23E2845-20	Total/NA	Solid	TX 1005	103659
860-49141-21	23E2845-21	Total/NA	Solid	TX 1005	103659
MB 860-103659/1-A	Method Blank	Total/NA	Solid	TX 1005	103659
LCS 860-103659/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	103659
LCS 860-103659/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	103659
860-49141-1 MS	23E2845-1	Total/NA	Solid	TX 1005	103659
860-49141-1 MSD	23E2845-1	Total/NA	Solid	TX 1005	103659

### Prep Batch: 103659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-1	23E2845-1	Total/NA	Solid	TX_1005_S_Pre	
860-49141-2	23E2845-2	Total/NA	Solid	TX_1005_S_Pre	
860-49141-3	23E2845-3	Total/NA	Solid	TX_1005_S_Pre	
860-49141-4	23E2845-4	Total/NA	Solid	TX_1005_S_Pre	
860-49141-5	23E2845-5	Total/NA	Solid	TX_1005_S_Pre	
860-49141-6	23E2845-6	Total/NA	Solid	TX_1005_S_Pre	
860-49141-8	23E2845-8	Total/NA	Solid	TX_1005_S_Pre	
860-49141-9	23E2845-9	Total/NA	Solid	TX_1005_S_Pre	

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# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA (Continued)

### Prep Batch: 103659 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-10	23E2845-10	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-11	23E2845-11	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-13	23E2845-13	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-14	23E2845-14	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-15	23E2845-15	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-16	23E2845-16	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-17	23E2845-17	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-18	23E2845-18	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-19	23E2845-19	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-20	23E2845-20	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-21	23E2845-21	Total/NA	Solid	TX_1005_S_Pre p	
MB 860-103659/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-103659/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-103659/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-1 MS	23E2845-1	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-1 MSD	23E2845-1	Total/NA	Solid	TX_1005_S_Pre p	

### Analysis Batch: 103819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-7	23E2845-7	Total/NA	Solid	TX 1005	103921
860-49141-22	23E2845-22	Total/NA	Solid	TX 1005	103921
860-49141-23	23E2845-23	Total/NA	Solid	TX 1005	103921
860-49141-24	23E2845-24	Total/NA	Solid	TX 1005	103921
860-49141-25	23E2845-25	Total/NA	Solid	TX 1005	103921
860-49141-26	23E2845-26	Total/NA	Solid	TX 1005	103921
860-49141-27	23E2845-27	Total/NA	Solid	TX 1005	103921
860-49141-28	23E2845-28	Total/NA	Solid	TX 1005	103921
860-49141-29	23E2845-29	Total/NA	Solid	TX 1005	103921
860-49141-30	23E2845-30	Total/NA	Solid	TX 1005	103921
860-49141-31	23E2845-31	Total/NA	Solid	TX 1005	103921
860-49141-32	23E2845-32	Total/NA	Solid	TX 1005	103921
860-49141-33	23E2845-33	Total/NA	Solid	TX 1005	103921
860-49141-35	23E2845-35	Total/NA	Solid	TX 1005	103921
860-49141-36	23E2845-36	Total/NA	Solid	TX 1005	103921
860-49141-38	23E2845-38	Total/NA	Solid	TX 1005	103921
860-49141-39	23E2845-39	Total/NA	Solid	TX 1005	103921
860-49141-40	23E2845-40	Total/NA	Solid	TX 1005	103921
860-49141-46	23E2845-46	Total/NA	Solid	TX 1005	103921
MB 860-103921/1-A	Method Blank	Total/NA	Solid	TX 1005	103921

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# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA (Continued)

### Analysis Batch: 103819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 860-103921/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	103921
LCSD 860-103921/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	103921
860-49141-7 MS	23E2845-7	Total/NA	Solid	TX 1005	103921
860-49141-7 MSD	23E2845-7	Total/NA	Solid	TX 1005	103921

### Prep Batch: 103921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-7	23E2845-7	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-22	23E2845-22	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-23	23E2845-23	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-24	23E2845-24	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-25	23E2845-25	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-26	23E2845-26	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-27	23E2845-27	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-28	23E2845-28	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-29	23E2845-29	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-30	23E2845-30	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-31	23E2845-31	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-32	23E2845-32	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-33	23E2845-33	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-34	23E2845-34	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-35	23E2845-35	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-36	23E2845-36	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-38	23E2845-38	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-39	23E2845-39	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-40	23E2845-40	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-46	23E2845-46	Total/NA	Solid	TX_1005_S_Pre p	
MB 860-103921/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-103921/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Pre p	
LCSD 860-103921/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-7 MS	23E2845-7	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-7 MSD	23E2845-7	Total/NA	Solid	TX_1005_S_Pre p	

# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA

### Analysis Batch: 104020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-34	23E2845-34	Total/NA	Solid	TX 1005	103921

### Analysis Batch: 104022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-12	23E2845-12	Total/NA	Solid	TX 1005	104095
860-49141-41	23E2845-41	Total/NA	Solid	TX 1005	104095
860-49141-43	23E2845-43	Total/NA	Solid	TX 1005	104095
860-49141-44	23E2845-44	Total/NA	Solid	TX 1005	104095
860-49141-45	23E2845-45	Total/NA	Solid	TX 1005	104095
860-49141-47	23E2845-47	Total/NA	Solid	TX 1005	104095
860-49141-48	23E2845-48	Total/NA	Solid	TX 1005	104095
860-49141-49	23E2845-49	Total/NA	Solid	TX 1005	104095
860-49141-50	23E2845-50	Total/NA	Solid	TX 1005	104095
860-49141-51	23E2845-51	Total/NA	Solid	TX 1005	104095
860-49141-52	23E2845-52	Total/NA	Solid	TX 1005	104095
860-49141-53	23E2845-53	Total/NA	Solid	TX 1005	104095
860-49141-54	23E2845-54	Total/NA	Solid	TX 1005	104095
860-49141-55	23E2845-55	Total/NA	Solid	TX 1005	104095
860-49141-56	23E2845-56	Total/NA	Solid	TX 1005	104095
860-49141-57	23E2845-57	Total/NA	Solid	TX 1005	104095
860-49141-58	23E2845-58	Total/NA	Solid	TX 1005	104095
860-49141-59	23E2845-59	Total/NA	Solid	TX 1005	104095
860-49141-60	23E2845-60	Total/NA	Solid	TX 1005	104095
860-49141-61	23E2845-61	Total/NA	Solid	TX 1005	104095
MB 860-104095/1-A	Method Blank	Total/NA	Solid	TX 1005	104095
LCS 860-104095/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	104095
LCSD 860-104095/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	104095
860-49141-12 MS	23E2845-12	Total/NA	Solid	TX 1005	104095
860-49141-12 MSD	23E2845-12	Total/NA	Solid	TX 1005	104095

### Prep Batch: 104095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-12	23E2845-12	Total/NA	Solid	TX_1005_S_Pre	
860-49141-41	23E2845-41	Total/NA	Solid	TX_1005_S_Pre	
860-49141-43	23E2845-43	Total/NA	Solid	TX_1005_S_Pre	
860-49141-44	23E2845-44	Total/NA	Solid	TX_1005_S_Pre	
860-49141-45	23E2845-45	Total/NA	Solid	TX_1005_S_Pre	
860-49141-47	23E2845-47	Total/NA	Solid	TX_1005_S_Pre	
860-49141-48	23E2845-48	Total/NA	Solid	TX_1005_S_Pre	
860-49141-49	23E2845-49	Total/NA	Solid	TX_1005_S_Pre	
860-49141-50	23E2845-50	Total/NA	Solid	TX_1005_S_Pre	
860-49141-51	23E2845-51	Total/NA	Solid	TX_1005_S_Pre	
860-49141-52	23E2845-52	Total/NA	Solid	TX_1005_S_Pre	

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# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA (Continued)

### Prep Batch: 104095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-53	23E2845-53	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-54	23E2845-54	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-55	23E2845-55	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-56	23E2845-56	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-57	23E2845-57	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-58	23E2845-58	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-59	23E2845-59	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-60	23E2845-60	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-61	23E2845-61	Total/NA	Solid	TX_1005_S_Pre p	
MB 860-104095/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-104095/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Pre p	
LCSD 860-104095/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-12 MS	23E2845-12	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-12 MSD	23E2845-12	Total/NA	Solid	TX_1005_S_Pre p	

### Analysis Batch: 104237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-74	23E2845-74	Total/NA	Solid	TX 1005	104348

### Analysis Batch: 104240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-62	23E2845-62	Total/NA	Solid	TX 1005	104348
860-49141-63	23E2845-63	Total/NA	Solid	TX 1005	104348
860-49141-64	23E2845-64	Total/NA	Solid	TX 1005	104348
860-49141-65	23E2845-65	Total/NA	Solid	TX 1005	104348
860-49141-66	23E2845-66	Total/NA	Solid	TX 1005	104348
860-49141-67	23E2845-67	Total/NA	Solid	TX 1005	104348
860-49141-68	23E2845-68	Total/NA	Solid	TX 1005	104348
860-49141-69	23E2845-69	Total/NA	Solid	TX 1005	104348
860-49141-70	23E2845-70	Total/NA	Solid	TX 1005	104348
860-49141-71	23E2845-71	Total/NA	Solid	TX 1005	104348
860-49141-72	23E2845-72	Total/NA	Solid	TX 1005	104348
860-49141-73	23E2845-73	Total/NA	Solid	TX 1005	104348
860-49141-76	23E2845-76	Total/NA	Solid	TX 1005	104348
860-49141-77	23E2845-77	Total/NA	Solid	TX 1005	104348
860-49141-78	23E2845-78	Total/NA	Solid	TX 1005	104348
860-49141-79	23E2845-79	Total/NA	Solid	TX 1005	104348
MB 860-104348/1-A	Method Blank	Total/NA	Solid	TX 1005	104348
LCS 860-104348/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	104348
LCSD 860-104348/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	104348

# QC Association Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA

Analysis Batch: 104312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-1	23E2845-1	Total/NA	Solid	TX 1005	
860-49141-2	23E2845-2	Total/NA	Solid	TX 1005	
860-49141-3	23E2845-3	Total/NA	Solid	TX 1005	
860-49141-4	23E2845-4	Total/NA	Solid	TX 1005	
860-49141-5	23E2845-5	Total/NA	Solid	TX 1005	
860-49141-6	23E2845-6	Total/NA	Solid	TX 1005	
860-49141-7	23E2845-7	Total/NA	Solid	TX 1005	
860-49141-8	23E2845-8	Total/NA	Solid	TX 1005	
860-49141-9	23E2845-9	Total/NA	Solid	TX 1005	
860-49141-10	23E2845-10	Total/NA	Solid	TX 1005	
860-49141-11	23E2845-11	Total/NA	Solid	TX 1005	
860-49141-12	23E2845-12	Total/NA	Solid	TX 1005	
860-49141-13	23E2845-13	Total/NA	Solid	TX 1005	
860-49141-14	23E2845-14	Total/NA	Solid	TX 1005	
860-49141-15	23E2845-15	Total/NA	Solid	TX 1005	
860-49141-16	23E2845-16	Total/NA	Solid	TX 1005	
860-49141-17	23E2845-17	Total/NA	Solid	TX 1005	
860-49141-18	23E2845-18	Total/NA	Solid	TX 1005	
860-49141-19	23E2845-19	Total/NA	Solid	TX 1005	
860-49141-20	23E2845-20	Total/NA	Solid	TX 1005	
860-49141-21	23E2845-21	Total/NA	Solid	TX 1005	
860-49141-22	23E2845-22	Total/NA	Solid	TX 1005	
860-49141-23	23E2845-23	Total/NA	Solid	TX 1005	
860-49141-24	23E2845-24	Total/NA	Solid	TX 1005	
860-49141-25	23E2845-25	Total/NA	Solid	TX 1005	
860-49141-26	23E2845-26	Total/NA	Solid	TX 1005	
860-49141-27	23E2845-27	Total/NA	Solid	TX 1005	
860-49141-28	23E2845-28	Total/NA	Solid	TX 1005	
860-49141-29	23E2845-29	Total/NA	Solid	TX 1005	
860-49141-30	23E2845-30	Total/NA	Solid	TX 1005	
860-49141-31	23E2845-31	Total/NA	Solid	TX 1005	
860-49141-32	23E2845-32	Total/NA	Solid	TX 1005	
860-49141-33	23E2845-33	Total/NA	Solid	TX 1005	
860-49141-34	23E2845-34	Total/NA	Solid	TX 1005	
860-49141-35	23E2845-35	Total/NA	Solid	TX 1005	
860-49141-36	23E2845-36	Total/NA	Solid	TX 1005	
860-49141-37	23E2845-37	Total/NA	Solid	TX 1005	
860-49141-38	23E2845-38	Total/NA	Solid	TX 1005	
860-49141-39	23E2845-39	Total/NA	Solid	TX 1005	
860-49141-40	23E2845-40	Total/NA	Solid	TX 1005	
860-49141-41	23E2845-41	Total/NA	Solid	TX 1005	
860-49141-42	23E2845-42	Total/NA	Solid	TX 1005	
860-49141-43	23E2845-43	Total/NA	Solid	TX 1005	
860-49141-44	23E2845-44	Total/NA	Solid	TX 1005	
860-49141-45	23E2845-45	Total/NA	Solid	TX 1005	
860-49141-46	23E2845-46	Total/NA	Solid	TX 1005	
860-49141-47	23E2845-47	Total/NA	Solid	TX 1005	
860-49141-48	23E2845-48	Total/NA	Solid	TX 1005	
860-49141-49	23E2845-49	Total/NA	Solid	TX 1005	
860-49141-50	23E2845-50	Total/NA	Solid	TX 1005	
860-49141-51	23E2845-51	Total/NA	Solid	TX 1005	

# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA (Continued)

### Analysis Batch: 104312 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-52	23E2845-52	Total/NA	Solid	TX 1005	
860-49141-53	23E2845-53	Total/NA	Solid	TX 1005	
860-49141-54	23E2845-54	Total/NA	Solid	TX 1005	
860-49141-55	23E2845-55	Total/NA	Solid	TX 1005	
860-49141-56	23E2845-56	Total/NA	Solid	TX 1005	
860-49141-57	23E2845-57	Total/NA	Solid	TX 1005	
860-49141-58	23E2845-58	Total/NA	Solid	TX 1005	
860-49141-59	23E2845-59	Total/NA	Solid	TX 1005	
860-49141-60	23E2845-60	Total/NA	Solid	TX 1005	
860-49141-61	23E2845-61	Total/NA	Solid	TX 1005	
860-49141-62	23E2845-62	Total/NA	Solid	TX 1005	
860-49141-63	23E2845-63	Total/NA	Solid	TX 1005	
860-49141-64	23E2845-64	Total/NA	Solid	TX 1005	
860-49141-65	23E2845-65	Total/NA	Solid	TX 1005	
860-49141-66	23E2845-66	Total/NA	Solid	TX 1005	
860-49141-67	23E2845-67	Total/NA	Solid	TX 1005	
860-49141-68	23E2845-68	Total/NA	Solid	TX 1005	
860-49141-69	23E2845-69	Total/NA	Solid	TX 1005	
860-49141-70	23E2845-70	Total/NA	Solid	TX 1005	
860-49141-71	23E2845-71	Total/NA	Solid	TX 1005	
860-49141-72	23E2845-72	Total/NA	Solid	TX 1005	
860-49141-73	23E2845-73	Total/NA	Solid	TX 1005	
860-49141-74	23E2845-74	Total/NA	Solid	TX 1005	
860-49141-75	23E2845-75	Total/NA	Solid	TX 1005	
860-49141-76	23E2845-76	Total/NA	Solid	TX 1005	
860-49141-77	23E2845-77	Total/NA	Solid	TX 1005	
860-49141-78	23E2845-78	Total/NA	Solid	TX 1005	
860-49141-79	23E2845-79	Total/NA	Solid	TX 1005	
860-49141-80	23E2845-80	Total/NA	Solid	TX 1005	

### Prep Batch: 104348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-37	23E2845-37	Total/NA	Solid	TX_1005_S_Pre	
860-49141-62	23E2845-62	Total/NA	Solid	TX_1005_S_Pre	
860-49141-63	23E2845-63	Total/NA	Solid	TX_1005_S_Pre	
860-49141-64	23E2845-64	Total/NA	Solid	TX_1005_S_Pre	
860-49141-65	23E2845-65	Total/NA	Solid	TX_1005_S_Pre	
860-49141-66	23E2845-66	Total/NA	Solid	TX_1005_S_Pre	
860-49141-67	23E2845-67	Total/NA	Solid	TX_1005_S_Pre	
860-49141-68	23E2845-68	Total/NA	Solid	TX_1005_S_Pre	
860-49141-69	23E2845-69	Total/NA	Solid	TX_1005_S_Pre	
860-49141-70	23E2845-70	Total/NA	Solid	TX_1005_S_Pre	
860-49141-71	23E2845-71	Total/NA	Solid	TX_1005_S_Pre	

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# QC Association Summary

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA (Continued)

### Prep Batch: 104348 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-72	23E2845-72	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-73	23E2845-73	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-74	23E2845-74	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-75	23E2845-75	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-76	23E2845-76	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-77	23E2845-77	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-78	23E2845-78	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-79	23E2845-79	Total/NA	Solid	TX_1005_S_Pre p	
MB 860-104348/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-104348/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Pre p	
LCSD 860-104348/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-37 MS	23E2845-37	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-37 MSD	23E2845-37	Total/NA	Solid	TX_1005_S_Pre p	

### Analysis Batch: 104453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-37	23E2845-37	Total/NA	Solid	TX 1005	104348
860-49141-75	23E2845-75	Total/NA	Solid	TX 1005	104348
860-49141-37 MS	23E2845-37	Total/NA	Solid	TX 1005	104348
860-49141-37 MSD	23E2845-37	Total/NA	Solid	TX 1005	104348

### Analysis Batch: 104456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-80	23E2845-80	Total/NA	Solid	TX 1005	104498

### Prep Batch: 104498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-42	23E2845-42	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-80	23E2845-80	Total/NA	Solid	TX_1005_S_Pre p	
MB 860-104498/1-A	Method Blank	Total/NA	Solid	TX_1005_S_Pre p	
LCS 860-104498/2-A	Lab Control Sample	Total/NA	Solid	TX_1005_S_Pre p	
LCSD 860-104498/3-A	Lab Control Sample Dup	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-42 MS	23E2845-42	Total/NA	Solid	TX_1005_S_Pre p	
860-49141-42 MSD	23E2845-42	Total/NA	Solid	TX_1005_S_Pre p	

# QC Association Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## GC Semi VOA

### Analysis Batch: 104641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 860-104498/1-A	Method Blank	Total/NA	Solid	TX 1005	104498

### Analysis Batch: 104643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-49141-42	23E2845-42	Total/NA	Solid	TX 1005	104498
LCS 860-104498/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	104498
LCSD 860-104498/3-A	Lab Control Sample Dup	Total/NA	Solid	TX 1005	104498
860-49141-42 MS	23E2845-42	Total/NA	Solid	TX 1005	104498
860-49141-42 MSD	23E2845-42	Total/NA	Solid	TX 1005	104498

## Lab Chronicle

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

### Client Sample ID: 23E2845-1

Lab Sample ID: 860-49141-1

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.0 g	1 mL	330477	05/22/23 13:49	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	333269	05/31/23 16:06	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.51 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/17/23 21:51	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

### Client Sample ID: 23E2845-2

Lab Sample ID: 860-49141-2

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.1 g	1 mL	330477	05/22/23 13:49	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	333269	05/31/23 16:24	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.14 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/17/23 23:52	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

### Client Sample ID: 23E2845-3

Lab Sample ID: 860-49141-3

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.0 g	1 mL	330477	05/22/23 13:49	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	333269	05/31/23 16:43	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.12 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 00:33	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

### Client Sample ID: 23E2845-4

Lab Sample ID: 860-49141-4

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.1 g	1 mL	330477	05/22/23 13:49	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	333269	05/31/23 17:20	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.16 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 00:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

## Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-5**

**Lab Sample ID: 860-49141-5**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.0 g	1 mL	330477	05/22/23 13:49	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	333269	05/31/23 17:39	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.03 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 01:13	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-6**

**Lab Sample ID: 860-49141-6**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.25 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 01:33	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-7**

**Lab Sample ID: 860-49141-7**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.12 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/18/23 21:27	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-8**

**Lab Sample ID: 860-49141-8**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.27 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 01:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-9**

**Lab Sample ID: 860-49141-9**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.08 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 02:13	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Client Sample ID: 23E2845-10

Lab Sample ID: 860-49141-10

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.30 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 02:33	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

## Client Sample ID: 23E2845-11

Lab Sample ID: 860-49141-11

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.24 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 04:14	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

## Client Sample ID: 23E2845-12

Lab Sample ID: 860-49141-12

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.02 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 20:32	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

## Client Sample ID: 23E2845-13

Lab Sample ID: 860-49141-13

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.07 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 02:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

## Client Sample ID: 23E2845-14

Lab Sample ID: 860-49141-14

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.22 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 03:14	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-15**

**Lab Sample ID: 860-49141-15**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.02 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 03:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-16**

**Lab Sample ID: 860-49141-16**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.10 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 04:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-17**

**Lab Sample ID: 860-49141-17**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.32 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 04:55	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-18**

**Lab Sample ID: 860-49141-18**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.49 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 05:15	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-19**

**Lab Sample ID: 860-49141-19**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.19 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 05:35	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-20**

**Lab Sample ID: 860-49141-20**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.25 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 05:55	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-21**

**Lab Sample ID: 860-49141-21**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.19 g	10 mL	103659	05/17/23 12:40	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			103602	05/18/23 06:15	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-22**

**Lab Sample ID: 860-49141-22**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.15 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/18/23 23:28	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-23**

**Lab Sample ID: 860-49141-23**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.32 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/18/23 23:48	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-24**

**Lab Sample ID: 860-49141-24**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.10 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 00:08	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-25**

**Lab Sample ID: 860-49141-25**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.02 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 00:28	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-26**

**Lab Sample ID: 860-49141-26**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.15 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 00:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-27**

**Lab Sample ID: 860-49141-27**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.10 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 01:09	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-28**

**Lab Sample ID: 860-49141-28**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.23 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 01:29	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-29**

**Lab Sample ID: 860-49141-29**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.48 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 01:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU



# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-30**

**Lab Sample ID: 860-49141-30**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.16 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 02:29	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-31**

**Lab Sample ID: 860-49141-31**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.10 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 02:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-32**

**Lab Sample ID: 860-49141-32**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.11 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 03:09	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-33**

**Lab Sample ID: 860-49141-33**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.18 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 03:29	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-34**

**Lab Sample ID: 860-49141-34**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.07 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104020	05/19/23 11:38	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-35**

**Lab Sample ID: 860-49141-35**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.21 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 04:09	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-36**

**Lab Sample ID: 860-49141-36**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.15 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 04:30	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/23/23 14:19	CZT	EET HOU

**Client Sample ID: 23E2845-37**

**Lab Sample ID: 860-49141-37**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.19 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104453	05/23/23 14:05	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-38**

**Lab Sample ID: 860-49141-38**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.23 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 04:50	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-39**

**Lab Sample ID: 860-49141-39**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.04 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 05:10	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-40**

**Lab Sample ID: 860-49141-40**

Date Collected: 04/01/23 11:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.16 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/19/23 05:30	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-41**

**Lab Sample ID: 860-49141-41**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			5.1 g	1 mL	333420	05/31/23 16:43	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	335580	06/08/23 13:47	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			20.28 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 21:33	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-42**

**Lab Sample ID: 860-49141-42**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			10.0 g	1 mL	333420	05/31/23 16:43	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	335580	06/08/23 17:31	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			5.38 g	10 mL	104498	05/23/23 15:00	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104643	05/24/23 13:17	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-43**

**Lab Sample ID: 860-49141-43**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			5.1 g	1 mL	333420	05/31/23 16:43	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	335580	06/08/23 14:24	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			20.16 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 21:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-44**

**Lab Sample ID: 860-49141-44**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			5.2 g	1 mL	333420	05/31/23 16:43	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	335580	06/08/23 15:34	ULLI	EET CAL 4

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# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-44**

**Lab Sample ID: 860-49141-44**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			20.37 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 22:33	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-45**

**Lab Sample ID: 860-49141-45**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Organotin Prep			5.1 g	1 mL	333420	05/31/23 16:43	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	335580	06/08/23 15:53	ULLI	EET CAL 4
Total/NA	Prep	TX_1005_S_Prep			20.33 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 22:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-46**

**Lab Sample ID: 860-49141-46**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.33 g	10 mL	103921	05/18/23 15:59	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			103819	05/18/23 23:08	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-47**

**Lab Sample ID: 860-49141-47**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.44 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 23:13	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-48**

**Lab Sample ID: 860-49141-48**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.55 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 23:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-49**

**Lab Sample ID: 860-49141-49**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.45 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/19/23 23:53	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-50**

**Lab Sample ID: 860-49141-50**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.10 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 00:13	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-51**

**Lab Sample ID: 860-49141-51**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.37 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 03:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-52**

**Lab Sample ID: 860-49141-52**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.46 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 00:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-53**

**Lab Sample ID: 860-49141-53**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.54 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 03:54	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-54**

**Lab Sample ID: 860-49141-54**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.39 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 04:15	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-55**

**Lab Sample ID: 860-49141-55**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.38 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 03:14	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-56**

**Lab Sample ID: 860-49141-56**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.28 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 00:54	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-57**

**Lab Sample ID: 860-49141-57**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.51 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 01:14	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-58**

**Lab Sample ID: 860-49141-58**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.47 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 01:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-59**

**Lab Sample ID: 860-49141-59**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.52 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 02:14	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-60**

**Lab Sample ID: 860-49141-60**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.57 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 02:34	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-61**

**Lab Sample ID: 860-49141-61**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.21 g	10 mL	104095	05/19/23 14:50	CZT	EET HOU
Total/NA	Analysis	TX 1005		1			104022	05/20/23 02:54	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-62**

**Lab Sample ID: 860-49141-62**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.18 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 05:41	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-63**

**Lab Sample ID: 860-49141-63**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.02 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 06:02	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-64**

**Lab Sample ID: 860-49141-64**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.51 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 06:22	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-65**

**Lab Sample ID: 860-49141-65**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.43 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 06:42	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-66**

**Lab Sample ID: 860-49141-66**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.35 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 07:02	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-67**

**Lab Sample ID: 860-49141-67**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.59 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 07:42	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-68**

**Lab Sample ID: 860-49141-68**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.47 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 08:02	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU



# Lab Chronicle

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-69**

**Lab Sample ID: 860-49141-69**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.37 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 08:22	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-70**

**Lab Sample ID: 860-49141-70**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.29 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 08:42	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-71**

**Lab Sample ID: 860-49141-71**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.12 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 09:03	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-72**

**Lab Sample ID: 860-49141-72**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.46 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 09:23	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-73**

**Lab Sample ID: 860-49141-73**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.26 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 09:43	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

# Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-74**

**Lab Sample ID: 860-49141-74**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.13 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104237	05/23/23 10:23	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-75**

**Lab Sample ID: 860-49141-75**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.26 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104453	05/23/23 15:26	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-76**

**Lab Sample ID: 860-49141-76**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.35 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 04:41	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-77**

**Lab Sample ID: 860-49141-77**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.29 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 04:21	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-78**

**Lab Sample ID: 860-49141-78**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.16 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 05:01	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

## Lab Chronicle

Client: North Water District Laboratory Services  
 Project/Site: General Project

Job ID: 860-49141-1

**Client Sample ID: 23E2845-79**

**Lab Sample ID: 860-49141-79**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.09 g	10 mL	104348	05/22/23 16:49	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104240	05/23/23 05:21	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Client Sample ID: 23E2845-80**

**Lab Sample ID: 860-49141-80**

Date Collected: 04/01/23 13:00

Matrix: Solid

Date Received: 05/16/23 14:39

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	TX_1005_S_Prep			5.30 g	10 mL	104498	05/23/23 15:00	MCA	EET HOU
Total/NA	Analysis	TX 1005		1			104456	05/24/23 00:45	ELJ	EET HOU
Total/NA	Analysis	TX 1005		1			104312	05/24/23 10:12	CZT	EET HOU

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

# Accreditation/Certification Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

## Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-50	06-30-23

## Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-23
California	Los Angeles County Sanitation Districts	10109	07-31-23
California	SCAQMD LAP	17LA0919	11-30-23
California	State	3082	07-31-24
Kansas	NELAP	E-10420	07-31-23
Nevada	State	CA00111	07-31-24
Oregon	NELAP	4175	02-02-24
USDA	US Federal Programs	P330-22-00059	05-24-23 *
Washington	State	C916-18	10-11-23

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

# Method Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

Method	Method Description	Protocol	Laboratory
Organotins SIM	Organotins (GC/MS SIM)	Lab SOP	EET CAL 4
TX 1005	Texas - Total Petroleum Hydrocarbon (GC)	TCEQ	EET HOU
Organotin Prep	Extraction (Organotins)	None	EET CAL 4
TX_1005_S_Prep	Extraction - Texas Total petroleum Hyrdocarbons	TCEQ	EET HOU

**Protocol References:**

- Lab SOP = Laboratory Standard Operating Procedure
- None = None
- TCEQ = Texas Commission of Environmental Quality

**Laboratory References:**

- EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494
- EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200



# Sample Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-49141-1	23E2845-1	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-2	23E2845-2	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-3	23E2845-3	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-4	23E2845-4	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-5	23E2845-5	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-6	23E2845-6	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-7	23E2845-7	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-8	23E2845-8	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-9	23E2845-9	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-10	23E2845-10	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-11	23E2845-11	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-12	23E2845-12	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-13	23E2845-13	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-14	23E2845-14	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-15	23E2845-15	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-16	23E2845-16	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-17	23E2845-17	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-18	23E2845-18	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-19	23E2845-19	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-20	23E2845-20	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-21	23E2845-21	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-22	23E2845-22	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-23	23E2845-23	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-24	23E2845-24	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-25	23E2845-25	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-26	23E2845-26	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-27	23E2845-27	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-28	23E2845-28	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-29	23E2845-29	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-30	23E2845-30	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-31	23E2845-31	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-32	23E2845-32	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-33	23E2845-33	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-34	23E2845-34	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-35	23E2845-35	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-36	23E2845-36	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-37	23E2845-37	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-38	23E2845-38	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-39	23E2845-39	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-40	23E2845-40	Solid	04/01/23 11:00	05/16/23 14:39
860-49141-41	23E2845-41	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-42	23E2845-42	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-43	23E2845-43	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-44	23E2845-44	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-45	23E2845-45	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-46	23E2845-46	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-47	23E2845-47	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-48	23E2845-48	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-49	23E2845-49	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-50	23E2845-50	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-51	23E2845-51	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-52	23E2845-52	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-53	23E2845-53	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-54	23E2845-54	Solid	04/01/23 13:00	05/16/23 14:39

# Sample Summary

Client: North Water District Laboratory Services  
Project/Site: General Project

Job ID: 860-49141-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-49141-55	23E2845-55	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-56	23E2845-56	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-57	23E2845-57	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-58	23E2845-58	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-59	23E2845-59	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-60	23E2845-60	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-61	23E2845-61	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-62	23E2845-62	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-63	23E2845-63	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-64	23E2845-64	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-65	23E2845-65	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-66	23E2845-66	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-67	23E2845-67	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-68	23E2845-68	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-69	23E2845-69	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-70	23E2845-70	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-71	23E2845-71	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-72	23E2845-72	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-73	23E2845-73	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-74	23E2845-74	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-75	23E2845-75	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-76	23E2845-76	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-77	23E2845-77	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-78	23E2845-78	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-79	23E2845-79	Solid	04/01/23 13:00	05/16/23 14:39
860-49141-80	23E2845-80	Solid	04/01/23 13:00	05/16/23 14:39





# SUBCONTRACT ORDER

6/8/2023

### Sending Laboratory:

North Water District Laboratory Services, Inc.  
 130 South Trade Center Parkway  
 Conroe, TX 77385  
 Phone 936-321-6060  
 Fax 936-321-6061  
 Project Manager Monica O Martin

### Subcontracted Laboratory:

Eurofins Xenco\_Subcontract  
 4145 Greenbriar Drive  
 Stafford, TX 77477  
 Phone: (281) 240-4200  
 Fax:



860-49141 Chain of Custody

## Work Order: 23E2845

Analysis	Due	Expires	Comments
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### Sample ID: 23E2845-01 Tissue Sampled: 04/01/2023 11:00

Temp: ~~7~~ 6 IR ID:HOU-343  
 C/F: 0.4 Corrected Temp: 6 6

Sub\_Organotins-TX1001 05/24/2023 04/15/2023 11 00  
 TPH-1005 05/24/2023 04/15/2023 11 00  
*Analyte(s):*  
 1-Chlorooctadecane-surr  
 Total Petroleum Hydrocarbons (TPH), C6-C35  
*Containers Supplied*

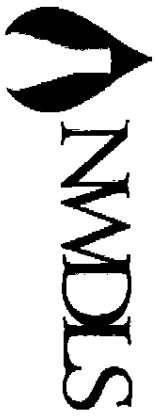
### Sample ID: 23E2845-02 Tissue Sampled: 04/01/2023 11:00

Sub\_Organotins-TX1001 05/24/2023 04/15/2023 11 00  
 TPH-1005 05/24/2023 04/15/2023 11 00  
*Analyte(s):*  
 1-Chlorooctadecane-surr  
 Total Petroleum Hydrocarbons (TPH), C6-C35  
*Containers Supplied*

### Sample ID: 23E2845-03 Tissue Sampled: 04/01/2023 11:00

Sub\_Organotins-TX1001 05/24/2023 04/15/2023 11 00  
 TPH-1005 05/24/2023 04/15/2023 11 00  
*Analyte(s):*  
 1-Chlorooctadecane-surr  
 Total Petroleum Hydrocarbons (TPH), C6-C35  
*Containers Supplied*





**SUBCONTRACT  
ORDER**  
(Continued)

6/8/2023

**Work Order: 23E2845 (Continued)**

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-04 Tissue Sampled: 04/01/2023 11:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 11 00	
TPH-1005			
<i>Analylte(s).</i>			
1-Chlorooctadecane-surr	05/24/2023	04/15/2023 11 00	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-05 Tissue Sampled: 04/01/2023 11:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 11 00	
TPH-1005			
<i>Analylte(s).</i>			
1-Chlorooctadecane-surr	05/24/2023	04/15/2023 11 00	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-06 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analylte(s)</i>			
1-Chlorooctadecane-surr			o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-07 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analylte(s).</i>			
1-Chlorooctadecane-surr			o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-08 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analylte(s)</i>			
1-Chlorooctadecane-surr			o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-09 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-10 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-11 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-12 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-13 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-14 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			
<b>Sample ID: 23E2845-15 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			
<b>Sample ID: 23E2845-16 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			
<b>Sample ID: 23E2845-17 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			
<b>Sample ID: 23E2845-18 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			



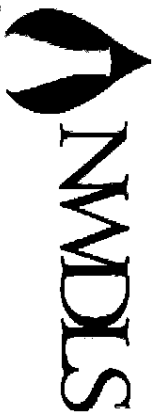
# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-19 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-20 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-21 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-22 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-23 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-24 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-25 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-26 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-27 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-28 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-29 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i> , 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-30 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i> , 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-31 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-32 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i> , 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-33 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-34 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-35 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-36 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-37 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-38 Tissue Sampled: 04/01/2023 11:00</b>			
TPH 1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied.</i>			



# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-39 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-40 Tissue Sampled: 04/01/2023 11:00</b>			
TPH-1005	05/24/2023	04/15/2023 11 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-41 Tissue Sampled: 04/01/2023 13:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 13 00	
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-42 Tissue Sampled: 04/01/2023 13:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 13 00	
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			





# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-43 Tissue Sampled: 04/01/2023 13:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 13 00	
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH), C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-44 Tissue Sampled: 04/01/2023 13:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 13 00	
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH), C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-45 Tissue Sampled: 04/01/2023 13:00</b>			
Sub_Organotins-TX1001	05/24/2023	04/15/2023 13 00	
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH) C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-46 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i> 1-Chlorooctadecane-surr Total Petroleum Hydrocarbons (TPH), C6-C35	1-Chlorooctane-surr		o-Terphenyl-surr
<i>Containers Supplied</i>			



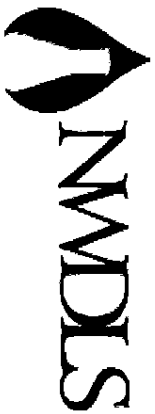
# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-47 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-48 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-49 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-50 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-51 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-52 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-53 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-54 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-55 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-56 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-57 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-58 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-59 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-60 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-61 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER (Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-62 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-63 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-64 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-65 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-66 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-67 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-68 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-69 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-70 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-71 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr		1-Chlorooctane-surr	o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
<b>Sample ID: 23E2845-72 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr	1-Chlorooctane-surr		o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-73 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr	1-Chlorooctane-surr		o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-74 Tissue Sampled: 04/01/2023 13:00</b>			
TPH 1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr	1-Chlorooctane-surr		o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-75 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr	1-Chlorooctane-surr		o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH) C6-C35			
<i>Containers Supplied</i>			
<b>Sample ID: 23E2845-76 Tissue Sampled: 04/01/2023 13:00</b>			
TPH-1005	05/24/2023	04/15/2023 13 00	
<i>Analyte(s)</i>			
1-Chlorooctadecane-surr	1-Chlorooctane-surr		o-Terphenyl-surr
Total Petroleum Hydrocarbons (TPH), C6-C35			
<i>Containers Supplied:</i>			



# SUBCONTRACT ORDER

(Continued)

6/8/2023

## Work Order: 23E2845 (Continued)

Analysis	Due	Expires	Comments
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**Sample ID: 23E2845-77 Tissue Sampled: 04/01/2023 13:00**

TPH 1005 05/24/2023 04/15/2023 13 00

*Analyte(s)*

- 1-Chlorooctadecane-surr 1-Chlorooctane-surr o-Terphenyl-surr
- Total Petroleum Hydrocarbons (TPH), C6-C35

*Containers Supplied*

**Sample ID: 23E2845-78 Tissue Sampled: 04/01/2023 13:00**

TPH 1005 05/24/2023 04/15/2023 13 00

*Analyte(s)*

- 1-Chlorooctadecane-surr 1-Chlorooctane-surr o-Terphenyl-surr
- Total Petroleum Hydrocarbons (TPH), C6-C35

*Containers Supplied*

**Sample ID: 23E2845-79 Tissue Sampled: 04/01/2023 13:00**

TPH 1005 05/24/2023 04/15/2023 13 00

*Analyte(s)*

- 1-Chlorooctadecane-surr 1-Chlorooctane-surr o-Terphenyl-surr
- Total Petroleum Hydrocarbons (TPH) C6-C35

*Containers Supplied*

Page 104 of 109

**Sample ID: 23E2845-80 Tissue Sampled: 04/01/2023 13:00**

TPH-1005 05/24/2023 04/15/2023 13 00

*Analyte(s)*

- 1-Chlorooctadecane-surr 1-Chlorooctane-surr o-Terphenyl-surr
- Total Petroleum Hydrocarbons (TPH), C6-C35

*Containers Supplied.*

Released By  Date 5/15/23 Received By  Date 5/15/23 14:39



ORIGIN ID:SGRA (281) 240-4200  
ADMINISTRATIVE OFFICES  
XENCO HOUSTON  
4145 GREENBRIAR DR

SHIP DATE: 16MAY23  
ACTWGT: 35.00 LB  
CAD: 110189707/NET4610

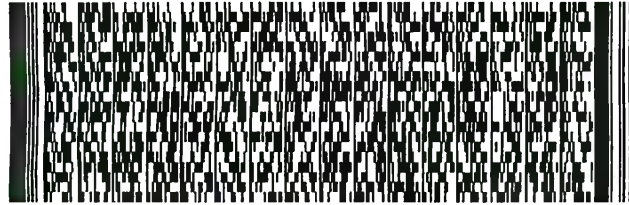
STAFFORD, TX 77477  
UNITED STATES US

BILL SENDER

TO EUROFINS CALSCIENCE  
EUROFINS CALSCIENCE  
2841 DOW AVENUE  
SUITE 100  
TUSTIN CA 92780

583,02BC3/FE2D

(714) 895-5494 REF:  
INV: PO: DEPT:



WED - 17 MAY 10:30A  
PRIORITY OVERNIGHT

TRK# 7721 6469 9427  
0201

A7 DTHA

92780  
CA-US SNA

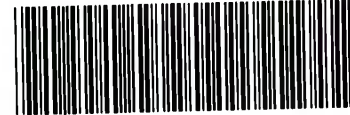


2127816

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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



860-49141 Waybill

**Eurofins Houston**

4145 Greenbriar Dr  
Stafford, TX 77477  
Phone: 281-240-4200

**Chain of Custody Record**



eurofins Env

Loc: 860  
**49141**

<b>Client Information (Sub Contract Lab)</b>				Sampler:		Lab PM: Richter, Travis W		Carrier Tracking No(s):		COC No: 860-25041.1			
Client Contact: Shipping/Receiving				Phone:		E-Mail: Travis.Richter@et.eurofinsus.com		State of Origin: Texas		Page: Page 1 of 1			
Company: Eurofins Environment Testing Southwest,				Accreditations Required (See note): NELAP - Texas				Job #: 860-49141-1					
Address: 2841 Dow Avenue, Suite 100,				Due Date Requested: 5/30/2023		<b>Analysis Requested</b>						Preservation Codes: A - HCL                    M - H B - NaOH                N - N C - Zn Acetate        O - A D - Nitric Acid        P - N E - NaHSO4            Q - N F - MeOH                R - N G - Amchlor            S - H H - Ascorbic Acid    T - T I - Ice                    U - A J - DI Water            V - M K - EDTA                W - p L - EDA                  Y - Tr Z - ot  Other:	
City: Tustin		TAT Requested (days):											
State, Zip: CA, 92780		PO #:											
Phone: 714-895-5494(Tel)		WO #:											
Project Name: General Project				Project #: 86003488		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers			
Site:				SSOW#:		Organotline_SIM/OrgTin_S_P Organotline (GC/MS SIM)							
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Organotline_SIM/OrgTin_S_P Organotline (GC/MS SIM)				Special Instructions/Note:	
				Preservation Code:									
23E2845-1 (860-49141-1)		4/1/23	11:00 Central		Solid		X				1		
23E2845-2 (860-49141-2)		4/1/23	11:00 Central		Solid		X				1		
23E2845-3 (860-49141-3)		4/1/23	11:00 Central		Solid		X				1		
23E2845-4 (860-49141-4)		4/1/23	11:00 Central		Solid		X				1		
23E2845-5 (860-49141-5)		4/1/23	11:00 Central		Solid		X				1		
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, 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 South Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, 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 South Central, 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: <i>S. Cochran</i>				Date/Time: 5/16/23 17:43		Company: <i>EAH</i>		Received by: <i>h</i>		Date/Time: 5/16/23 9:35		Company: <i>EC</i>	
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		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: 2-1/2-3 SCG							



860-49141 Chain of Custody

- 
 1
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## Login Sample Receipt Checklist

Client: North Water District Laboratory Services

Job Number: 860-49141-1

Login Number: 49141

List Number: 1

Creator: Coch, Stephanie

List Source: Eurofins Houston

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

## Login Sample Receipt Checklist

Client: North Water District Laboratory Services

Job Number: 860-49141-1

**Login Number: 49141**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 05/17/23 05:55 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	2127816
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	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.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: North Water District Laboratory Services

Job Number: 860-49141-1

**Login Number: 49141**

**List Number: 3**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 06/05/23 01:28 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	2127816
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	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.	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	



July 21, 2023

## LAB REPORT

Gregg Pawlak  
Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Report ID: 20230721155917MM

RE: PCCA HI TISSUE CHEM

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from our quality system will be noted in the case narrative. All analyses performed by North Water District Laboratory Services, Inc. unless noted.

For questions regarding this report, contact Monica Martin at 936-321-6060.

Sincerely,

Monica O. Martin  
Chief Administrative Officer



Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

### Work Order Case Narrative

A total of 80 samples were collected on:

<u>Laboratory ID</u>	<u>Sample Name</u>	<u>Sample Date</u>
23E2845-01	MM-HI-DMMU 1-1	04/01/2023 11:00
23E2845-02	MM-HI-DMMU 1-2	04/01/2023 11:00
23E2845-03	MM-HI-DMMU 1-3	04/01/2023 11:00
23E2845-04	MM-HI-DMMU 1-4	04/01/2023 11:00
23E2845-05	MM-HI-DMMU 1-5	04/01/2023 11:00
23E2845-06	MM-HI-DMMU 2-1	04/01/2023 11:00
23E2845-07	MM-HI-DMMU 2-2	04/01/2023 11:00
23E2845-08	MM-HI-DMMU 2-3	04/01/2023 11:00
23E2845-09	MM-HI-DMMU 2-4	04/01/2023 11:00
23E2845-10	MM-HI-DMMU 2-5	04/01/2023 11:00
23E2845-11	MM-HI-DMMU 3-1	04/01/2023 11:00
23E2845-12	MM-HI-DMMU 3-2	04/01/2023 11:00
23E2845-13	MM-HI-DMMU 3-3	04/01/2023 11:00
23E2845-14	MM-HI-DMMU 3-4	04/01/2023 11:00
23E2845-15	MM-HI-DMMU 3-5	04/01/2023 11:00
23E2845-16	MM-HI-DMMU 4-1	04/01/2023 11:00
23E2845-17	MM-HI-DMMU 4-2	04/01/2023 11:00
23E2845-18	MM-HI-DMMU 4-3	04/01/2023 11:00
23E2845-19	MM-HI-DMMU 4-4	04/01/2023 11:00
23E2845-20	MM-HI-DMMU 4-5	04/01/2023 11:00
23E2845-21	MM-HI-DMMU 5-1	04/01/2023 11:00
23E2845-22	MM-HI-DMMU 5-2	04/01/2023 11:00
23E2845-23	MM-HI-DMMU 5-3	04/01/2023 11:00
23E2845-24	MM-HI-DMMU 5-4	04/01/2023 11:00
23E2845-25	MM-HI-DMMU 5-5	04/01/2023 11:00
23E2845-26	MM-HI-DMMU 6-1	04/01/2023 11:00
23E2845-27	MM-HI-DMMU 6-2	04/01/2023 11:00
23E2845-28	MM-HI-DMMU 6-3	04/01/2023 11:00
23E2845-29	MM-HI-DMMU 6-4	04/01/2023 11:00
23E2845-30	MM-HI-DMMU 6-5	04/01/2023 11:00
23E2845-31	MM-HI-DMMU 7-1	04/01/2023 11:00
23E2845-32	MM-HI-DMMU 7-2	04/01/2023 11:00
23E2845-33	MM-HI-DMMU 7-3	04/01/2023 11:00
23E2845-34	MM-HI-DMMU 7-4	04/01/2023 11:00
23E2845-35	MM-HI-DMMU 7-5	04/01/2023 11:00
23E2845-36	MM-HI-DMMU 8-1	04/01/2023 11:00
23E2845-37	MM-HI-DMMU 8-2	04/01/2023 11:00
23E2845-38	MM-HI-DMMU 8-3	04/01/2023 11:00
23E2845-39	MM-HI-DMMU 8-4	04/01/2023 11:00
23E2845-40	MM-HI-DMMU 8-5	04/01/2023 11:00
23E2845-41	NV-HI-DMMU 1-1	04/01/2023 13:00
23E2845-42	NV-HI-DMMU 1-2	04/01/2023 13:00
23E2845-43	NV-HI-DMMU 1-3	04/01/2023 13:00
23E2845-44	NV-HI-DMMU 1-4	04/01/2023 13:00
23E2845-45	NV-HI-DMMU 1-5	04/01/2023 13:00
23E2845-46	NV-HI-DMMU 2-1	04/01/2023 13:00

Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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23E2845-47	NV-HI-DMMU 2-2	04/01/2023 13:00
23E2845-48	NV-HI-DMMU 2-3	04/01/2023 13:00
23E2845-49	NV-HI-DMMU 2-4	04/01/2023 13:00
23E2845-50	NV-HI-DMMU 2-5	04/01/2023 13:00
23E2845-51	NV-HI-DMMU 3-1	04/01/2023 13:00
23E2845-52	NV-HI-DMMU 3-2	04/01/2023 13:00
23E2845-53	NV-HI-DMMU 3-3	04/01/2023 13:00
23E2845-54	NV-HI-DMMU 3-4	04/01/2023 13:00
23E2845-55	NV-HI-DMMU 3-5	04/01/2023 13:00
23E2845-56	NV-HI-DMMU 4-1	04/01/2023 13:00
23E2845-57	NV-HI-DMMU 4-2	04/01/2023 13:00
23E2845-58	NV-HI-DMMU 4-3	04/01/2023 13:00
23E2845-59	NV-HI-DMMU 4-4	04/01/2023 13:00
23E2845-60	NV-HI-DMMU 4-5	04/01/2023 13:00
23E2845-61	NV-HI-DMMU 5-1	04/01/2023 13:00
23E2845-62	NV-HI-DMMU 5-2	04/01/2023 13:00
23E2845-63	NV-HI-DMMU 5-3	04/01/2023 13:00
23E2845-64	NV-HI-DMMU 5-4	04/01/2023 13:00
23E2845-65	NV-HI-DMMU 5-5	04/01/2023 13:00
23E2845-66	NV-HI-DMMU 6-1	04/01/2023 13:00
23E2845-67	NV-HI-DMMU 6-2	04/01/2023 13:00
23E2845-68	NV-HI-DMMU 6-3	04/01/2023 13:00
23E2845-69	NV-HI-DMMU 6-4	04/01/2023 13:00
23E2845-70	NV-HI-DMMU 6-5	04/01/2023 13:00
23E2845-71	NV-HI-DMMU 7-1	04/01/2023 13:00
23E2845-72	NV-HI-DMMU 7-2	04/01/2023 13:00
23E2845-73	NV-HI-DMMU 7-3	04/01/2023 13:00
23E2845-74	NV-HI-DMMU 7-4	04/01/2023 13:00
23E2845-75	NV-HI-DMMU 7-5	04/01/2023 13:00
23E2845-76	NV-HI-DMMU 8-1	04/01/2023 13:00
23E2845-77	NV-HI-DMMU 8-2	04/01/2023 13:00
23E2845-78	NV-HI-DMMU 8-3	04/01/2023 13:00
23E2845-79	NV-HI-DMMU 8-4	04/01/2023 13:00
23E2845-80	NV-HI-DMMU 8-5	04/01/2023 13:00

Samples were received and accepted at NWDLS on 05/10/2023 15:00 (previously held in freezer storage). Any receiving discrepancies are recorded and stored in NWDLS' database. The samples received a Work Order of 23E2845. The lab sample IDs, client sample IDs, and dates of collection can be found at the top of each result page.

NWDLS provided their lowest detection limit for all requested analyses. Note that detection and reporting limits are adjusted to account for sample specific parameters.

Any QC that did not meet the laboratory specified control limits was flagged and reported with qualifiers. For additional information, please refer to the included quality control data pages.





Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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### Sample Results

Client Sample ID: MM-HI-DMMU 1-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-01      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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#### Semivolatile Organic Compounds by GCMS

SW-8270	Acenaphthene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Acenaphthylene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Anthracene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Benzo(a)anthracene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Benzo(a)pyrene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.52U	ug/kg	2	9.52	9.52	BGE2066	06/03/2023 00:14	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Chrysene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Di-n-butyl phthalate	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Fluoranthene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Fluorene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Naphthalene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Phenanthrene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
SW-8270	Pyrene	A	<4.76U	ug/kg	2	4.76	4.76	BGE2066	06/03/2023 00:14	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		30.6% S		60-140				06/03/2023 00:14	
SW-8270	Surrogate: Nitrobenzene-d5-surr		66.8%		60-140				06/03/2023 00:14	
SW-8270	Surrogate: p-Terphenyl-d14-surr		31.3% S		60-140				06/03/2023 00:14	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 1-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-02      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Acenaphthylene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Anthracene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Benzo(a)anthracene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Benzo(a)pyrene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.98U	ug/kg	2	9.98	9.98	BGE2066	06/03/2023 00:48	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Chrysene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Di-n-butyl phthalate	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Fluoranthene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Fluorene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Naphthalene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Phenanthrene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
SW-8270	Pyrene	A	<4.99U	ug/kg	2	4.99	4.99	BGE2066	06/03/2023 00:48	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		17.0% S	60-140					06/03/2023 00:48	
SW-8270	Surrogate: Nitrobenzene-d5-surr		61.5%	60-140					06/03/2023 00:48	
SW-8270	Surrogate: p-Terphenyl-d14-surr		17.6% S	60-140					06/03/2023 00:48	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 1-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-03      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Acenaphthylene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Anthracene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Benzo(a)anthracene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Benzo(a)pyrene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.47U	ug/kg	2	9.47	9.47	BGE2066	06/03/2023 01:23	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Chrysene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Di-n-butyl phthalate	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Fluoranthene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Fluorene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Naphthalene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Phenanthrene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
SW-8270	Pyrene	A	<4.73U	ug/kg	2	4.73	4.73	BGE2066	06/03/2023 01:23	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		15.2% S	60-140					06/03/2023 01:23	
SW-8270	Surrogate: Nitrobenzene-d5-surr		74.8%	60-140					06/03/2023 01:23	
SW-8270	Surrogate: p-Terphenyl-d14-surr		19.4% S	60-140					06/03/2023 01:23	

Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 1-4  
Lab Sample ID: 23E2845-04  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Acenaphthylene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Anthracene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Benzo(a)anthracene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Benzo(a)pyrene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.86U	ug/kg	2	9.86	9.86	BGE2066	06/03/2023 01:58	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Chrysene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Di-n-butyl phthalate	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Fluoranthene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Fluorene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Naphthalene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Phenanthrene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
SW-8270	Pyrene	A	<4.93U	ug/kg	2	4.93	4.93	BGE2066	06/03/2023 01:58	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		13.5% S	60-140					06/03/2023 01:58	
SW-8270	Surrogate: Nitrobenzene-d5-surr		70.1%	60-140					06/03/2023 01:58	
SW-8270	Surrogate: p-Terphenyl-d14-surr		10.9% S	60-140					06/03/2023 01:58	

Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 1-5  
Lab Sample ID: 23E2845-05  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Acenaphthylene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Anthracene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Benzo(a)pyrene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Di-n-butyl phthalate	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Fluoranthene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Fluorene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Naphthalene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Phenanthrene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Pyrene	A	<4.86U	ug/kg	2	4.86	4.86	BGE2066	06/02/2023 23:39	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		68.3%	60-140					06/02/2023 23:39	
SW-8270	Surrogate: Nitrobenzene-d5-surr		109%	60-140					06/02/2023 23:39	
SW-8270	Surrogate: p-Terphenyl-d14-surr		77.7%	60-140					06/02/2023 23:39	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 1-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-05RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.73U	ug/kg	2	9.73	9.73	BGE2066	06/07/2023 01:19	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.73U	ug/kg	2	9.73	9.73	BGE2066	06/07/2023 01:19	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		77.0%	60-140					06/07/2023 01:19	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		87.5%	60-140					06/07/2023 01:19	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		21.5% S	60-140					06/07/2023 01:19	



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Project: PCCA HI TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
 (Continued)

Client Sample ID: MM-HI-DMMU 2-1  
 Lab Sample ID: 23E2845-06  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	<2.39U	ug/kg	1	2.39	2.39	BGF1571	06/30/2023 00:50	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		95.9%	60-140					06/30/2023 00:50	
SW-8270	Surrogate: Nitrobenzene-d5-surr		185% S	60-140					06/30/2023 00:50	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.7% S	60-140					06/30/2023 00:50	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 2-2	Sample Matrix: Tissue
Lab Sample ID: 23E2845-07	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	12.9	ug/kg	1	2.46	2.46	BGF1571	06/30/2023 01:25	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>127%</i>	<i>60-140</i>					<i>06/30/2023 01:25</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>280% S</i>	<i>60-140</i>					<i>06/30/2023 01:25</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>43.3% S</i>	<i>60-140</i>					<i>06/30/2023 01:25</i>	





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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 2-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-08      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	14.9	ug/kg	1	2.49	2.49	BGF1571	06/30/2023 02:00	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>106%</i>	<i>60-140</i>					<i>06/30/2023 02:00</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>246% S</i>	<i>60-140</i>					<i>06/30/2023 02:00</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>44.4% S</i>	<i>60-140</i>					<i>06/30/2023 02:00</i>	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 2-4	Sample Matrix: Tissue
Lab Sample ID: 23E2845-09	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	12.4	ug/kg	1	2.48	2.48	BGF1571	06/30/2023 02:35	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>102%</i>	<i>60-140</i>					<i>06/30/2023 02:35</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>209% S</i>	<i>60-140</i>					<i>06/30/2023 02:35</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>48.3% S</i>	<i>60-140</i>					<i>06/30/2023 02:35</i>	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 2-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-10      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	9.82	ug/kg	1	2.49	2.49	BGF1571	06/30/2023 03:10	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>107%</i>	<i>60-140</i>					<i>06/30/2023 03:10</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>160% S</i>	<i>60-140</i>					<i>06/30/2023 03:10</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>70.1%</i>	<i>60-140</i>					<i>06/30/2023 03:10</i>	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 3-1  
Lab Sample ID: 23E2845-11  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.96U	ug/kg	1	4.96	4.96	BGF1307	06/27/2023 23:34	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Acenaphthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Acenaphthylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Benzo(a)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Benzo(a)pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.96U	ug/kg	1	4.96	4.96	BGF1307	06/27/2023 23:34	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	8.11V	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Chrysene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Diethyl phthalate	A	4.51V	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Di-n-butyl phthalate	A	8.24V	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Fluoranthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Fluorene	A	4.43	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Naphthalene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Phenanthrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB
SW-8270	Pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/27/2023 23:34	KRB

SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		31.6% S		60-140				06/27/2023 23:34	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		144% S		60-140				06/27/2023 23:34	
SW-8270	Surrogate: 2-Fluorophenol-surr		72.0% S		60-140				06/27/2023 23:34	
SW-8270	Surrogate: Nitrobenzene-d5-surr		194% S		60-140				06/27/2023 23:34	
SW-8270	Surrogate: Phenol-d5-surr		119% S		60-140				06/27/2023 23:34	
SW-8270	Surrogate: p-Terphenyl-d14-surr		51.0% S		60-140				06/27/2023 23:34	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 3-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-12      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.76U	ug/kg	1	4.76	4.76	BGF1307	06/28/2023 00:09	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Acenaphthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Acenaphthylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Benzo(a)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Benzo(a)pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.76U	ug/kg	1	4.76	4.76	BGF1307	06/28/2023 00:09	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	12.2V	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Chrysene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Di-n-butyl phthalate	A	6.91V	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Fluoranthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Fluorene	A	5.23	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Naphthalene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Phenanthrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
SW-8270	Pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1307	06/28/2023 00:09	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		25.4% S		60-140				06/28/2023 00:09	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		117%		60-140				06/28/2023 00:09	
SW-8270	Surrogate: 2-Fluorophenol-surr		68.8%		60-140				06/28/2023 00:09	
SW-8270	Surrogate: Nitrobenzene-d5-surr		191% S		60-140				06/28/2023 00:09	
SW-8270	Surrogate: Phenol-d5-surr		98.8%		60-140				06/28/2023 00:09	
SW-8270	Surrogate: p-Terphenyl-d14-surr		19.3% S		60-140				06/28/2023 00:09	

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 3-3  
Lab Sample ID: 23E2845-13  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.88U	ug/kg	1	4.88	4.88	BGF1307	06/28/2023 00:44	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Acenaphthene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Acenaphthylene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Benzo(a)anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Benzo(a)pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.88U	ug/kg	1	4.88	4.88	BGF1307	06/28/2023 00:44	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	7.62V	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Chrysene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Di-n-butyl phthalate	A	6.75V	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Fluoranthene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Fluorene	A	5.77	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Naphthalene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Phenanthrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 00:44	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		10.6% S	60-140					06/28/2023 00:44	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		79.2% S	60-140					06/28/2023 00:44	
SW-8270	Surrogate: 2-Fluorophenol-surr		56.5% S	60-140					06/28/2023 00:44	
SW-8270	Surrogate: Nitrobenzene-d5-surr		162% S	60-140					06/28/2023 00:44	
SW-8270	Surrogate: Phenol-d5-surr		81.5% S	60-140					06/28/2023 00:44	
SW-8270	Surrogate: p-Terphenyl-d14-surr		33.6% S	60-140					06/28/2023 00:44	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 3-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-14      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.90U	ug/kg	1	4.90	4.90	BGF1307	06/28/2023 01:19	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Acenaphthene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Acenaphthylene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Benzo(a)anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Benzo(a)pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.90U	ug/kg	1	4.90	4.90	BGF1307	06/28/2023 01:19	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	7.88V	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Chrysene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Di-n-butyl phthalate	A	6.78V	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Fluoranthene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Fluorene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Naphthalene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Phenanthrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
SW-8270	Pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1307	06/28/2023 01:19	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		2.31% S		60-140				06/28/2023 01:19	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		30.5% S		60-140				06/28/2023 01:19	
SW-8270	Surrogate: 2-Fluorophenol-surr		44.3% S		60-140				06/28/2023 01:19	
SW-8270	Surrogate: Nitrobenzene-d5-surr		96.1%		60-140				06/28/2023 01:19	
SW-8270	Surrogate: Phenol-d5-surr		72.0%		60-140				06/28/2023 01:19	
SW-8270	Surrogate: p-Terphenyl-d14-surr		34.8% S		60-140				06/28/2023 01:19	

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11555 Clay Road  
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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 3-5  
Lab Sample ID: 23E2845-15  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.66U	ug/kg	1	4.66	4.66	BGF1307	06/28/2023 01:54	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Acenaphthene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Acenaphthylene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Anthracene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Benzo(a)anthracene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Benzo(a)pyrene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.66U	ug/kg	1	4.66	4.66	BGF1307	06/28/2023 01:54	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	9.19V	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Chrysene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Di-n-butyl phthalate	A	4.84V	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Fluoranthene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Fluorene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Naphthalene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Phenanthrene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
SW-8270	Pyrene	A	<2.33U	ug/kg	1	2.33	2.33	BGF1307	06/28/2023 01:54	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		2.97% S		60-140				06/28/2023 01:54	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		30.7% S		60-140				06/28/2023 01:54	
SW-8270	Surrogate: 2-Fluorophenol-surr		50.4% S		60-140				06/28/2023 01:54	
SW-8270	Surrogate: Nitrobenzene-d5-surr		94.6%		60-140				06/28/2023 01:54	
SW-8270	Surrogate: Phenol-d5-surr		72.9%		60-140				06/28/2023 01:54	
SW-8270	Surrogate: p-Terphenyl-d14-surr		34.4% S		60-140				06/28/2023 01:54	





Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-16      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Acenaphthylene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Anthracene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Benzo(a)anthracene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Benzo(a)pyrene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.88U	ug/kg	2	9.88	9.88	BGE2066	06/03/2023 02:32	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Chrysene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Di-n-butyl phthalate	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Fluoranthene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Fluorene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Naphthalene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Phenanthrene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
SW-8270	Pyrene	A	<4.94U	ug/kg	2	4.94	4.94	BGE2066	06/03/2023 02:32	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		22.7% S		60-140				06/03/2023 02:32	
SW-8270	Surrogate: Nitrobenzene-d5-surr		82.7%		60-140				06/03/2023 02:32	
SW-8270	Surrogate: p-Terphenyl-d14-surr		23.9% S		60-140				06/03/2023 02:32	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-17      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Acenaphthylene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Anthracene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Benzo(a)anthracene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Benzo(a)pyrene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.71U	ug/kg	2	9.71	9.71	BGE2066	06/03/2023 03:07	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Chrysene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Di-n-butyl phthalate	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Fluoranthene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Fluorene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Naphthalene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Phenanthrene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
SW-8270	Pyrene	A	<4.85U	ug/kg	2	4.85	4.85	BGE2066	06/03/2023 03:07	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		47.6% S		60-140				06/03/2023 03:07	
SW-8270	Surrogate: Nitrobenzene-d5-surr		131%		60-140				06/03/2023 03:07	
SW-8270	Surrogate: p-Terphenyl-d14-surr		52.2% S		60-140				06/03/2023 03:07	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-18      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Acenaphthylene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Anthracene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Di-n-butyl phthalate	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Fluoranthene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Fluorene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Naphthalene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Phenanthrene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
SW-8270	Pyrene	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/03/2023 03:41	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.3% S	60-140					06/03/2023 03:41	
SW-8270	Surrogate: Nitrobenzene-d5-surr		135%	60-140					06/03/2023 03:41	
SW-8270	Surrogate: p-Terphenyl-d14-surr		16.6% S	60-140					06/03/2023 03:41	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-18RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/07/2023 01:53	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.92U	ug/kg	2	9.92	9.92	BGE2066	06/07/2023 01:53	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.92U	ug/kg	2	9.92	9.92	BGE2066	06/07/2023 01:53	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/07/2023 01:53	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/07/2023 01:53	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.96U	ug/kg	2	4.96	4.96	BGE2066	06/07/2023 01:53	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		49.7% S	60-140					06/07/2023 01:53	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		94.4%	60-140					06/07/2023 01:53	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		37.8% S	60-140					06/07/2023 01:53	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-19      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Acenaphthylene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Anthracene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Di-n-butyl phthalate	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Fluoranthene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Fluorene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Naphthalene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Phenanthrene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
SW-8270	Pyrene	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/03/2023 04:16	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		58.9% S	60-140					06/03/2023 04:16	
SW-8270	Surrogate: Nitrobenzene-d5-surr		158% S	60-140					06/03/2023 04:16	
SW-8270	Surrogate: p-Terphenyl-d14-surr		32.6% S	60-140					06/03/2023 04:16	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-19RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/07/2023 02:28	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.23U	ug/kg	2	9.23	9.23	BGE2066	06/07/2023 02:28	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.23U	ug/kg	2	9.23	9.23	BGE2066	06/07/2023 02:28	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/07/2023 02:28	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/07/2023 02:28	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.61U	ug/kg	2	4.61	4.61	BGE2066	06/07/2023 02:28	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		61.3%	60-140					06/07/2023 02:28	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		114%	60-140					06/07/2023 02:28	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		48.0% S	60-140					06/07/2023 02:28	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 4-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-20      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Acenaphthylene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Anthracene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Di-n-butyl phthalate	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Fluoranthene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Fluorene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Naphthalene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Phenanthrene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
SW-8270	Pyrene	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/03/2023 04:51	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		55.9% S	60-140					06/03/2023 04:51	
SW-8270	Surrogate: Nitrobenzene-d5-surr		127%	60-140					06/03/2023 04:51	
SW-8270	Surrogate: p-Terphenyl-d14-surr		53.1% S	60-140					06/03/2023 04:51	



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 11555 Clay Road  
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Project: PCCA HI TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
 (Continued)

Client Sample ID: MM-HI-DMMU 4-5  
 Lab Sample ID: 23E2845-20RE1  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/07/2023 03:02	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.94U	ug/kg	2	9.94	9.94	BGE2066	06/07/2023 03:02	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.94U	ug/kg	2	9.94	9.94	BGE2066	06/07/2023 03:02	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/07/2023 03:02	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/07/2023 03:02	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.97U	ug/kg	2	4.97	4.97	BGE2066	06/07/2023 03:02	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		58.1% S	60-140					06/07/2023 03:02	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		91.4%	60-140					06/07/2023 03:02	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		43.4% S	60-140					06/07/2023 03:02	





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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 5-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-21      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Acenaphthylene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Benzo(a)anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Benzo(a)pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.92U	ug/kg	1	4.92	4.92	BGF1307	06/28/2023 02:29	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Chrysene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Diethyl phthalate	A	6.11V	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Di-n-butyl phthalate	A	8.12V	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Fluoranthene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Fluorene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Naphthalene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Phenanthrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1307	06/28/2023 02:29	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		51.9% S	60-140					06/28/2023 02:29	
SW-8270	Surrogate: Nitrobenzene-d5-surr		142% S	60-140					06/28/2023 02:29	
SW-8270	Surrogate: p-Terphenyl-d14-surr		34.9% S	60-140					06/28/2023 02:29	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 5-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-22      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Acenaphthylene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Benzo(a)anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Benzo(a)pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.88U	ug/kg	1	4.88	4.88	BGF1307	06/28/2023 03:03	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Chrysene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Diethyl phthalate	A	5.06V	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Di-n-butyl phthalate	A	4.83V	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Fluoranthene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Fluorene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Naphthalene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Phenanthrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
SW-8270	Pyrene	A	<2.44U	ug/kg	1	2.44	2.44	BGF1307	06/28/2023 03:03	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		66.7%		60-140				06/28/2023 03:03	
SW-8270	Surrogate: Nitrobenzene-d5-surr		148% S		60-140				06/28/2023 03:03	
SW-8270	Surrogate: p-Terphenyl-d14-surr		38.5% S		60-140				06/28/2023 03:03	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 5-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-23      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Acenaphthylene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Anthracene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Benzo(a)anthracene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Benzo(a)pyrene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.83U	ug/kg	1	4.83	4.83	BGF1307	06/28/2023 03:38	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Chrysene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Diethyl phthalate	A	3.01V	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Di-n-butyl phthalate	A	4.42V	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Fluoranthene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Fluorene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Naphthalene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Phenanthrene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
SW-8270	Pyrene	A	<2.41U	ug/kg	1	2.41	2.41	BGF1307	06/28/2023 03:38	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		74.8%		60-140				06/28/2023 03:38	
SW-8270	Surrogate: Nitrobenzene-d5-surr		160% S		60-140				06/28/2023 03:38	
SW-8270	Surrogate: p-Terphenyl-d14-surr		26.2% S		60-140				06/28/2023 03:38	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 5-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-24      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Acenaphthylene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Anthracene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Benzo(a)anthracene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Benzo(a)pyrene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.81U	ug/kg	1	4.81	4.81	BGF1307	06/28/2023 04:13	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Chrysene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Diethyl phthalate	A	4.57V	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Di-n-butyl phthalate	A	4.92V	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Fluoranthene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Fluorene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Hexachlorocyclopentadiene	A	14.2	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Naphthalene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Phenanthrene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
SW-8270	Pyrene	A	<2.40U	ug/kg	1	2.40	2.40	BGF1307	06/28/2023 04:13	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		88.1%		60-140				06/28/2023 04:13	
SW-8270	Surrogate: Nitrobenzene-d5-surr		173% S		60-140				06/28/2023 04:13	
SW-8270	Surrogate: p-Terphenyl-d14-surr		38.6% S		60-140				06/28/2023 04:13	



Terracon\_Houston  
 11555 Clay Road  
 Houston, TX 77043

Project: PCCA HI TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
 (Continued)

Client Sample ID: MM-HI-DMMU 5-5  
 Lab Sample ID: 23E2845-25  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Acenaphthylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Benzo(a)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Benzo(a)pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.95U	ug/kg	1	4.95	4.95	BGF1307	06/28/2023 04:48	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Chrysene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Diethyl phthalate	A	6.43V	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Di-n-butyl phthalate	A	4.90V	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Fluoranthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Fluorene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Naphthalene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Phenanthrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
SW-8270	Pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1307	06/28/2023 04:48	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		78.6%		60-140				06/28/2023 04:48	
SW-8270	Surrogate: Nitrobenzene-d5-surr		162% S		60-140				06/28/2023 04:48	
SW-8270	Surrogate: p-Terphenyl-d14-surr		35.0% S		60-140				06/28/2023 04:48	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 6-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-26      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	2.48	ug/kg	1	2.46	2.46	BGF1571	06/30/2023 03:44	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>129%</i>	<i>60-140</i>					<i>06/30/2023 03:44</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>189% S</i>	<i>60-140</i>					<i>06/30/2023 03:44</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>73.6%</i>	<i>60-140</i>					<i>06/30/2023 03:44</i>	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 6-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-27      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	14.0	ug/kg	1	2.43	2.43	BGF1571	06/30/2023 04:19	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>106%</i>	<i>60-140</i>					<i>06/30/2023 04:19</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>174% S</i>	<i>60-140</i>					<i>06/30/2023 04:19</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>85.2%</i>	<i>60-140</i>					<i>06/30/2023 04:19</i>	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 6-3	Sample Matrix: Tissue
Lab Sample ID: 23E2845-28	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	11.9	ug/kg	1	2.40	2.40	BGF1571	06/30/2023 04:54	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>116%</i>	<i>60-140</i>					<i>06/30/2023 04:54</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>176% S</i>	<i>60-140</i>					<i>06/30/2023 04:54</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>88.8%</i>	<i>60-140</i>					<i>06/30/2023 04:54</i>	





Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 6-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-29      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	5.07	ug/kg	1	2.46	2.46	BGF1571	07/13/2023 16:20	KRB
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>137%</i>	<i>60-140</i>					<i>07/13/2023 16:20</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>262% S</i>	<i>60-140</i>					<i>07/13/2023 16:20</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>61.9%</i>	<i>60-140</i>					<i>07/13/2023 16:20</i>	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 6-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-30      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	9.86	ug/kg	1	2.44	2.44	BGF1571	07/06/2023 19:38	krb
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>180% S</i>	<i>60-140</i>					<i>07/06/2023 19:38</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>198% S</i>	<i>60-140</i>					<i>07/06/2023 19:38</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>125%</i>	<i>60-140</i>					<i>07/06/2023 19:38</i>	

Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-1  
Lab Sample ID: 23E2845-31  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	8.28	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Acenaphthylene	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Anthracene	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Di-n-butyl phthalate	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Fluoranthene	A	11.2	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Fluorene	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Naphthalene	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Phenanthrene	A	9.75	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
SW-8270	Pyrene	A	5.59	ug/kg	2	4.87	4.87	BGE2066	06/03/2023 05:25	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		45.0% S	60-140					06/03/2023 05:25	
SW-8270	Surrogate: Nitrobenzene-d5-surr		110%	60-140					06/03/2023 05:25	
SW-8270	Surrogate: p-Terphenyl-d14-surr		31.6% S	60-140					06/03/2023 05:25	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-31RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/07/2023 03:37	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.75U	ug/kg	2	9.75	9.75	BGE2066	06/07/2023 03:37	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.75U	ug/kg	2	9.75	9.75	BGE2066	06/07/2023 03:37	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/07/2023 03:37	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/07/2023 03:37	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE2066	06/07/2023 03:37	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		60.0%	60-140					06/07/2023 03:37	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		86.2%	60-140					06/07/2023 03:37	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		41.2% S	60-140					06/07/2023 03:37	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-32      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	9.10	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Acenaphthylene	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Anthracene	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Di-n-butyl phthalate	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Fluoranthene	A	18.9	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Fluorene	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Naphthalene	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Phenanthrene	A	8.31	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
SW-8270	Pyrene	A	9.55	ug/kg	2	4.95	4.95	BGE2066	06/03/2023 06:00	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		60.6%						06/03/2023 06:00	
SW-8270	Surrogate: Nitrobenzene-d5-surr		134%						06/03/2023 06:00	
SW-8270	Surrogate: p-Terphenyl-d14-surr		21.5% S						06/03/2023 06:00	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-32RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/07/2023 04:11	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.90U	ug/kg	2	9.90	9.90	BGE2066	06/07/2023 04:11	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<9.90U	ug/kg	2	9.90	9.90	BGE2066	06/07/2023 04:11	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/07/2023 04:11	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/07/2023 04:11	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.95U	ug/kg	2	4.95	4.95	BGE2066	06/07/2023 04:11	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		57.4% S	60-140					06/07/2023 04:11	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		102%	60-140					06/07/2023 04:11	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		35.1% S	60-140					06/07/2023 04:11	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-33      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Acenaphthylene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Anthracene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Benzo(a)pyrene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.84U	ug/kg	2	9.84	9.84	BGE2066	06/07/2023 04:46	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<9.84U	ug/kg	2	9.84	9.84	BGE2066	06/07/2023 04:46	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Di-n-butyl phthalate	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Fluoranthene	A	8.97	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Fluorene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Naphthalene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Phenanthrene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
SW-8270	Pyrene	A	<4.92U	ug/kg	2	4.92	4.92	BGE2066	06/07/2023 04:46	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.7% S	60-140					06/07/2023 04:46	
SW-8270	Surrogate: Nitrobenzene-d5-surr		130%	60-140					06/07/2023 04:46	
SW-8270	Surrogate: p-Terphenyl-d14-surr		19.4% S	60-140					06/07/2023 04:46	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-34      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Acenaphthylene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Anthracene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Benzo(a)anthracene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Benzo(a)pyrene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	benzo(b&k)fluoranthene	A	<24.9U	ug/kg	5	24.9	24.9	BGE2066	06/10/2023 06:27	KRB
SW-8270	Benzo(g,h,i)perylene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Chrysene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Di-n-butyl phthalate	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Fluoranthene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Fluorene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Naphthalene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Phenanthrene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
SW-8270	Pyrene	A	<12.4U	ug/kg	5	12.4	12.4	BGE2066	06/10/2023 06:27	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.5% S		60-140				06/10/2023 06:27	
SW-8270	Surrogate: Nitrobenzene-d5-surr		115%		60-140				06/10/2023 06:27	
SW-8270	Surrogate: p-Terphenyl-d14-surr		35.7% S		60-140				06/10/2023 06:27	



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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 7-5  
Lab Sample ID: 23E2845-35  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Acenaphthylene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Anthracene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Benzo(a)pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.40U	ug/kg	2	9.40	9.40	BGE2066	06/07/2023 05:55	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<9.40U	ug/kg	2	9.40	9.40	BGE2066	06/07/2023 05:55	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Di-n-butyl phthalate	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Fluoranthene	A	7.56	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Fluorene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Naphthalene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Phenanthrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 05:55	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		55.6% S	60-140					06/07/2023 05:55	
SW-8270	Surrogate: Nitrobenzene-d5-surr		178% S	60-140					06/07/2023 05:55	
SW-8270	Surrogate: p-Terphenyl-d14-surr		26.1% S	60-140					06/07/2023 05:55	

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 8-1  
Lab Sample ID: 23E2845-36  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Acenaphthylene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Benzo(a)anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Benzo(a)pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.92U	ug/kg	1	4.92	4.92	BGF1744	07/04/2023 00:23	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.46B, U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Chrysene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Di-n-butyl phthalate	A	6.96V	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Fluoranthene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Fluorene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Naphthalene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Phenanthrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Pyrene	A	<2.46U	ug/kg	1	2.46	2.46	BGF1744	07/04/2023 00:23	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		140%	60-140					07/04/2023 00:23	
SW-8270	Surrogate: Nitrobenzene-d5-surr		113%	60-140					07/04/2023 00:23	
SW-8270	Surrogate: p-Terphenyl-d14-surr		40.2% S	60-140					07/04/2023 00:23	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 8-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-37      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Acenaphthylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Benzo(a)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Benzo(a)pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.75U	ug/kg	1	4.75	4.75	BGF1744	07/04/2023 00:58	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.38B, U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Chrysene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Di-n-butyl phthalate	A	5.29V	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Fluoranthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Fluorene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Naphthalene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Phenanthrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/04/2023 00:58	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		158% S	60-140					07/04/2023 00:58	
SW-8270	Surrogate: Nitrobenzene-d5-surr		174% S	60-140					07/04/2023 00:58	
SW-8270	Surrogate: p-Terphenyl-d14-surr		37.7% S	60-140					07/04/2023 00:58	



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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 8-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-38      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Acenaphthylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Anthracene	A	5.36	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Benzo(a)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Benzo(a)pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.96U	ug/kg	1	4.96	4.96	BGF1744	07/01/2023 18:33	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.48B, U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Chrysene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Di-n-butyl phthalate	A	4.41V	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Fluoranthene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Fluorene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Naphthalene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Phenanthrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Pyrene	A	<2.48U	ug/kg	1	2.48	2.48	BGF1744	07/01/2023 18:33	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		144% S	60-140					07/01/2023 18:33	
SW-8270	Surrogate: Nitrobenzene-d5-surr		230% S	60-140					07/01/2023 18:33	
SW-8270	Surrogate: p-Terphenyl-d14-surr		17.1% S	60-140					07/01/2023 18:33	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 8-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-39      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Acenaphthylene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Benzo(a)anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Benzo(a)pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.90U	ug/kg	1	4.90	4.90	BGF1744	07/01/2023 19:08	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.45B, U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Chrysene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Di-n-butyl phthalate	A	10.5V	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Fluoranthene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Fluorene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Naphthalene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Phenanthrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Pyrene	A	<2.45U	ug/kg	1	2.45	2.45	BGF1744	07/01/2023 19:08	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		156% S	60-140					07/01/2023 19:08	
SW-8270	Surrogate: Nitrobenzene-d5-surr		235% S	60-140					07/01/2023 19:08	
SW-8270	Surrogate: p-Terphenyl-d14-surr		84.0%	60-140					07/01/2023 19:08	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: MM-HI-DMMU 8-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-40      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Acenaphthylene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Anthracene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Benzo(a)anthracene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Benzo(a)pyrene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.50U	ug/kg	1	4.50	4.50	BGF1744	07/01/2023 19:43	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.25B, U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Chrysene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Di-n-butyl phthalate	A	4.19V	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Fluoranthene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Fluorene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Naphthalene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Phenanthrene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Pyrene	A	<2.25U	ug/kg	1	2.25	2.25	BGF1744	07/01/2023 19:43	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		107%	60-140					07/01/2023 19:43	
SW-8270	Surrogate: Nitrobenzene-d5-surr		258% S	60-140					07/01/2023 19:43	
SW-8270	Surrogate: p-Terphenyl-d14-surr		23.8% S	60-140					07/01/2023 19:43	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 1-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-41      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Acenaphthylene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Anthracene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Benzo(a)anthracene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Benzo(a)pyrene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	benzo(b&k)fluoranthene	A	<24.2U	ug/kg	5	24.2	24.2	BGE2066	06/10/2023 07:01	KRB
SW-8270	Benzo(g,h,i)perylene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Chrysene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Di-n-butyl phthalate	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Fluoranthene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Fluorene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Naphthalene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Phenanthrene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
SW-8270	Pyrene	A	<12.1U	ug/kg	5	12.1	12.1	BGE2066	06/10/2023 07:01	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		41.5% S	60-140					06/10/2023 07:01	
SW-8270	Surrogate: Nitrobenzene-d5-surr		116%	60-140					06/10/2023 07:01	
SW-8270	Surrogate: p-Terphenyl-d14-surr		30.0% S	60-140					06/10/2023 07:01	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 1-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-42      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Acenaphthylene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Anthracene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Benzo(a)pyrene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	benzo(b&k)fluoranthene	A	<8.93U	ug/kg	2	8.93	8.93	BGE2066	06/07/2023 07:04	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<8.93U	ug/kg	2	8.93	8.93	BGE2066	06/07/2023 07:04	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Di-n-butyl phthalate	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Fluoranthene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Fluorene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Naphthalene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Phenanthrene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
SW-8270	Pyrene	A	<4.46U	ug/kg	2	4.46	4.46	BGE2066	06/07/2023 07:04	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		24.0% S	60-140					06/07/2023 07:04	
SW-8270	Surrogate: Nitrobenzene-d5-surr		108%	60-140					06/07/2023 07:04	
SW-8270	Surrogate: p-Terphenyl-d14-surr		18.8% S	60-140					06/07/2023 07:04	



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Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 1-3  
Lab Sample ID: 23E2845-43  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Acenaphthylene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Anthracene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Benzo(a)pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.40U	ug/kg	2	9.40	9.40	BGE2066	06/07/2023 07:38	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<9.40U	ug/kg	2	9.40	9.40	BGE2066	06/07/2023 07:38	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Di-n-butyl phthalate	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Fluoranthene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Fluorene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Naphthalene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Phenanthrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
SW-8270	Pyrene	A	<4.70U	ug/kg	2	4.70	4.70	BGE2066	06/07/2023 07:38	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		40.9% S	60-140					06/07/2023 07:38	
SW-8270	Surrogate: Nitrobenzene-d5-surr		111%	60-140					06/07/2023 07:38	
SW-8270	Surrogate: p-Terphenyl-d14-surr		31.7% S	60-140					06/07/2023 07:38	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 1-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-44      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Acenaphthylene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Anthracene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Benzo(a)pyrene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.07U	ug/kg	2	9.07	9.07	BGE2066	06/07/2023 08:13	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<9.07U	ug/kg	2	9.07	9.07	BGE2066	06/07/2023 08:13	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Di-n-butyl phthalate	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Fluoranthene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Fluorene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Naphthalene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Phenanthrene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
SW-8270	Pyrene	A	<4.54U	ug/kg	2	4.54	4.54	BGE2066	06/07/2023 08:13	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.6% S	60-140					06/07/2023 08:13	
SW-8270	Surrogate: Nitrobenzene-d5-surr		122%	60-140					06/07/2023 08:13	
SW-8270	Surrogate: p-Terphenyl-d14-surr		18.5% S	60-140					06/07/2023 08:13	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 1-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-45      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Acenaphthylene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Anthracene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Benzo(a)pyrene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	benzo(b&k)fluoranthene	A	<9.62U	ug/kg	2	9.62	9.62	BGE2066	06/07/2023 08:47	KRB
SW-8270	Benzo(a)anthracene & Chrysene	N	<9.62U	ug/kg	2	9.62	9.62	BGE2066	06/07/2023 08:47	KRB
SW-8270	Benzo(g,h,i)perylene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Di-n-butyl phthalate	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Fluoranthene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Fluorene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Naphthalene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Phenanthrene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
SW-8270	Pyrene	A	<4.81U	ug/kg	2	4.81	4.81	BGE2066	06/07/2023 08:47	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		55.6% S	60-140					06/07/2023 08:47	
SW-8270	Surrogate: Nitrobenzene-d5-surr		149% S	60-140					06/07/2023 08:47	
SW-8270	Surrogate: p-Terphenyl-d14-surr		44.4% S	60-140					06/07/2023 08:47	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 2-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-46      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	8.50	ug/kg	1	2.32	2.32	BGF1571	07/06/2023 20:12	krb
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>130%</i>	<i>60-140</i>					<i>07/06/2023 20:12</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>152% S</i>	<i>60-140</i>					<i>07/06/2023 20:12</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>92.4%</i>	<i>60-140</i>					<i>07/06/2023 20:12</i>	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 2-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-47      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	10.5	ug/kg	1	2.37	2.37	BGF1571	07/06/2023 20:47	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		102%	60-140					07/06/2023 20:47	
SW-8270	Surrogate: Nitrobenzene-d5-surr		154% S	60-140					07/06/2023 20:47	
SW-8270	Surrogate: p-Terphenyl-d14-surr		74.6%	60-140					07/06/2023 20:47	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 2-3	Sample Matrix: Tissue
Lab Sample ID: 23E2845-48	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	9.52	ug/kg	1	2.34	2.34	BGF1571	07/06/2023 21:22	krb
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>123%</i>	<i>60-140</i>					<i>07/06/2023 21:22</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>179% S</i>	<i>60-140</i>					<i>07/06/2023 21:22</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>84.1%</i>	<i>60-140</i>					<i>07/06/2023 21:22</i>	



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Project: PCCA HI TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
 (Continued)

Client Sample ID: NV-HI-DMMU 2-4  
 Lab Sample ID: 23E2845-49  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 13:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	13.5	ug/kg	1	2.37	2.37	BGF1571	07/06/2023 21:57	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		116%	60-140					07/06/2023 21:57	
SW-8270	Surrogate: Nitrobenzene-d5-surr		189% S	60-140					07/06/2023 21:57	
SW-8270	Surrogate: p-Terphenyl-d14-surr		80.7%	60-140					07/06/2023 21:57	



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 Project Number:  
 Project Manager: Gregg Pawlak

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**Sample Results**  
 (Continued)

Client Sample ID: NV-HI-DMMU 2-5  
 Lab Sample ID: 23E2845-50  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 13:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	10.9	ug/kg	1	2.28	2.28	BGF1571	07/06/2023 22:32	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		105%	60-140					07/06/2023 22:32	
SW-8270	Surrogate: Nitrobenzene-d5-surr		171% S	60-140					07/06/2023 22:32	
SW-8270	Surrogate: p-Terphenyl-d14-surr		80.4%	60-140					07/06/2023 22:32	



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Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-1  
Lab Sample ID: 23E2845-51  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.63U	ug/kg	1	4.63	4.63	BGF1307	06/28/2023 05:23	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Acenaphthene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Acenaphthylene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Benzo(a)anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Benzo(a)pyrene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.63U	ug/kg	1	4.63	4.63	BGF1307	06/28/2023 05:23	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	13.8V	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Chrysene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Di-n-butyl phthalate	A	3.91V	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Fluoranthene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Fluorene	A	2.76	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Naphthalene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Phenanthrene	A	6.00	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Pyrene	A	3.57	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:23	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		6.53% S		60-140				06/28/2023 05:23	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		73.0%		60-140				06/28/2023 05:23	
SW-8270	Surrogate: 2-Fluorophenol-surr		57.2% S		60-140				06/28/2023 05:23	
SW-8270	Surrogate: Nitrobenzene-d5-surr		152% S		60-140				06/28/2023 05:23	
SW-8270	Surrogate: Phenol-d5-surr		81.7%		60-140				06/28/2023 05:23	
SW-8270	Surrogate: p-Terphenyl-d14-surr		57.1% S		60-140				06/28/2023 05:23	

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-2  
Lab Sample ID: 23E2845-52  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.62U	ug/kg	1	4.62	4.62	BGF1307	06/28/2023 05:58	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Acenaphthene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Acenaphthylene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Benzo(a)anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Benzo(a)pyrene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.62U	ug/kg	1	4.62	4.62	BGF1307	06/28/2023 05:58	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	13.4V	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Chrysene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Di-n-butyl phthalate	A	5.14V	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Fluoranthene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Fluorene	A	5.84	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Naphthalene	A	<2.31U	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Phenanthrene	A	8.24	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Pyrene	A	3.70	ug/kg	1	2.31	2.31	BGF1307	06/28/2023 05:58	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		7.23% S	60-140					06/28/2023 05:58	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		63.1%	60-140					06/28/2023 05:58	
SW-8270	Surrogate: 2-Fluorophenol-surr		52.2% S	60-140					06/28/2023 05:58	
SW-8270	Surrogate: Nitrobenzene-d5-surr		147% S	60-140					06/28/2023 05:58	
SW-8270	Surrogate: Phenol-d5-surr		77.3%	60-140					06/28/2023 05:58	
SW-8270	Surrogate: p-Terphenyl-d14-surr		53.7% S	60-140					06/28/2023 05:58	

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-3  
Lab Sample ID: 23E2845-53  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.68U	ug/kg	1	4.68	4.68	BGF1307	06/28/2023 06:33	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Acenaphthene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Acenaphthylene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Anthracene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Benzo(a)anthracene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Benzo(a)pyrene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.68U	ug/kg	1	4.68	4.68	BGF1307	06/28/2023 06:33	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	9.61V	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Di-n-butyl phthalate	A	3.70V	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Fluoranthene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Fluorene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Naphthalene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Phenanthrene	A	5.41	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Pyrene	A	3.59	ug/kg	1	2.34	2.34	BGF1307	06/28/2023 06:33	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		6.77% S	60-140					06/28/2023 06:33	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		73.7%	60-140					06/28/2023 06:33	
SW-8270	Surrogate: 2-Fluorophenol-surr		53.8% S	60-140					06/28/2023 06:33	
SW-8270	Surrogate: Nitrobenzene-d5-surr		145% S	60-140					06/28/2023 06:33	
SW-8270	Surrogate: Phenol-d5-surr		78.9%	60-140					06/28/2023 06:33	
SW-8270	Surrogate: p-Terphenyl-d14-surr		51.4% S	60-140					06/28/2023 06:33	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-53RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Chrysene (Rerun)	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	07/03/2023 20:18	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	07/03/2023 20:18	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.34U	ug/kg	1	2.34	2.34	BGF1307	07/03/2023 20:18	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		53.4% S	60-140					07/03/2023 20:18	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		48.9% S	60-140					07/03/2023 20:18	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		43.7% S	60-140					07/03/2023 20:18	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-54      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.74U	ug/kg	1	4.74	4.74	BGF1307	06/28/2023 07:08	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Acenaphthene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Acenaphthylene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Anthracene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Benzo(a)anthracene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Benzo(a)pyrene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.74U	ug/kg	1	4.74	4.74	BGF1307	06/28/2023 07:08	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	8.88V	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Di-n-butyl phthalate	A	3.39V	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Fluoranthene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Fluorene	A	3.05	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Naphthalene	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Phenanthrene	A	5.65	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
SW-8270	Pyrene	A	3.05	ug/kg	1	2.37	2.37	BGF1307	06/28/2023 07:08	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		7.22% S		60-140				06/28/2023 07:08	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		63.2%		60-140				06/28/2023 07:08	
SW-8270	Surrogate: 2-Fluorophenol-surr		53.0% S		60-140				06/28/2023 07:08	
SW-8270	Surrogate: Nitrobenzene-d5-surr		159% S		60-140				06/28/2023 07:08	
SW-8270	Surrogate: Phenol-d5-surr		75.5%		60-140				06/28/2023 07:08	
SW-8270	Surrogate: p-Terphenyl-d14-surr		53.7% S		60-140				06/28/2023 07:08	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-54RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Chrysene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	07/03/2023 21:28	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	07/03/2023 21:28	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGF1307	07/03/2023 21:28	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		41.4% S	60-140					07/03/2023 21:28	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		43.0% S	60-140					07/03/2023 21:28	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		43.0% S	60-140					07/03/2023 21:28	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-5  
Lab Sample ID: 23E2845-55  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.64U	ug/kg	1	4.64	4.64	BGF1307	06/29/2023 17:52	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Acenaphthene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Acenaphthylene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Anthracene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Benzo(a)pyrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.64U	ug/kg	1	4.64	4.64	BGF1307	06/29/2023 17:52	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Di-n-butyl phthalate	A	9.31V	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Fluoranthene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Fluorene	A	8.16	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Naphthalene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Phenanthrene	A	11.7	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Pyrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	06/29/2023 17:52	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		13.0% S	60-140					06/29/2023 17:52	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		63.5%	60-140					06/29/2023 17:52	
SW-8270	Surrogate: 2-Fluorophenol-surr		76.2%	60-140					06/29/2023 17:52	
SW-8270	Surrogate: Nitrobenzene-d5-surr		137%	60-140					06/29/2023 17:52	
SW-8270	Surrogate: Phenol-d5-surr		100%	60-140					06/29/2023 17:52	
SW-8270	Surrogate: p-Terphenyl-d14-surr		47.6% S	60-140					06/29/2023 17:52	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 3-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-55RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	07/03/2023 22:38	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	11.5V	ug/kg	1	2.32	2.32	BGF1307	07/03/2023 22:38	KRB
SW-8270	Chrysene (Rerun)	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	07/03/2023 22:38	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	07/03/2023 22:38	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.32U	ug/kg	1	2.32	2.32	BGF1307	07/03/2023 22:38	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		41.0% S	60-140					07/03/2023 22:38	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		52.9% S	60-140					07/03/2023 22:38	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		45.7% S	60-140					07/03/2023 22:38	





Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 4-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-56      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Acenaphthylene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Anthracene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Benzo(a)anthracene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Benzo(a)pyrene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.84U	ug/kg	1	4.84	4.84	BGF1744	07/01/2023 20:18	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Chrysene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Di-n-butyl phthalate	A	7.36V	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Fluoranthene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Fluorene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Naphthalene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Phenanthrene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
SW-8270	Pyrene	A	<2.42U	ug/kg	1	2.42	2.42	BGF1744	07/01/2023 20:18	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		67.1%		60-140				07/01/2023 20:18	
SW-8270	Surrogate: Nitrobenzene-d5-surr		134%		60-140				07/01/2023 20:18	
SW-8270	Surrogate: p-Terphenyl-d14-surr		50.3% S		60-140				07/01/2023 20:18	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 4-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-57      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Acenaphthylene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Benzo(a)anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Benzo(a)pyrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.93U	ug/kg	1	4.93	4.93	BGF1744	07/01/2023 20:53	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Chrysene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Di-n-butyl phthalate	A	7.30V	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Fluoranthene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Fluorene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Naphthalene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Phenanthrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
SW-8270	Pyrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 20:53	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		94.8%		60-140				07/01/2023 20:53	
SW-8270	Surrogate: Nitrobenzene-d5-surr		155% S		60-140				07/01/2023 20:53	
SW-8270	Surrogate: p-Terphenyl-d14-surr		50.4% S		60-140				07/01/2023 20:53	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 4-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-58      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Acenaphthylene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Benzo(a)anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Benzo(a)pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.57U	ug/kg	1	4.57	4.57	BGF1744	07/01/2023 21:28	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Chrysene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Di-n-butyl phthalate	A	7.28V	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Fluoranthene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Fluorene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Naphthalene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Phenanthrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
SW-8270	Pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/01/2023 21:28	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		80.2%	60-140					07/01/2023 21:28	
SW-8270	Surrogate: Nitrobenzene-d5-surr		127%	60-140					07/01/2023 21:28	
SW-8270	Surrogate: p-Terphenyl-d14-surr		58.0% S	60-140					07/01/2023 21:28	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 4-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-59      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Acenaphthylene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Anthracene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Benzo(a)anthracene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Benzo(a)pyrene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.48U	ug/kg	1	4.48	4.48	BGF1744	07/01/2023 22:03	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Chrysene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Di-n-butyl phthalate	A	7.49V	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Fluoranthene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Fluorene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Naphthalene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Phenanthrene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
SW-8270	Pyrene	A	<2.24U	ug/kg	1	2.24	2.24	BGF1744	07/01/2023 22:03	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		85.1%		60-140				07/01/2023 22:03	
SW-8270	Surrogate: Nitrobenzene-d5-surr		151% S		60-140				07/01/2023 22:03	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.5% S		60-140				07/01/2023 22:03	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 4-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-60      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Acenaphthylene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Benzo(a)anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Benzo(a)pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.43U	ug/kg	1	4.43	4.43	BGF1744	07/01/2023 22:38	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Chrysene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Di-n-butyl phthalate	A	6.72V	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Fluoranthene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Fluorene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Naphthalene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Phenanthrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
SW-8270	Pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1744	07/01/2023 22:38	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		85.5%		60-140				07/01/2023 22:38	
SW-8270	Surrogate: Nitrobenzene-d5-surr		156% S		60-140				07/01/2023 22:38	
SW-8270	Surrogate: p-Terphenyl-d14-surr		51.1% S		60-140				07/01/2023 22:38	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-61      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Acenaphthylene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Benzo(a)anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Benzo(a)pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.44U	ug/kg	1	4.44	4.44	BGF1307	06/29/2023 18:26	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Chrysene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Diethyl phthalate	A	5.18V	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Di-n-butyl phthalate	A	<2.22B, U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Fluoranthene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Fluorene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Naphthalene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Phenanthrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
SW-8270	Pyrene	A	<2.22U	ug/kg	1	2.22	2.22	BGF1307	06/29/2023 18:26	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		45.5% S	60-140					06/29/2023 18:26	
SW-8270	Surrogate: Nitrobenzene-d5-surr		102%	60-140					06/29/2023 18:26	
SW-8270	Surrogate: p-Terphenyl-d14-surr		34.1% S	60-140					06/29/2023 18:26	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-62      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Acenaphthylene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Anthracene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Benzo(a)pyrene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.56U	ug/kg	1	4.56	4.56	BGF1307	06/29/2023 19:01	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Diethyl phthalate	A	5.92V	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Di-n-butyl phthalate	A	11.8V	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Fluoranthene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Fluorene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Naphthalene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Phenanthrene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
SW-8270	Pyrene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	06/29/2023 19:01	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		82.3%	60-140					06/29/2023 19:01	
SW-8270	Surrogate: Nitrobenzene-d5-surr		115%	60-140					06/29/2023 19:01	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.6% S	60-140					06/29/2023 19:01	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-62RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	07/03/2023 23:48	KRB
SW-8270	Chrysene (Rerun)	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	07/03/2023 23:48	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	07/03/2023 23:48	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.28U	ug/kg	1	2.28	2.28	BGF1307	07/03/2023 23:48	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		50.6% S	60-140					07/03/2023 23:48	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		50.2% S	60-140					07/03/2023 23:48	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		44.5% S	60-140					07/03/2023 23:48	





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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-63      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Acenaphthylene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Benzo(a)anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Benzo(a)pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.77U	ug/kg	1	4.77	4.77	BGF1307	06/29/2023 19:36	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Chrysene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Diethyl phthalate	A	6.55V	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Di-n-butyl phthalate	A	<2.39B, U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Fluoranthene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Fluorene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Naphthalene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Phenanthrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 19:36	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		75.4%	60-140					06/29/2023 19:36	
SW-8270	Surrogate: Nitrobenzene-d5-surr		129%	60-140					06/29/2023 19:36	
SW-8270	Surrogate: p-Terphenyl-d14-surr		62.2%	60-140					06/29/2023 19:36	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-64      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Acenaphthylene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Benzo(a)anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Benzo(a)pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.78U	ug/kg	1	4.78	4.78	BGF1307	06/29/2023 20:11	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Chrysene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Diethyl phthalate	A	5.58V	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Di-n-butyl phthalate	A	<2.39B, U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Fluoranthene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Fluorene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Naphthalene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Phenanthrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
SW-8270	Pyrene	A	<2.39U	ug/kg	1	2.39	2.39	BGF1307	06/29/2023 20:11	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		66.6%	60-140					06/29/2023 20:11	
SW-8270	Surrogate: Nitrobenzene-d5-surr		132%	60-140					06/29/2023 20:11	
SW-8270	Surrogate: p-Terphenyl-d14-surr		51.9% S	60-140					06/29/2023 20:11	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 5-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-65      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Acenaphthylene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Benzo(a)anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Benzo(a)pyrene	A	3.39	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.69U	ug/kg	1	4.69	4.69	BGF1307	06/29/2023 20:46	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Chrysene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Diethyl phthalate	A	6.62V	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Di-n-butyl phthalate	A	<2.35B, U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Fluoranthene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Fluorene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Naphthalene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Phenanthrene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
SW-8270	Pyrene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1307	06/29/2023 20:46	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		55.7% S	60-140					06/29/2023 20:46	
SW-8270	Surrogate: Nitrobenzene-d5-surr		112%	60-140					06/29/2023 20:46	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.8% S	60-140					06/29/2023 20:46	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 6-1	Sample Matrix: Tissue
Lab Sample ID: 23E2845-66	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	10.9	ug/kg	1	2.39	2.39	BGF1571	07/06/2023 23:07	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		100%	60-140					07/06/2023 23:07	
SW-8270	Surrogate: Nitrobenzene-d5-surr		179% S	60-140					07/06/2023 23:07	
SW-8270	Surrogate: p-Terphenyl-d14-surr		71.7%	60-140					07/06/2023 23:07	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 6-2	Sample Matrix: Tissue
Lab Sample ID: 23E2845-67	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	4.93	ug/kg	1	2.31	2.31	BGF1571	07/08/2023 01:23	krb
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>63.9%</i>	<i>60-140</i>					<i>07/08/2023 01:23</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>111%</i>	<i>60-140</i>					<i>07/08/2023 01:23</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>38.8% S</i>	<i>60-140</i>					<i>07/08/2023 01:23</i>	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 6-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-68      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	2.28	ug/kg	1	2.24	2.24	BGF1571	07/08/2023 01:58	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		38.2% S	60-140					07/08/2023 01:58	
SW-8270	Surrogate: Nitrobenzene-d5-surr		91.9%	60-140					07/08/2023 01:58	
SW-8270	Surrogate: p-Terphenyl-d14-surr		21.8% S	60-140					07/08/2023 01:58	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 6-4	Sample Matrix: Tissue
Lab Sample ID: 23E2845-69	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	2.95	ug/kg	1	2.36	2.36	BGF1571	07/08/2023 02:33	krb
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>47.1% S</i>	<i>60-140</i>					<i>07/08/2023 02:33</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>85.1%</i>	<i>60-140</i>					<i>07/08/2023 02:33</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>29.6% S</i>	<i>60-140</i>					<i>07/08/2023 02:33</i>	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 6-5	Sample Matrix: Tissue
Lab Sample ID: 23E2845-70	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	<2.28U	ug/kg	1	2.28	2.28	BGF1571	07/08/2023 03:08	krb
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.3% S	60-140					07/08/2023 03:08	
SW-8270	Surrogate: Nitrobenzene-d5-surr		82.7%	60-140					07/08/2023 03:08	
SW-8270	Surrogate: p-Terphenyl-d14-surr		32.6% S	60-140					07/08/2023 03:08	





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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 7-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-71      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Acenaphthylene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Anthracene	A	3.08	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Benzo(a)anthracene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Benzo(a)pyrene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.55U	ug/kg	1	4.55	4.55	BGF1744	07/01/2023 23:13	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Chrysene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Di-n-butyl phthalate	A	7.94V	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Fluoranthene	A	8.25	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Fluorene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Naphthalene	A	<2.28U	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Phenanthrene	A	7.56	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
SW-8270	Pyrene	A	8.98	ug/kg	1	2.28	2.28	BGF1744	07/01/2023 23:13	KRB
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SW-8270	Surrogate: 2-Fluorobiphenyl-surr		65.9%		60-140				07/01/2023 23:13	
SW-8270	Surrogate: Nitrobenzene-d5-surr		142% S		60-140				07/01/2023 23:13	
SW-8270	Surrogate: p-Terphenyl-d14-surr		43.9% S		60-140				07/01/2023 23:13	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 7-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-72      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Acenaphthylene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Anthracene	A	5.57	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Benzo(a)anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Benzo(a)pyrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.93U	ug/kg	1	4.93	4.93	BGF1744	07/01/2023 23:48	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Chrysene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Di-n-butyl phthalate	A	7.41V	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Fluoranthene	A	17.1	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Fluorene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Naphthalene	A	<2.47U	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Phenanthrene	A	15.1	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
SW-8270	Pyrene	A	20.0	ug/kg	1	2.47	2.47	BGF1744	07/01/2023 23:48	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		75.3%		60-140				07/01/2023 23:48	
SW-8270	Surrogate: Nitrobenzene-d5-surr		183% S		60-140				07/01/2023 23:48	
SW-8270	Surrogate: p-Terphenyl-d14-surr		56.9% S		60-140				07/01/2023 23:48	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 7-3  
Lab Sample ID: 23E2845-73  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Acenaphthylene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Anthracene	A	3.21	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Benzo(a)anthracene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Benzo(a)pyrene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	benzo(b&k)fluoranthene	A	<5.00U	ug/kg	1	5.00	5.00	BGF1744	07/02/2023 00:23	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Chrysene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Di-n-butyl phthalate	A	7.88V	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Fluoranthene	A	9.44	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Fluorene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Naphthalene	A	<2.50U	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Phenanthrene	A	8.90	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
SW-8270	Pyrene	A	12.5	ug/kg	1	2.50	2.50	BGF1744	07/02/2023 00:23	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		79.7%		60-140				07/02/2023 00:23	
SW-8270	Surrogate: Nitrobenzene-d5-surr		144% S		60-140				07/02/2023 00:23	
SW-8270	Surrogate: p-Terphenyl-d14-surr		60.2%		60-140				07/02/2023 00:23	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 7-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-74      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Acenaphthylene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Anthracene	A	2.61	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Benzo(a)anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Benzo(a)pyrene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.71U	ug/kg	1	4.71	4.71	BGF1744	07/02/2023 00:58	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Chrysene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Di-n-butyl phthalate	A	5.83V	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Fluoranthene	A	7.97	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Fluorene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Naphthalene	A	<2.35U	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Phenanthrene	A	6.35	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
SW-8270	Pyrene	A	11.0	ug/kg	1	2.35	2.35	BGF1744	07/02/2023 00:58	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		82.0%		60-140				07/02/2023 00:58	
SW-8270	Surrogate: Nitrobenzene-d5-surr		161% S		60-140				07/02/2023 00:58	
SW-8270	Surrogate: p-Terphenyl-d14-surr		60.1%		60-140				07/02/2023 00:58	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 7-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-75      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Acenaphthylene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Anthracene	A	2.61	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Benzo(a)anthracene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Benzo(a)pyrene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.86U	ug/kg	1	4.86	4.86	BGF1744	07/02/2023 01:33	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Chrysene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Di-n-butyl phthalate	A	5.83V	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Fluoranthene	A	6.01	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Fluorene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Naphthalene	A	<2.43U	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Phenanthrene	A	6.38	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
SW-8270	Pyrene	A	7.49	ug/kg	1	2.43	2.43	BGF1744	07/02/2023 01:33	KRB
<hr/>										
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		66.3%		60-140				07/02/2023 01:33	
SW-8270	Surrogate: Nitrobenzene-d5-surr		171% S		60-140				07/02/2023 01:33	
SW-8270	Surrogate: p-Terphenyl-d14-surr		47.8% S		60-140				07/02/2023 01:33	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 8-1  
Lab Sample ID: 23E2845-76  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Acenaphthylene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Anthracene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Benzo(a)anthracene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Benzo(a)pyrene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.68U	ug/kg	1	4.68	4.68	BGF1744	07/02/2023 02:08	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	14.6V	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Chrysene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Di-n-butyl phthalate	A	4.24V	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Fluoranthene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Fluorene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Naphthalene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Phenanthrene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Pyrene	A	<2.34U	ug/kg	1	2.34	2.34	BGF1744	07/02/2023 02:08	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		83.7%	60-140					07/02/2023 02:08	
SW-8270	Surrogate: Nitrobenzene-d5-surr		172% S	60-140					07/02/2023 02:08	
SW-8270	Surrogate: p-Terphenyl-d14-surr		47.0% S	60-140					07/02/2023 02:08	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 8-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-77      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Acenaphthylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Benzo(a)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Benzo(a)pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.76U	ug/kg	1	4.76	4.76	BGF1744	07/02/2023 02:43	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	21.4V	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Chrysene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Di-n-butyl phthalate	A	7.40V	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Fluoranthene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Fluorene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Naphthalene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Phenanthrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Pyrene	A	<2.38U	ug/kg	1	2.38	2.38	BGF1744	07/02/2023 02:43	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		66.5%	60-140					07/02/2023 02:43	
SW-8270	Surrogate: Nitrobenzene-d5-surr		149% S	60-140					07/02/2023 02:43	
SW-8270	Surrogate: p-Terphenyl-d14-surr		52.6% S	60-140					07/02/2023 02:43	



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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 8-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-78      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Acenaphthylene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Anthracene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Benzo(a)anthracene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Benzo(a)pyrene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.46U	ug/kg	1	4.46	4.46	BGF1744	07/02/2023 03:17	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	12.9V	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Chrysene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Di-n-butyl phthalate	A	6.15V	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Fluoranthene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Fluorene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Naphthalene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Phenanthrene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Pyrene	A	<2.23U	ug/kg	1	2.23	2.23	BGF1744	07/02/2023 03:17	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		80.7%	60-140					07/02/2023 03:17	
SW-8270	Surrogate: Nitrobenzene-d5-surr		153% S	60-140					07/02/2023 03:17	
SW-8270	Surrogate: p-Terphenyl-d14-surr		34.0% S	60-140					07/02/2023 03:17	





Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 8-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-79      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Acenaphthylene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Benzo(a)anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Benzo(a)pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.59U	ug/kg	1	4.59	4.59	BGF1744	07/02/2023 03:52	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	14.1V	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Chrysene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Di-n-butyl phthalate	A	5.97V	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Fluoranthene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Fluorene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Naphthalene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Phenanthrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Pyrene	A	<2.29U	ug/kg	1	2.29	2.29	BGF1744	07/02/2023 03:52	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		59.9% S	60-140					07/02/2023 03:52	
SW-8270	Surrogate: Nitrobenzene-d5-surr		168% S	60-140					07/02/2023 03:52	
SW-8270	Surrogate: p-Terphenyl-d14-surr		50.0% S	60-140					07/02/2023 03:52	



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/21/2023 15:59
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**Sample Results**  
(Continued)

Client Sample ID: NV-HI-DMMU 8-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2845-80      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Acenaphthene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Acenaphthylene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Anthracene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Benzo(a)anthracene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Benzo(a)pyrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	benzo(b&k)fluoranthene	A	<4.64U	ug/kg	1	4.64	4.64	BGF1744	07/02/2023 04:27	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Bis(2-ethylhexyl )phthalate	A	17.6V	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Chrysene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Dibenzo(a,h)anthracene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Di-n-butyl phthalate	A	6.97V	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Fluoranthene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Fluorene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Indeno(1,2,3-cd) pyrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Naphthalene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Phenanthrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Pyrene	A	<2.32U	ug/kg	1	2.32	2.32	BGF1744	07/02/2023 04:27	KRB
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		66.1%	60-140					07/02/2023 04:27	
SW-8270	Surrogate: Nitrobenzene-d5-surr		149% S	60-140					07/02/2023 04:27	
SW-8270	Surrogate: p-Terphenyl-d14-surr		56.8% S	60-140					07/02/2023 04:27	

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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### Quality Control

#### Semivolatile Organic Compounds by GCMS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE2066 - SW-3570</b>										
<b>MB SV BT (BGE2066-BLK1)</b>										
					Prepared: 5/12/2023 Analyzed: 6/2/2023					
Acenaphthene	<4.99	U	4.99	ug/kg						
Acenaphthylene	<4.99	U	4.99	ug/kg						
Anthracene	<4.99	U	4.99	ug/kg						
Benzo(a)anthracene	<4.99	U	4.99	ug/kg						
Benzo(a)pyrene	<4.99	U	4.99	ug/kg						
benzo(b&k)fluoranthene	<9.98	U	9.98	ug/kg						
Benzo(g,h,i)perylene	<4.99	U	4.99	ug/kg						
Chrysene	<4.99	U	4.99	ug/kg						
Dibenzo(a,h)anthracene	<4.99	U	4.99	ug/kg						
Di-n-butyl phthalate	<4.99	U	4.99	ug/kg						
Fluoranthene	<4.99	U	4.99	ug/kg						
Fluorene	<4.99	U	4.99	ug/kg						
Indeno(1,2,3-cd) pyrene	<4.99	U	4.99	ug/kg						
Naphthalene	<4.99	U	4.99	ug/kg						
Phenanthrene	<4.99	U	4.99	ug/kg						
Pyrene	<4.99	U	4.99	ug/kg						
<i>Surrogate: 2-Fluorobiphenyl-surr</i>			24.7	ug/kg	39.9		62.0	60-140		
<i>Surrogate: Nitrobenzene-d5-surr</i>			26.7	ug/kg	39.9		67.0	60-140		
<i>Surrogate: p-Terphenyl-d14-surr</i>			25.3	ug/kg	39.9		63.3	60-140		

#### BS SV BT/IDOC1 SV BT (BGE2066-BS1)

					Prepared: 5/12/2023 Analyzed: 6/2/2023					
Acenaphthene	31.2		4.79	ug/kg	38.3		81.4	60-140		
Acenaphthylene	33.3		4.79	ug/kg	38.3		86.8	60-140		
Anthracene	26.9		4.79	ug/kg	38.3		70.1	60-140		
Benzo(a)anthracene	25.7		4.79	ug/kg	38.3		67.1	60-140		
Benzo(a)pyrene	21.7	J1	4.79	ug/kg	38.3		56.6	60-140		
benzo(b&k)fluoranthene	56.7		9.58	ug/kg	76.6		74.0	60-140		
Benzo(g,h,i)perylene	19.3	J1	4.79	ug/kg	38.3		50.5	60-140		
Chrysene	16.3	J1	4.79	ug/kg	38.3		42.5	60-140		
Dibenzo(a,h)anthracene	18.6	J1	4.79	ug/kg	38.3		48.5	60-140		
Di-n-butyl phthalate	26.3		4.79	ug/kg	38.3		68.6	60-140		
Fluoranthene	27.3		4.79	ug/kg	38.3		71.3	60-140		
Fluorene	29.3		4.79	ug/kg	38.3		76.4	60-140		
Indeno(1,2,3-cd) pyrene	17.6	J1	4.79	ug/kg	38.3		45.8	60-140		
Naphthalene	24.0		4.79	ug/kg	38.3		62.5	60-140		
Phenanthrene	29.8		4.79	ug/kg	38.3		77.9	60-140		
Pyrene	12.8	J1	4.79	ug/kg	38.3		33.3	60-140		
<i>Surrogate: 2-Fluorobiphenyl-surr</i>			S	21.1	ug/kg	38.3	55.0	60-140		
<i>Surrogate: Nitrobenzene-d5-surr</i>			S	27.0	ug/kg	38.3	70.6	60-140		
<i>Surrogate: p-Terphenyl-d14-surr</i>			S	20.8	ug/kg	38.3	54.4	60-140		

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE2066 - SW-3570 (Continued)</b>										
<b>BSD SV BT/IDOC2 SV BT (BGE2066-BSD1)</b>										
					Prepared: 5/12/2023 Analyzed: 6/2/2023					
Acenaphthene	33.1		4.95	ug/kg	39.6		83.7	60-140	6.04	40
Acenaphthylene	33.7		4.95	ug/kg	39.6		85.2	60-140	1.41	40
Anthracene	28.7		4.95	ug/kg	39.6		72.4	60-140	6.56	40
Benzo(a)anthracene	26.9		4.95	ug/kg	39.6		67.9	60-140	4.45	40
Benzo(a)pyrene	22.3	J1	4.95	ug/kg	39.6		56.2	60-140	2.59	40
benzo(b&k)fluoranthene	52.3		9.90	ug/kg	79.2		66.0	60-140	8.14	40
Benzo(g,h,i)perylene	21.4	J1	4.95	ug/kg	39.6		53.9	60-140	9.86	40
Chrysene	16.7	J1	4.95	ug/kg	39.6		42.1	60-140	2.40	40
Dibenzo(a,h)anthracene	21.2	J1	4.95	ug/kg	39.6		53.4	60-140	13.0	40
Di-n-butyl phthalate	30.1		4.95	ug/kg	39.6		75.9	60-140	13.4	40
Fluoranthene	28.0		4.95	ug/kg	39.6		70.8	60-140	2.65	40
Fluorene	30.2		4.95	ug/kg	39.6		76.3	60-140	3.20	40
Indeno(1,2,3-cd) pyrene	20.6	J1	4.95	ug/kg	39.6		52.0	60-140	15.9	40
Naphthalene	25.7		4.95	ug/kg	39.6		64.9	60-140	6.99	40
Phenanthrene	31.8		4.95	ug/kg	39.6		80.2	60-140	6.24	40
Pyrene	15.2	J1	4.95	ug/kg	39.6		38.4	60-140	17.6	40
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	22.2	ug/kg	39.6		56.1	60-140		
Surrogate: Nitrobenzene-d5-surr			28.8	ug/kg	39.6		72.8	60-140		
Surrogate: p-Terphenyl-d14-surr		S	19.9	ug/kg	39.6		50.3	60-140		

**MDL SV BT (BGE2066-MRL1)**

Prepared: 5/12/2023 Analyzed: 6/2/2023

Acenaphthene	4.64	J	4.73	ug/kg	3.78		123			
Acenaphthylene	3.86	J	4.73	ug/kg	3.78		102			
Anthracene	3.15	J	4.73	ug/kg	3.78		83.4			
Benzo(a)anthracene	3.98	J	4.73	ug/kg	3.78		105			
Benzo(a)pyrene	2.66	J	4.73	ug/kg	3.78		70.5			
benzo(b&k)fluoranthene	4.00	J	9.45	ug/kg	7.56		52.9			
Benzo(g,h,i)perylene	1.27	J	4.73	ug/kg	3.78		33.7			
Chrysene	0.791	J	4.73	ug/kg	3.78		20.9			
Dibenzo(a,h)anthracene	1.34	J	4.73	ug/kg	3.78		35.6			
Di-n-butyl phthalate	7.43		4.73	ug/kg	3.78		197			
Fluoranthene	3.50	J	4.73	ug/kg	3.78		92.7			
Fluorene	3.98	J	4.73	ug/kg	3.78		105			
Indeno(1,2,3-cd) pyrene	1.42	J	4.73	ug/kg	3.78		37.7			
Naphthalene	2.49	J	4.73	ug/kg	3.78		65.9			
Phenanthrene	5.01		4.73	ug/kg	3.78		133			
Pyrene	2.05	J	4.73	ug/kg	3.78		54.1			
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	20.6	ug/kg	37.8		54.6	60-140		
Surrogate: Nitrobenzene-d5-surr			26.6	ug/kg	37.8		70.4	60-140		
Surrogate: p-Terphenyl-d14-surr		S	20.3	ug/kg	37.8		53.6	60-140		

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2066 - SW-3570 (Continued)**

**23E2845-05 MS (BGE2066-MS1)**

Source: 23E2845-05

Prepared: 5/12/2023 Analyzed: 6/2/2023

Acenaphthene	25.9		4.45	ug/kg	35.6	<4.45	72.7	60-140		
Acenaphthylene	26.9		4.45	ug/kg	35.6	<4.45	75.6	60-140		
Anthracene	20.5	J1	4.45	ug/kg	35.6	<4.45	57.7	60-140		
Benzo(a)pyrene	19.7	J1	4.45	ug/kg	35.6	<4.45	55.4	60-140		
benzo(b&k)fluoranthene	40.6	J1	8.90	ug/kg	71.2	<8.90	57.1	60-140		
Benzo(g,h,i)perylene	15.6	J1	4.45	ug/kg	35.6	<4.45	43.9	60-140		
Dibenzo(a,h)anthracene	16.2	J1	4.45	ug/kg	35.6	<4.45	45.6	60-140		
Di-n-butyl phthalate	19.5	J1	4.45	ug/kg	35.6	<4.45	54.9	60-140		
Fluoranthene	20.4	J1	4.45	ug/kg	35.6	<4.45	57.2	60-140		
Fluorene	21.6		4.45	ug/kg	35.6	<4.45	60.6	60-140		
Indeno(1,2,3-cd) pyrene	16.7	J1	4.45	ug/kg	35.6	<4.45	46.9	60-140		
Naphthalene	21.3		4.45	ug/kg	35.6	<4.45	60.0	60-140		
Phenanthrene	24.4		4.45	ug/kg	35.6	<4.45	68.6	60-140		
Pyrene	6.94	J1	4.45	ug/kg	35.6	<4.45	19.5	60-140		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	14.1	ug/kg	35.6		39.7	60-140		
Surrogate: Nitrobenzene-d5-surr			22.5	ug/kg	35.6		63.2	60-140		
Surrogate: p-Terphenyl-d14-surr		S	12.8	ug/kg	35.6		35.9	60-140		

**Matrix Spike (BGE2066-MS2)**

Source: 23E2845-05RE1

Prepared: 5/12/2023 Analyzed: 6/7/2023

benzo(b&k)fluoranthene	36.3	J1	8.90	ug/kg	71.2	<8.90	50.9	60-140		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	20.0	ug/kg	35.6		56.2	60-140		
Surrogate: Nitrobenzene-d5-surr			24.1	ug/kg	35.6		67.7	60-140		
Surrogate: p-Terphenyl-d14-surr		S	11.3	ug/kg	35.6		31.7	60-140		

**23E2845-05 MSD (BGE2066-MSD1)**

Source: 23E2845-05

Prepared: 5/12/2023 Analyzed: 6/2/2023

Acenaphthene	31.6		4.92	ug/kg	39.4	<4.92	80.4	60-140	20.0	40
Acenaphthylene	35.6		4.92	ug/kg	39.4	<4.92	90.3	60-140	27.7	40
Anthracene	28.9		4.92	ug/kg	39.4	<4.92	73.5	60-140	33.9	40
Benzo(a)pyrene	25.9		4.92	ug/kg	39.4	<4.92	65.8	60-140	27.2	40
benzo(b&k)fluoranthene	48.2		9.84	ug/kg	78.7	<9.84	61.2	60-140	16.9	40
Benzo(g,h,i)perylene	19.7	J1	4.92	ug/kg	39.4	<4.92	49.9	60-140	22.9	40
Dibenzo(a,h)anthracene	21.6	J1	4.92	ug/kg	39.4	<4.92	54.8	60-140	28.1	40
Di-n-butyl phthalate	24.7		4.92	ug/kg	39.4	<4.92	62.7	60-140	23.3	40
Fluoranthene	24.5		4.92	ug/kg	39.4	<4.92	62.3	60-140	18.5	40
Fluorene	29.1		4.92	ug/kg	39.4	<4.92	73.9	60-140	29.7	40
Indeno(1,2,3-cd) pyrene	18.9	J1	4.92	ug/kg	39.4	<4.92	47.9	60-140	12.1	40
Naphthalene	26.9		4.92	ug/kg	39.4	<4.92	68.3	60-140	23.0	40
Phenanthrene	33.4		4.92	ug/kg	39.4	<4.92	85.0	60-140	31.2	40
Pyrene	7.59	J1	4.92	ug/kg	39.4	<4.92	19.3	60-140	8.85	40
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	19.0	ug/kg	39.4		48.2	60-140		
Surrogate: Nitrobenzene-d5-surr			30.2	ug/kg	39.4		76.8	60-140		
Surrogate: p-Terphenyl-d14-surr		S	14.7	ug/kg	39.4		37.4	60-140		

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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE2066 - SW-3570 (Continued)</b>										
<b>Matrix Spike Dup (BGE2066-MSD2)</b>			<b>Source: 23E2845-05RE1</b>		Prepared: 5/12/2023 Analyzed: 6/7/2023					
benzo(b&k)fluoranthene	45.6	J1	9.84	ug/kg	78.7	<9.84	57.9	60-140	22.8	40
-----										
Surrogate: 2-Fluorobiphenyl-surr			26.6	ug/kg	39.4		67.6	60-140		
Surrogate: Nitrobenzene-d5-surr			30.6	ug/kg	39.4		77.6	60-140		
Surrogate: p-Terphenyl-d14-surr		S	15.4	ug/kg	39.4		39.2	60-140		

**Batch: BGF1307 - SW-3570**

**MB SV BT (BGF1307-BLK1)**

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	<2.45	U	2.45	ug/kg						
Acenaphthylene	<2.45	U	2.45	ug/kg						
Anthracene	<2.45	U	2.45	ug/kg						
Benzo(a)anthracene	<2.45	U	2.45	ug/kg						
Benzo(a)pyrene	<2.45	U	2.45	ug/kg						
benzo(b&k)fluoranthene	<4.89	U	4.89	ug/kg						
Benzo(g,h,i)perylene	<2.45	U	2.45	ug/kg						
Bis(2-ethylhexyl )phthalate	14.6		2.45	ug/kg						
Chrysene	<2.45	U	2.45	ug/kg						
Dibenzo(a,h)anthracene	<2.45	U	2.45	ug/kg						
Di-n-butyl phthalate	5.21		2.45	ug/kg						
Fluoranthene	<2.45	U	2.45	ug/kg						
Fluorene	<2.45	U	2.45	ug/kg						
Indeno(1,2,3-cd) pyrene	<2.45	U	2.45	ug/kg						
Naphthalene	<2.45	U	2.45	ug/kg						
Phenanthrene	<2.45	U	2.45	ug/kg						
Pyrene	<2.45	U	2.45	ug/kg						
-----										
Surrogate: 2,4,6-Tribromophenol-surr		S	28.7	ug/kg	157		18.4	60-140		
Surrogate: 2-Fluorobiphenyl-surr			86.9	ug/kg	78.3		111	60-140		
Surrogate: 2-Fluorophenol-surr		S	93.3	ug/kg	157		59.6	60-140		
Surrogate: Nitrobenzene-d5-surr			86.6	ug/kg	78.3		111	60-140		
Surrogate: Phenol-d5-surr			121	ug/kg	157		77.2	60-140		
Surrogate: p-Terphenyl-d14-surr			82.3	ug/kg	78.3		105	60-140		

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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1307 - SW-3570 (Continued)**

**BS SV BT (BGF1307-BS1)**

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	59.9		2.34	ug/kg	74.8		80.1	60-140		
Acenaphthylene	54.6		2.34	ug/kg	74.8		73.0	60-140		
Anthracene	49.4		2.34	ug/kg	74.8		66.1	60-140		
Benzo(a)anthracene	48.3		2.34	ug/kg	74.8		64.6	60-140		
Benzo(a)pyrene	42.6	J1	2.34	ug/kg	74.8		57.0	60-140		
benzo(b&k)fluoranthene	97.1		4.67	ug/kg	150		65.0	60-140		
Benzo(g,h,i)perylene	31.3	J1	2.34	ug/kg	74.8		41.8	60-140		
Bis(2-ethylhexyl )phthalate	57.3		2.34	ug/kg	74.8		76.7	60-140		
Chrysene	25.3	J1	2.34	ug/kg	74.8		33.8	60-140		
Dibenzo(a,h)anthracene	37.4	J1	2.34	ug/kg	74.8		50.0	60-140		
Di-n-butyl phthalate	37.8	J1	2.34	ug/kg	74.8		50.6	60-140		
Fluoranthene	49.5		2.34	ug/kg	74.8		66.2	60-140		
Fluorene	48.8		2.34	ug/kg	74.8		65.3	60-140		
Indeno(1,2,3-cd) pyrene	36.1	J1	2.34	ug/kg	74.8		48.3	60-140		
Naphthalene	54.7		2.34	ug/kg	74.8		73.2	60-140		
Phenanthrene	49.1		2.34	ug/kg	74.8		65.7	60-140		
Pyrene	18.7	J1	2.34	ug/kg	74.8		25.0	60-140		
<hr/>										
Surrogate: 2,4,6-Tribromophenol-surr		S	22.3	ug/kg	150		14.9	60-140		
Surrogate: 2-Fluorobiphenyl-surr			51.6	ug/kg	74.8		69.1	60-140		
Surrogate: 2-Fluorophenol-surr			90.5	ug/kg	150		60.5	60-140		
Surrogate: Nitrobenzene-d5-surr			75.1	ug/kg	74.8		101	60-140		
Surrogate: Phenol-d5-surr			119	ug/kg	150		79.6	60-140		
Surrogate: p-Terphenyl-d14-surr			54.9	ug/kg	74.8		73.4	60-140		

**BSD SV BT (BGF1307-BS1)**

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	59.4		2.32	ug/kg	74.2		80.1	60-140	0.723	40
Acenaphthylene	57.7		2.32	ug/kg	74.2		77.8	60-140	5.55	40
Anthracene	59.8		2.32	ug/kg	74.2		80.6	60-140	19.1	40
Benzo(a)anthracene	46.0		2.32	ug/kg	74.2		62.0	60-140	4.97	40
Benzo(a)pyrene	35.3	J1	2.32	ug/kg	74.2		47.6	60-140	18.7	40
benzo(b&k)fluoranthene	90.4		4.64	ug/kg	148		60.9	60-140	7.18	40
Benzo(g,h,i)perylene	24.0	J1	2.32	ug/kg	74.2		32.3	60-140	26.5	40
Bis(2-ethylhexyl )phthalate	58.0		2.32	ug/kg	74.2		78.2	60-140	1.20	40
Chrysene	34.0	J1	2.32	ug/kg	74.2		45.9	60-140	29.5	40
Dibenzo(a,h)anthracene	24.9	J1	2.32	ug/kg	74.2		33.6	60-140	40.0	40
Di-n-butyl phthalate	40.2	J1	2.32	ug/kg	74.2		54.1	60-140	6.00	40
Fluoranthene	52.8		2.32	ug/kg	74.2		71.1	60-140	6.39	40
Fluorene	50.8		2.32	ug/kg	74.2		68.5	60-140	3.97	40
Indeno(1,2,3-cd) pyrene	23.8	J1	2.32	ug/kg	74.2		32.0	60-140	41.3	40
Naphthalene	59.9		2.32	ug/kg	74.2		80.8	60-140	9.08	40
Phenanthrene	55.0		2.32	ug/kg	74.2		74.1	60-140	11.2	40
Pyrene	46.1	J1	2.32	ug/kg	74.2		62.1	60-140	84.7	40
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Surrogate: 2,4,6-Tribromophenol-surr		S	24.2	ug/kg	148		16.3	60-140		
Surrogate: 2-Fluorobiphenyl-surr			58.0	ug/kg	74.2		78.1	60-140		
Surrogate: 2-Fluorophenol-surr			92.6	ug/kg	148		62.4	60-140		

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**Quality Control**  
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**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1307 - SW-3570 (Continued)**

**BSD SV BT (BGF1307-BSD1)**

Prepared: 6/8/2023 Analyzed: 6/27/2023

Surrogate: Nitrobenzene-d5-surr	69.2		ug/kg	74.2		93.3	60-140
Surrogate: Phenol-d5-surr	121		ug/kg	148		81.4	60-140
Surrogate: p-Terphenyl-d14-surr	59.3		ug/kg	74.2		79.9	60-140

**MDL SV BT (BGF1307-MRL1)**

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	9.22		2.35	ug/kg	7.52	123	50-150
Acenaphthylene	8.43		2.35	ug/kg	7.52	112	50-150
Anthracene	7.58		2.35	ug/kg	7.52	101	50-150
Benzo(a)anthracene	8.80		2.35	ug/kg	7.52	117	50-150
Benzo(a)pyrene	7.90		2.35	ug/kg	7.52	105	50-150
benzo(b&k)fluoranthene	14.7		4.70	ug/kg	15.0	97.5	50-150
Benzo(g,h,i)perylene	7.10		2.35	ug/kg	7.52	94.5	50-150
Bis(2-ethylhexyl )phthalate	21.7	J1	2.35	ug/kg	7.52	288	50-150
Chrysene	6.02		2.35	ug/kg	7.52	80.1	50-150
Dibenzo(a,h)anthracene	5.66		2.35	ug/kg	7.52	75.3	50-150
Di-n-butyl phthalate	10.3		2.35	ug/kg	7.52	137	50-150
Fluoranthene	7.42		2.35	ug/kg	7.52	98.6	50-150
Fluorene	6.59		2.35	ug/kg	7.52	87.7	50-150
Indeno(1,2,3-cd) pyrene	5.44		2.35	ug/kg	7.52	72.4	50-150
Naphthalene	8.81		2.35	ug/kg	7.52	117	50-150
Phenanthrene	7.15		2.35	ug/kg	7.52	95.1	50-150
Pyrene	4.57		2.35	ug/kg	7.52	60.7	50-150
Surrogate: 2,4,6-Tribromophenol-surr		S	46.0	ug/kg	150	30.6	60-140
Surrogate: 2-Fluorobiphenyl-surr			76.4	ug/kg	75.2	102	60-140
Surrogate: 2-Fluorophenol-surr			114	ug/kg	150	75.6	60-140
Surrogate: Nitrobenzene-d5-surr			81.2	ug/kg	75.2	108	60-140
Surrogate: Phenol-d5-surr			128	ug/kg	150	85.3	60-140
Surrogate: p-Terphenyl-d14-surr			68.4	ug/kg	75.2	91.0	60-140



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**Quality Control**  
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**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1307 - SW-3570 (Continued)**

**23E2845-11 MS (BGF1307-MS1)**

Source: 23E2845-11

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	87.1		2.49	ug/kg	79.5	<2.49	110	60-140		
Acenaphthylene	82.4		2.49	ug/kg	79.5	<2.49	104	60-140		
Anthracene	87.4		2.49	ug/kg	79.5	<2.49	110	60-140		
Benzo(a)anthracene	39.2	J1	2.49	ug/kg	79.5	<2.49	49.3	60-140		
Benzo(a)pyrene	31.0	J1	2.49	ug/kg	79.5	<2.49	38.9	60-140		
benzo(b&k)fluoranthene	61.1	J1	4.97	ug/kg	159	<4.97	38.4	60-140		
Benzo(g,h,i)perylene	8.53	J1	2.49	ug/kg	79.5	<2.49	10.7	60-140		
Bis(2-ethylhexyl )phthalate	44.3	J1	2.49	ug/kg	79.5	8.11	45.5	60-140		
Chrysene	57.3		2.49	ug/kg	79.5	<2.49	72.0	60-140		
Dibenzo(a,h)anthracene	9.98	J1	2.49	ug/kg	79.5	<2.49	12.6	60-140		
Di-n-butyl phthalate	37.4	J1	2.49	ug/kg	79.5	8.24	36.7	60-140		
Fluoranthene	42.8	J1	2.49	ug/kg	79.5	<2.49	53.9	60-140		
Fluorene	74.2		2.49	ug/kg	79.5	4.43	87.7	60-140		
Indeno(1,2,3-cd) pyrene	9.70	J1	2.49	ug/kg	79.5	<2.49	12.2	60-140		
Naphthalene	83.3		2.49	ug/kg	79.5	<2.49	105	60-140		
Phenanthrene	65.5		2.49	ug/kg	79.5	<2.49	82.4	60-140		
Pyrene	20.4	J1	2.49	ug/kg	79.5	<2.49	25.7	60-140		
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Surrogate: 2,4,6-Tribromophenol-surr		S	69.7	ug/kg	159		43.9	60-140		
Surrogate: 2-Fluorobiphenyl-surr			104	ug/kg	79.5		130	60-140		
Surrogate: 2-Fluorophenol-surr			125	ug/kg	159		78.4	60-140		
Surrogate: Nitrobenzene-d5-surr		S	138	ug/kg	79.5		173	60-140		
Surrogate: Phenol-d5-surr			197	ug/kg	159		124	60-140		
Surrogate: p-Terphenyl-d14-surr		S	14.6	ug/kg	79.5		18.3	60-140		

**23E2845-11 MSD (BGF1307-MSD1)**

Source: 23E2845-11

Prepared: 6/8/2023 Analyzed: 6/27/2023

Acenaphthene	64.7		2.37	ug/kg	75.8	<2.37	85.4	60-140	29.5	40
Acenaphthylene	65.2		2.37	ug/kg	75.8	<2.37	86.0	60-140	23.3	40
Anthracene	65.8		2.37	ug/kg	75.8	<2.37	86.8	60-140	28.2	40
Benzo(a)anthracene	36.7	J1	2.37	ug/kg	75.8	<2.37	48.5	60-140	6.45	40
Benzo(a)pyrene	33.1	J1	2.37	ug/kg	75.8	<2.37	43.6	60-140	6.59	40
benzo(b&k)fluoranthene	56.6	J1	4.73	ug/kg	152	<4.73	37.4	60-140	7.64	40
Benzo(g,h,i)perylene	6.79	J1	2.37	ug/kg	75.8	<2.37	8.96	60-140	22.7	40
Bis(2-ethylhexyl )phthalate	40.7	J1	2.37	ug/kg	75.8	8.11	43.1	60-140	8.32	40
Chrysene	44.5	J1	2.37	ug/kg	75.8	<2.37	58.8	60-140	25.1	40
Dibenzo(a,h)anthracene	6.83	J1	2.37	ug/kg	75.8	<2.37	9.01	60-140	37.6	40
Di-n-butyl phthalate	25.6	J1	2.37	ug/kg	75.8	8.24	22.9	60-140	37.7	40
Fluoranthene	31.1	J1	2.37	ug/kg	75.8	<2.37	41.1	60-140	31.6	40
Fluorene	59.7		2.37	ug/kg	75.8	4.43	72.9	60-140	21.7	40
Indeno(1,2,3-cd) pyrene	6.55	J1	2.37	ug/kg	75.8	<2.37	8.65	60-140	38.8	40
Naphthalene	67.9		2.37	ug/kg	75.8	<2.37	89.6	60-140	20.4	40
Phenanthrene	51.6		2.37	ug/kg	75.8	<2.37	68.2	60-140	23.7	40
Pyrene	17.3	J1	2.37	ug/kg	75.8	<2.37	22.9	60-140	16.3	40
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Surrogate: 2,4,6-Tribromophenol-surr		S	52.1	ug/kg	152		34.4	60-140		
Surrogate: 2-Fluorobiphenyl-surr			97.5	ug/kg	75.8		129	60-140		
Surrogate: 2-Fluorophenol-surr			109	ug/kg	152		72.1	60-140		

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**Quality Control**  
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**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1307 - SW-3570 (Continued)**

**23E2845-11 MSD (BGF1307-MSD1)**

Source: 23E2845-11

Prepared: 6/8/2023 Analyzed: 6/27/2023

Surrogate: Nitrobenzene-d5-surr			102	ug/kg	75.8		135	60-140		
Surrogate: Phenol-d5-surr			148	ug/kg	152		97.9	60-140		
Surrogate: p-Terphenyl-d14-surr	S		15.6	ug/kg	75.8		20.6	60-140		

**Batch: BGF1571 - SW-3570**

**MB SV BT (BGF1571-BLK1)**

Prepared: 6/9/2023 Analyzed: 6/29/2023

Di-n-butyl phthalate	<2.49	U	2.49	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			93.9	ug/kg	79.5		118	60-140		
Surrogate: Nitrobenzene-d5-surr			89.8	ug/kg	79.5		113	60-140		
Surrogate: p-Terphenyl-d14-surr			59.0	ug/kg	79.5		74.2	60-140		

**BS SV BT (BGF1571-BS1)**

Prepared: 6/9/2023 Analyzed: 6/29/2023

Di-n-butyl phthalate	36.0	J1	2.48	ug/kg	79.4		45.3	60-140		
Surrogate: 2-Fluorobiphenyl-surr			66.4	ug/kg	79.4		83.7	60-140		
Surrogate: Nitrobenzene-d5-surr			85.3	ug/kg	79.4		108	60-140		
Surrogate: p-Terphenyl-d14-surr	S		39.5	ug/kg	79.4		49.8	60-140		

**BSD SV BT (BGF1571-BSD1)**

Prepared: 6/9/2023 Analyzed: 6/29/2023

Di-n-butyl phthalate	30.1	J1	2.49	ug/kg	79.7		37.7	60-140	18.0	40
Surrogate: 2-Fluorobiphenyl-surr			57.9	ug/kg	79.7		72.6	60-140		
Surrogate: Nitrobenzene-d5-surr			89.8	ug/kg	79.7		113	60-140		
Surrogate: p-Terphenyl-d14-surr	S		37.3	ug/kg	79.7		46.8	60-140		

**MDL SV BT (BGF1571-MRL1)**

Prepared: 6/9/2023 Analyzed: 6/29/2023

Di-n-butyl phthalate	6.82		2.39	ug/kg	7.65		89.2	50-150		
Surrogate: 2-Fluorobiphenyl-surr			76.0	ug/kg	76.5		99.3	60-140		
Surrogate: Nitrobenzene-d5-surr			97.6	ug/kg	76.5		128	60-140		
Surrogate: p-Terphenyl-d14-surr	S		44.0	ug/kg	76.5		57.6	60-140		

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**Quality Control**  
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**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1571 - SW-3570 (Continued)**

**23E2845-06 MS (BGF1571-MS1)**

Source: 23E2845-06

Prepared: 6/9/2023 Analyzed: 6/29/2023

Di-n-butyl phthalate	54.8		2.48	ug/kg	79.2	<2.48	69.2	60-140		
Surrogate: 2-Fluorobiphenyl-surr			84.2	ug/kg	79.2		106	60-140		
Surrogate: Nitrobenzene-d5-surr			105	ug/kg	79.2		133	60-140		
Surrogate: p-Terphenyl-d14-surr	S		11.8	ug/kg	79.2		15.0	60-140		

**23E2845-06 MSD (BGF1571-MSD1)**

Source: 23E2845-06

Prepared: 6/9/2023 Analyzed: 6/30/2023

Di-n-butyl phthalate	59.2		2.41	ug/kg	77.1	<2.41	76.9	60-140	7.76	40
Surrogate: 2-Fluorobiphenyl-surr			85.7	ug/kg	77.1		111	60-140		
Surrogate: Nitrobenzene-d5-surr	S		118	ug/kg	77.1		153	60-140		
Surrogate: p-Terphenyl-d14-surr	S		16.2	ug/kg	77.1		21.0	60-140		

**Batch: BGF1744 - SW-3570**

**MB SV BT (BGF1744-BLK1)**

Prepared: 6/12/2023 Analyzed: 7/7/2023

Acenaphthene	<2.40	U	2.40	ug/kg						
Acenaphthylene	<2.40	U	2.40	ug/kg						
Anthracene	<2.40	U	2.40	ug/kg						
Benzo(a)anthracene	<2.40	U	2.40	ug/kg						
Benzo(a)pyrene	<2.40	U	2.40	ug/kg						
benzo(b&k)fluoranthene	<4.80	U	4.80	ug/kg						
Benzo(g,h,i)perylene	<2.40	U	2.40	ug/kg						
Bis(2-ethylhexyl )phthalate	10.9		2.40	ug/kg						
Chrysene	<2.40	U	2.40	ug/kg						
Dibenzo(a,h)anthracene	<2.40	U	2.40	ug/kg						
Di-n-butyl phthalate	2.69		2.40	ug/kg						
Fluoranthene	<2.40	U	2.40	ug/kg						
Fluorene	<2.40	U	2.40	ug/kg						
Indeno(1,2,3-cd) pyrene	<2.40	U	2.40	ug/kg						
Naphthalene	<2.40	U	2.40	ug/kg						
Phenanthrene	<2.40	U	2.40	ug/kg						
Pyrene	<2.40	U	2.40	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			74.2	ug/kg	76.8		96.7	60-140		
Surrogate: Nitrobenzene-d5-surr			66.9	ug/kg	76.8		87.1	60-140		
Surrogate: p-Terphenyl-d14-surr			50.4	ug/kg	76.8		65.6	60-140		

Terracon\_Houston  
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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGF1744 - SW-3570 (Continued)</b>										
<b>BS SV BT (BGF1744-BS1)</b>										
					Prepared: 6/12/2023 Analyzed: 7/7/2023					
Acenaphthene	86.1		2.40	ug/kg	76.9		112	60-140		
Acenaphthylene	83.4		2.40	ug/kg	76.9		108	60-140		
Anthracene	54.5		2.40	ug/kg	76.9		70.8	60-140		
Benzo(a)anthracene	52.9		2.40	ug/kg	76.9		68.8	60-140		
Benzo(a)pyrene	50.7		2.40	ug/kg	76.9		65.9	60-140		
benzo(b&k)fluoranthene	117		4.81	ug/kg	154		76.0	60-140		
Benzo(g,h,i)perylene	50.7		2.40	ug/kg	76.9		65.9	60-140		
Bis(2-ethylhexyl )phthalate	47.5		2.40	ug/kg	76.9		61.7	60-140		
Chrysene	41.4	J1	2.40	ug/kg	76.9		53.8	60-140		
Dibenzo(a,h)anthracene	55.5		2.40	ug/kg	76.9		72.2	60-140		
Di-n-butyl phthalate	48.5		2.40	ug/kg	76.9		63.1	60-140		
Fluoranthene	74.7		2.40	ug/kg	76.9		97.1	60-140		
Fluorene	80.1		2.40	ug/kg	76.9		104	60-140		
Indeno(1,2,3-cd) pyrene	56.6		2.40	ug/kg	76.9		73.6	60-140		
Naphthalene	67.1		2.40	ug/kg	76.9		87.2	60-140		
Phenanthrene	59.0		2.40	ug/kg	76.9		76.7	60-140		
Pyrene	69.8		2.40	ug/kg	76.9		90.8	60-140		
<i>Surrogate: 2-Fluorobiphenyl-surr</i>			<i>56.4</i>	<i>ug/kg</i>	<i>76.9</i>		<i>73.3</i>	<i>60-140</i>		
<i>Surrogate: Nitrobenzene-d5-surr</i>			<i>79.2</i>	<i>ug/kg</i>	<i>76.9</i>		<i>103</i>	<i>60-140</i>		
<i>Surrogate: p-Terphenyl-d14-surr</i>			<i>50.9</i>	<i>ug/kg</i>	<i>76.9</i>		<i>66.2</i>	<i>60-140</i>		

<b>BSD SV BT (BGF1744-BSD1)</b>										
					Prepared: 6/12/2023 Analyzed: 7/7/2023					
Acenaphthene	62.5		2.49	ug/kg	79.7		78.4	60-140	31.8	40
Acenaphthylene	62.6		2.49	ug/kg	79.7		78.5	60-140	28.6	40
Anthracene	44.4	J1	2.49	ug/kg	79.7		55.8	60-140	20.3	40
Benzo(a)anthracene	57.4		2.49	ug/kg	79.7		72.0	60-140	8.09	40
Benzo(a)pyrene	52.9		2.49	ug/kg	79.7		66.4	60-140	4.35	40
benzo(b&k)fluoranthene	123		4.98	ug/kg	159		77.5	60-140	5.43	40
Benzo(g,h,i)perylene	52.3		2.49	ug/kg	79.7		65.7	60-140	3.19	40
Bis(2-ethylhexyl )phthalate	52.4		2.49	ug/kg	79.7		65.8	60-140	9.87	40
Chrysene	44.5	J1	2.49	ug/kg	79.7		55.9	60-140	7.30	40
Dibenzo(a,h)anthracene	57.0		2.49	ug/kg	79.7		71.6	60-140	2.69	40
Di-n-butyl phthalate	42.2	J1	2.49	ug/kg	79.7		53.0	60-140	14.0	40
Fluoranthene	57.6		2.49	ug/kg	79.7		72.2	60-140	25.9	40
Fluorene	62.4		2.49	ug/kg	79.7		78.4	60-140	24.7	40
Indeno(1,2,3-cd) pyrene	54.8		2.49	ug/kg	79.7		68.8	60-140	3.23	40
Naphthalene	59.8		2.49	ug/kg	79.7		75.0	60-140	11.5	40
Phenanthrene	54.4		2.49	ug/kg	79.7		68.3	60-140	8.02	40
Pyrene	58.1		2.49	ug/kg	79.7		72.9	60-140	18.4	40
<i>Surrogate: 2-Fluorobiphenyl-surr</i>			<i>62.4</i>	<i>ug/kg</i>	<i>79.7</i>		<i>78.4</i>	<i>60-140</i>		
<i>Surrogate: Nitrobenzene-d5-surr</i>			<i>62.7</i>	<i>ug/kg</i>	<i>79.7</i>		<i>78.7</i>	<i>60-140</i>		
<i>Surrogate: p-Terphenyl-d14-surr</i>			<i>39.3</i>	<i>ug/kg</i>	<i>79.7</i>		<i>49.3</i>	<i>60-140</i>		

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Project: PCCA HI TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/21/2023 15:59

**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF1744 - SW-3570 (Continued)**

**MDL SV BT (BGF1744-MRL1)**

Prepared: 6/12/2023 Analyzed: 7/7/2023

Acenaphthene	11.0		2.47	ug/kg	7.89		140	50-150		
Acenaphthylene	7.99		2.47	ug/kg	7.89		101	50-150		
Anthracene	8.78		2.47	ug/kg	7.89		111	50-150		
Benzo(a)anthracene	7.35		2.47	ug/kg	7.89		93.1	50-150		
Benzo(a)pyrene	6.60		2.47	ug/kg	7.89		83.6	50-150		
benzo(b&k)fluoranthene	16.6		4.93	ug/kg	15.8		105	50-150		
Benzo(g,h,i)perylene	5.79		2.47	ug/kg	7.89		73.4	50-150		
Bis(2-ethylhexyl )phthalate	16.5	J1	2.47	ug/kg	7.89		209	50-150		
Chrysene	<2.47	J1, U	2.47	ug/kg	7.89			50-150		
Dibenzo(a,h)anthracene	7.10		2.47	ug/kg	7.89		90.0	50-150		
Di-n-butyl phthalate	11.4		2.47	ug/kg	7.89		145	50-150		
Fluoranthene	8.70		2.47	ug/kg	7.89		110	50-150		
Fluorene	8.16		2.47	ug/kg	7.89		103	50-150		
Indeno(1,2,3-cd) pyrene	5.94		2.47	ug/kg	7.89		75.3	50-150		
Naphthalene	7.64		2.47	ug/kg	7.89		96.8	50-150		
Phenanthrene	12.9	J1	2.47	ug/kg	7.89		163	50-150		
Pyrene	2.59	J1	2.47	ug/kg	7.89		32.8	50-150		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr			78.1	ug/kg	78.9		99.0	60-140		
Surrogate: Nitrobenzene-d5-surr			66.8	ug/kg	78.9		84.7	60-140		
Surrogate: p-Terphenyl-d14-surr			52.5	ug/kg	78.9		66.5	60-140		

**23E2845-36 MS (BGF1744-MS1)**

**Source: 23E2845-36**

Prepared: 6/12/2023 Analyzed: 7/8/2023

Acenaphthene	81.9		2.49	ug/kg	79.7	<2.49	103	60-140		
Acenaphthylene	79.8		2.49	ug/kg	79.7	<2.49	100	60-140		
Anthracene	129	J1	2.49	ug/kg	79.7	<2.49	162	60-140		
Benzo(a)anthracene	27.4	J1	2.49	ug/kg	79.7	<2.49	34.4	60-140		
Benzo(a)pyrene	84.1		2.49	ug/kg	79.7	<2.49	106	60-140		
benzo(b&k)fluoranthene	93.5	J1	4.98	ug/kg	159	<4.98	58.7	60-140		
Benzo(g,h,i)perylene	94.2		2.49	ug/kg	79.7	<2.49	118	60-140		
Bis(2-ethylhexyl )phthalate	47.8		2.49	ug/kg	79.7	<2.49	60.0	60-140		
Chrysene	53.4		2.49	ug/kg	79.7	<2.49	67.0	60-140		
Dibenzo(a,h)anthracene	92.1		2.49	ug/kg	79.7	<2.49	116	60-140		
Di-n-butyl phthalate	86.2		2.49	ug/kg	79.7	6.96	99.5	60-140		
Fluoranthene	72.5		2.49	ug/kg	79.7	<2.49	91.0	60-140		
Fluorene	82.5		2.49	ug/kg	79.7	<2.49	104	60-140		
Indeno(1,2,3-cd) pyrene	85.7		2.49	ug/kg	79.7	<2.49	108	60-140		
Naphthalene	69.0		2.49	ug/kg	79.7	<2.49	86.6	60-140		
Phenanthrene	132	J1	2.49	ug/kg	79.7	<2.49	166	60-140		
Pyrene	23.5	J1	2.49	ug/kg	79.7	<2.49	29.5	60-140		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr			80.9	ug/kg	79.7		102	60-140		
Surrogate: Nitrobenzene-d5-surr		S	42.3	ug/kg	79.7		53.1	60-140		
Surrogate: p-Terphenyl-d14-surr		S	16.4	ug/kg	79.7		20.6	60-140		

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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGF1744 - SW-3570 (Continued)</b>										
<b>23E2845-36 MSD (BGF1744-MSD1)</b>			<b>Source: 23E2845-36</b>			Prepared: 6/12/2023 Analyzed: 7/8/2023				
Acenaphthene	66.1		2.49	ug/kg	79.7	<2.49	82.9	60-140	21.4	40
Acenaphthylene	64.8		2.49	ug/kg	79.7	<2.49	81.4	60-140	20.7	40
Anthracene	87.3		2.49	ug/kg	79.7	<2.49	110	60-140	38.8	40
Benzo(a)anthracene	22.9	J1	2.49	ug/kg	79.7	<2.49	28.8	60-140	17.9	40
Benzo(a)pyrene	73.8		2.49	ug/kg	79.7	<2.49	92.7	60-140	13.0	40
benzo(b&k)fluoranthene	75.3	J1	4.98	ug/kg	159	<4.98	47.3	60-140	21.5	40
Benzo(g,h,i)perylene	81.4		2.49	ug/kg	79.7	<2.49	102	60-140	14.5	40
Bis(2-ethylhexyl )phthalate	46.0	J1	2.49	ug/kg	79.7	<2.49	57.7	60-140	3.92	40
Chrysene	44.7	J1	2.49	ug/kg	79.7	<2.49	56.1	60-140	17.7	40
Dibenzo(a,h)anthracene	83.8		2.49	ug/kg	79.7	<2.49	105	60-140	9.48	40
Di-n-butyl phthalate	75.5		2.49	ug/kg	79.7	6.96	86.0	60-140	13.3	40
Fluoranthene	66.6		2.49	ug/kg	79.7	<2.49	83.6	60-140	8.49	40
Fluorene	61.0		2.49	ug/kg	79.7	<2.49	76.5	60-140	30.1	40
Indeno(1,2,3-cd) pyrene	77.8		2.49	ug/kg	79.7	<2.49	97.6	60-140	9.73	40
Naphthalene	68.7		2.49	ug/kg	79.7	<2.49	86.2	60-140	0.480	40
Phenanthrene	99.7		2.49	ug/kg	79.7	<2.49	125	60-140	28.2	40
Pyrene	22.4	J1	2.49	ug/kg	79.7	<2.49	28.1	60-140	4.83	40
-----										
Surrogate: 2-Fluorobiphenyl-surr			65.9	ug/kg	79.7		82.7	60-140		
Surrogate: Nitrobenzene-d5-surr		J1	47.5	ug/kg	79.7		59.6	60-140		
Surrogate: p-Terphenyl-d14-surr		J1	16.2	ug/kg	79.7		20.3	60-140		



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Project: PCCA HI TISSUE CHEM  
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**Reported:**  
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### Sample Condition Checklist

**Work Order: 23E2845**

**Check Points**

- No Custody Seals
- Yes Containers Intact
- Yes COC/Labels Agree
- Yes Received On Ice
- Yes Appropriate Containers
- Yes Appropriate Sample Volume
- No Coolers Intact
- Yes Samples Accepted

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**Reported:**  
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## Term and Qualifier Definitions

Item	Definition
B	Analyte was found in the associated method blank.
J	Estimated value - The reported value is between the detection limit and reporting limit.
J1	Estimated value - The reported value is outside the established quality control criteria for accuracy and/or precision.
S	The surrogate recovery was outside the established laboratory recovery limit.
U	Non-detected compound.
V	Analyte was detected in both sample and method blank.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated
*	A = Accredited, N = Not Accredited or Accreditation not available
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
MDL	Method Detection Limit - The minimum concentration of a substance (or analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. Based on standard deviation of replicate spiked samples take through all steps of the analytical procedure following 40 CFR Part 136 Appendix B.
SDL	Sample Detection Limit - The minimum concentration of a substance (analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The SDL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MDL = SDL.
MRL	Method Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The MRL is at or above the lowest calibration standard.
LRL	Laboratory Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The LRL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MRL = LRL.





June 16, 2023

## LAB REPORT

Gregg Pawlak  
Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Report ID: 20230616110422MM

RE: PCCA CDP TISSUE CHEM

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from our quality system will be noted in the case narrative. All analyses performed by North Water District Laboratory Services, Inc. unless noted.

For questions regarding this report, contact Monica Martin at 936-321-6060.

Sincerely,

Monica O. Martin  
Chief Administrative Officer

Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

## Work Order Case Narrative

A total of 36 samples were collected on:

<u>Laboratory ID</u>	<u>Sample Name</u>	<u>Sample Date</u>
23E2848-01	MM-CDP-06-1	04/01/2023 11:00
23E2848-02	MM-CDP-06-2	04/01/2023 11:00
23E2848-03	MM-CDP-06-3	04/01/2023 11:00
23E2848-04	MM-CDP-06-4	04/01/2023 11:00
23E2848-05	MM-CDP-06-5	04/01/2023 11:00
23E2848-06	MM-CDP-07-1	04/01/2023 11:00
23E2848-07	MM-CDP-07-2	04/01/2023 11:00
23E2848-08	MM-CDP-07-3	04/01/2023 11:00
23E2848-09	MM-CDP-07-4	04/01/2023 11:00
23E2848-10	MM-CDP-07-5	04/01/2023 11:00
23E2848-11	MM-REF-1	04/01/2023 11:00
23E2848-12	MM-REF-2	04/01/2023 11:00
23E2848-13	MM-REF-3	04/01/2023 11:00
23E2848-14	MM-REF-4	04/01/2023 11:00
23E2848-15	MM-REF-5	04/01/2023 11:00
23E2848-16	MM-CDP-PRETEST-1	04/01/2023 11:00
23E2848-17	MM-CDP-PRETEST-2	04/01/2023 11:00
23E2848-18	MM-CDP-PRETEST-3	04/01/2023 11:00
23E2848-19	NV-CDP-06-1	04/01/2023 13:00
23E2848-20	NV-CDP-06-2	04/01/2023 13:00
23E2848-21	NV-CDP-06-3	04/01/2023 13:00
23E2848-22	NV-CDP-06-4	04/01/2023 13:00
23E2848-23	NV-CDP-06-5	04/01/2023 13:00
23E2848-24	NV-CDP-07-1	04/01/2023 13:00
23E2848-25	NV-CDP-07-2	04/01/2023 13:00
23E2848-26	NV-CDP-07-3	04/01/2023 13:00
23E2848-27	NV-CDP-07-4	04/01/2023 13:00
23E2848-28	NV-CDP-07-5	04/01/2023 13:00
23E2848-29	NV-REF-1	04/01/2023 13:00
23E2848-30	NV-REF-2	04/01/2023 13:00
23E2848-31	NV-REF-3	04/01/2023 13:00
23E2848-32	NV-REF-4	04/01/2023 13:00
23E2848-33	NV-REF-5	04/01/2023 13:00
23E2848-34	NV-CDP-PRETEST-1	04/01/2023 13:00
23E2848-35	NV-CDP-PRETEST-2	04/01/2023 13:00
23E2848-36	NV-CDP-PRETEST-3	04/01/2023 13:00

Samples were received and accepted at NWDLS on 05/10/2023 15:00. Samples were held in freezer storage until digestion and/or extraction began for all tests, including subcontracted tests. Any receiving discrepancies are recorded and stored in NWDLS' database. The samples received a Work Order of 23E2848. The lab sample IDs, client sample IDs, and dates of collection can be found at the top of each result page.

NWDLS provided their lowest detection limit for all requested analyses. Note that detection and reporting limits are adjusted to account for sample specific parameters.

Any QC that did not meet the laboratory specified control limits was flagged and reported with qualifiers. For additional



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information, please refer to the included quality control data pages.

Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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### Sample Results

Client Sample ID: MM-CDP-06-1      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-01      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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#### Semivolatile Organic Compounds by GCMS

SW-8270	Phenol, Total	A	43.8V	ug/kg	1	4.71	4.71	BGE4170	06/05/2023 02:34	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>14.7% S</i>	<i>60-140</i>					<i>06/05/2023 02:34</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>57.1% S</i>	<i>60-140</i>					<i>06/05/2023 02:34</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>64.6%</i>	<i>60-140</i>					<i>06/05/2023 02:34</i>	

#### Metals, Total

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Arsenic	N	1.09	mg/kg	1	0.00246	0.0100	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Beryllium	N	0.00122J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 15:40	TBB
EPA 200.8	Cadmium	N	0.0406	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Chromium	N	0.0481V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Copper	N	1.15V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 09:58	TBB
SW-7471B	Mercury	A	<0.00492U	mg/kg	1	0.00492	0.00984	BGE3654	06/07/2023 13:28	AKR
EPA 200.8	Lead	N	0.0265V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Nickel	N	0.343V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Selenium	N	0.151	mg/kg	1	0.0220	0.0400	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Thallium	N	0.000360J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 09:58	TBB
EPA 200.8	Zinc	N	11.2V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 15:50	TBB

#### General Chemistry

SM 2540 G	% Solids	A	10.6V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-1	Sample Matrix: Tissue
Lab Sample ID: 23E2848-01RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0167	mg/kg	1	0.000141	0.00992	BGF0506	06/09/2023 13:24	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-02      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	49.7V	ug/kg	1	4.91	4.91	BGE4170	06/05/2023 02:00	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		39.0% S	60-140					06/05/2023 02:00	
SW-8270	Surrogate: 2-Fluorophenol-surr		75.0%	60-140					06/05/2023 02:00	
SW-8270	Surrogate: Phenol-d5-surr		69.8%	60-140					06/05/2023 02:00	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0198	BGE2506	06/02/2023 10:13	TBB
EPA 200.8	Arsenic	N	1.01A	mg/kg	5	0.0122	0.0496	BGE2506	06/02/2023 10:23	TBB
EPA 200.8	Beryllium	N	0.00153J	mg/kg	1	0.000198	0.00397	BGE2506	06/08/2023 15:52	TBB
EPA 200.8	Cadmium	N	0.0427	mg/kg	1	0.000627	0.0198	BGE2506	06/02/2023 10:13	TBB
EPA 200.8	Chromium	N	0.0329A, V, J	mg/kg	5	0.00729	0.298	BGE2506	06/02/2023 10:23	TBB
EPA 200.8	Copper	N	1.16A, V	mg/kg	5	0.00863	0.0992	BGE2506	06/02/2023 10:23	TBB
SW-7471B	Mercury	A	<0.00496U	mg/kg	1	0.00496	0.00992	BGE3654	06/07/2023 13:32	AKR
EPA 200.8	Lead	N	0.0295V	mg/kg	1	0.00150	0.00992	BGE2506	06/02/2023 10:13	TBB
EPA 200.8	Nickel	N	0.365A, V	mg/kg	5	0.00176	0.0992	BGE2506	06/02/2023 10:23	TBB
EPA 200.8	Selenium	N	0.160A	mg/kg	1	0.0218	0.0397	BGE2506	06/02/2023 10:13	TBB
EPA 200.8	Thallium	N	0.000397J	mg/kg	1	0.000137	0.00992	BGE2506	06/02/2023 10:13	TBB
EPA 200.8	Zinc	N	11.8V	mg/kg	10	0.0745	0.397	BGE2506	06/08/2023 12:40	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.4V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-02RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0148	mg/kg	1	0.000139	0.00980	BGF0506	06/09/2023 13:31	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-3      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-03      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	3.46V	ug/kg	1	2.34	2.34	BGE4170	06/05/2023 03:09	KRB
SW-8270	Phenol, Total	A	49.4V	ug/kg	1	4.68	4.68	BGE4170	06/05/2023 03:09	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>16.3% S</i>	<i>60-140</i>					<i>06/05/2023 03:09</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>60.2%</i>	<i>60-140</i>					<i>06/05/2023 03:09</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>66.8%</i>	<i>60-140</i>					<i>06/05/2023 03:09</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0199	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Arsenic	N	1.00	mg/kg	1	0.00245	0.00996	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Beryllium	N	0.00165J	mg/kg	1	0.000199	0.00398	BGE2506	06/08/2023 15:57	TBB
EPA 200.8	Cadmium	N	0.0405	mg/kg	1	0.000629	0.0199	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Chromium	N	0.0341V, J	mg/kg	1	0.00146	0.0598	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Copper	N	1.01V	mg/kg	1	0.00173	0.0199	BGE2506	06/02/2023 10:25	TBB
SW-7471B	Mercury	A	<0.00465U	mg/kg	1	0.00465	0.00930	BGE3654	06/07/2023 13:35	AKR
EPA 200.8	Lead	N	0.0299V	mg/kg	1	0.00150	0.00996	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Nickel	N	0.359V	mg/kg	1	0.000353	0.0199	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Selenium	N	0.143	mg/kg	1	0.0219	0.0398	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Thallium	N	0.000558J	mg/kg	1	0.000137	0.00996	BGE2506	06/02/2023 10:25	TBB
EPA 200.8	Zinc	N	12.2V	mg/kg	10	0.0748	0.398	BGE2506	06/08/2023 12:43	TBB

**General Chemistry**

SM 2540 G	% Solids	A	9.19V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-3	Sample Matrix: Tissue
Lab Sample ID: 23E2848-03RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0119	mg/kg	1	0.000139	0.00977	BGF0506	06/09/2023 13:34	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-4      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-04      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	48.3V	ug/kg	1	4.50	4.50	BGE4170	06/05/2023 03:44	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		20.5% S	60-140					06/05/2023 03:44	
SW-8270	Surrogate: 2-Fluorophenol-surr		59.3% S	60-140					06/05/2023 03:44	
SW-8270	Surrogate: Phenol-d5-surr		62.9%	60-140					06/05/2023 03:44	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Arsenic	N	1.11	mg/kg	1	0.00246	0.0100	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Beryllium	N	0.00120J	mg/kg	5	0.00100	0.0200	BGE2506	06/08/2023 12:53	TBB
EPA 200.8	Cadmium	N	0.0353	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Chromium	N	0.0375V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Copper	N	0.955V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 10:30	TBB
SW-7471B	Mercury	A	<0.00465U	mg/kg	1	0.00465	0.00930	BGE3654	06/07/2023 13:38	AKR
EPA 200.8	Lead	N	0.0334V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Nickel	N	0.252V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Selenium	N	0.143	mg/kg	1	0.0220	0.0400	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Thallium	N	0.000340J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 10:30	TBB
EPA 200.8	Zinc	N	9.96V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 12:53	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.5V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-04RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0106	mg/kg	1	0.000139	0.00977	BGF0506	06/09/2023 13:36	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-5  
Lab Sample ID: 23E2848-05  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	68.5V	ug/kg	1	4.73	4.73	BGE4170	06/05/2023 04:18	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		7.95% S	60-140					06/05/2023 04:18	
SW-8270	Surrogate: 2-Fluorophenol-surr		69.5%	60-140					06/05/2023 04:18	
SW-8270	Surrogate: Phenol-d5-surr		74.5%	60-140					06/05/2023 04:18	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0199	BGE2506	06/02/2023 10:35	TBB
EPA 200.8	Arsenic	N	0.996A	mg/kg	5	0.0123	0.0498	BGE2506	06/02/2023 10:38	TBB
EPA 200.8	Beryllium	N	0.00143J	mg/kg	1	0.000199	0.00398	BGE2506	06/08/2023 12:55	TBB
EPA 200.8	Cadmium	N	0.0454	mg/kg	1	0.000629	0.0199	BGE2506	06/02/2023 10:35	TBB
EPA 200.8	Chromium	N	0.0311A, V, J	mg/kg	5	0.00732	0.299	BGE2506	06/02/2023 10:38	TBB
EPA 200.8	Copper	N	1.17A, V	mg/kg	5	0.00867	0.0996	BGE2506	06/02/2023 10:38	TBB
SW-7471B	Mercury	A	<0.00484U	mg/kg	1	0.00484	0.00968	BGE3654	06/07/2023 13:41	AKR
EPA 200.8	Lead	N	0.0327V	mg/kg	1	0.00150	0.00996	BGE2506	06/02/2023 10:35	TBB
EPA 200.8	Nickel	N	0.333A, V	mg/kg	5	0.00176	0.0996	BGE2506	06/02/2023 10:38	TBB
EPA 200.8	Selenium	N	0.155A	mg/kg	1	0.0219	0.0398	BGE2506	06/02/2023 10:35	TBB
EPA 200.8	Thallium	N	0.000359J	mg/kg	1	0.000137	0.00996	BGE2506	06/02/2023 10:35	TBB
EPA 200.8	Zinc	N	11.7V	mg/kg	5	0.0374	0.199	BGE2506	06/08/2023 12:58	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.9V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-06-5	Sample Matrix: Tissue
Lab Sample ID: 23E2848-05RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0171	mg/kg	1	0.000140	0.00988	BGF0506	06/09/2023 13:39	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-1      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-06      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	5.96V	ug/kg	1	2.41	2.41	BGE4170	06/05/2023 04:53	KRB
SW-8270	Di-n-butyl phthalate	A	6.11V	ug/kg	1	2.41	2.41	BGE4170	06/05/2023 04:53	KRB
SW-8270	Di-n-octyl phthalate	A	<2.41U	ug/kg	1	2.41	2.41	BGE4170	06/05/2023 04:53	KRB
SW-8270	Phenol, Total	A	74.2V	ug/kg	1	4.83	4.83	BGE4170	06/05/2023 04:53	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>16.3% S</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>42.5% S</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>72.1%</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>84.3%</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>78.2%</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>43.0% S</i>	<i>60-140</i>					<i>06/05/2023 04:53</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00162U	mg/kg	1	0.00162	0.0201	BGE2506	06/02/2023 10:40	TBB
EPA 200.8	Arsenic	N	1.24A	mg/kg	5	0.0123	0.0502	BGE2506	06/02/2023 10:42	TBB
EPA 200.8	Beryllium	N	0.00157J	mg/kg	1	0.000201	0.00402	BGE2506	06/08/2023 13:10	TBB
EPA 200.8	Cadmium	N	0.0526	mg/kg	1	0.000635	0.0201	BGE2506	06/02/2023 10:40	TBB
EPA 200.8	Chromium	N	0.0292A, V, J	mg/kg	5	0.00738	0.301	BGE2506	06/02/2023 10:42	TBB
EPA 200.8	Copper	N	1.35A, V	mg/kg	5	0.00873	0.100	BGE2506	06/02/2023 10:42	TBB
SW-7471B	Mercury	A	<0.00484U	mg/kg	1	0.00484	0.00968	BGE3654	06/07/2023 13:45	AKR
EPA 200.8	Lead	N	0.0492V	mg/kg	1	0.00152	0.0100	BGE2506	06/02/2023 10:40	TBB
EPA 200.8	Nickel	N	0.334A, V	mg/kg	5	0.00178	0.100	BGE2506	06/02/2023 10:42	TBB
EPA 200.8	Selenium	N	0.187A	mg/kg	1	0.0221	0.0402	BGE2506	06/02/2023 10:40	TBB
EPA 200.8	Thallium	N	0.000622J	mg/kg	1	0.000139	0.0100	BGE2506	06/02/2023 10:40	TBB
EPA 200.8	Zinc	N	12.4V	mg/kg	5	0.0377	0.201	BGE2506	06/08/2023 13:12	TBB

**General Chemistry**

SM 2540 G	% Solids	A	11.9V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-1	Sample Matrix: Tissue
Lab Sample ID: 23E2848-06RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0148	mg/kg	1	0.000140	0.00988	BGF0506	06/09/2023 15:19	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-2      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-07      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	10.0V	ug/kg	1	2.44	2.44	BGE4170	06/05/2023 05:28	KRB
SW-8270	Di-n-butyl phthalate	A	6.18V	ug/kg	1	2.44	2.44	BGE4170	06/05/2023 05:28	KRB
SW-8270	Di-n-octyl phthalate	A	<2.44U	ug/kg	1	2.44	2.44	BGE4170	06/05/2023 05:28	KRB
SW-8270	Phenol, Total	A	77.8V	ug/kg	1	4.88	4.88	BGE4170	06/05/2023 05:28	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>23.2% S</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>47.5% S</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>76.1%</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>94.0%</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>93.4%</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>50.4% S</i>	<i>60-140</i>					<i>06/05/2023 05:28</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 10:45	TBB
EPA 200.8	Arsenic	N	1.20A	mg/kg	5	0.0123	0.0500	BGE2506	06/02/2023 10:55	TBB
EPA 200.8	Beryllium	N	0.00166J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 13:15	TBB
EPA 200.8	Cadmium	N	0.0712	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 10:45	TBB
EPA 200.8	Chromium	N	0.0428A, V, J	mg/kg	5	0.00735	0.300	BGE2506	06/02/2023 10:55	TBB
EPA 200.8	Copper	N	1.41A, V	mg/kg	5	0.00870	0.100	BGE2506	06/02/2023 10:55	TBB
SW-7471B	Mercury	A	<0.00500U	mg/kg	1	0.00500	0.0100	BGE3654	06/07/2023 13:55	AKR
EPA 200.8	Lead	N	0.0488V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 10:45	TBB
EPA 200.8	Nickel	N	0.393A, V	mg/kg	5	0.00177	0.100	BGE2506	06/02/2023 10:55	TBB
EPA 200.8	Selenium	N	0.197A	mg/kg	1	0.0220	0.0400	BGE2506	06/02/2023 10:45	TBB
EPA 200.8	Thallium	N	0.000500J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 10:45	TBB
EPA 200.8	Zinc	N	13.9V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 13:17	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.3V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-07RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0184	mg/kg	1	0.000138	0.00969	BGF0506	06/09/2023 15:21	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-3  
Lab Sample ID: 23E2848-08  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	8.80V	ug/kg	1	2.18	2.18	BGE4170	06/05/2023 06:02	KRB
SW-8270	Di-n-butyl phthalate	A	6.23V	ug/kg	1	2.18	2.18	BGE4170	06/05/2023 06:02	KRB
SW-8270	Di-n-octyl phthalate	A	<2.18U	ug/kg	1	2.18	2.18	BGE4170	06/05/2023 06:02	KRB
SW-8270	Phenol, Total	A	67.9V	ug/kg	1	4.36	4.36	BGE4170	06/05/2023 06:02	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		20.0% S	60-140					06/05/2023 06:02	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		43.3% S	60-140					06/05/2023 06:02	
SW-8270	Surrogate: 2-Fluorophenol-surr		75.7%	60-140					06/05/2023 06:02	
SW-8270	Surrogate: Nitrobenzene-d5-surr		76.9%	60-140					06/05/2023 06:02	
SW-8270	Surrogate: Phenol-d5-surr		84.9%	60-140					06/05/2023 06:02	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.4% S	60-140					06/05/2023 06:02	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 15:42	TBB
EPA 200.8	Arsenic	N	1.23	mg/kg	1	0.00246	0.0100	BGE2506	06/02/2023 10:57	TBB
EPA 200.8	Beryllium	N	0.00154J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 13:22	TBB
EPA 200.8	Cadmium	N	0.0573	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 10:57	TBB
EPA 200.8	Chromium	N	0.0239V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 10:57	TBB
EPA 200.8	Copper	N	1.18V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 10:57	TBB
SW-7471B	Mercury	A	<0.00469U	mg/kg	1	0.00469	0.00937	BGE3654	06/07/2023 13:58	AKR
EPA 200.8	Lead	N	0.0409V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 15:42	TBB
EPA 200.8	Nickel	N	0.359V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 10:57	TBB
EPA 200.8	Selenium	N	0.190	mg/kg	1	0.0220	0.0400	BGE2506	06/08/2023 13:22	TBB
EPA 200.8	Thallium	N	0.000440J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 10:57	TBB
EPA 200.8	Zinc	N	12.2V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 13:25	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.9V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-3	Sample Matrix: Tissue
Lab Sample ID: 23E2848-08RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0144	mg/kg	1	0.000141	0.00992	BGF0506	06/09/2023 15:24	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-4  
Lab Sample ID: 23E2848-09  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	8.66V	ug/kg	1	2.30	2.30	BGE4170	06/05/2023 06:37	KRB
SW-8270	Di-n-butyl phthalate	A	5.56V	ug/kg	1	2.30	2.30	BGE4170	06/05/2023 06:37	KRB
SW-8270	Di-n-octyl phthalate	A	<2.30U	ug/kg	1	2.30	2.30	BGE4170	06/05/2023 06:37	KRB
SW-8270	Phenol, Total	A	88.8V	ug/kg	1	4.60	4.60	BGE4170	06/05/2023 06:37	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>12.1% S</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>46.1% S</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>70.3%</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>76.8%</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>76.3%</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>45.2% S</i>	<i>60-140</i>					<i>06/05/2023 06:37</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0199	BGE2506	06/02/2023 15:47	TBB
EPA 200.8	Arsenic	N	0.971A	mg/kg	5	0.0123	0.0498	BGE2506	06/02/2023 11:05	TBB
EPA 200.8	Beryllium	N	0.00137J	mg/kg	1	0.000199	0.00398	BGE2506	06/08/2023 13:27	TBB
EPA 200.8	Cadmium	N	0.0563	mg/kg	1	0.000629	0.0199	BGE2506	06/02/2023 11:02	TBB
EPA 200.8	Chromium	N	0.0258A, V, J	mg/kg	5	0.00732	0.299	BGE2506	06/02/2023 11:05	TBB
EPA 200.8	Copper	N	1.26A, V	mg/kg	5	0.00867	0.0996	BGE2506	06/02/2023 11:05	TBB
SW-7471B	Mercury	A	<0.00484U	mg/kg	1	0.00484	0.00968	BGE3654	06/07/2023 14:01	AKR
EPA 200.8	Lead	N	0.0475V	mg/kg	1	0.00150	0.00996	BGE2506	06/02/2023 15:47	TBB
EPA 200.8	Nickel	N	0.336A, V	mg/kg	5	0.00176	0.0996	BGE2506	06/02/2023 11:05	TBB
EPA 200.8	Selenium	N	0.176	mg/kg	1	0.0219	0.0398	BGE2506	06/08/2023 13:27	TBB
EPA 200.8	Thallium	N	0.000438J	mg/kg	1	0.000137	0.00996	BGE2506	06/02/2023 11:02	TBB
EPA 200.8	Zinc	N	12.8V	mg/kg	5	0.0374	0.199	BGE2506	06/08/2023 13:30	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.7V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-09RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0151	mg/kg	1	0.000140	0.00984	BGF0506	06/09/2023 15:26	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-5      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-10      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	8.33V	ug/kg	1	2.39	2.39	BGE4170	06/05/2023 07:11	KRB
SW-8270	Di-n-butyl phthalate	A	5.42V	ug/kg	1	2.39	2.39	BGE4170	06/05/2023 07:11	KRB
SW-8270	Di-n-octyl phthalate	A	<2.39U	ug/kg	1	2.39	2.39	BGE4170	06/05/2023 07:11	KRB
SW-8270	Phenol, Total	A	80.9V	ug/kg	1	4.78	4.78	BGE4170	06/05/2023 07:11	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>12.0% S</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>40.5% S</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>73.8%</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>82.1%</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>73.5%</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>31.3% S</i>	<i>60-140</i>					<i>06/05/2023 07:11</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0198	BGE2506	06/02/2023 15:52	TBB
EPA 200.8	Arsenic	N	1.18	mg/kg	1	0.00244	0.00992	BGE2506	06/15/2023 12:33	TBB
EPA 200.8	Beryllium	N	0.00113J	mg/kg	1	0.000198	0.00397	BGE2506	06/08/2023 13:42	TBB
EPA 200.8	Cadmium	N	0.0550	mg/kg	1	0.000627	0.0198	BGE2506	06/02/2023 11:07	TBB
EPA 200.8	Chromium	N	0.0362V, J	mg/kg	1	0.00146	0.0595	BGE2506	06/02/2023 15:52	TBB
EPA 200.8	Copper	N	1.31V	mg/kg	1	0.00173	0.0198	BGE2506	06/02/2023 15:52	TBB
SW-7471B	Mercury	A	<0.00500U	mg/kg	1	0.00500	0.0100	BGE3654	06/07/2023 14:05	AKR
EPA 200.8	Lead	N	0.0433V	mg/kg	1	0.00150	0.00992	BGE2506	06/02/2023 15:52	TBB
EPA 200.8	Nickel	N	0.337V	mg/kg	1	0.000351	0.0198	BGE2506	06/02/2023 15:52	TBB
EPA 200.8	Selenium	N	0.168	mg/kg	1	0.0218	0.0397	BGE2506	06/08/2023 13:42	TBB
EPA 200.8	Thallium	N	0.000357J	mg/kg	1	0.000137	0.00992	BGE2506	06/02/2023 11:07	TBB
EPA 200.8	Zinc	N	11.3V	mg/kg	5	0.0373	0.198	BGE2506	06/08/2023 13:44	TBB

**General Chemistry**

SM 2540 G	% Solids	A	9.80V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-07-5	Sample Matrix: Tissue
Lab Sample ID: 23E2848-10RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0133	mg/kg	1	0.000140	0.00984	BGF0506	06/09/2023 15:29	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-11      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	6.50V	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Phenol, Total	A	59.7V	ug/kg	1	4.63	4.63	BGE4145	06/01/2023 07:56	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>25.7% S</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>63.8%</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>74.8%</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>87.0%</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>53.7% S</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>47.6% S</i>	<i>60-140</i>					<i>06/01/2023 07:56</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 15:57	TBB
EPA 200.8	Arsenic	N	1.24	mg/kg	1	0.00246	0.0100	BGE2506	06/15/2023 12:38	TBB
EPA 200.8	Beryllium	N	0.00120J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 13:49	TBB
EPA 200.8	Cadmium	N	0.0450	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 11:12	TBB
EPA 200.8	Chromium	N	0.0415V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 15:57	TBB
EPA 200.8	Copper	N	1.42V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 15:57	TBB
SW-7471B	Mercury	A	<0.00469U	mg/kg	1	0.00469	0.00937	BGE3654	06/07/2023 14:08	AKR
EPA 200.8	Lead	N	0.0463V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 15:57	TBB
EPA 200.8	Nickel	N	0.341V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 15:57	TBB
EPA 200.8	Selenium	N	0.181	mg/kg	1	0.0220	0.0400	BGE2506	06/08/2023 13:49	TBB
EPA 200.8	Thallium	N	0.000340J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 11:12	TBB
EPA 200.8	Zinc	N	11.5V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 13:52	TBB

**General Chemistry**

SM 2540 G	% Solids	A	11.2V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon\_Houston  
 11555 Clay Road  
 Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
 06/16/2023 11:04

**Sample Results**  
 (Continued)

Client Sample ID: MM-REF-1  
 Lab Sample ID: 23E2848-11RE1  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	6.14V	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>29.8% S</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>68.9%</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>85.3%</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>100%</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>90.0%</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>77.7%</i>	<i>60-140</i>					<i>06/05/2023 18:43</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0155	mg/kg	1	0.000138	0.00973	BGF0506	06/09/2023 15:31	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-REF-2  
Lab Sample ID: 23E2848-12  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	6.47V	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Phenol, Total	A	57.3V	ug/kg	1	4.60	4.60	BGE4145	06/01/2023 08:30	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>22.2% S</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>56.3% S</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>74.0%</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>83.0%</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>53.9% S</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>43.1% S</i>	<i>60-140</i>					<i>06/01/2023 08:30</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00162U	mg/kg	1	0.00162	0.0201	BGE2506	06/02/2023 16:19	TBB
EPA 200.8	Arsenic	N	1.22	mg/kg	1	0.00247	0.0100	BGE2506	06/02/2023 11:34	TBB
EPA 200.8	Beryllium	N	0.00147J	mg/kg	1	0.000201	0.00402	BGE2506	06/08/2023 14:19	TBB
EPA 200.8	Cadmium	N	0.0508	mg/kg	1	0.000635	0.0201	BGE2506	06/02/2023 11:34	TBB
EPA 200.8	Chromium	N	0.0310V, J	mg/kg	1	0.00148	0.0602	BGE2506	06/02/2023 11:34	TBB
EPA 200.8	Copper	N	1.25V	mg/kg	1	0.00175	0.0201	BGE2506	06/02/2023 11:34	TBB
SW-7471B	Mercury	A	<0.00469U	mg/kg	1	0.00469	0.00937	BGE3654	06/07/2023 13:18	AKR
EPA 200.8	Lead	N	0.0389V	mg/kg	1	0.00152	0.0100	BGE2506	06/02/2023 16:19	TBB
EPA 200.8	Nickel	N	0.385V	mg/kg	1	0.000355	0.0201	BGE2506	06/02/2023 11:34	TBB
EPA 200.8	Selenium	N	0.197	mg/kg	1	0.0221	0.0402	BGE2506	06/08/2023 14:19	TBB
EPA 200.8	Thallium	N	0.000341J	mg/kg	1	0.000139	0.0100	BGE2506	06/02/2023 11:34	TBB
EPA 200.8	Zinc	N	12.5V	mg/kg	5	0.0377	0.201	BGE2506	06/08/2023 14:21	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.8V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon\_Houston  
 11555 Clay Road  
 Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
 06/16/2023 11:04

**Sample Results**  
**(Continued)**

Client Sample ID: MM-REF-2  
 Lab Sample ID: 23E2848-12RE1  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.84V	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>27.3% S</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>62.2%</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>82.8%</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>102%</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>91.5%</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>69.5%</i>	<i>60-140</i>					<i>06/05/2023 19:17</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0149	mg/kg	1	0.000139	0.00980	BGF0506	06/09/2023 15:38	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-REF-3  
Lab Sample ID: 23E2848-13  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	4.62V	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Phenol, Total	A	70.2V	ug/kg	1	4.73	4.73	BGE4145	06/01/2023 09:05	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		13.2% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		52.8% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: 2-Fluorophenol-surr		70.2%	60-140					06/01/2023 09:05	
SW-8270	Surrogate: Nitrobenzene-d5-surr		84.9%	60-140					06/01/2023 09:05	
SW-8270	Surrogate: Phenol-d5-surr		57.9% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: p-Terphenyl-d14-surr		37.9% S	60-140					06/01/2023 09:05	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00159U	mg/kg	1	0.00159	0.0198	BGE2506	06/02/2023 16:24	TBB
EPA 200.8	Arsenic	N	1.29	mg/kg	1	0.00243	0.00988	BGE2506	06/02/2023 11:39	TBB
EPA 200.8	Beryllium	N	0.00144J	mg/kg	1	0.000198	0.00395	BGE2506	06/08/2023 14:26	TBB
EPA 200.8	Cadmium	N	0.0455	mg/kg	1	0.000625	0.0198	BGE2506	06/02/2023 11:39	TBB
EPA 200.8	Chromium	N	0.0248V, J	mg/kg	1	0.00145	0.0593	BGE2506	06/02/2023 11:39	TBB
EPA 200.8	Copper	N	0.984V	mg/kg	1	0.00172	0.0198	BGE2506	06/02/2023 11:39	TBB
SW-7471B	Mercury	A	<0.00476U	mg/kg	1	0.00476	0.00952	BGE3654	06/07/2023 14:11	AKR
EPA 200.8	Lead	N	0.0317V	mg/kg	1	0.00149	0.00988	BGE2506	06/02/2023 16:24	TBB
EPA 200.8	Nickel	N	0.342V	mg/kg	1	0.000350	0.0198	BGE2506	06/02/2023 11:39	TBB
EPA 200.8	Selenium	N	0.168	mg/kg	1	0.0217	0.0395	BGE2506	06/08/2023 14:26	TBB
EPA 200.8	Thallium	N	0.000237J	mg/kg	1	0.000136	0.00988	BGE2506	06/02/2023 11:39	TBB
EPA 200.8	Zinc	N	11.3V	mg/kg	5	0.0371	0.198	BGE2506	06/08/2023 14:29	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.5V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID:	MM-REF-3	Sample Matrix:	Tissue
Lab Sample ID:	23E2848-13RE1	Date Collected:	04/01/2023 11:00
Sample Alias:		Collected by:	Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst	
<b>Semivolatile Organic Compounds by GCMS</b>											
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	5.97V	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB	
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB	
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>14.4% S</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>53.6% S</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>77.9%</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>105%</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>92.0%</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>59.9% S</i>	<i>60-140</i>					<i>06/05/2023 19:52</i>		
<b>Metals, Total</b>											
EPA 200.8	Silver (Rerun)	N	0.0185	mg/kg	1	0.000139	0.00977	BGF0506	06/09/2023 15:41	TBB	

Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-14	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	5.23V	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Phenol, Total	A	61.0V	ug/kg	1	4.77	4.77	BGE4145	06/01/2023 09:39	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>15.5% S</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>57.1% S</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>69.4%</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>91.4%</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>52.3% S</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>47.9% S</i>	<i>60-140</i>					<i>06/01/2023 09:39</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 16:29	TBB
EPA 200.8	Arsenic	N	1.07A	mg/kg	5	0.0123	0.0500	BGE2506	06/02/2023 11:46	TBB
EPA 200.8	Beryllium	N	0.00148J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 14:31	TBB
EPA 200.8	Cadmium	N	0.0452	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 11:44	TBB
EPA 200.8	Chromium	N	0.0352A, V, J	mg/kg	5	0.00735	0.300	BGE2506	06/02/2023 11:46	TBB
EPA 200.8	Copper	N	1.13A, V	mg/kg	5	0.00870	0.100	BGE2506	06/02/2023 11:46	TBB
SW-7471B	Mercury	A	<0.00465U	mg/kg	1	0.00465	0.00930	BGE3654	06/07/2023 14:21	AKR
EPA 200.8	Lead	N	0.0360V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 16:29	TBB
EPA 200.8	Nickel	N	0.387A, V	mg/kg	5	0.00177	0.100	BGE2506	06/02/2023 11:46	TBB
EPA 200.8	Selenium	N	0.176	mg/kg	1	0.0220	0.0400	BGE2506	06/08/2023 14:31	TBB
EPA 200.8	Thallium	N	0.000300J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 11:44	TBB
EPA 200.8	Zinc	N	11.7V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 14:34	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.4V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-14RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	8.47V	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		16.4% S	60-140					06/05/2023 20:26	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		61.4%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		87.3%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		106%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		92.9%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		70.2%	60-140					06/05/2023 20:26	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0133	mg/kg	1	0.000142	0.0100	BGF0506	06/09/2023 15:51	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: MM-REF-5  
Lab Sample ID: 23E2848-15  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	5.01V	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Phenol, Total	A	70.4V	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 10:14	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		17.4% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.2% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: 2-Fluorophenol-surr		66.8%	60-140					06/01/2023 10:14	
SW-8270	Surrogate: Nitrobenzene-d5-surr		88.1%	60-140					06/01/2023 10:14	
SW-8270	Surrogate: Phenol-d5-surr		57.0% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: p-Terphenyl-d14-surr		40.2% S	60-140					06/01/2023 10:14	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 16:34	TBB
EPA 200.8	Arsenic	N	1.21	mg/kg	1	0.00246	0.0100	BGE2506	06/02/2023 11:49	TBB
EPA 200.8	Beryllium	N	0.00116J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 14:36	TBB
EPA 200.8	Cadmium	N	0.0455	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 11:49	TBB
EPA 200.8	Chromium	N	0.0266V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 11:49	TBB
EPA 200.8	Copper	N	1.19V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 11:49	TBB
SW-7471B	Mercury	A	<0.00488U	mg/kg	1	0.00488	0.00976	BGE3654	06/07/2023 14:25	AKR
EPA 200.8	Lead	N	0.0389V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 16:34	TBB
EPA 200.8	Nickel	N	0.335V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 11:49	TBB
EPA 200.8	Selenium	N	0.162	mg/kg	1	0.0220	0.0400	BGE2506	06/08/2023 14:36	TBB
EPA 200.8	Thallium	N	0.000300J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 11:49	TBB
EPA 200.8	Zinc	N	11.6V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 14:46	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.7V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
**(Continued)**

Client Sample ID: MM-REF-5	Sample Matrix: Tissue
Lab Sample ID: 23E2848-15RE1	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	10.0V	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>18.3% S</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>50.8% S</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>79.8%</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>98.5%</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>94.4%</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>65.0%</i>	<i>60-140</i>					<i>06/05/2023 21:01</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0175	mg/kg	1	0.000139	0.00980	BGF0506	06/09/2023 15:53	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-1      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-16      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	4.79V	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Phenol, Total	A	69.5V	ug/kg	1	4.85	4.85	BGE4145	06/01/2023 10:48	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>12.4% S</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>55.4% S</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>64.7%</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>84.0%</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>50.5% S</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>49.1% S</i>	<i>60-140</i>					<i>06/01/2023 10:48</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00162U	mg/kg	1	0.00162	0.0201	BGE2506	06/02/2023 16:46	TBB
EPA 200.8	Arsenic	N	1.04	mg/kg	1	0.00247	0.0100	BGE2506	06/02/2023 12:01	TBB
EPA 200.8	Beryllium	N	0.00124J	mg/kg	1	0.000201	0.00402	BGE2506	06/08/2023 14:48	TBB
EPA 200.8	Cadmium	N	0.0419	mg/kg	1	0.000635	0.0201	BGE2506	06/02/2023 12:01	TBB
EPA 200.8	Chromium	N	0.0424V, J	mg/kg	1	0.00148	0.0602	BGE2506	06/02/2023 12:01	TBB
EPA 200.8	Copper	N	1.03V	mg/kg	1	0.00175	0.0201	BGE2506	06/02/2023 12:01	TBB
SW-7471B	Mercury	A	<0.00476U	mg/kg	1	0.00476	0.00952	BGE3654	06/07/2023 14:35	AKR
EPA 200.8	Lead	N	0.0322V	mg/kg	1	0.00152	0.0100	BGE2506	06/02/2023 16:46	TBB
EPA 200.8	Nickel	N	0.384V	mg/kg	1	0.000355	0.0201	BGE2506	06/02/2023 12:01	TBB
EPA 200.8	Selenium	N	0.184	mg/kg	1	0.0221	0.0402	BGE2506	06/08/2023 14:48	TBB
EPA 200.8	Thallium	N	0.000221J	mg/kg	1	0.000139	0.0100	BGE2506	06/02/2023 12:01	TBB
EPA 200.8	Zinc	N	13.1V	mg/kg	5	0.0377	0.201	BGE2506	06/08/2023 14:51	TBB

**General Chemistry**

SM 2540 G	% Solids	A	10.8V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-1      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-16RE1      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.15V	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		13.2% S	60-140					06/05/2023 21:36	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		59.6% S	60-140					06/05/2023 21:36	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		75.3%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		99.9%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		87.3%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		73.7%	60-140					06/05/2023 21:36	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0158	mg/kg	1	0.000142	0.0100	BGF0506	06/09/2023 15:55	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-2      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-17      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	4.66V	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Phenol, Total	A	77.1V	ug/kg	1	4.98	4.98	BGE4145	06/01/2023 11:23	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>14.2% S</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>54.8% S</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>61.1%</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>85.5%</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>50.4% S</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>43.6% S</i>	<i>60-140</i>					<i>06/01/2023 11:23</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00160U	mg/kg	1	0.00160	0.0198	BGE2506	06/02/2023 16:51	TBB
EPA 200.8	Arsenic	N	1.22	mg/kg	1	0.00244	0.00992	BGE2506	06/02/2023 12:06	TBB
EPA 200.8	Beryllium	N	0.00181J	mg/kg	1	0.000198	0.00397	BGE2506	06/08/2023 14:53	TBB
EPA 200.8	Cadmium	N	0.0429	mg/kg	1	0.000627	0.0198	BGE2506	06/02/2023 12:06	TBB
EPA 200.8	Chromium	N	0.0682V	mg/kg	1	0.00146	0.0595	BGE2506	06/02/2023 12:06	TBB
EPA 200.8	Copper	N	1.40V	mg/kg	1	0.00173	0.0198	BGE2506	06/02/2023 12:06	TBB
SW-7471B	Mercury	A	<0.00469U	mg/kg	1	0.00469	0.00937	BGE3654	06/07/2023 14:38	AKR
EPA 200.8	Lead	N	0.0486V	mg/kg	1	0.00150	0.00992	BGE2506	06/02/2023 16:51	TBB
EPA 200.8	Nickel	N	0.387V	mg/kg	1	0.000351	0.0198	BGE2506	06/02/2023 12:06	TBB
EPA 200.8	Selenium	N	0.202	mg/kg	1	0.0218	0.0397	BGE2506	06/08/2023 14:53	TBB
EPA 200.8	Thallium	N	0.000337J	mg/kg	1	0.000137	0.00992	BGE2506	06/02/2023 12:06	TBB
EPA 200.8	Zinc	N	13.2V	mg/kg	5	0.0373	0.198	BGE2506	06/08/2023 14:56	TBB

**General Chemistry**

SM 2540 G	% Solids	A	12.4V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-17RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	12.0V	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>15.7% S</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>62.6%</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>68.5%</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>99.5%</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>78.0%</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>80.1%</i>	<i>60-140</i>					<i>06/05/2023 22:45</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0174	mg/kg	1	0.000141	0.00992	BGF0506	06/09/2023 15:58	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-18      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	3.82V	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Phenol, Total	A	63.7V	ug/kg	1	4.61	4.61	BGE4145	06/01/2023 11:57	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>27.0% S</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>68.1%</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>73.9%</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>87.8%</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>57.9% S</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>42.6% S</i>	<i>60-140</i>					<i>06/01/2023 11:57</i>	

**Metals, Total**

EPA 200.8	Antimony	N	<0.00161U	mg/kg	1	0.00161	0.0200	BGE2506	06/02/2023 16:56	TBB
EPA 200.8	Arsenic	N	1.28	mg/kg	1	0.00246	0.0100	BGE2506	06/02/2023 12:11	TBB
EPA 200.8	Beryllium	N	0.00134J	mg/kg	1	0.000200	0.00400	BGE2506	06/08/2023 14:58	TBB
EPA 200.8	Cadmium	N	0.0475	mg/kg	1	0.000632	0.0200	BGE2506	06/02/2023 12:11	TBB
EPA 200.8	Chromium	N	0.0321V, J	mg/kg	1	0.00147	0.0600	BGE2506	06/02/2023 12:11	TBB
EPA 200.8	Copper	N	1.43V	mg/kg	1	0.00174	0.0200	BGE2506	06/02/2023 12:11	TBB
SW-7471B	Mercury	A	<0.00496U	mg/kg	1	0.00496	0.00992	BGE3654	06/07/2023 14:41	AKR
EPA 200.8	Lead	N	0.0535V	mg/kg	1	0.00151	0.0100	BGE2506	06/02/2023 16:56	TBB
EPA 200.8	Nickel	N	0.359V	mg/kg	1	0.000354	0.0200	BGE2506	06/02/2023 12:11	TBB
EPA 200.8	Selenium	N	0.224	mg/kg	1	0.0220	0.0400	BGE2506	06/08/2023 14:58	TBB
EPA 200.8	Thallium	N	0.000400J	mg/kg	1	0.000138	0.0100	BGE2506	06/02/2023 12:11	TBB
EPA 200.8	Zinc	N	14.1V	mg/kg	5	0.0376	0.200	BGE2506	06/08/2023 15:01	TBB

**General Chemistry**

SM 2540 G	% Solids	A	11.4V	%	1	0.100	0.100	BGE2234	05/15/2023 11:06	JRU
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-18RE1      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.45V	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>27.7% S</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>76.6%</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>88.1%</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>109%</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>93.3%</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>82.2%</i>	<i>60-140</i>					<i>06/05/2023 23:19</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0198	mg/kg	1	0.000139	0.00980	BGF0506	06/09/2023 16:00	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-19      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	66.4V	ug/kg	1	4.77	4.77	BGE4170	06/05/2023 07:46	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		3.06% S	60-140					06/05/2023 07:46	
SW-8270	Surrogate: 2-Fluorophenol-surr		48.4% S	60-140					06/05/2023 07:46	
SW-8270	Surrogate: Phenol-d5-surr		60.2%	60-140					06/05/2023 07:46	

**Metals, Total**

EPA 200.8	Antimony	N	0.00199J	mg/kg	1	0.00162	0.0201	BGE2506	06/02/2023 17:01	TBB
EPA 200.8	Arsenic	N	2.00	mg/kg	5	0.0123	0.0502	BGE2506	06/02/2023 12:18	TBB
EPA 200.8	Beryllium	N	0.000341J	mg/kg	1	0.000201	0.00402	BGE2506	06/08/2023 15:03	TBB
EPA 200.8	Cadmium	N	0.0287	mg/kg	1	0.000635	0.0201	BGE2506	06/02/2023 12:16	TBB
EPA 200.8	Chromium	N	0.0704V	mg/kg	1	0.00148	0.0602	BGE2506	06/02/2023 12:16	TBB
EPA 200.8	Copper	N	1.04V	mg/kg	1	0.00175	0.0201	BGE2506	06/02/2023 12:16	TBB
SW-7471B	Mercury	A	0.00540J	mg/kg	1	0.00476	0.00952	BGE3654	06/07/2023 14:45	AKR
EPA 200.8	Lead	N	0.0717V	mg/kg	1	0.00152	0.0100	BGE2506	06/02/2023 17:01	TBB
EPA 200.8	Nickel	N	0.150V	mg/kg	1	0.000355	0.0201	BGE2506	06/02/2023 12:16	TBB
EPA 200.8	Selenium	N	0.305	mg/kg	1	0.0221	0.0402	BGE2506	06/08/2023 15:03	TBB
EPA 200.8	Thallium	N	0.000221J	mg/kg	1	0.000139	0.0100	BGE2506	06/02/2023 12:16	TBB
EPA 200.8	Zinc	N	8.46V	mg/kg	5	0.0377	0.201	BGE2506	06/08/2023 15:06	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.6V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-1	Sample Matrix: Tissue
Lab Sample ID: 23E2848-19RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0145	mg/kg	1	0.000138	0.00969	BGF0506	06/09/2023 16:03	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-20      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	53.0V	ug/kg	1	4.94	4.94	BGE4170	06/05/2023 08:21	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		4.28% S	60-140					06/05/2023 08:21	
SW-8270	Surrogate: 2-Fluorophenol-surr		58.4% S	60-140					06/05/2023 08:21	
SW-8270	Surrogate: Phenol-d5-surr		64.0%	60-140					06/05/2023 08:21	

**Metals, Total**

EPA 200.8	Antimony	N	0.00238J	mg/kg	1	0.00161	0.0200	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Arsenic	N	2.06	mg/kg	5	0.0123	0.0500	BGE2507	06/06/2023 15:41	TBB
EPA 200.8	Beryllium	N	0.000920J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 12:11	TBB
EPA 200.8	Cadmium	N	0.0301	mg/kg	1	0.000632	0.0200	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Chromium	N	0.116V	mg/kg	1	0.00147	0.0600	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Copper	N	1.20V	mg/kg	1	0.00174	0.0200	BGE2507	06/06/2023 15:39	TBB
SW-7471B	Mercury	A	<0.00492U	mg/kg	1	0.00492	0.00984	BGE3654	06/07/2023 14:48	AKR
EPA 200.8	Lead	N	0.0943	mg/kg	1	0.00151	0.0100	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Nickel	N	0.172V	mg/kg	1	0.000354	0.0200	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Selenium	N	0.300	mg/kg	1	0.0220	0.0400	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Thallium	N	0.000340J	mg/kg	1	0.000138	0.0100	BGE2507	06/06/2023 15:39	TBB
EPA 200.8	Zinc	N	50.4	mg/kg	20	0.150	0.800	BGE2507	06/08/2023 15:08	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.0V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-20RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0211	mg/kg	1	0.000139	0.00977	BGF0507	06/09/2023 16:27	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-21      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	63.3V	ug/kg	1	4.70	4.70	BGE4170	06/05/2023 08:55	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>35.0% S</i>	<i>60-140</i>					<i>06/05/2023 08:55</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>73.4%</i>	<i>60-140</i>					<i>06/05/2023 08:55</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>79.3%</i>	<i>60-140</i>					<i>06/05/2023 08:55</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00201J	mg/kg	1	0.00162	0.0201	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Arsenic	N	1.76	mg/kg	1	0.00247	0.0100	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Beryllium	N	0.000984J	mg/kg	1	0.000201	0.00402	BGE2507	06/07/2023 12:26	TBB
EPA 200.8	Cadmium	N	0.0226	mg/kg	1	0.000635	0.0201	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Chromium	N	0.116V	mg/kg	1	0.00148	0.0602	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Copper	N	1.17V	mg/kg	1	0.00175	0.0201	BGE2507	06/06/2023 15:53	TBB
SW-7471B	Mercury	A	<0.00476U	mg/kg	1	0.00476	0.00952	BGE3655	06/08/2023 15:28	AKR
EPA 200.8	Lead	N	0.0798	mg/kg	1	0.00152	0.0100	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Nickel	N	0.159V	mg/kg	1	0.000355	0.0201	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Selenium	N	0.237	mg/kg	1	0.0221	0.0402	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Thallium	N	0.000341J	mg/kg	1	0.000139	0.0100	BGE2507	06/06/2023 15:53	TBB
EPA 200.8	Zinc	N	7.00	mg/kg	1	0.00754	0.0402	BGE2507	06/06/2023 15:53	TBB

**General Chemistry**

SM 2540 G	% Solids	A	12.2V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-3	Sample Matrix: Tissue
Lab Sample ID: 23E2848-21RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0133	mg/kg	1	0.000140	0.00984	BGF0507	06/09/2023 16:12	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-4  
Lab Sample ID: 23E2848-22  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	67.1V	ug/kg	1	4.69	4.69	BGE4170	06/05/2023 09:30	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		4.37% S	60-140					06/05/2023 09:30	
SW-8270	Surrogate: 2-Fluorophenol-surr		51.2% S	60-140					06/05/2023 09:30	
SW-8270	Surrogate: Phenol-d5-surr		59.2% S	60-140					06/05/2023 09:30	

**Metals, Total**

EPA 200.8	Antimony	N	0.00218J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 12:39	TBB
EPA 200.8	Arsenic	N	1.87	mg/kg	5	0.0123	0.0500	BGE2507	06/07/2023 12:41	TBB
EPA 200.8	Beryllium	N	0.000980J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 12:39	TBB
EPA 200.8	Cadmium	N	0.0284	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 12:39	TBB
EPA 200.8	Chromium	N	0.105A, V, J	mg/kg	5	0.00735	0.300	BGE2507	06/07/2023 12:41	TBB
EPA 200.8	Copper	N	1.09V	mg/kg	5	0.00870	0.100	BGE2507	06/07/2023 12:41	TBB
SW-7471B	Mercury	A	<0.00492U	mg/kg	1	0.00492	0.00984	BGE3655	06/08/2023 15:18	AKR
EPA 200.8	Lead	N	0.0804	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 12:39	TBB
EPA 200.8	Nickel	N	0.152V	mg/kg	5	0.00177	0.100	BGE2507	06/07/2023 12:41	TBB
EPA 200.8	Selenium	N	0.227	mg/kg	5	0.110	0.200	BGE2507	06/07/2023 12:41	TBB
EPA 200.8	Thallium	N	0.000360J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 12:39	TBB
EPA 200.8	Zinc	N	7.82	mg/kg	5	0.0376	0.200	BGE2507	06/07/2023 12:41	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.1V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-22RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0144	mg/kg	1	0.000141	0.00996	BGF0507	06/09/2023 16:29	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-5      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-23      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Phenol, Total	A	53.0V	ug/kg	1	4.94	4.94	BGE4170	06/05/2023 10:39	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>8.98% S</i>	<i>60-140</i>					<i>06/05/2023 10:39</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>74.3%</i>	<i>60-140</i>					<i>06/05/2023 10:39</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>84.6%</i>	<i>60-140</i>					<i>06/05/2023 10:39</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00240J	mg/kg	1	0.00160	0.0198	BGE2507	06/07/2023 12:44	TBB
EPA 200.8	Arsenic	N	1.93	mg/kg	10	0.0244	0.0992	BGE2507	06/07/2023 12:46	TBB
EPA 200.8	Beryllium	N	0.00157J	mg/kg	1	0.000198	0.00397	BGE2507	06/07/2023 12:44	TBB
EPA 200.8	Cadmium	N	0.0234	mg/kg	1	0.000627	0.0198	BGE2507	06/07/2023 12:44	TBB
EPA 200.8	Chromium	N	0.107A, V, J	mg/kg	10	0.0146	0.595	BGE2507	06/07/2023 12:46	TBB
EPA 200.8	Copper	N	1.03V	mg/kg	10	0.0173	0.198	BGE2507	06/07/2023 12:46	TBB
SW-7471B	Mercury	A	<0.00476U	mg/kg	1	0.00476	0.00952	BGE3655	06/08/2023 15:55	AKR
EPA 200.8	Lead	N	0.0862	mg/kg	1	0.00150	0.00992	BGE2507	06/07/2023 12:44	TBB
EPA 200.8	Nickel	N	0.189A, V, J	mg/kg	10	0.00351	0.198	BGE2507	06/07/2023 12:46	TBB
EPA 200.8	Selenium	N	0.230A, J	mg/kg	10	0.218	0.397	BGE2507	06/07/2023 12:46	TBB
EPA 200.8	Thallium	N	0.000317J	mg/kg	1	0.000137	0.00992	BGE2507	06/07/2023 12:44	TBB
EPA 200.8	Zinc	N	33.0	mg/kg	10	0.0745	0.397	BGE2507	06/07/2023 12:46	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.8V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-06-5	Sample Matrix: Tissue
Lab Sample ID: 23E2848-23RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0129	mg/kg	1	0.000142	0.0100	BGF0507	06/09/2023 16:31	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-1  
Lab Sample ID: 23E2848-24  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	3.90V	ug/kg	1	2.33	2.33	BGE4170	06/05/2023 11:13	KRB
SW-8270	Di-n-butyl phthalate	A	4.14V	ug/kg	1	2.33	2.33	BGE4170	06/05/2023 11:13	KRB
SW-8270	Di-n-octyl phthalate	A	<2.33U	ug/kg	1	2.33	2.33	BGE4170	06/05/2023 11:13	KRB
SW-8270	Phenol, Total	A	86.3V	ug/kg	1	4.66	4.66	BGE4170	06/05/2023 11:13	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>2.01% S</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>31.6% S</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>51.4% S</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>66.1%</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>67.4%</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>25.5% S</i>	<i>60-140</i>					<i>06/05/2023 11:13</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00309J	mg/kg	1	0.00160	0.0199	BGE2507	06/07/2023 12:49	TBB
EPA 200.8	Arsenic	N	2.25	mg/kg	5	0.0123	0.0498	BGE2507	06/08/2023 15:20	TBB
EPA 200.8	Beryllium	N	0.000857J	mg/kg	1	0.000199	0.00398	BGE2507	06/07/2023 12:49	TBB
EPA 200.8	Cadmium	N	0.0302	mg/kg	1	0.000629	0.0199	BGE2507	06/07/2023 12:49	TBB
EPA 200.8	Chromium	N	0.191V	mg/kg	1	0.00146	0.0598	BGE2507	06/08/2023 15:18	TBB
EPA 200.8	Copper	N	2.77V	mg/kg	1	0.00173	0.0199	BGE2507	06/08/2023 15:18	TBB
SW-7471B	Mercury	A	<0.00488U	mg/kg	1	0.00488	0.00976	BGE3655	06/08/2023 15:31	AKR
EPA 200.8	Lead	N	0.139	mg/kg	1	0.00150	0.00996	BGE2507	06/07/2023 12:49	TBB
EPA 200.8	Nickel	N	0.179V	mg/kg	1	0.000353	0.0199	BGE2507	06/08/2023 15:18	TBB
EPA 200.8	Selenium	N	0.320	mg/kg	1	0.0219	0.0398	BGE2507	06/08/2023 15:18	TBB
EPA 200.8	Thallium	N	0.000359J	mg/kg	1	0.000137	0.00996	BGE2507	06/07/2023 12:49	TBB
EPA 200.8	Zinc	N	9.56	mg/kg	5	0.0374	0.199	BGE2507	06/08/2023 15:20	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.0V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-1	Sample Matrix: Tissue
Lab Sample ID: 23E2848-24RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0117	mg/kg	1	0.000141	0.00992	BGF0507	06/09/2023 16:34	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-2      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-25      Date Collected: 04/01/2023 13:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	6.55V	ug/kg	1	2.36	2.36	BGE4170	06/05/2023 11:48	KRB
SW-8270	Di-n-butyl phthalate	A	7.05V	ug/kg	1	2.36	2.36	BGE4170	06/05/2023 11:48	KRB
SW-8270	Di-n-octyl phthalate	A	<2.36U	ug/kg	1	2.36	2.36	BGE4170	06/05/2023 11:48	KRB
SW-8270	Phenol, Total	A	83.9V	ug/kg	1	4.72	4.72	BGE4170	06/05/2023 11:48	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>2.05% S</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>26.4% S</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>53.7% S</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>61.1%</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>67.3%</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>21.7% S</i>	<i>60-140</i>					<i>06/05/2023 11:48</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00320J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 12:54	TBB
EPA 200.8	Arsenic	N	2.12	mg/kg	10	0.0246	0.100	BGE2507	06/07/2023 12:59	TBB
EPA 200.8	Beryllium	N	0.000520J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 12:54	TBB
EPA 200.8	Cadmium	N	0.0292	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 12:54	TBB
EPA 200.8	Chromium	N	0.168A, V, J	mg/kg	10	0.0147	0.600	BGE2507	06/07/2023 12:59	TBB
EPA 200.8	Copper	N	3.16V	mg/kg	10	0.0174	0.200	BGE2507	06/07/2023 12:59	TBB
SW-7471B	Mercury	A	<0.00496U	mg/kg	1	0.00496	0.00992	BGE3655	06/08/2023 15:35	AKR
EPA 200.8	Lead	N	0.141	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 12:54	TBB
EPA 200.8	Nickel	N	0.181A, V, J	mg/kg	10	0.00354	0.200	BGE2507	06/07/2023 12:59	TBB
EPA 200.8	Selenium	N	0.268A, J	mg/kg	10	0.220	0.400	BGE2507	06/07/2023 12:59	TBB
EPA 200.8	Thallium	N	0.000280J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 12:54	TBB
EPA 200.8	Zinc	N	18.8	mg/kg	10	0.0751	0.400	BGE2507	06/07/2023 12:59	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.8V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-25RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0152	mg/kg	1	0.000141	0.00996	BGF0507	06/09/2023 16:36	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-3      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-26      Date Collected: 04/01/2023 13:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	4.43V	ug/kg	1	2.45	2.45	BGE4170	06/05/2023 12:23	KRB
SW-8270	Di-n-butyl phthalate	A	3.58V	ug/kg	1	2.45	2.45	BGE4170	06/05/2023 12:23	KRB
SW-8270	Di-n-octyl phthalate	A	<2.45U	ug/kg	1	2.45	2.45	BGE4170	06/05/2023 12:23	KRB
SW-8270	Phenol, Total	A	52.9V	ug/kg	1	4.89	4.89	BGE4170	06/05/2023 12:23	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>6.27% S</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>28.5% S</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>62.2%</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>73.3%</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>65.3%</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>22.8% S</i>	<i>60-140</i>					<i>06/05/2023 12:23</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00378J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Arsenic	N	2.22	mg/kg	10	0.0246	0.100	BGE2507	06/07/2023 13:14	TBB
EPA 200.8	Beryllium	N	0.000980J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Cadmium	N	0.0297	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Chromium	N	0.317V	mg/kg	1	0.00147	0.0600	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Copper	N	3.44V	mg/kg	1	0.00174	0.0200	BGE2507	06/07/2023 13:09	TBB
SW-7471B	Mercury	A	<0.00496U	mg/kg	1	0.00496	0.00992	BGE3655	06/08/2023 15:38	AKR
EPA 200.8	Lead	N	0.154	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Nickel	N	0.190V	mg/kg	1	0.000354	0.0200	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Selenium	N	0.316	mg/kg	1	0.0220	0.0400	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Thallium	N	0.000360J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 13:09	TBB
EPA 200.8	Zinc	N	10.0	mg/kg	10	0.0751	0.400	BGE2507	06/07/2023 13:14	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.0V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-3	Sample Matrix: Tissue
Lab Sample ID: 23E2848-26RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0157	mg/kg	1	0.000140	0.00984	BGF0507	06/09/2023 16:39	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-4      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-27      Date Collected: 04/01/2023 13:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	<2.47U, B	ug/kg	1	2.47	2.47	BGE4170	06/05/2023 12:57	KRB
SW-8270	Di-n-butyl phthalate	A	9.02V	ug/kg	1	2.47	2.47	BGE4170	06/05/2023 12:57	KRB
SW-8270	Di-n-octyl phthalate	A	<2.47U	ug/kg	1	2.47	2.47	BGE4170	06/05/2023 12:57	KRB
SW-8270	Phenol, Total	A	71.1V	ug/kg	1	4.93	4.93	BGE4170	06/05/2023 12:57	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>37.1% S</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>42.5% S</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>81.8%</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>86.8%</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>77.4%</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>23.4% S</i>	<i>60-140</i>					<i>06/05/2023 12:57</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00306J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Arsenic	N	2.11	mg/kg	10	0.0246	0.100	BGE2507	06/07/2023 13:21	TBB
EPA 200.8	Beryllium	N	0.000620J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Cadmium	N	0.0283	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Chromium	N	0.222V	mg/kg	1	0.00147	0.0600	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Copper	N	2.89V	mg/kg	1	0.00174	0.0200	BGE2507	06/07/2023 13:16	TBB
SW-7471B	Mercury	A	<0.00480U	mg/kg	1	0.00480	0.00960	BGE3655	06/08/2023 15:41	AKR
EPA 200.8	Lead	N	0.135	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Nickel	N	0.169V	mg/kg	1	0.000354	0.0200	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Selenium	N	0.315	mg/kg	1	0.0220	0.0400	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Thallium	N	0.000280J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 13:16	TBB
EPA 200.8	Zinc	N	9.31	mg/kg	10	0.0751	0.400	BGE2507	06/07/2023 13:21	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.6V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-4	Sample Matrix: Tissue
Lab Sample ID: 23E2848-27RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0143	mg/kg	1	0.000140	0.00988	BGF0507	06/09/2023 16:41	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-5      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-28      Date Collected: 04/01/2023 13:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate	A	4.54V	ug/kg	1	2.35	2.35	BGE4170	06/05/2023 13:32	KRB
SW-8270	Di-n-butyl phthalate	A	4.07V	ug/kg	1	2.35	2.35	BGE4170	06/05/2023 13:32	KRB
SW-8270	Di-n-octyl phthalate	A	<2.35U	ug/kg	1	2.35	2.35	BGE4170	06/05/2023 13:32	KRB
SW-8270	Phenol, Total	A	74.2V	ug/kg	1	4.71	4.71	BGE4170	06/05/2023 13:32	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>1.60% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>13.6% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>43.3% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>51.2% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>54.5% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>13.2% S</i>	<i>60-140</i>					<i>06/05/2023 13:32</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00227J	mg/kg	1	0.00162	0.0201	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Arsenic	N	2.09	mg/kg	10	0.0247	0.100	BGE2507	06/07/2023 13:29	TBB
EPA 200.8	Beryllium	N	0.000442J	mg/kg	1	0.000201	0.00402	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Cadmium	N	0.0250	mg/kg	1	0.000635	0.0201	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Chromium	N	0.0967V	mg/kg	1	0.00148	0.0602	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Copper	N	1.87V	mg/kg	1	0.00175	0.0201	BGE2507	06/07/2023 13:24	TBB
SW-7471B	Mercury	A	<0.00500U	mg/kg	1	0.00500	0.0100	BGE3655	06/08/2023 15:45	AKR
EPA 200.8	Lead	N	0.0921	mg/kg	1	0.00152	0.0100	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Nickel	N	0.138V	mg/kg	1	0.000355	0.0201	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Selenium	N	0.328	mg/kg	1	0.0221	0.0402	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Thallium	N	0.000261J	mg/kg	1	0.000139	0.0100	BGE2507	06/07/2023 13:24	TBB
EPA 200.8	Zinc	N	34.0	mg/kg	10	0.0754	0.402	BGE2507	06/07/2023 13:29	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.2V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-07-5	Sample Matrix: Tissue
Lab Sample ID: 23E2848-28RE1	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0126	mg/kg	1	0.000143	0.0100	BGF0507	06/09/2023 16:44	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-1  
Lab Sample ID: 23E2848-29  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	5.56V	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Phenol, Total	A	50.7V	ug/kg	1	4.70	4.70	BGE4145	06/01/2023 12:32	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>5.72% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>26.8% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>51.7% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>58.0% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>38.6% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>26.9% S</i>	<i>60-140</i>					<i>06/01/2023 12:32</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00264J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Arsenic	N	2.08	mg/kg	5	0.0123	0.0500	BGE2507	06/07/2023 13:41	TBB
EPA 200.8	Beryllium	N	0.000680J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Cadmium	N	0.0264	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Chromium	N	0.126V	mg/kg	1	0.00147	0.0600	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Copper	N	1.83V	mg/kg	1	0.00174	0.0200	BGE2507	06/07/2023 13:31	TBB
SW-7471B	Mercury	A	<0.00465U	mg/kg	1	0.00465	0.00930	BGE3655	06/08/2023 16:05	AKR
EPA 200.8	Lead	N	0.106	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Nickel	N	0.159V	mg/kg	1	0.000354	0.0200	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Selenium	N	0.300	mg/kg	1	0.0220	0.0400	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Thallium	N	0.000300J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 13:31	TBB
EPA 200.8	Zinc	N	8.23	mg/kg	5	0.0376	0.200	BGE2507	06/07/2023 13:41	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.5V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon\_Houston  
 11555 Clay Road  
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Project: PCCA CDP TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
 06/16/2023 11:04

**Sample Results**  
**(Continued)**

Client Sample ID: NV-REF-1  
 Lab Sample ID: 23E2848-29RE1  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 13:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	3.69V	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr (Rerun)</i>		<i>5.10% S</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr (Rerun)</i>		<i>30.6% S</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr (Rerun)</i>		<i>64.8%</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr (Rerun)</i>		<i>79.7%</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr (Rerun)</i>		<i>68.1%</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr (Rerun)</i>		<i>29.9% S</i>	<i>60-140</i>					<i>06/05/2023 23:54</i>	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0221	mg/kg	1	0.000138	0.00969	BGF0507	06/09/2023 16:53	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-30	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	3.25V	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Phenol, Total	A	52.8V	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 13:06	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>20.9% S</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>57.0% S</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>71.8%</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>90.4%</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>49.0% S</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>24.9% S</i>	<i>60-140</i>					<i>06/01/2023 13:06</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00319J	mg/kg	1	0.00160	0.0198	BGE2507	06/07/2023 13:46	TBB
EPA 200.8	Arsenic	N	1.95	mg/kg	5	0.0122	0.0496	BGE2507	06/07/2023 13:48	TBB
EPA 200.8	Beryllium	N	0.000615J	mg/kg	1	0.000198	0.00397	BGE2507	06/07/2023 13:46	TBB
EPA 200.8	Cadmium	N	0.0250	mg/kg	1	0.000627	0.0198	BGE2507	06/07/2023 13:46	TBB
EPA 200.8	Chromium	N	0.151A, V, J	mg/kg	5	0.00729	0.298	BGE2507	06/07/2023 13:48	TBB
EPA 200.8	Copper	N	2.73V	mg/kg	5	0.00863	0.0992	BGE2507	06/07/2023 13:48	TBB
SW-7471B	Mercury	A	<0.00496U	mg/kg	1	0.00496	0.00992	BGE3655	06/08/2023 16:08	AKR
EPA 200.8	Lead	N	0.123	mg/kg	1	0.00150	0.00992	BGE2507	06/07/2023 13:46	TBB
EPA 200.8	Nickel	N	0.181V	mg/kg	5	0.00176	0.0992	BGE2507	06/07/2023 13:48	TBB
EPA 200.8	Selenium	N	0.232	mg/kg	5	0.109	0.198	BGE2507	06/07/2023 13:48	TBB
EPA 200.8	Thallium	N	0.000278J	mg/kg	1	0.000137	0.00992	BGE2507	06/07/2023 13:46	TBB
EPA 200.8	Zinc	N	24.7	mg/kg	5	0.0373	0.198	BGE2507	06/07/2023 13:48	TBB

**General Chemistry**

SM 2540 G	% Solids	A	14.0V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon\_Houston  
 11555 Clay Road  
 Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
 Project Number:  
 Project Manager: Gregg Pawlak

**Reported:**  
 06/16/2023 11:04

**Sample Results**  
 (Continued)

Client Sample ID: NV-REF-2  
 Lab Sample ID: 23E2848-30RE1  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 13:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	5.39V	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		29.1% S	60-140					06/06/2023 00:28	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		60.0%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		84.7%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		99.8%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		80.7%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		54.6% S	60-140					06/06/2023 00:28	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0213	mg/kg	1	0.000141	0.00996	BGF0507	06/09/2023 17:03	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-3  
Lab Sample ID: 23E2848-31  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	4.41V	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Phenol, Total	A	58.3V	ug/kg	1	4.94	4.94	BGE4145	06/01/2023 13:41	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>18.3% S</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>47.8% S</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>69.4%</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>93.4%</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>48.2% S</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>36.0% S</i>	<i>60-140</i>					<i>06/01/2023 13:41</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00424J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 14:15	TBB
EPA 200.8	Arsenic	N	2.16	mg/kg	10	0.0246	0.100	BGE2507	06/07/2023 14:20	TBB
EPA 200.8	Beryllium	N	0.000720J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 14:15	TBB
EPA 200.8	Cadmium	N	0.0272	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 14:15	TBB
EPA 200.8	Chromium	N	0.285A, V, J	mg/kg	10	0.0147	0.600	BGE2507	06/07/2023 14:20	TBB
EPA 200.8	Copper	N	3.51V	mg/kg	10	0.0174	0.200	BGE2507	06/07/2023 14:20	TBB
SW-7471B	Mercury	A	<0.00480U	mg/kg	1	0.00480	0.00960	BGE3655	06/08/2023 16:11	AKR
EPA 200.8	Lead	N	0.151	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 14:15	TBB
EPA 200.8	Nickel	N	0.242V	mg/kg	10	0.00354	0.200	BGE2507	06/07/2023 14:20	TBB
EPA 200.8	Selenium	N	0.244A, J	mg/kg	10	0.220	0.400	BGE2507	06/07/2023 14:20	TBB
EPA 200.8	Thallium	N	0.000440J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 14:15	TBB
EPA 200.8	Zinc	N	18.8	mg/kg	10	0.0751	0.400	BGE2507	06/07/2023 14:20	TBB

**General Chemistry**

SM 2540 G	% Solids	A	12.8V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-34      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	21.6V	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>23.8% S</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>65.0%</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>90.5%</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>96.6%</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>132%</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>10.5% S</i>	<i>60-140</i>					<i>06/01/2023 15:59</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00247J	mg/kg	1	0.00162	0.0201	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Arsenic	N	2.13	mg/kg	10	0.0247	0.100	BGE2507	06/07/2023 14:50	TBB
EPA 200.8	Beryllium	N	0.000602J	mg/kg	1	0.000201	0.00402	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Cadmium	N	0.0247	mg/kg	1	0.000635	0.0201	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Chromium	N	0.0885V	mg/kg	1	0.00148	0.0602	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Copper	N	1.90V	mg/kg	1	0.00175	0.0201	BGE2507	06/07/2023 14:45	TBB
SW-7471B	Mercury	A	<0.00465U	mg/kg	1	0.00465	0.00930	BGE3655	06/08/2023 16:21	AKR
EPA 200.8	Lead	N	0.0677	mg/kg	1	0.00152	0.0100	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Nickel	N	0.181V	mg/kg	1	0.000355	0.0201	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Selenium	N	0.371	mg/kg	1	0.0221	0.0402	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Thallium	N	0.000301J	mg/kg	1	0.000139	0.0100	BGE2507	06/07/2023 14:45	TBB
EPA 200.8	Zinc	N	45.5	mg/kg	10	0.0754	0.402	BGE2507	06/07/2023 14:50	TBB

**General Chemistry**

SM 2540 G	% Solids	A	12.7V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-34RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	<4.87U, B	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Phenol, Total (Rerun)	A	78.1V	ug/kg	2	9.75	9.75	BGE4145	06/10/2023 04:42	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		28.9% S	60-140					06/10/2023 04:42	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		68.5%	60-140					06/10/2023 04:42	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		79.6%	60-140					06/10/2023 04:42	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		111%	60-140					06/10/2023 04:42	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		94.8%	60-140					06/10/2023 04:42	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		11.9% S	60-140					06/10/2023 04:42	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0235	mg/kg	1	0.000141	0.00996	BGF0507	06/09/2023 17:10	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-35      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	13.6V	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>16.1% S</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>58.8% S</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>70.2%</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>90.1%</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>112%</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>8.78% S</i>	<i>60-140</i>					<i>06/01/2023 16:33</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00272J	mg/kg	1	0.00161	0.0200	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Arsenic	N	1.86	mg/kg	5	0.0123	0.0500	BGE2507	06/07/2023 14:55	TBB
EPA 200.8	Beryllium	N	0.00176J	mg/kg	1	0.000200	0.00400	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Cadmium	N	0.0211	mg/kg	1	0.000632	0.0200	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Chromium	N	0.158V	mg/kg	1	0.00147	0.0600	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Copper	N	1.48V	mg/kg	1	0.00174	0.0200	BGE2507	06/07/2023 14:53	TBB
SW-7471B	Mercury	A	<0.00476U	mg/kg	1	0.00476	0.00952	BGE3655	06/08/2023 16:25	AKR
EPA 200.8	Lead	N	0.0970	mg/kg	1	0.00151	0.0100	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Nickel	N	0.201V	mg/kg	1	0.000354	0.0200	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Selenium	N	0.295	mg/kg	1	0.0220	0.0400	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Thallium	N	0.000540J	mg/kg	1	0.000138	0.0100	BGE2507	06/07/2023 14:53	TBB
EPA 200.8	Zinc	N	19.7	mg/kg	5	0.0376	0.200	BGE2507	06/07/2023 14:55	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.2V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-2      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-35RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	<4.98U, B	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Phenol, Total (Rerun)	A	109V	ug/kg	2	9.96	9.96	BGE4145	06/10/2023 05:17	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		20.0% S	60-140					06/10/2023 05:17	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		74.5%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		52.5% S	60-140					06/10/2023 05:17	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		106%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		91.1%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		11.7% S	60-140					06/10/2023 05:17	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0252	mg/kg	1	0.000140	0.00984	BGF0507	06/09/2023 17:13	TBB
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-36      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Di-n-butyl phthalate	A	3.46V	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
<i>SW-8270</i>	<i>Surrogate: 2,4,6-Tribromophenol-surr</i>		<i>7.23% S</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorobiphenyl-surr</i>		<i>50.6% S</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	
<i>SW-8270</i>	<i>Surrogate: 2-Fluorophenol-surr</i>		<i>83.7%</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	
<i>SW-8270</i>	<i>Surrogate: Nitrobenzene-d5-surr</i>		<i>102%</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	
<i>SW-8270</i>	<i>Surrogate: Phenol-d5-surr</i>		<i>125%</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	
<i>SW-8270</i>	<i>Surrogate: p-Terphenyl-d14-surr</i>		<i>26.0% S</i>	<i>60-140</i>					<i>06/01/2023 17:08</i>	

**Metals, Total**

EPA 200.8	Antimony	N	0.00276J	mg/kg	1	0.00160	0.0198	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Arsenic	N	2.25	mg/kg	5	0.0122	0.0496	BGE2507	06/07/2023 15:03	TBB
EPA 200.8	Beryllium	N	0.00161J	mg/kg	1	0.000198	0.00397	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Cadmium	N	0.0264	mg/kg	1	0.000627	0.0198	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Chromium	N	0.139V	mg/kg	1	0.00146	0.0595	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Copper	N	1.57V	mg/kg	1	0.00173	0.0198	BGE2507	06/07/2023 15:00	TBB
SW-7471B	Mercury	A	<0.00480U	mg/kg	1	0.00480	0.00960	BGE3655	06/08/2023 16:35	AKR
EPA 200.8	Lead	N	0.113	mg/kg	1	0.00150	0.00992	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Nickel	N	0.184V	mg/kg	1	0.000351	0.0198	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Selenium	N	0.355	mg/kg	1	0.0218	0.0397	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Thallium	N	0.000556J	mg/kg	1	0.000137	0.00992	BGE2507	06/07/2023 15:00	TBB
EPA 200.8	Zinc	N	16.5	mg/kg	5	0.0373	0.198	BGE2507	06/07/2023 15:03	TBB

**General Chemistry**

SM 2540 G	% Solids	A	13.9V	%	1	0.100	0.100	BGE2233	05/15/2023 10:45	BP
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Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 06/16/2023 11:04
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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-36RE1      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	45.6V	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Phenol, Total (Rerun)	A	89.6V	ug/kg	2	9.65	9.65	BGE4145	06/10/2023 05:52	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		11.0% S	60-140					06/10/2023 05:52	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		60.6%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		57.7% S	60-140					06/10/2023 05:52	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		94.2%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		71.1%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		37.9% S	60-140					06/10/2023 05:52	

**Metals, Total**

EPA 200.8	Silver (Rerun)	N	0.0200	mg/kg	1	0.000140	0.00988	BGF0507	06/09/2023 17:15	TBB
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Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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### Quality Control

#### Semivolatile Organic Compounds by GCMS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE4145 - SW-3570</b>										
<b>MB SV BT (BGE4145-BLK1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	3.59		2.36	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			55.7	ug/kg	75.6		73.6	60-140		
Surrogate: Nitrobenzene-d5-surr			62.4	ug/kg	75.6		82.5	60-140		
Surrogate: p-Terphenyl-d14-surr			49.2	ug/kg	75.6		65.1	60-140		
<b>Blank (BGE4145-BLK2)</b>										
Prepared: 5/25/2023 Analyzed: 6/5/2023										
Bis(2-ethylhexyl )phthalate	8.93		2.36	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			59.4	ug/kg	75.6		78.5	60-140		
Surrogate: Nitrobenzene-d5-surr			78.2	ug/kg	75.6		103	60-140		
Surrogate: p-Terphenyl-d14-surr			53.3	ug/kg	75.6		70.5	60-140		
<b>BS SV BT/IDOC1 (BGE4145-BS1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	51.4		2.48	ug/kg	79.2		64.9	60-140		
Surrogate: 2-Fluorobiphenyl-surr			52.0	ug/kg	79.2		65.7	60-140		
Surrogate: Nitrobenzene-d5-surr			54.9	ug/kg	79.2		69.3	60-140		
Surrogate: p-Terphenyl-d14-surr	S		31.2	ug/kg	79.2		39.4	60-140		
<b>BS SV BT/IDOC1 (BGE4145-BS2)</b>										
Prepared: 5/25/2023 Analyzed: 6/5/2023										
Bis(2-ethylhexyl )phthalate	84.0		2.48	ug/kg	79.2		106	60-140		
Surrogate: 2-Fluorobiphenyl-surr	S		46.3	ug/kg	79.2		58.5	60-140		
Surrogate: Nitrobenzene-d5-surr			68.3	ug/kg	79.2		86.2	60-140		
Surrogate: p-Terphenyl-d14-surr			49.1	ug/kg	79.2		62.0	60-140		
<b>BSD SV BT/IDOC2 (BGE4145-BSD1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	51.0		2.43	ug/kg	77.8		65.6	60-140	0.651	40
Surrogate: 2-Fluorobiphenyl-surr			47.7	ug/kg	77.8		61.3	60-140		
Surrogate: Nitrobenzene-d5-surr			48.6	ug/kg	77.8		62.4	60-140		
Surrogate: p-Terphenyl-d14-surr	S		32.9	ug/kg	77.8		42.2	60-140		

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Project: PCCA CDP TISSUE CHEM  
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Project Manager: Gregg Pawlak

**Reported:**  
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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE4145 - SW-3570 (Continued)</b>										
<b>BSD SV BT/IDOC2 (BGE4145-BSD2)</b>										
					Prepared: 5/25/2023 Analyzed: 6/5/2023					
Bis(2-ethylhexyl )phthalate	89.4		2.43	ug/kg	77.8		115	60-140	6.16	40
Surrogate: 2-Fluorobiphenyl-surr		S	43.7	ug/kg	77.8		56.2	60-140		
Surrogate: Nitrobenzene-d5-surr			67.7	ug/kg	77.8		87.0	60-140		
Surrogate: p-Terphenyl-d14-surr			51.6	ug/kg	77.8		66.3	60-140		
<b>MDL SV BT (BGE4145-MRL1)</b>										
					Prepared: 5/25/2023 Analyzed: 6/1/2023					
Di-n-butyl phthalate	4.81		2.42	ug/kg	7.74		62.2	50-150		
Surrogate: 2-Fluorobiphenyl-surr			48.4	ug/kg	77.4		62.6	60-140		
Surrogate: Nitrobenzene-d5-surr			60.8	ug/kg	77.4		78.6	60-140		
Surrogate: p-Terphenyl-d14-surr		S	34.9	ug/kg	77.4		45.0	60-140		
<b>MRL Check (BGE4145-MRL2)</b>										
					Prepared: 5/25/2023 Analyzed: 6/5/2023					
Bis(2-ethylhexyl )phthalate	13.8	J1	2.42	ug/kg	7.74		178	50-150		
Surrogate: 2-Fluorobiphenyl-surr			50.3	ug/kg	77.4		65.0	60-140		
Surrogate: Nitrobenzene-d5-surr			68.3	ug/kg	77.4		88.3	60-140		
Surrogate: p-Terphenyl-d14-surr		S	43.7	ug/kg	77.4		56.5	60-140		
<b>23E2848-11 MS (BGE4145-MS1)</b>										
					<b>Source: 23E2848-11</b>		Prepared: 5/25/2023 Analyzed: 6/1/2023			
Di-n-butyl phthalate	41.7	J1	2.24	ug/kg	71.8	6.50	49.0	60-140		
Surrogate: 2-Fluorobiphenyl-surr		S	34.4	ug/kg	71.8		47.9	60-140		
Surrogate: Nitrobenzene-d5-surr			55.7	ug/kg	71.8		77.5	60-140		
Surrogate: p-Terphenyl-d14-surr		S	23.0	ug/kg	71.8		32.0	60-140		
<b>Matrix Spike (BGE4145-MS2)</b>										
					<b>Source: 23E2848-11RE1</b>		Prepared: 5/25/2023 Analyzed: 6/5/2023			
Bis(2-ethylhexyl )phthalate	58.8		2.24	ug/kg	71.8	6.14	73.3	60-140		
Surrogate: 2-Fluorobiphenyl-surr		S	35.6	ug/kg	71.8		49.6	60-140		
Surrogate: Nitrobenzene-d5-surr			73.3	ug/kg	71.8		102	60-140		
Surrogate: p-Terphenyl-d14-surr			47.7	ug/kg	71.8		66.4	60-140		

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE4145 - SW-3570 (Continued)**

**23E2848-11 MSD (BGE4145-MSD1)**

Source: **23E2848-11**

Prepared: 5/25/2023 Analyzed: 6/1/2023

Di-n-butyl phthalate	45.7	J1	2.36	ug/kg	75.6	6.50	51.8	60-140	9.14	40
Surrogate: 2-Fluorobiphenyl-surr		S	32.9	ug/kg	75.6		43.5	60-140		
Surrogate: Nitrobenzene-d5-surr			59.0	ug/kg	75.6		78.0	60-140		
Surrogate: p-Terphenyl-d14-surr		S	23.4	ug/kg	75.6		30.9	60-140		

**Matrix Spike Dup (BGE4145-MSD2)**

Source: **23E2848-11RE1**

Prepared: 5/25/2023 Analyzed: 6/5/2023

Bis(2-ethylhexyl )phthalate	67.1		2.36	ug/kg	75.6	6.14	80.6	60-140	13.2	40
Surrogate: 2-Fluorobiphenyl-surr		S	34.5	ug/kg	75.6		45.6	60-140		
Surrogate: Nitrobenzene-d5-surr			70.6	ug/kg	75.6		93.4	60-140		
Surrogate: p-Terphenyl-d14-surr			52.5	ug/kg	75.6		69.4	60-140		

**Batch: BGE4170 - SW-3570**

**MB SV BT (BGE4170-BLK1)**

Prepared: 5/25/2023 Analyzed: 6/4/2023

Bis(2-ethylhexyl )phthalate	5.46		2.45	ug/kg						
Di-n-butyl phthalate	6.13		2.45	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			54.3	ug/kg	78.4		69.3	60-140		
Surrogate: Nitrobenzene-d5-surr			50.8	ug/kg	78.4		64.7	60-140		
Surrogate: p-Terphenyl-d14-surr			62.8	ug/kg	78.4		80.1	60-140		

**BS SV BT (BGE4170-BS1)**

Prepared: 5/25/2023 Analyzed: 6/4/2023

Bis(2-ethylhexyl )phthalate	39.1	J1	2.38	ug/kg	76.0		51.4	60-140		
Di-n-butyl phthalate	41.7	J1	2.38	ug/kg	76.0		54.9	60-140		
Surrogate: 2-Fluorobiphenyl-surr		S	35.6	ug/kg	76.0		46.8	60-140		
Surrogate: Nitrobenzene-d5-surr		S	42.2	ug/kg	76.0		55.5	60-140		
Surrogate: p-Terphenyl-d14-surr		S	30.6	ug/kg	76.0		40.2	60-140		

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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE4170 - SW-3570 (Continued)**

**BSD SV BT (BGE4170-bsd1)**

Prepared: 5/25/2023 Analyzed: 6/5/2023

Bis(2-ethylhexyl )phthalate	40.9	J1	2.47	ug/kg	79.1		51.7	60-140	4.43	40
Di-n-butyl phthalate	40.6	J1	2.47	ug/kg	79.1		51.3	60-140	2.79	40
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	43.7	ug/kg	79.1		55.3	60-140		
Surrogate: Nitrobenzene-d5-surr		S	46.1	ug/kg	79.1		58.3	60-140		
Surrogate: p-Terphenyl-d14-surr		S	36.7	ug/kg	79.1		46.5	60-140		

**MDL SV BT (BGE4170-MRL1)**

Prepared: 5/25/2023 Analyzed: 6/4/2023

Bis(2-ethylhexyl )phthalate	13.1	J1	2.35	ug/kg	7.50		174	50-150		
Di-n-butyl phthalate	7.76		2.35	ug/kg	7.50		103	50-150		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr			45.8	ug/kg	75.0		61.0	60-140		
Surrogate: Nitrobenzene-d5-surr			51.0	ug/kg	75.0		67.9	60-140		
Surrogate: p-Terphenyl-d14-surr		S	43.9	ug/kg	75.0		58.5	60-140		

**23E284802 MS (BGE4170-MS1)**

Source: 23E2848-02

Prepared: 5/25/2023 Analyzed: 6/5/2023

Bis(2-ethylhexyl )phthalate	28.6	J1	2.45	ug/kg	78.4	<2.45	36.4	60-140		
Di-n-butyl phthalate	54.6	J1	2.45	ug/kg	78.4	8.70	58.5	60-140		
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	40.2	ug/kg	78.4		51.3	60-140		
Surrogate: Nitrobenzene-d5-surr			48.3	ug/kg	78.4		61.6	60-140		
Surrogate: p-Terphenyl-d14-surr		S	33.0	ug/kg	78.4		42.1	60-140		

**23E284802 MSD (BGE4170-MSD1)**

Source: 23E2848-02

Prepared: 5/25/2023 Analyzed: 6/5/2023

Bis(2-ethylhexyl )phthalate	36.9	J1	2.44	ug/kg	78.0	<2.44	47.3	60-140	25.4	40
Di-n-butyl phthalate	68.9		2.44	ug/kg	78.0	8.70	77.2	60-140	23.2	40
<hr/>										
Surrogate: 2-Fluorobiphenyl-surr		S	43.9	ug/kg	78.0		56.3	60-140		
Surrogate: Nitrobenzene-d5-surr			49.5	ug/kg	78.0		63.4	60-140		
Surrogate: p-Terphenyl-d14-surr		S	37.2	ug/kg	78.0		47.7	60-140		



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**Quality Control**  
(Continued)

**Metals, Total**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2506 - EPA 200.3**

**Blank (BGE2506-BLK1)**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	<0.0996	U	0.0996	mg/kg						
Arsenic	<0.0498	U	0.0498	mg/kg						
Cadmium	<0.0996	U	0.0996	mg/kg						
Chromium	0.0342	J	0.299	mg/kg						
Copper	0.0292	J	0.0996	mg/kg						
Lead	0.0103	J	0.0498	mg/kg						
Nickel	0.0150	J	0.0996	mg/kg						
Selenium	<0.199	U	0.199	mg/kg						
Thallium	<0.0498	U	0.0498	mg/kg						

**Blank (BGE2506-BLK3)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Zinc	1.34		0.199	mg/kg						
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**Blank (BGE2506-BLK4)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	<0.0199	U	0.0199	mg/kg						
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**LCS (BGE2506-BS1)**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	9.72		0.0956	mg/kg	9.56		102	85-115		
Arsenic	4.85		0.0478	mg/kg	4.78		102	85-115		
Cadmium	9.43		0.0956	mg/kg	9.56		98.6	85-115		
Chromium	28.1		0.287	mg/kg	28.7		97.9	85-115		
Copper	9.45		0.0956	mg/kg	9.56		98.9	85-115		
Lead	4.94		0.0478	mg/kg	4.78		103	85-115		
Nickel	9.31		0.0956	mg/kg	9.56		97.4	85-115		
Thallium	4.83		0.0478	mg/kg	4.78		101	85-115		

**LCS (BGE2506-BS3)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Zinc	20.5		0.191	mg/kg	19.1		107	85-115		
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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2506 - EPA 200.3 (Continued)**

**LCS (BGE2506-BS4)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	2.10		0.0191	mg/kg	1.91		110	85-115		
Selenium	20.7		0.191	mg/kg	19.1		108	85-115		

**Duplicate (BGE2506-DUP1)**

**Source: 23E2848-01**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	<0.0199	U	0.0199	mg/kg		<0.0199				20
Arsenic	1.04		0.00996	mg/kg		1.09			5.51	20
Cadmium	0.0397		0.0199	mg/kg		0.0406			2.24	20
Chromium	0.0534	J	0.0598	mg/kg		0.0481			10.5	20
Copper	1.16		0.0199	mg/kg		1.15			0.865	20
Lead	0.0255		0.00996	mg/kg		0.0265			4.16	20
Nickel	0.342		0.0199	mg/kg		0.343			0.201	20
Selenium	0.148		0.0398	mg/kg		0.151			2.17	20
Thallium	0.000398	J	0.00996	mg/kg		0.000360			10.1	20

**Duplicate (BGE2506-DUP2)**

**Source: 23E2848-11**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Cadmium	0.0432		0.0200	mg/kg		0.0450			4.13	20
Thallium	0.000320	J	0.0100	mg/kg		0.000340			6.06	20

**Duplicate (BGE2506-DUP4)**

**Source: 23E2848-11**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	<0.0200	U	0.0200	mg/kg		<0.0200				20
Arsenic	1.18		0.0100	mg/kg		1.24			5.39	20
Chromium	0.0367	J	0.0600	mg/kg		0.0415			12.4	20
Copper	1.32		0.0200	mg/kg		1.42			7.35	20
Lead	0.0415		0.0100	mg/kg		0.0463			10.9	20
Nickel	0.316		0.0200	mg/kg		0.341			7.69	20

**Duplicate (BGE2506-DUP5)**

**Source: 23E2848-01**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Zinc	12.2		0.398	mg/kg		11.2			7.98	20
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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2506 - EPA 200.3 (Continued)**

**Duplicate (BGE2506-DUP6)**

Source: 23E2848-11

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	0.00126	J	0.00400	mg/kg		0.00120			4.88	20
Selenium	0.169		0.0400	mg/kg		0.181			6.94	20

**Duplicate (BGE2506-DUP7)**

Source: 23E2848-01

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	0.00147	J	0.00398	mg/kg		0.00122			18.9	20
Zinc	11.4		0.199	mg/kg		11.2			1.82	20

**MDL Check (BGE2506-MRL1)**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	0.0506	J	0.102	mg/kg	0.0509			99.4		
Arsenic	0.00163	J	0.0509	mg/kg	0.00509			32.0		
Cadmium	0.00570	J	0.102	mg/kg	0.00509			112		
Chromium	0.0303	J	0.305	mg/kg	0.0153			199		
Copper	0.0360	J	0.102	mg/kg	0.0102			354		
Lead	0.00611	J	0.0509	mg/kg	0.00509			120		
Nickel	0.0162	J	0.102	mg/kg	0.00509			318		
Selenium	0.116	J	0.204	mg/kg	0.102			114		
Thallium	0.00295	J	0.0509	mg/kg	0.00255			116		

**MDL Check (BGE2506-MRL3)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Zinc	0.184	J	0.204	mg/kg	0.102			180		
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**MDL Check (BGE2506-MRL4)**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	0.00132	J	0.0204	mg/kg	0.00102			130		
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**Matrix Spike (BGE2506-MS1)**

Source: 23E2848-01

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	1.93		0.0200	mg/kg	2.00	<0.0200		96.6	75-125	
Arsenic	1.94		0.0500	mg/kg	1.00	1.09		84.6	75-125	
Cadmium	1.97		0.0200	mg/kg	2.00	0.0406		96.2	75-125	
Chromium	5.93		0.0600	mg/kg	6.00	0.0481		98.0	75-125	
Copper	2.98		0.0200	mg/kg	2.00	1.15		91.6	75-125	
Lead	1.01		0.0100	mg/kg	1.00	0.0265		98.8	75-125	
Nickel	2.23		0.0200	mg/kg	2.00	0.343		94.4	75-125	
Thallium	0.932		0.0100	mg/kg	1.00	0.000360		93.2	75-125	

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2506 - EPA 200.3 (Continued)**

**Matrix Spike (BGE2506-MS2)**

**Source: 23E2848-11**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Cadmium	1.87		0.0201	mg/kg	2.01	0.0450	91.1	75-125		
Thallium	0.866		0.0100	mg/kg	1.00	0.000340	86.2	75-125		

**Matrix Spike (BGE2506-MS4)**

**Source: 23E2848-11**

Prepared: 5/16/2023 Analyzed: 6/2/2023

Antimony	1.91		0.0201	mg/kg	2.01	<0.0201	95.3	75-125		
Arsenic	1.93	J1	0.0502	mg/kg	1.00	1.24	68.3	75-125		
Chromium	5.71		0.0602	mg/kg	6.02	0.0415	94.0	75-125		
Copper	3.06		0.0201	mg/kg	2.01	1.42	81.6	75-125		
Lead	0.947		0.0100	mg/kg	1.00	0.0463	89.7	75-125		
Nickel	2.14		0.0201	mg/kg	2.01	0.341	89.3	75-125		

**Matrix Spike (BGE2506-MS5)**

**Source: 23E2848-01**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	0.431		0.00400	mg/kg	0.400	0.00122	107	75-125		
Selenium	5.38	J1	0.0400	mg/kg	4.00	0.151	131	75-125		
Zinc	16.6	J1	0.200	mg/kg	4.00	11.2	133	75-125		

**Matrix Spike (BGE2506-MS6)**

**Source: 23E2848-11**

Prepared: 5/16/2023 Analyzed: 6/8/2023

Beryllium	0.406		0.00402	mg/kg	0.402	0.00120	101	75-125		
Selenium	5.39	J1	0.0402	mg/kg	4.02	0.181	130	75-125		
Zinc	15.2		0.201	mg/kg	4.02	11.5	92.2	75-125		

**Batch: BGE2507 - EPA 200.3**

**Blank (BGE2507-BLK1)**

Prepared: 5/16/2023 Analyzed: 6/6/2023

Antimony	<0.101	U	0.101	mg/kg						
Arsenic	<0.0503	U	0.0503	mg/kg						
Cadmium	<0.101	U	0.101	mg/kg						
Chromium	0.0140	J	0.302	mg/kg						
Copper	0.0256	J	0.101	mg/kg						
Lead	<0.0503	U	0.0503	mg/kg						
Nickel	0.00573	J	0.101	mg/kg						
Selenium	<0.201	U	0.201	mg/kg						
Thallium	<0.0503	U	0.0503	mg/kg						
Zinc	<0.201	U	0.201	mg/kg						

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2507 - EPA 200.3 (Continued)**

**Blank (BGE2507-BLK2)**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Beryllium <0.0201 U 0.0201 mg/kg

**LCS (BGE2507-BS1)**

Prepared: 5/16/2023 Analyzed: 6/6/2023

Antimony	10.2		0.0952	mg/kg	9.52	107	85-115			
Arsenic	4.87		0.0476	mg/kg	4.76	102	85-115			
Cadmium	9.47		0.0952	mg/kg	9.52	99.4	85-115			
Chromium	28.1		0.286	mg/kg	28.6	98.4	85-115			
Copper	10.1		0.0952	mg/kg	9.52	106	85-115			
Lead	4.77		0.0476	mg/kg	4.76	100	85-115			
Nickel	9.33		0.0952	mg/kg	9.52	97.9	85-115			
Selenium	19.7		0.190	mg/kg	19.0	103	85-115			
Thallium	4.80		0.0476	mg/kg	4.76	101	85-115			
Zinc	19.6		0.190	mg/kg	19.0	103	85-115			

**LCS (BGE2507-BS2)**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Beryllium 2.19 0.0190 mg/kg 1.90 115 85-115

**Duplicate (BGE2507-DUP1)**

**Source: 23E2848-20**

Prepared: 5/16/2023 Analyzed: 6/6/2023

Antimony	0.00235	J	0.0201	mg/kg	0.00238	1.29	20
Arsenic	2.04		0.0502	mg/kg	2.06	1.19	20
Cadmium	0.0291		0.0201	mg/kg	0.0301	3.66	20
Chromium	0.131		0.0602	mg/kg	0.116	11.8	20
Copper	1.12		0.0201	mg/kg	1.20	6.73	20
Lead	0.0898		0.0100	mg/kg	0.0943	4.82	20
Nickel	0.173		0.0201	mg/kg	0.172	0.447	20
Selenium	0.300		0.0402	mg/kg	0.300	0.227	20
Thallium	0.000361	J	0.0100	mg/kg	0.000340	6.11	20
Zinc	24.0	J1	0.201	mg/kg	50.4	70.9	20

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2507 - EPA 200.3 (Continued)**

**Duplicate (BGE2507-DUP2)**

**Source: 23E2848-30**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Antimony	0.00344	J	0.0200	mg/kg		0.00319			7.40	20
Arsenic	1.85		0.100	mg/kg		1.95			5.46	20
Beryllium	0.000580	J	0.00400	mg/kg		0.000615			5.87	20
Cadmium	0.0246		0.0200	mg/kg		0.0250			1.85	20
Chromium	0.151		0.0600	mg/kg		0.151			0.0322	20
Copper	2.56		0.0200	mg/kg		2.73			6.09	20
Lead	0.113		0.0100	mg/kg		0.123			9.11	20
Nickel	0.169		0.0200	mg/kg		0.181			7.12	20
Selenium	0.287	J1	0.0400	mg/kg		0.232			21.3	20
Thallium	0.000280	J	0.0100	mg/kg		0.000278			0.797	20
Zinc	8.12	J1	0.400	mg/kg		24.7			101	20

**Duplicate (BGE2507-DUP3)**

**Source: 23E2848-20**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Beryllium	0.000964	J	0.00402	mg/kg		0.000920			4.66	20
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**MDL Check (BGE2507-MRL1)**

Prepared: 5/16/2023 Analyzed: 6/6/2023

Antimony	0.0571	J	0.0990	mg/kg	0.0495				115	
Arsenic	<0.0495	U	0.0495	mg/kg	0.00495					
Cadmium	0.00634	J	0.0990	mg/kg	0.00495				128	
Chromium	0.0550	J	0.297	mg/kg	0.0149				370	
Copper	0.0366	J	0.0990	mg/kg	0.00990				370	
Lead	0.00762	J	0.0495	mg/kg	0.00495				154	
Nickel	0.0146	J	0.0990	mg/kg	0.00495				294	
Selenium	0.102	J	0.198	mg/kg	0.0990				103	
Thallium	0.00485	J	0.0495	mg/kg	0.00248				196	
Zinc	0.128	J	0.198	mg/kg	0.0990				129	

**MDL Check (BGE2507-MRL2)**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Beryllium	0.00158	J	0.0198	mg/kg	0.000990				160	
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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE2507 - EPA 200.3 (Continued)**

**Matrix Spike (BGE2507-MS1)**

**Source: 23E2848-20**

Prepared: 5/16/2023 Analyzed: 6/6/2023

Antimony	2.15		0.0200	mg/kg	2.00	0.00238	107	75-125		
Arsenic	3.11		0.0500	mg/kg	1.00	2.06	104	75-125		
Cadmium	2.06		0.0200	mg/kg	2.00	0.0301	101	75-125		
Chromium	6.15		0.0600	mg/kg	6.00	0.116	101	75-125		
Copper	3.00		0.0200	mg/kg	2.00	1.20	89.9	75-125		
Lead	1.05		0.0100	mg/kg	1.00	0.0943	95.5	75-125		
Nickel	2.09		0.0200	mg/kg	2.00	0.172	96.0	75-125		
Selenium	5.46	J1	0.0400	mg/kg	4.00	0.300	129	75-125		
Thallium	0.968		0.0100	mg/kg	1.00	0.000340	96.7	75-125		
Zinc	12.6	J1	0.200	mg/kg	4.00	50.4	NR	75-125		

**Matrix Spike (BGE2507-MS2)**

**Source: 23E2848-30**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Antimony	2.11		0.0199	mg/kg	1.99	0.00319	106	75-125		
Arsenic	2.89		0.0498	mg/kg	0.996	1.95	94.5	75-125		
Beryllium	0.464		0.00398	mg/kg	0.398	0.000615	116	75-125		
Cadmium	2.14		0.0199	mg/kg	1.99	0.0250	106	75-125		
Chromium	6.75		0.0598	mg/kg	5.98	0.151	110	75-125		
Copper	4.88		0.0996	mg/kg	1.99	2.73	108	75-125		
Lead	1.13		0.00996	mg/kg	0.996	0.123	101	75-125		
Nickel	2.25		0.0199	mg/kg	1.99	0.181	104	75-125		
Selenium	5.70	J1	0.0398	mg/kg	3.98	0.232	137	75-125		
Thallium	0.996		0.00996	mg/kg	0.996	0.000278	100	75-125		
Zinc	27.5	J1	0.199	mg/kg	3.98	24.7	70.5	75-125		

**Matrix Spike (BGE2507-MS3)**

**Source: 23E2848-20**

Prepared: 5/16/2023 Analyzed: 6/7/2023

Beryllium	0.463		0.00400	mg/kg	0.400	0.000920	116	75-125		
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Project Number:  
Project Manager: Gregg Pawlak

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE3654 - SW-7471</b>										
<b>MDL Check (BGE3654-MRL1)</b>										
Mercury	0.0107	J	0.0196	mg/kg	0.00979		109			
Prepared & Analyzed: 6/7/2023										
<b>Matrix Spike (BGE3654-MS1)</b>										
Mercury	0.123		0.00992	mg/kg	0.124	<0.00992	99.1	80-120		
Source: 23E2848-12 Prepared & Analyzed: 6/7/2023										
<b>Matrix Spike (BGE3654-MS2)</b>										
Mercury	0.119		0.00952	mg/kg	0.119	<0.00952	99.8	80-120		
Source: 23E2848-13 Prepared & Analyzed: 6/7/2023										
<b>Matrix Spike Dup (BGE3654-MSD1)</b>										
Mercury	0.117		0.00945	mg/kg	0.118	<0.00945	99.0	80-120	4.96	20
Source: 23E2848-12 Prepared & Analyzed: 6/7/2023										
<b>Matrix Spike Dup (BGE3654-MSD2)</b>										
Mercury	0.121		0.00976	mg/kg	0.122	<0.00976	99.6	80-120	2.21	20
Source: 23E2848-13 Prepared & Analyzed: 6/7/2023										
<b>Batch: BGE3655 - SW-7471</b>										
<b>MDL Check (BGE3655-MRL1)</b>										
Mercury	0.00988	J	0.0200	mg/kg	0.00998		99.0			
Prepared & Analyzed: 6/8/2023										
<b>Matrix Spike (BGE3655-MS1)</b>										
Mercury	0.121		0.00960	mg/kg	0.120	<0.00960	100	80-120		
Source: 23E2848-22 Prepared & Analyzed: 6/8/2023										
<b>Matrix Spike (BGE3655-MS2)</b>										
Mercury	0.114		0.00930	mg/kg	0.116	<0.00930	97.8	80-120		
Source: 23E2848-23 Prepared & Analyzed: 6/8/2023										
<b>Matrix Spike Dup (BGE3655-MSD1)</b>										
Mercury	0.126		0.00976	mg/kg	0.122	<0.00976	103	80-120	4.54	20
Source: 23E2848-22 Prepared & Analyzed: 6/8/2023										



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**Quality Control  
(Continued)**

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE3655 - SW-7471 (Continued)**

**Matrix Spike Dup (BGE3655-MSD2)**

**Source: 23E2848-23**

Prepared & Analyzed: 6/8/2023

Mercury	0.124		0.0100	mg/kg	0.125	<0.0100	99.2	80-120	8.69	20
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**Batch: BGF0506 - EPA 200.3**

**Blank (BGF0506-BLK1)**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	<0.0505	U	0.0505	mg/kg						
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**LCS (BGF0506-BS1)**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	1.79	J1	0.0467	mg/kg	4.67		38.4	85-115		
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**Duplicate (BGF0506-DUP1)**

**Source: 23E2848-01RE1**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	0.0162		0.0100	mg/kg		0.0167			2.92	20
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**Duplicate (BGF0506-DUP2)**

**Source: 23E2848-11RE1**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	0.0151		0.00996	mg/kg		0.0155			2.91	20
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**MDL Check (BGF0506-MRL1)**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	0.00216	J	0.0490	mg/kg	0.00245		88.0			
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**Matrix Spike (BGF0506-MS1)**

**Source: 23E2848-01RE1**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	0.554	J1	0.00996	mg/kg	0.996	0.0167	53.9	75-125		
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**Matrix Spike (BGF0506-MS2)**

**Source: 23E2848-11RE1**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	0.379	J1	0.00977	mg/kg	0.977	0.0155	37.2	75-125		
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**Batch: BGF0507 - EPA 200.3**

**Blank (BGF0507-BLK1)**

Prepared: 6/5/2023 Analyzed: 6/9/2023

Silver	<0.0500	U	0.0500	mg/kg						
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**Quality Control**  
**(Continued)**

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGF0507 - EPA 200.3 (Continued)**

<b>LCS (BGF0507-BS1)</b>										
Silver	2.22	J1	0.0505	mg/kg	5.05		43.9	85-115		
Prepared: 6/5/2023 Analyzed: 6/9/2023										
<b>Duplicate (BGF0507-DUP1) Source: 23E2848-21RE1</b>										
Silver	0.0152		0.00962	mg/kg		0.0133			13.4	20
Prepared: 6/5/2023 Analyzed: 6/9/2023										
<b>Duplicate (BGF0507-DUP2) Source: 23E2848-32RE1</b>										
Silver	0.0147		0.00996	mg/kg		0.0141			3.84	20
Prepared: 6/5/2023 Analyzed: 6/9/2023										
<b>MDL Check (BGF0507-MRL1)</b>										
Silver	0.00263	J	0.0505	mg/kg	0.00253		104			
Prepared: 6/5/2023 Analyzed: 6/9/2023										
<b>Matrix Spike (BGF0507-MS1) Source: 23E2848-21RE1</b>										
Silver	0.816		0.0100	mg/kg	1.00	0.0133	80.3	75-125		
Prepared: 6/5/2023 Analyzed: 6/9/2023										
<b>Matrix Spike (BGF0507-MS2) Source: 23E2848-32RE1</b>										
Silver	0.563	J1	0.00992	mg/kg	0.992	0.0141	55.3	75-125		
Prepared: 6/5/2023 Analyzed: 6/9/2023										

**Batch: SGF0026 - BGE2506**

<b>Interference Check A (SGF0026-IFA1)</b>										
Prepared & Analyzed: 6/2/2023										
Antimony	0.149			ug/L					70-130	
Arsenic	0.126			ug/L					70-130	
Cadmium	0.384			ug/L					70-130	
Chromium	3.42			ug/L					70-130	
Copper	0.164			ug/L					70-130	
Lead	0.0720			ug/L					70-130	
Nickel	0.595			ug/L					70-130	
Selenium	0.195			ug/L					70-130	
Thallium	0.00800			ug/L					70-130	



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**Quality Control**  
**(Continued)**

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: SGF0026 - BGE2506 (Continued)**

**Interference Check B (SGF0026-IFB1)**

Prepared & Analyzed: 6/2/2023

Antimony	96.9			ug/L	100		96.9	70-130		
Arsenic	49.6			ug/L	50.0		99.2	70-130		
Cadmium	94.8			ug/L	100		94.8	70-130		
Chromium	287			ug/L	300		95.8	70-130		
Copper	89.9			ug/L	100		89.9	70-130		
Lead	45.5			ug/L	50.0		91.0	70-130		
Nickel	89.7			ug/L	100		89.7	70-130		
Selenium	198			ug/L	200		99.1	70-130		
Thallium	46.5			ug/L	50.0		93.0	70-130		

**Batch: SGF0034 - BGE2506**

**Interference Check A (SGF0034-IFA1)**

Prepared & Analyzed: 6/2/2023

Antimony	0.139			ug/L				70-130		
Arsenic	0.106			ug/L				70-130		
Chromium	3.26			ug/L				70-130		
Copper	0.117			ug/L				70-130		
Lead	0.0640			ug/L				70-130		
Nickel	0.574			ug/L				70-130		

**Interference Check B (SGF0034-IFB1)**

Prepared & Analyzed: 6/2/2023

Antimony	94.4			ug/L	100		94.4	70-130		
Arsenic	49.5			ug/L	50.0		99.0	70-130		
Chromium	287			ug/L	300		95.6	70-130		
Copper	86.8			ug/L	100		86.8	70-130		
Lead	46.6			ug/L	50.0		93.1	70-130		
Nickel	88.0			ug/L	100		88.0	70-130		

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**Reported:**  
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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: SGF0074 - BGE2507**

**Interference Check A (SGF0074-IFA1)**

Prepared & Analyzed: 6/6/2023

Antimony	0.215			ug/L				70-130		
Arsenic	0.125			ug/L				70-130		
Cadmium	0.410			ug/L				70-130		
Chromium	3.67			ug/L				70-130		
Copper	0.296			ug/L				70-130		
Lead	0.0900			ug/L				70-130		
Nickel	0.644			ug/L				70-130		
Selenium	0.186			ug/L				70-130		
Thallium	0.0320			ug/L				70-130		
Zinc	0.144			ug/L				70-130		

**Interference Check B (SGF0074-IFB1)**

Prepared & Analyzed: 6/6/2023

Antimony	104			ug/L	100	104	104	70-130		
Arsenic	52.0			ug/L	50.0	104	104	70-130		
Cadmium	99.9			ug/L	100	99.9	99.9	70-130		
Chromium	295			ug/L	300	98.3	98.3	70-130		
Copper	98.9			ug/L	100	98.9	98.9	70-130		
Lead	45.0			ug/L	50.0	89.9	89.9	70-130		
Nickel	92.5			ug/L	100	92.5	92.5	70-130		
Selenium	213			ug/L	200	106	106	70-130		
Thallium	48.2			ug/L	50.0	96.4	96.4	70-130		
Zinc	192			ug/L	200	96.2	96.2	70-130		

**Batch: SGF0091 - BGE2507**

**Interference Check A (SGF0091-IFA1)**

Prepared & Analyzed: 6/7/2023

Antimony	0.159			ug/L				70-130		
Arsenic	0.103			ug/L				70-130		
Beryllium	0.00200			ug/L				70-130		
Cadmium	0.367			ug/L				70-130		
Chromium	3.29			ug/L				70-130		
Copper	0.144			ug/L				70-130		
Lead	0.0700			ug/L				70-130		
Nickel	0.582			ug/L				70-130		
Selenium	0.249			ug/L				70-130		
Thallium	0.0160			ug/L				70-130		
Zinc	1.26			ug/L				70-130		

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**Quality Control**  
(Continued)

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: SGF0091 - BGE2507 (Continued)**

**Interference Check B (SGF0091-IFB1)**

Prepared & Analyzed: 6/7/2023

Antimony	103			ug/L	100		103	70-130		
Arsenic	52.0			ug/L	50.0		104	70-130		
Beryllium	18.5			ug/L	20.0		92.6	70-130		
Cadmium	98.9			ug/L	100		98.9	70-130		
Chromium	295			ug/L	300		98.4	70-130		
Copper	96.1			ug/L	100		96.1	70-130		
Lead	46.1			ug/L	50.0		92.2	70-130		
Nickel	93.3			ug/L	100		93.3	70-130		
Selenium	213			ug/L	200		107	70-130		
Thallium	46.8			ug/L	50.0		93.5	70-130		
Zinc	193			ug/L	200		96.3	70-130		

**Batch: SGF0122 - BGE2506**

**Interference Check A (SGF0122-IFA1)**

Prepared & Analyzed: 6/8/2023

Arsenic	0.0990			ug/L				70-130		
Beryllium	0.00800			ug/L				70-130		
Chromium	3.28			ug/L				70-130		
Copper	0.338			ug/L				70-130		
Nickel	0.573			ug/L				70-130		
Selenium	0.185			ug/L				70-130		
Zinc	0.665			ug/L				70-130		

**Interference Check B (SGF0122-IFB1)**

Prepared & Analyzed: 6/8/2023

Arsenic	51.2			ug/L	50.0		102	70-130		
Beryllium	18.1			ug/L	20.0		90.6	70-130		
Chromium	286			ug/L	300		95.3	70-130		
Copper	92.8			ug/L	100		92.8	70-130		
Nickel	90.9			ug/L	100		90.9	70-130		
Selenium	208			ug/L	200		104	70-130		
Zinc	189			ug/L	200		94.7	70-130		



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**Quality Control  
(Continued)**

**Metals, Total (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: SGF0142 - BGF0506</b>										
<b>Interference Check A (SGF0142-IFA1)</b>										
Silver	0.00700			ug/L		Prepared & Analyzed: 6/9/2023		70-130		
<b>Interference Check B (SGF0142-IFB1)</b>										
Silver	45.6			ug/L	50.0	Prepared & Analyzed: 6/9/2023	91.3	70-130		
<b>Batch: SGF0149 - BGF0506</b>										
<b>Interference Check A (SGF0149-IFA1)</b>										
Silver	0.00800			ug/L		Prepared & Analyzed: 6/9/2023		70-130		
<b>Interference Check B (SGF0149-IFB1)</b>										
Silver	46.5			ug/L	50.0	Prepared & Analyzed: 6/9/2023	93.0	70-130		
<b>Batch: SGF0246 - BGE2506</b>										
<b>Interference Check A (SGF0246-IFA1)</b>										
Arsenic	0.0830			ug/L		Prepared & Analyzed: 6/15/2023		70-130		
<b>Interference Check B (SGF0246-IFB1)</b>										
Arsenic	52.1			ug/L	50.0	Prepared & Analyzed: 6/15/2023	104	70-130		



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**Quality Control  
(Continued)**

**General Chemistry**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE2233 - Percent Solids</b>										
<b>Blank (BGE2233-BLK1)</b>										
% Solids	<0.100	U	0.100	%						Prepared: 5/12/2023 Analyzed: 5/15/2023
<b>Duplicate (BGE2233-DUP1)</b>										
			<b>Source: 23E2848-01</b>		Prepared: 5/12/2023 Analyzed: 5/15/2023					
% Solids	10.4		0.100	%		10.6			1.47	10
<b>Duplicate (BGE2233-DUP2)</b>										
			<b>Source: 23E2848-36</b>		Prepared: 5/12/2023 Analyzed: 5/15/2023					
% Solids	14.0		0.100	%		13.9			0.908	10
<b>Reference (BGE2233-SRM1)</b>										
% Solids	0.369		0.100	%	0.350		105	78.9-118		
<b>Batch: BGE2234 - Percent Solids</b>										
<b>Blank (BGE2234-BLK1)</b>										
% Solids	<0.100	U	0.100	%						Prepared: 5/12/2023 Analyzed: 5/15/2023
<b>Duplicate (BGE2234-DUP1)</b>										
			<b>Source: 23E2848-03</b>		Prepared: 5/12/2023 Analyzed: 5/15/2023					
% Solids	9.17		0.100	%		9.19			0.209	10
<b>Duplicate (BGE2234-DUP2)</b>										
			<b>Source: 23E2848-10</b>		Prepared: 5/12/2023 Analyzed: 5/15/2023					
% Solids	9.70		0.100	%		9.80			1.07	10
<b>Reference (BGE2234-SRM1)</b>										
% Solids	0.377		0.100	%	0.350		108	78.9-118		



Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

### Sample Condition Checklist

**Work Order: 23E2848**

**Check Points**

- No Custody Seals
- Yes Containers Intact
- Yes COC/Labels Agree
- Yes Received On Ice
- Yes Appropriate Containers
- Yes Appropriate Sample Volume
- No Coolers Intact
- Yes Samples Accepted

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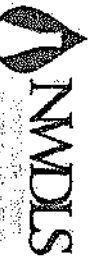
Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
06/16/2023 11:04

## Term and Qualifier Definitions

Item	Definition
A	Detection limit elevated due to abundance of non-target analyte.
B	Analyte was found in the associated method blank.
J	Estimated value - The reported value is between the detection limit and reporting limit.
J1	Estimated value - The reported value is outside the established quality control criteria for accuracy and/or precision.
S	The surrogate recovery was outside the established laboratory recovery limit.
U	Non-detected compound.
V	Analyte was detected in both sample and method blank.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated
*	A = Accredited, N = Not Accredited or Accreditation not available
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
MDL	Method Detection Limit - The minimum concentration of a substance (or analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. Based on standard deviation of replicate spiked samples take through all steps of the analytical procedure following 40 CFR Part 136 Appendix B.
SDL	Sample Detection Limit - The minimum concentration of a substance (analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The SDL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MDL = SDL.
MRL	Method Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The MRL is at or above the lowest calibration standard.
LRL	Laboratory Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The LRL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MRL = LRL.





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 TCEQ T104704238-23-39

**23E2848**

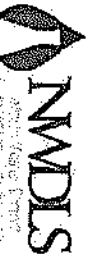
Terracon\_Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM

Schedule Comments:

Project Comments:

Sample ID	Collection Point	Date/Time Begin	Date/Time Sampled	Sample Type	Container	Analysis/Preservation	Field Results
23E2848-01	MM-CDP-06-1		4-1-23 11:00	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20c <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20c <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C	
23E2848-02	MM-CDP-06-2		4-1-23 11:00	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20c <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20c <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C	



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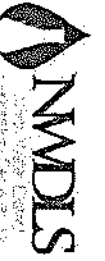
TCEQ T104704238-23-39

**23E2848**

(Continued)

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 Phone: (713) 690-8889

Project Name : PCCA CDP TISSUE CHEM		Schedule Comments:			
Project Comments:					
23E2848-03	MM-CDP-06-3	4-1-23 1100	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.1 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.1 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C
23E2848-04	MM-CDP-06-4	4-1-23 1100	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.1 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.1 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C



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**23E2848**

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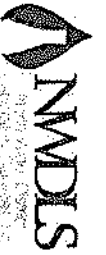
Terracon\_Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM

Schedule Comments:

Project Comments:

23E2848-05	MM-CDP-06-5		T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20 <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.4 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C	
23E2848-06	MM-CDP-07-1	4-1-23 1.05	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20i <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.4 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	



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**23E2848**

(Continued)

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Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-07	MM-CDP-07-2		4-1-23 1/9/0	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200; <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	
23E2848-08	MM-CDP-07-3		4-1-23 1/9/0	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200; <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	



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**23E2848**

(Continued)

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Project Name : PCCA GDP TISSUE CHEM  
 Project Comments :

Schedule Comments:

23E2848-09	MM-CDP-07-4		4-1-23 1103	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200i <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organolins-TX10014°C TS-2540 G <-20°C	
23E2848-10	MM-CDP-07-5		4-1-23 1103	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200i <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organolins-TX10014°C TS-2540 G <-20°C	



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**23E2848**

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 Phone: (713) 690-8989

Project Name: PCCA CDP TISSUE CHEM  
 Project Comments:

MM-REF-1	MM-REF-2	T	A	Schedule Comments:
23E2848-11	MM-REF-1	Composite	Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C
23E2848-12	MM-REF-2	Composite	Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C



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**23E2848**

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**Project Name :** PCCA CDP TISSUE CHEM  
**Project Comments:**

**Schedule Comments:**

23E2848-13	MM-REF-3		T Composite	A Glass 250mL w/ Teflon-lined Lid		
23E2848-14	MM-REF-4		T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS ; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200; <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	
					4-1-23 1100	



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**23E2848**

(Continued)

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Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-15	MM-REF-5		4-1-23 1100	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	
23E2848-16	MM-CDP-PRETEST-1		4-1-23 1100	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	





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Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-17	MM-CDP-PRETEST-2		4-1-23 1.50	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20K <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	
23E2848-18	MM-CDP-PRETEST-3		4-1-23 1.50	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20K <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	

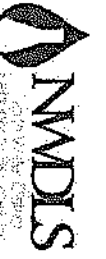


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 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM		Project Comments:		Schedule Comments:	
23E2848-19	NV-CDP-06-1				
		U-1-23	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2 <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200: <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C
23E2848-20	NV-CDP-06-2				
		U-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200: <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C



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**23E2848**

(Continued)

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Project Name : PCCA CDP TISSUE CHEM

Schedule Comments:

Project Comments:

23E2848-21	NV-CDP-06-3		T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C	
23E2848-22	NV-CDP-06-4	4-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS : <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C TS-2540 G <-20°C	



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Project Name : PCCA CDP TISSUE CHEM		Schedule Comments:			
Project Comments:					
23E2848-23	NV-CDP-06-5	4-1-23 1303	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX 10014°C TS-2540 G <-20°C
23E2848-24	NV-CDP-07-1	4-1-23 1303	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX 10014°C TS-2540 G <-20°C



# CHAIN OF CUSTODY RECORD

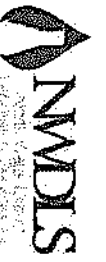
North Water District Laboratory Services  
 130 S. Trade Center Pkwy, Conroe TX 77385  
 (936) 321-6060 - lab@nwdls.com  
 TCEQ T104704238-23-39

Terracore Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-25	NV-CDP-07-2	4-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2 <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	
23E2848-26	NV-CDP-07-3	4-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2 <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200: <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	



# CHAIN OF CUSTODY RECORD

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TOEQ T104704238-23-39

Terracon, Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM		Schedule Comments:				
Project Comments:						
23E2848-27	NV-CDP-07-4	4-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200I <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	
23E2848-28	NV-CDP-07-5	4-1-23 1300	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2I <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200I <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	



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**23E2848**

(Continued)

Terracon\_Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-29	NV-REF-1		4-1-23 1329	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20f <-20°C Beryllium KED ICPMS 2 <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20f <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.8 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	
23E2848-30	NV-REF-2		4-1-23 1393	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20f <-20°C Beryllium KED ICPMS 2 <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 20f <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.8 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C <-20°C TS-2540 G <-20°C	



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**23E2848**

(Continued)

Tetracon\_Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name: PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-31	NV-REF-3		4-1-23 1300	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organohals-TX10014°C TS-2540 G <-20°C	
23E2848-32	NV-REF-4		4-1-23 1300	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS: <-20°C Copper KED ICPMS 200 <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.8 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organohals-TX10014°C TS-2540 G <-20°C	





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**23E2848**

(Continued)

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 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM  
 Project Comments:

Schedule Comments:

23E2848-33	NV-REF-5		4-1-23 1303	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS ; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	
23E2848-34	NV-CDP-PRETEST-1		4-1-23 1303	T Composite	A Glass 250mL w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS ; <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.i <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.f <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C	



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**23E2848**

(Continued)

Terracon\_Houston  
 Gregg Pawlak  
 11555 Clay Road  
 Houston, TX 77043  
 Phone: (713) 690-8989

Project Name : PCCA CDP TISSUE CHEM		Schedule Comments:			
Project Comments:					
23E2848-35	NV-CDP-PRETEST-2	4-1-23 1333	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.1 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.1 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C
23E2848-36	NV-CDP-PRETEST-3	4-1-23 1333	T Composite	A Glass 250ml w/ Teflon-lined Lid	Antimony KED ICPMS 2 <-20°C Arsenic KED ICPMS 20C <-20°C Beryllium KED ICPMS 2i <-20°C Cadmium KED ICPMS 2 <-20°C Chromium KED ICPMS 1 <-20°C Copper KED ICPMS 20C <-20°C Hg-7471 <-20°C Lead KED ICPMS 200.8 <-20°C Nickel KED ICPMS 200.1 <-20°C Selenium KED ICPMS 2 <-20°C Silver KED ICPMS 200.1 <-20°C Thallium KED ICPMS 20 <-20°C Zinc KED ICPMS 200.8 <-20°C SVOA-8270 <-20°C TPH-1005 <-20°C Sub_Organotins-TX10014°C TS-2540 G <-20°C



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**23E2848**

(Continued)

Terracon_Houston Gregg Pawlak 11555 Clay Road Houston, TX 77043 Phone: (713) 690-8989	Project Name : PCCA CDP TISSUE CHEM Project Comments:
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Field Remarks:	Preservation: (Circle and Write ID)	H2SO4	HN03	NaOH	Other:
Sampler (Signature) <i>Shirley</i>	Relinquished By: (Signature) <i>Shirley</i>	Date/Time 5/10/23 15:00	Received By: (Signature)	Date/Time	Date/Time
Print Name Theron King	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time	Date/Time
Affiliation TDC Lab	Relinquished To Lab By: (Signature)	Date/Time	Received for Laboratory By: (Signature)	Date/Time	Date/Time
Custody Seal : Yes / No	COC Labels Agree: Yes / No	Appropriate Volume: Yes / No	Received on Ice: Yes / No	Temperature: _____ °C	
Container Intact : Yes / No	Appropriate Containers: Yes / No	Coders Intact: Yes / No	Samples Accepted: Yes / No	Thermometer ID: _____	



July 24, 2023

## LAB REPORT

Gregg Pawlak  
Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Report ID: 20230724105056MM

RE: PCCA CDP TISSUE CHEM

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from our quality system will be noted in the case narrative. All analyses performed by North Water District Laboratory Services, Inc. unless noted.

For questions regarding this report, contact Monica Martin at 936-321-6060.

Sincerely,

Monica O. Martin  
Chief Administrative Officer



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/24/2023 10:50
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### Work Order Case Narrative

A total of 36 samples were collected on:

<u>Laboratory ID</u>	<u>Sample Name</u>	<u>Sample Date</u>
23E2848-01	MM-CDP-06-1	04/01/2023 11:00
23E2848-02	MM-CDP-06-2	04/01/2023 11:00
23E2848-03	MM-CDP-06-3	04/01/2023 11:00
23E2848-04	MM-CDP-06-4	04/01/2023 11:00
23E2848-05	MM-CDP-06-5	04/01/2023 11:00
23E2848-06	MM-CDP-07-1	04/01/2023 11:00
23E2848-07	MM-CDP-07-2	04/01/2023 11:00
23E2848-08	MM-CDP-07-3	04/01/2023 11:00
23E2848-09	MM-CDP-07-4	04/01/2023 11:00
23E2848-10	MM-CDP-07-5	04/01/2023 11:00
23E2848-11	MM-REF-1 **	04/01/2023 11:00
23E2848-12	MM-REF-2 **	04/01/2023 11:00
23E2848-13	MM-REF-3 **	04/01/2023 11:00
23E2848-14	MM-REF-4 **	04/01/2023 11:00
23E2848-15	MM-REF-5 **	04/01/2023 11:00
23E2848-16	MM-CDP-PRETEST-1 **	04/01/2023 11:00
23E2848-17	MM-CDP-PRETEST-2 **	04/01/2023 11:00
23E2848-18	MM-CDP-PRETEST-3 **	04/01/2023 11:00
23E2848-19	NV-CDP-06-1	04/01/2023 13:00
23E2848-20	NV-CDP-06-2	04/01/2023 13:00
23E2848-21	NV-CDP-06-3	04/01/2023 13:00
23E2848-22	NV-CDP-06-4	04/01/2023 13:00
23E2848-23	NV-CDP-06-5	04/01/2023 13:00
23E2848-24	NV-CDP-07-1	04/01/2023 13:00
23E2848-25	NV-CDP-07-2	04/01/2023 13:00
23E2848-26	NV-CDP-07-3	04/01/2023 13:00
23E2848-27	NV-CDP-07-4	04/01/2023 13:00
23E2848-28	NV-CDP-07-5	04/01/2023 13:00
23E2848-29	NV-REF-1 **	04/01/2023 13:00
23E2848-30	NV-REF-2 **	04/01/2023 13:00
23E2848-31	NV-REF-3 **	04/01/2023 13:00
23E2848-32	NV-REF-4 **	04/01/2023 13:00
23E2848-33	NV-REF-5 **	04/01/2023 13:00
23E2848-34	NV-CDP-PRETEST-1 **	04/01/2023 13:00
23E2848-35	NV-CDP-PRETEST-2 **	04/01/2023 13:00
23E2848-36	NV-CDP-PRETEST-3 **	04/01/2023 13:00

Samples were received and accepted at NWDLS on 05/10/2023 15:00. Samples were held in freezer storage until digestion and/or extraction began for all tests, including subcontracted tests. Any receiving discrepancies are recorded and stored in NWDLS' database. The samples received a Work Order of 23E2848. The lab sample IDs, client sample IDs, and dates of collection can be found at the top of each result page.

NWDLS provided their lowest detection limit for all requested analyses. Note that detection and reporting limits are adjusted to account for sample specific parameters.

Any QC that did not meet the laboratory specified control limits was flagged and reported with qualifiers. For additional



Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

information, please refer to the included quality control data pages.

\*\* The bioaccumulation study contained samples from both CDP and Harbor Island . The reference and pretest samples were shared for both projects.



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/24/2023 10:50
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### Sample Results

Client Sample ID: MM-REF-1      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-11      Date Collected: 04/01/2023 11:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
--------	---------	---	----------	-------	----	-----	-----	-------	----------	---------

#### Semivolatile Organic Compounds by GCMS

SW-8270	2,4-Dichlorophenol	A	<4.63U	ug/kg	1	4.63	4.63	BGE4145	06/01/2023 07:56	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Acenaphthene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Acenaphthylene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Diethyl phthalate	A	5.32V	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Di-n-butyl phthalate	A	6.50V	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Fluorene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Naphthalene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Phenanthrene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 07:56	KRB
SW-8270	Phenol, Total	A	59.7V	ug/kg	1	4.63	4.63	BGE4145	06/01/2023 07:56	KRB
<hr/>										
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		25.7% S	60-140					06/01/2023 07:56	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		63.8%	60-140					06/01/2023 07:56	
SW-8270	Surrogate: 2-Fluorophenol-surr		74.8%	60-140					06/01/2023 07:56	
SW-8270	Surrogate: Nitrobenzene-d5-surr		87.0%	60-140					06/01/2023 07:56	
SW-8270	Surrogate: Phenol-d5-surr		53.7% S	60-140					06/01/2023 07:56	
SW-8270	Surrogate: p-Terphenyl-d14-surr		47.6% S	60-140					06/01/2023 07:56	

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11555 Clay Road  
Houston, TX 77043

Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

**Sample Results**  
(Continued)

Client Sample ID: MM-REF-1  
Lab Sample ID: 23E2848-11RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
--------	---------	---	----------	-------	----	-----	-----	-------	----------	---------

**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.63U	ug/kg	1	4.63	4.63	BGE4145	06/05/2023 18:43	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	6.14V	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Chrysene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Pyrene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 18:43	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		29.8% S	60-140					06/05/2023 18:43	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		68.9%	60-140					06/05/2023 18:43	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		85.3%	60-140					06/05/2023 18:43	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		100%	60-140					06/05/2023 18:43	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		90.0%	60-140					06/05/2023 18:43	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		77.7%	60-140					06/05/2023 18:43	



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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-2	Sample Matrix: Tissue
Lab Sample ID: 23E2848-12	Date Collected: 04/01/2023 11:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.60U	ug/kg	1	4.60	4.60	BGE4145	06/01/2023 08:30	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Acenaphthene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Acenaphthylene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Anthracene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Diethyl phthalate	A	5.04V	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Di-n-butyl phthalate	A	6.47V	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Fluorene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Naphthalene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Phenanthrene	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/01/2023 08:30	KRB
SW-8270	Phenol, Total	A	57.3V	ug/kg	1	4.60	4.60	BGE4145	06/01/2023 08:30	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		22.2% S	60-140					06/01/2023 08:30	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		56.3% S	60-140					06/01/2023 08:30	
SW-8270	Surrogate: 2-Fluorophenol-surr		74.0%	60-140					06/01/2023 08:30	
SW-8270	Surrogate: Nitrobenzene-d5-surr		83.0%	60-140					06/01/2023 08:30	
SW-8270	Surrogate: Phenol-d5-surr		53.9% S	60-140					06/01/2023 08:30	
SW-8270	Surrogate: p-Terphenyl-d14-surr		43.1% S	60-140					06/01/2023 08:30	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-2  
Lab Sample ID: 23E2848-12RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.60U	ug/kg	1	4.60	4.60	BGE4145	06/05/2023 19:17	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.84V	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Chrysene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Pyrene (Rerun)	A	<2.30U	ug/kg	1	2.30	2.30	BGE4145	06/05/2023 19:17	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		27.3% S	60-140					06/05/2023 19:17	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		62.2%	60-140					06/05/2023 19:17	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		82.8%	60-140					06/05/2023 19:17	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		102%	60-140					06/05/2023 19:17	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		91.5%	60-140					06/05/2023 19:17	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		69.5%	60-140					06/05/2023 19:17	



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 Project Number:  
 Project Manager: Gregg Pawlak

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**Sample Results**  
 (Continued)

Client Sample ID: MM-REF-3  
 Lab Sample ID: 23E2848-13  
 Sample Alias:

Sample Matrix: Tissue  
 Date Collected: 04/01/2023 11:00  
 Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.73U	ug/kg	1	4.73	4.73	BGE4145	06/01/2023 09:05	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Acenaphthene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Acenaphthylene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Anthracene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Diethyl phthalate	A	<2.37B, U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Di-n-butyl phthalate	A	4.62V	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Fluorene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Naphthalene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Phenanthrene	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/01/2023 09:05	KRB
SW-8270	Phenol, Total	A	70.2V	ug/kg	1	4.73	4.73	BGE4145	06/01/2023 09:05	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		13.2% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		52.8% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: 2-Fluorophenol-surr		70.2%	60-140					06/01/2023 09:05	
SW-8270	Surrogate: Nitrobenzene-d5-surr		84.9%	60-140					06/01/2023 09:05	
SW-8270	Surrogate: Phenol-d5-surr		57.9% S	60-140					06/01/2023 09:05	
SW-8270	Surrogate: p-Terphenyl-d14-surr		37.9% S	60-140					06/01/2023 09:05	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-3  
Lab Sample ID: 23E2848-13RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.73U	ug/kg	1	4.73	4.73	BGE4145	06/05/2023 19:52	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Bis(2-ethylhexyl) phthalate (Rerun)	A	5.97V	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Chrysene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Pyrene (Rerun)	A	<2.37U	ug/kg	1	2.37	2.37	BGE4145	06/05/2023 19:52	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		14.4% S	60-140					06/05/2023 19:52	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		53.6% S	60-140					06/05/2023 19:52	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		77.9%	60-140					06/05/2023 19:52	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		105%	60-140					06/05/2023 19:52	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		92.0%	60-140					06/05/2023 19:52	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		59.9% S	60-140					06/05/2023 19:52	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-4  
Lab Sample ID: 23E2848-14  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.77U	ug/kg	1	4.77	4.77	BGE4145	06/01/2023 09:39	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Acenaphthene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Acenaphthylene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Anthracene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Diethyl phthalate	A	<2.39B, U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Di-n-butyl phthalate	A	5.23V	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Fluorene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Naphthalene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Phenanthrene	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/01/2023 09:39	KRB
SW-8270	Phenol, Total	A	61.0V	ug/kg	1	4.77	4.77	BGE4145	06/01/2023 09:39	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		15.5% S	60-140					06/01/2023 09:39	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		57.1% S	60-140					06/01/2023 09:39	
SW-8270	Surrogate: 2-Fluorophenol-surr		69.4%	60-140					06/01/2023 09:39	
SW-8270	Surrogate: Nitrobenzene-d5-surr		91.4%	60-140					06/01/2023 09:39	
SW-8270	Surrogate: Phenol-d5-surr		52.3% S	60-140					06/01/2023 09:39	
SW-8270	Surrogate: p-Terphenyl-d14-surr		47.9% S	60-140					06/01/2023 09:39	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-4  
Lab Sample ID: 23E2848-14RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.77U	ug/kg	1	4.77	4.77	BGE4145	06/05/2023 20:26	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Bis(2-ethylhexyl) phthalate (Rerun)	A	8.47V	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Chrysene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Pyrene (Rerun)	A	<2.39U	ug/kg	1	2.39	2.39	BGE4145	06/05/2023 20:26	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		16.4% S	60-140					06/05/2023 20:26	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		61.4%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		87.3%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		106%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		92.9%	60-140					06/05/2023 20:26	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		70.2%	60-140					06/05/2023 20:26	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-5  
Lab Sample ID: 23E2848-15  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.75U	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 10:14	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Acenaphthene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Acenaphthylene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Diethyl phthalate	A	<2.38B, U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Di-n-butyl phthalate	A	5.01V	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Fluorene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Naphthalene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Phenanthrene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 10:14	KRB
SW-8270	Phenol, Total	A	70.4V	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 10:14	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		17.4% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.2% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: 2-Fluorophenol-surr		66.8%	60-140					06/01/2023 10:14	
SW-8270	Surrogate: Nitrobenzene-d5-surr		88.1%	60-140					06/01/2023 10:14	
SW-8270	Surrogate: Phenol-d5-surr		57.0% S	60-140					06/01/2023 10:14	
SW-8270	Surrogate: p-Terphenyl-d14-surr		40.2% S	60-140					06/01/2023 10:14	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-REF-5  
Lab Sample ID: 23E2848-15RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.75U	ug/kg	1	4.75	4.75	BGE4145	06/05/2023 21:01	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	10.0V	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Chrysene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Pyrene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/05/2023 21:01	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		18.3% S	60-140					06/05/2023 21:01	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		50.8% S	60-140					06/05/2023 21:01	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		79.8%	60-140					06/05/2023 21:01	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		98.5%	60-140					06/05/2023 21:01	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		94.4%	60-140					06/05/2023 21:01	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		65.0%	60-140					06/05/2023 21:01	



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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-1  
Lab Sample ID: 23E2848-16  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.85U	ug/kg	1	4.85	4.85	BGE4145	06/01/2023 10:48	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Acenaphthene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Acenaphthylene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Anthracene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Diethyl phthalate	A	<2.43B, U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Di-n-butyl phthalate	A	4.79V	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Fluorene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Naphthalene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Phenanthrene	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/01/2023 10:48	KRB
SW-8270	Phenol, Total	A	69.5V	ug/kg	1	4.85	4.85	BGE4145	06/01/2023 10:48	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		12.4% S	60-140					06/01/2023 10:48	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		55.4% S	60-140					06/01/2023 10:48	
SW-8270	Surrogate: 2-Fluorophenol-surr		64.7%	60-140					06/01/2023 10:48	
SW-8270	Surrogate: Nitrobenzene-d5-surr		84.0%	60-140					06/01/2023 10:48	
SW-8270	Surrogate: Phenol-d5-surr		50.5% S	60-140					06/01/2023 10:48	
SW-8270	Surrogate: p-Terphenyl-d14-surr		49.1% S	60-140					06/01/2023 10:48	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-1  
Lab Sample ID: 23E2848-16RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.85U	ug/kg	1	4.85	4.85	BGE4145	06/05/2023 21:36	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.15V	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Chrysene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Pyrene (Rerun)	A	<2.43U	ug/kg	1	2.43	2.43	BGE4145	06/05/2023 21:36	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		13.2% S	60-140					06/05/2023 21:36	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		59.6% S	60-140					06/05/2023 21:36	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		75.3%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		99.9%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		87.3%	60-140					06/05/2023 21:36	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		73.7%	60-140					06/05/2023 21:36	

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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-2      Sample Matrix: Tissue  
Lab Sample ID: 23E2848-17      Date Collected: 04/01/2023 11:00  
Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.98U	ug/kg	1	4.98	4.98	BGE4145	06/01/2023 11:23	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Acenaphthene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Acenaphthylene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Anthracene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Diethyl phthalate	A	<2.49B, U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Di-n-butyl phthalate	A	4.66V	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Fluorene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Naphthalene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Phenanthrene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 11:23	KRB
SW-8270	Phenol, Total	A	77.1V	ug/kg	1	4.98	4.98	BGE4145	06/01/2023 11:23	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		14.2% S	60-140					06/01/2023 11:23	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		54.8% S	60-140					06/01/2023 11:23	
SW-8270	Surrogate: 2-Fluorophenol-surr		61.1%	60-140					06/01/2023 11:23	
SW-8270	Surrogate: Nitrobenzene-d5-surr		85.5%	60-140					06/01/2023 11:23	
SW-8270	Surrogate: Phenol-d5-surr		50.4% S	60-140					06/01/2023 11:23	
SW-8270	Surrogate: p-Terphenyl-d14-surr		43.6% S	60-140					06/01/2023 11:23	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-2  
Lab Sample ID: 23E2848-17RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.98U	ug/kg	1	4.98	4.98	BGE4145	06/05/2023 22:45	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.98U	ug/kg	1	4.98	4.98	BGE4145	06/05/2023 22:45	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	12.0V	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Pyrene (Rerun)	A	<2.49C+, U	ug/kg	1	2.49	2.49	BGE4145	06/05/2023 22:45	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		15.7% S	60-140					06/05/2023 22:45	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		62.6%	60-140					06/05/2023 22:45	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		68.5%	60-140					06/05/2023 22:45	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		99.5%	60-140					06/05/2023 22:45	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		78.0%	60-140					06/05/2023 22:45	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		80.1%	60-140					06/05/2023 22:45	

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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-3  
Lab Sample ID: 23E2848-18  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.61U	ug/kg	1	4.61	4.61	BGE4145	06/01/2023 11:57	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Acenaphthene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Acenaphthylene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Anthracene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Diethyl phthalate	A	<2.31B, U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Di-n-butyl phthalate	A	3.82V	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Fluorene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Naphthalene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Phenanthrene	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/01/2023 11:57	KRB
SW-8270	Phenol, Total	A	63.7V	ug/kg	1	4.61	4.61	BGE4145	06/01/2023 11:57	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		27.0% S	60-140					06/01/2023 11:57	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		68.1%	60-140					06/01/2023 11:57	
SW-8270	Surrogate: 2-Fluorophenol-surr		73.9%	60-140					06/01/2023 11:57	
SW-8270	Surrogate: Nitrobenzene-d5-surr		87.8%	60-140					06/01/2023 11:57	
SW-8270	Surrogate: Phenol-d5-surr		57.9% S	60-140					06/01/2023 11:57	
SW-8270	Surrogate: p-Terphenyl-d14-surr		42.6% S	60-140					06/01/2023 11:57	

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Project Number:  
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**Sample Results**  
(Continued)

Client Sample ID: MM-CDP-PRETEST-3  
Lab Sample ID: 23E2848-18RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 11:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.61U	ug/kg	1	4.61	4.61	BGE4145	06/05/2023 23:19	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.61U	ug/kg	1	4.61	4.61	BGE4145	06/05/2023 23:19	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.45V	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.31U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Pyrene (Rerun)	A	<2.31C+, U	ug/kg	1	2.31	2.31	BGE4145	06/05/2023 23:19	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		27.7% S	60-140					06/05/2023 23:19	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		76.6%	60-140					06/05/2023 23:19	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		88.1%	60-140					06/05/2023 23:19	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		109%	60-140					06/05/2023 23:19	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		93.3%	60-140					06/05/2023 23:19	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		82.2%	60-140					06/05/2023 23:19	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-1  
Lab Sample ID: 23E2848-29  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.70U	ug/kg	1	4.70	4.70	BGE4145	06/01/2023 12:32	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Acenaphthene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Acenaphthylene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Anthracene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Diethyl phthalate	A	3.97V	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Di-n-butyl phthalate	A	5.56V	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Fluorene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Naphthalene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Phenanthrene	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/01/2023 12:32	KRB
SW-8270	Phenol, Total	A	50.7V	ug/kg	1	4.70	4.70	BGE4145	06/01/2023 12:32	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		5.72% S	60-140					06/01/2023 12:32	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		26.8% S	60-140					06/01/2023 12:32	
SW-8270	Surrogate: 2-Fluorophenol-surr		51.7% S	60-140					06/01/2023 12:32	
SW-8270	Surrogate: Nitrobenzene-d5-surr		58.0% S	60-140					06/01/2023 12:32	
SW-8270	Surrogate: Phenol-d5-surr		38.6% S	60-140					06/01/2023 12:32	
SW-8270	Surrogate: p-Terphenyl-d14-surr		26.9% S	60-140					06/01/2023 12:32	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-1  
Lab Sample ID: 23E2848-29RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.70U	ug/kg	1	4.70	4.70	BGE4145	06/05/2023 23:54	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.70U	ug/kg	1	4.70	4.70	BGE4145	06/05/2023 23:54	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	3.69V	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.35U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Pyrene (Rerun)	A	<2.35C+, U	ug/kg	1	2.35	2.35	BGE4145	06/05/2023 23:54	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		5.10% S	60-140					06/05/2023 23:54	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		30.6% S	60-140					06/05/2023 23:54	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		64.8%	60-140					06/05/2023 23:54	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		79.7%	60-140					06/05/2023 23:54	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		68.1%	60-140					06/05/2023 23:54	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		29.9% S	60-140					06/05/2023 23:54	



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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-2  
Lab Sample ID: 23E2848-30  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.75U	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 13:06	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Acenaphthene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Acenaphthylene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Anthracene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Diethyl phthalate	A	4.82V	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Di-n-butyl phthalate	A	3.25V	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Fluorene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Naphthalene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Phenanthrene	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/01/2023 13:06	KRB
SW-8270	Phenol, Total	A	52.8V	ug/kg	1	4.75	4.75	BGE4145	06/01/2023 13:06	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		20.9% S	60-140					06/01/2023 13:06	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		57.0% S	60-140					06/01/2023 13:06	
SW-8270	Surrogate: 2-Fluorophenol-surr		71.8%	60-140					06/01/2023 13:06	
SW-8270	Surrogate: Nitrobenzene-d5-surr		90.4%	60-140					06/01/2023 13:06	
SW-8270	Surrogate: Phenol-d5-surr		49.0% S	60-140					06/01/2023 13:06	
SW-8270	Surrogate: p-Terphenyl-d14-surr		24.9% S	60-140					06/01/2023 13:06	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-2  
Lab Sample ID: 23E2848-30RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.75U	ug/kg	1	4.75	4.75	BGE4145	06/06/2023 00:28	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.75U	ug/kg	1	4.75	4.75	BGE4145	06/06/2023 00:28	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	5.39V	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.38U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Pyrene (Rerun)	A	<2.38C+, U	ug/kg	1	2.38	2.38	BGE4145	06/06/2023 00:28	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		29.1% S	60-140					06/06/2023 00:28	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		60.0%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		84.7%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		99.8%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		80.7%	60-140					06/06/2023 00:28	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		54.6% S	60-140					06/06/2023 00:28	

Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA CDP TISSUE CHEM Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 07/24/2023 10:50
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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-3	Sample Matrix: Tissue
Lab Sample ID: 23E2848-31	Date Collected: 04/01/2023 13:00
Sample Alias:	Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.94U	ug/kg	1	4.94	4.94	BGE4145	06/01/2023 13:41	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Acenaphthene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Acenaphthylene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Anthracene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Diethyl phthalate	A	3.18V	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Di-n-butyl phthalate	A	4.41V	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Fluorene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Naphthalene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Phenanthrene	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/01/2023 13:41	KRB
SW-8270	Phenol, Total	A	58.3V	ug/kg	1	4.94	4.94	BGE4145	06/01/2023 13:41	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		18.3% S	60-140					06/01/2023 13:41	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		47.8% S	60-140					06/01/2023 13:41	
SW-8270	Surrogate: 2-Fluorophenol-surr		69.4%	60-140					06/01/2023 13:41	
SW-8270	Surrogate: Nitrobenzene-d5-surr		93.4%	60-140					06/01/2023 13:41	
SW-8270	Surrogate: Phenol-d5-surr		48.2% S	60-140					06/01/2023 13:41	
SW-8270	Surrogate: p-Terphenyl-d14-surr		36.0% S	60-140					06/01/2023 13:41	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-3  
Lab Sample ID: 23E2848-31RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.94U	ug/kg	1	4.94	4.94	BGE4145	06/06/2023 01:03	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.94U	ug/kg	1	4.94	4.94	BGE4145	06/06/2023 01:03	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	22.2V	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.47U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
SW-8270	Pyrene (Rerun)	A	<2.47C+, U	ug/kg	1	2.47	2.47	BGE4145	06/06/2023 01:03	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		31.5% S	60-140					06/06/2023 01:03	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		59.1% S	60-140					06/06/2023 01:03	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		81.3%	60-140					06/06/2023 01:03	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		92.7%	60-140					06/06/2023 01:03	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		92.0%	60-140					06/06/2023 01:03	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		86.2%	60-140					06/06/2023 01:03	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-4  
Lab Sample ID: 23E2848-32  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.66U	ug/kg	1	4.66	4.66	BGE4145	06/01/2023 14:15	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Acenaphthene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Acenaphthylene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Anthracene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Benzo(g,h,i)perylene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Diethyl phthalate	A	5.20V	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Di-n-butyl phthalate	A	5.34V	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Fluorene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Hexachlorocyclopentadiene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Naphthalene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Phenanthrene	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/01/2023 14:15	KRB
SW-8270	Phenol, Total	A	97.3V	ug/kg	1	4.66	4.66	BGE4145	06/01/2023 14:15	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		15.7% S	60-140					06/01/2023 14:15	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		57.1% S	60-140					06/01/2023 14:15	
SW-8270	Surrogate: 2-Fluorophenol-surr		67.0%	60-140					06/01/2023 14:15	
SW-8270	Surrogate: Nitrobenzene-d5-surr		102%	60-140					06/01/2023 14:15	
SW-8270	Surrogate: Phenol-d5-surr		64.0%	60-140					06/01/2023 14:15	
SW-8270	Surrogate: p-Terphenyl-d14-surr		23.0% S	60-140					06/01/2023 14:15	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
07/24/2023 10:50

**Sample Results**  
(Continued)

Client Sample ID: NV-REF-4  
Lab Sample ID: 23E2848-32RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)pyrene (Rerun)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.66U	ug/kg	1	4.66	4.66	BGE4145	06/06/2023 01:38	KRB
SW-8270	Benzo(a)anthracene & Chrysene (Rerun)	N	<4.66U	ug/kg	1	4.66	4.66	BGE4145	06/06/2023 01:38	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	7.96V	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.33U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Pyrene (Rerun)	A	<2.33C+, U	ug/kg	1	2.33	2.33	BGE4145	06/06/2023 01:38	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		22.6% S	60-140					06/06/2023 01:38	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		68.2%	60-140					06/06/2023 01:38	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		73.6%	60-140					06/06/2023 01:38	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		132%	60-140					06/06/2023 01:38	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		85.9%	60-140					06/06/2023 01:38	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		52.6% S	60-140					06/06/2023 01:38	

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Project Number:  
Project Manager: Gregg Pawlak

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### Sample Results (Continued)

Client Sample ID: NV-REF-5  
Lab Sample ID: 23E2848-33  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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#### Semivolatile Organic Compounds by GCMS

SW-8270	2,4-Dichlorophenol	A	<4.73U	ug/kg	1	4.73	4.73	BGE4145	06/01/2023 15:24	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Acenaphthene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Acenaphthylene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Anthracene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Diethyl phthalate	A	4.76V	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Di-n-butyl phthalate	A	4.60V	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Fluorene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Naphthalene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
SW-8270	Phenanthrene	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/01/2023 15:24	KRB
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SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		9.87% S	60-140					06/01/2023 15:24	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		54.6% S	60-140					06/01/2023 15:24	
SW-8270	Surrogate: 2-Fluorophenol-surr		74.8%	60-140					06/01/2023 15:24	
SW-8270	Surrogate: Nitrobenzene-d5-surr		129%	60-140					06/01/2023 15:24	
SW-8270	Surrogate: Phenol-d5-surr		113%	60-140					06/01/2023 15:24	
SW-8270	Surrogate: p-Terphenyl-d14-surr		27.3% S	60-140					06/01/2023 15:24	

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Project: PCCA CDP TISSUE CHEM  
Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-REF-5  
Lab Sample ID: 23E2848-33RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<4.73U	ug/kg	1	4.73	4.73	BGE4145	06/10/2023 04:07	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	<2.36B, U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Chrysene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Fluoranthene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Hexachlorocyclopentadiene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Phenol, Total (Rerun)	A	92.7V	ug/kg	1	4.73	4.73	BGE4145	06/10/2023 04:07	KRB
SW-8270	Pyrene (Rerun)	A	<2.36U	ug/kg	1	2.36	2.36	BGE4145	06/10/2023 04:07	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		15.1% S	60-140					06/10/2023 04:07	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		59.2% S	60-140					06/10/2023 04:07	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		65.9%	60-140					06/10/2023 04:07	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		110%	60-140					06/10/2023 04:07	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		91.9%	60-140					06/10/2023 04:07	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		36.2% S	60-140					06/10/2023 04:07	



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Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-1  
Lab Sample ID: 23E2848-34  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.87U	ug/kg	1	4.87	4.87	BGE4145	06/01/2023 15:59	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Acenaphthene	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Acenaphthylene	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Anthracene	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Diethyl phthalate	A	3.34V	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Di-n-butyl phthalate	A	21.6V	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Fluorene	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Naphthalene	A	15.9	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Phenanthrene	A	<2.44U	ug/kg	1	2.44	2.44	BGE4145	06/01/2023 15:59	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		23.8% S	60-140					06/01/2023 15:59	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		65.0%	60-140					06/01/2023 15:59	
SW-8270	Surrogate: 2-Fluorophenol-surr		90.5%	60-140					06/01/2023 15:59	
SW-8270	Surrogate: Nitrobenzene-d5-surr		96.6%	60-140					06/01/2023 15:59	
SW-8270	Surrogate: Phenol-d5-surr		132%	60-140					06/01/2023 15:59	
SW-8270	Surrogate: p-Terphenyl-d14-surr		10.5% S	60-140					06/01/2023 15:59	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-1  
Lab Sample ID: 23E2848-34RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.75U	ug/kg	2	9.75	9.75	BGE4145	06/10/2023 04:42	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Bis(2-ethylhexyl) phthalate (Rerun)	A	<4.87B, U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Chrysene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Fluoranthene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Hexachlorocyclopentadiene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Phenol, Total (Rerun)	A	78.1V	ug/kg	2	9.75	9.75	BGE4145	06/10/2023 04:42	KRB
SW-8270	Pyrene (Rerun)	A	<4.87U	ug/kg	2	4.87	4.87	BGE4145	06/10/2023 04:42	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		28.9% S		60-140				06/10/2023 04:42	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		68.5%		60-140				06/10/2023 04:42	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		79.6%		60-140				06/10/2023 04:42	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		111%		60-140				06/10/2023 04:42	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		94.8%		60-140				06/10/2023 04:42	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		11.9% S		60-140				06/10/2023 04:42	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-2  
Lab Sample ID: 23E2848-35  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.98U	ug/kg	1	4.98	4.98	BGE4145	06/01/2023 16:33	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Acenaphthene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Acenaphthylene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Anthracene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Diethyl phthalate	A	2.52V	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Di-n-butyl phthalate	A	13.6V	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Fluorene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Naphthalene	A	16.2	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Phenanthrene	A	<2.49U	ug/kg	1	2.49	2.49	BGE4145	06/01/2023 16:33	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		16.1% S	60-140					06/01/2023 16:33	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		58.8% S	60-140					06/01/2023 16:33	
SW-8270	Surrogate: 2-Fluorophenol-surr		70.2%	60-140					06/01/2023 16:33	
SW-8270	Surrogate: Nitrobenzene-d5-surr		90.1%	60-140					06/01/2023 16:33	
SW-8270	Surrogate: Phenol-d5-surr		112%	60-140					06/01/2023 16:33	
SW-8270	Surrogate: p-Terphenyl-d14-surr		8.78% S	60-140					06/01/2023 16:33	

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Project Number:  
Project Manager: Gregg Pawlak

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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-2  
Lab Sample ID: 23E2848-35RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.96U	ug/kg	2	9.96	9.96	BGE4145	06/10/2023 05:17	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	<4.98B, U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Chrysene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Fluoranthene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Hexachlorocyclopentadiene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Phenol, Total (Rerun)	A	109V	ug/kg	2	9.96	9.96	BGE4145	06/10/2023 05:17	KRB
SW-8270	Pyrene (Rerun)	A	<4.98U	ug/kg	2	4.98	4.98	BGE4145	06/10/2023 05:17	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		20.0% S	60-140					06/10/2023 05:17	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		74.5%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		52.5% S	60-140					06/10/2023 05:17	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		106%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		91.1%	60-140					06/10/2023 05:17	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		11.7% S	60-140					06/10/2023 05:17	



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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-3      Sample Matrix: Tissue  
 Lab Sample ID: 23E2848-36      Date Collected: 04/01/2023 13:00  
 Sample Alias:      Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	2,4-Dichlorophenol	A	<4.83U	ug/kg	1	4.83	4.83	BGE4145	06/01/2023 17:08	KRB
SW-8270	2,6-Dinitrotoluene (2,6-DNT)	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Acenaphthene	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Acenaphthylene	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Anthracene	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Diethyl phthalate	A	3.57V	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Di-n-butyl phthalate	A	3.46V	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Fluorene	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Naphthalene	A	7.33	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
SW-8270	Phenanthrene	A	<2.41U	ug/kg	1	2.41	2.41	BGE4145	06/01/2023 17:08	KRB
<hr/>										
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr		7.23% S	60-140					06/01/2023 17:08	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr		50.6% S	60-140					06/01/2023 17:08	
SW-8270	Surrogate: 2-Fluorophenol-surr		83.7%	60-140					06/01/2023 17:08	
SW-8270	Surrogate: Nitrobenzene-d5-surr		102%	60-140					06/01/2023 17:08	
SW-8270	Surrogate: Phenol-d5-surr		125%	60-140					06/01/2023 17:08	
SW-8270	Surrogate: p-Terphenyl-d14-surr		26.0% S	60-140					06/01/2023 17:08	

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**Sample Results**  
(Continued)

Client Sample ID: NV-CDP-PRETEST-3  
Lab Sample ID: 23E2848-36RE1  
Sample Alias:

Sample Matrix: Tissue  
Date Collected: 04/01/2023 13:00  
Collected by: Theran Gay

Method	Analyte	*	Result Q	Units	DF	SDL	LRL	Batch	Analyzed	Analyst
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**Semivolatile Organic Compounds by GCMS**

SW-8270	Benzo(a)anthracene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Benzo(a)pyrene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	benzo(b&k)fluoranthene (Rerun)	A	<9.65U	ug/kg	2	9.65	9.65	BGE4145	06/10/2023 05:52	KRB
SW-8270	Benzo(g,h,i)perylene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Bis(2-ethylhexyl )phthalate (Rerun)	A	45.6V	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Chrysene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Dibenzo(a,h)anthracene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Di-n-octyl phthalate (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Fluoranthene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Hexachlorocyclopentadiene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Indeno(1,2,3-cd) pyrene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Phenol, Total (Rerun)	A	89.6V	ug/kg	2	9.65	9.65	BGE4145	06/10/2023 05:52	KRB
SW-8270	Pyrene (Rerun)	A	<4.83U	ug/kg	2	4.83	4.83	BGE4145	06/10/2023 05:52	KRB
SW-8270	Surrogate: 2,4,6-Tribromophenol-surr (Rerun)		11.0% S	60-140					06/10/2023 05:52	
SW-8270	Surrogate: 2-Fluorobiphenyl-surr (Rerun)		60.6%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: 2-Fluorophenol-surr (Rerun)		57.7% S	60-140					06/10/2023 05:52	
SW-8270	Surrogate: Nitrobenzene-d5-surr (Rerun)		94.2%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: Phenol-d5-surr (Rerun)		71.1%	60-140					06/10/2023 05:52	
SW-8270	Surrogate: p-Terphenyl-d14-surr (Rerun)		37.9% S	60-140					06/10/2023 05:52	

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### Quality Control

#### Semivolatile Organic Compounds by GCMS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE4145 - SW-3570</b>										
<b>MB SV BT (BGE4145-BLK1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	3.59		2.36	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			55.7	ug/kg	75.6		73.6	60-140		
Surrogate: Nitrobenzene-d5-surr			62.4	ug/kg	75.6		82.5	60-140		
Surrogate: p-Terphenyl-d14-surr			49.2	ug/kg	75.6		65.1	60-140		
<b>Blank (BGE4145-BLK2)</b>										
Prepared: 5/25/2023 Analyzed: 6/5/2023										
Bis(2-ethylhexyl )phthalate	8.93		2.36	ug/kg						
Surrogate: 2-Fluorobiphenyl-surr			59.4	ug/kg	75.6		78.5	60-140		
Surrogate: Nitrobenzene-d5-surr			78.2	ug/kg	75.6		103	60-140		
Surrogate: p-Terphenyl-d14-surr			53.3	ug/kg	75.6		70.5	60-140		
<b>BS SV BT/IDOC1 (BGE4145-BS1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	51.4		2.48	ug/kg	79.2		64.9	60-140		
Surrogate: 2-Fluorobiphenyl-surr			52.0	ug/kg	79.2		65.7	60-140		
Surrogate: Nitrobenzene-d5-surr			54.9	ug/kg	79.2		69.3	60-140		
Surrogate: p-Terphenyl-d14-surr	S		31.2	ug/kg	79.2		39.4	60-140		
<b>BS SV BT/IDOC1 (BGE4145-BS2)</b>										
Prepared: 5/25/2023 Analyzed: 6/5/2023										
Bis(2-ethylhexyl )phthalate	84.0		2.48	ug/kg	79.2		106	60-140		
Surrogate: 2-Fluorobiphenyl-surr	S		46.3	ug/kg	79.2		58.5	60-140		
Surrogate: Nitrobenzene-d5-surr			68.3	ug/kg	79.2		86.2	60-140		
Surrogate: p-Terphenyl-d14-surr			49.1	ug/kg	79.2		62.0	60-140		
<b>BSD SV BT/IDOC2 (BGE4145-BSD1)</b>										
Prepared: 5/25/2023 Analyzed: 6/1/2023										
Di-n-butyl phthalate	51.0		2.43	ug/kg	77.8		65.6	60-140	0.651	40
Surrogate: 2-Fluorobiphenyl-surr			47.7	ug/kg	77.8		61.3	60-140		
Surrogate: Nitrobenzene-d5-surr			48.6	ug/kg	77.8		62.4	60-140		
Surrogate: p-Terphenyl-d14-surr	S		32.9	ug/kg	77.8		42.2	60-140		

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**Reported:**  
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**Quality Control**  
(Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch: BGE4145 - SW-3570 (Continued)</b>										
<b>BSD SV BT/IDOC2 (BGE4145-BSD2)</b>										
					Prepared: 5/25/2023 Analyzed: 6/5/2023					
Bis(2-ethylhexyl )phthalate	89.4		2.43	ug/kg	77.8		115	60-140	6.16	40
Surrogate: 2-Fluorobiphenyl-surr		S	43.7	ug/kg	77.8		56.2	60-140		
Surrogate: Nitrobenzene-d5-surr			67.7	ug/kg	77.8		87.0	60-140		
Surrogate: p-Terphenyl-d14-surr			51.6	ug/kg	77.8		66.3	60-140		
<b>MDL SV BT (BGE4145-MRL1)</b>										
					Prepared: 5/25/2023 Analyzed: 6/1/2023					
Di-n-butyl phthalate	4.81		2.42	ug/kg	7.74		62.2	50-150		
Surrogate: 2-Fluorobiphenyl-surr			48.4	ug/kg	77.4		62.6	60-140		
Surrogate: Nitrobenzene-d5-surr			60.8	ug/kg	77.4		78.6	60-140		
Surrogate: p-Terphenyl-d14-surr		S	34.9	ug/kg	77.4		45.0	60-140		
<b>MRL Check (BGE4145-MRL2)</b>										
					Prepared: 5/25/2023 Analyzed: 6/5/2023					
Bis(2-ethylhexyl )phthalate	13.8	J1	2.42	ug/kg	7.74		178	50-150		
Surrogate: 2-Fluorobiphenyl-surr			50.3	ug/kg	77.4		65.0	60-140		
Surrogate: Nitrobenzene-d5-surr			68.3	ug/kg	77.4		88.3	60-140		
Surrogate: p-Terphenyl-d14-surr		S	43.7	ug/kg	77.4		56.5	60-140		
<b>23E2848-11 MS (BGE4145-MS1)</b>										
					<b>Source: 23E2848-11</b>		Prepared: 5/25/2023 Analyzed: 6/1/2023			
Di-n-butyl phthalate	41.7	J1	2.24	ug/kg	71.8	6.50	49.0	60-140		
Surrogate: 2-Fluorobiphenyl-surr		S	34.4	ug/kg	71.8		47.9	60-140		
Surrogate: Nitrobenzene-d5-surr			55.7	ug/kg	71.8		77.5	60-140		
Surrogate: p-Terphenyl-d14-surr		S	23.0	ug/kg	71.8		32.0	60-140		
<b>Matrix Spike (BGE4145-MS2)</b>										
					<b>Source: 23E2848-11RE1</b>		Prepared: 5/25/2023 Analyzed: 6/5/2023			
Bis(2-ethylhexyl )phthalate	58.8		2.24	ug/kg	71.8	6.14	73.3	60-140		
Surrogate: 2-Fluorobiphenyl-surr		S	35.6	ug/kg	71.8		49.6	60-140		
Surrogate: Nitrobenzene-d5-surr			73.3	ug/kg	71.8		102	60-140		
Surrogate: p-Terphenyl-d14-surr			47.7	ug/kg	71.8		66.4	60-140		





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**Quality Control**  
 (Continued)

**Semivolatile Organic Compounds by GCMS (Continued)**

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Batch: BGE4145 - SW-3570 (Continued)**

**23E2848-11 MSD (BGE4145-MSD1)**

**Source: 23E2848-11**

Prepared: 5/25/2023 Analyzed: 6/1/2023

Di-n-butyl phthalate	45.7	J1	2.36	ug/kg	75.6	6.50	51.8	60-140	9.14	40
Surrogate: 2-Fluorobiphenyl-surr		S	32.9	ug/kg	75.6		43.5	60-140		
Surrogate: Nitrobenzene-d5-surr			59.0	ug/kg	75.6		78.0	60-140		
Surrogate: p-Terphenyl-d14-surr		S	23.4	ug/kg	75.6		30.9	60-140		

**Matrix Spike Dup (BGE4145-MSD2)**

**Source: 23E2848-11RE1**

Prepared: 5/25/2023 Analyzed: 6/5/2023

Bis(2-ethylhexyl )phthalate	67.1		2.36	ug/kg	75.6	6.14	80.6	60-140	13.2	40
Surrogate: 2-Fluorobiphenyl-surr		S	34.5	ug/kg	75.6		45.6	60-140		
Surrogate: Nitrobenzene-d5-surr			70.6	ug/kg	75.6		93.4	60-140		
Surrogate: p-Terphenyl-d14-surr			52.5	ug/kg	75.6		69.4	60-140		



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### Sample Condition Checklist

**Work Order: 23E2848**

**Check Points**

- No Custody Seals
- Yes Containers Intact
- Yes COC/Labels Agree
- Yes Received On Ice
- Yes Appropriate Containers
- Yes Appropriate Sample Volume
- No Coolers Intact
- Yes Samples Accepted

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## Term and Qualifier Definitions

Item	Definition
B	Analyte was found in the associated method blank.
C+	The associated calibration QC is higher than the established quality control criteria for accuracy - no hit in sample; data not affected and acceptable to report.
J1	Estimated value - The reported value is outside the established quality control criteria for accuracy and/or precision.
S	The surrogate recovery was outside the established laboratory recovery limit.
U	Non-detected compound.
V	Analyte was detected in both sample and method blank.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated
*	A = Accredited, N = Not Accredited or Accreditation not available
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
MDL	Method Detection Limit - The minimum concentration of a substance (or analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. Based on standard deviation of replicate spiked samples take through all steps of the analytical procedure following 40 CFR Part 136 Appendix B.
SDL	Sample Detection Limit - The minimum concentration of a substance (analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The SDL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MDL = SDL.
MRL	Method Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The MRL is at or above the lowest calibration standard.
LRL	Laboratory Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The LRL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MRL = LRL.

**APPENDIX F**  
**STATISTICAL CALCULATIONS**

**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ber-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Beryllium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0047	0.0044	0.0056	0.0069	0.0171
HI-DMMU-01	0.0121	0.0139	0.0132	0.0140	0.0093
HI-DMMU-02	0.0135	0.0128	0.0090	0.0127	0.0106
HI-DMMU-03	0.0097	0.0138	0.0113	0.0120	0.0084
HI-DMMU-04	0.0139	0.0122	0.0143	0.0191	0.0115
HI-DMMU-05	0.0117	0.0127	0.0114	0.0126	0.0109
HI-DMMU-06	0.0132	0.0155	0.0134	0.0104	0.0126
HI-DMMU-07	0.0134	0.0113	0.0112	0.0158	0.0122
HI-DMMU-08	0.0099	0.0136	0.0132	0.0171	0.0108

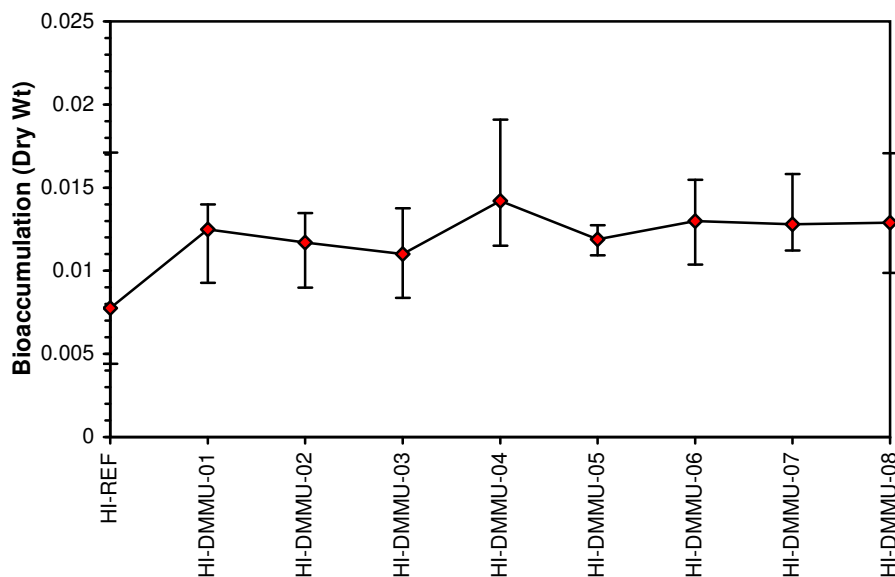
Conc-mg/Kg	Transform: Untransformed							Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%	N		
HI-REF	0.0077	0.0000	0.0077	0.0044	0.0171	68.668	5		
HI-DMMU-01	0.0125	0.0048	0.0125	0.0093	0.0140	15.614	5	20.00	16.00
HI-DMMU-02	0.0117	0.0040	0.0117	0.0090	0.0135	15.899	5	20.00	16.00
HI-DMMU-03	0.0110	0.0033	0.0110	0.0084	0.0138	18.936	5	20.00	16.00
HI-DMMU-04	0.0142	0.0065	0.0142	0.0115	0.0191	20.950	5	19.00	16.00
HI-DMMU-05	0.0119	0.0041	0.0119	0.0109	0.0127	6.547	5	20.00	16.00
HI-DMMU-06	0.0130	0.0053	0.0130	0.0104	0.0155	14.041	5	20.00	16.00
HI-DMMU-07	0.0128	0.0051	0.0128	0.0112	0.0158	14.912	5	20.00	16.00
HI-DMMU-08	0.0129	0.0052	0.0129	0.0099	0.0171	21.788	5	19.50	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.90538	0.945	1.42472	3.96147
Bartlett's Test indicates equal variances (p = 0.06)	14.8563	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ber-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Beryllium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0047	0.0044	0.0056	0.0069	0.0171
HI-DMMU-01	0.0121	0.0139	0.0132	0.0140	0.0093
HI-DMMU-02	0.0135	0.0128	0.0090	0.0127	0.0106
HI-DMMU-03	0.0097	0.0138	0.0113	0.0120	0.0084
HI-DMMU-04	0.0139	0.0122	0.0143	0.0191	0.0115
HI-DMMU-05	0.0117	0.0127	0.0114	0.0126	0.0109
HI-DMMU-06	0.0132	0.0155	0.0134	0.0104	0.0126
HI-DMMU-07	0.0134	0.0113	0.0112	0.0158	0.0122
HI-DMMU-08	0.0099	0.0136	0.0132	0.0171	0.0108

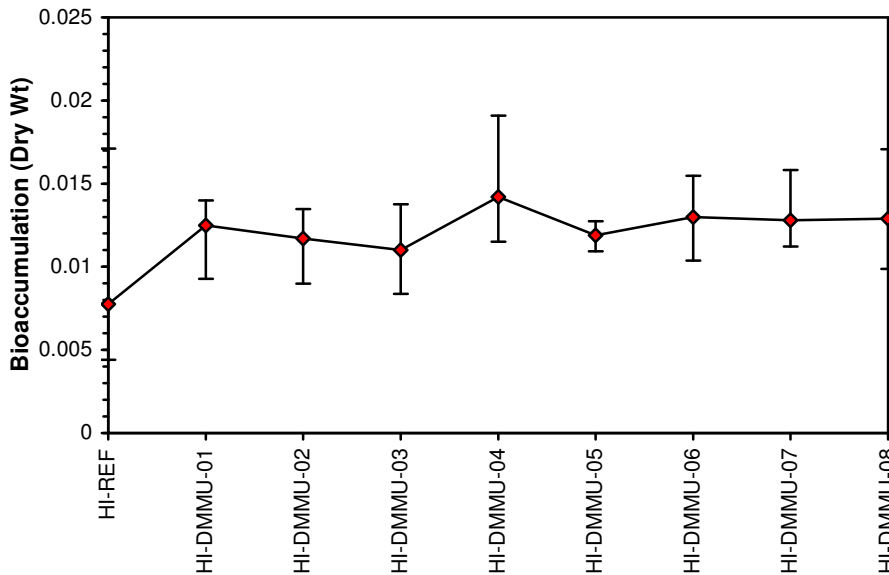
Conc-mg/Kg	Transform: Reciprocal						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.0077	0.0000	164.236	58.480	227.273	40.986	5	
HI-DMMU-01	0.0125	0.0048	81.906	71.429	107.759	18.473	5	20.00
HI-DMMU-02	0.0117	0.0040	87.253	74.074	110.988	17.598	5	20.00
HI-DMMU-03	0.0110	0.0033	93.365	72.464	118.906	19.448	5	20.00
HI-DMMU-04	0.0142	0.0065	72.630	52.356	86.957	18.359	5	19.00
HI-DMMU-05	0.0119	0.0041	84.608	78.740	91.743	6.561	5	20.00
HI-DMMU-06	0.0130	0.0053	78.084	64.516	96.154	14.736	5	20.00
HI-DMMU-07	0.0128	0.0051	79.533	63.291	89.286	13.618	5	20.00
HI-DMMU-08	0.0129	0.0052	80.294	58.480	101.112	20.904	5	19.50

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.83609	0.945	-1.4597	9.54887
Bartlett's Test indicates unequal variances (p = 2.50E-05)	35.1642	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: CADr-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Cadmium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.1820	0.1790	0.2120	0.2030	0.1650
HI-DMMU-01	0.4010	0.4040	0.4470	0.4390	0.4540
HI-DMMU-02	0.5090	0.4390	0.4340	0.4910	0.4200
HI-DMMU-03	0.5360	0.5160	0.4150	0.4770	0.4630
HI-DMMU-04	0.5670	0.4680	0.4120	0.5170	0.4050
HI-DMMU-05	0.4200	0.4310	0.4270	0.3710	0.4210
HI-DMMU-06	0.4150	0.4940	0.5220	0.4800	0.4830
HI-DMMU-07	0.5320	0.4890	0.4340	0.4790	0.4940
HI-DMMU-08	0.4630	0.4520	0.5720	0.5720	0.0064

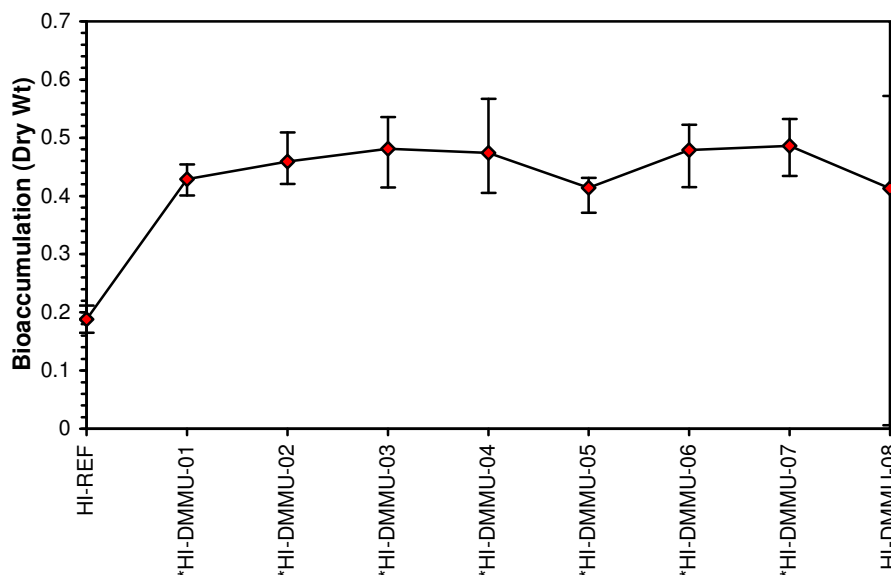
Conc-mg/Kg	Transform: Untransformed							Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%	N		
HI-REF	0.1882	0.0000	0.1882	0.1650	0.2120	10.105	5		
*HI-DMMU-01	0.4290	0.2966	0.4290	0.4010	0.4540	5.778	5	15.00	16.00
*HI-DMMU-02	0.4586	0.3331	0.4586	0.4200	0.5090	8.494	5	15.00	16.00
*HI-DMMU-03	0.4814	0.3612	0.4814	0.4150	0.5360	9.823	5	15.00	16.00
*HI-DMMU-04	0.4738	0.3518	0.4738	0.4050	0.5670	14.599	5	15.00	16.00
*HI-DMMU-05	0.4140	0.2781	0.4140	0.3710	0.4310	5.907	5	15.00	16.00
*HI-DMMU-06	0.4788	0.3580	0.4788	0.4150	0.5220	8.214	5	15.00	16.00
*HI-DMMU-07	0.4856	0.3663	0.4856	0.4340	0.5320	7.238	5	15.00	16.00
HI-DMMU-08	0.4131	0.2770	0.4131	0.0064	0.5720	56.758	5	20.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.72713	0.945	-2.8967	16.5108
Bartlett's Test indicates unequal variances (p = 1.74E-07)	46.712	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: CADr-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Cadmium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.1820	0.1790	0.2120	0.2030	0.1650
HI-DMMU-01	0.4010	0.4040	0.4470	0.4390	0.4540
HI-DMMU-02	0.5090	0.4390	0.4340	0.4910	0.4200
HI-DMMU-03	0.5360	0.5160	0.4150	0.4770	0.4630
HI-DMMU-04	0.5670	0.4680	0.4120	0.5170	0.4050
HI-DMMU-05	0.4200	0.4310	0.4270	0.3710	0.4210
HI-DMMU-06	0.4150	0.4940	0.5220	0.4800	0.4830
HI-DMMU-07	0.5320	0.4890	0.4340	0.4790	0.4940
HI-DMMU-08	0.4630	0.4520	0.5720	0.5720	0.0064

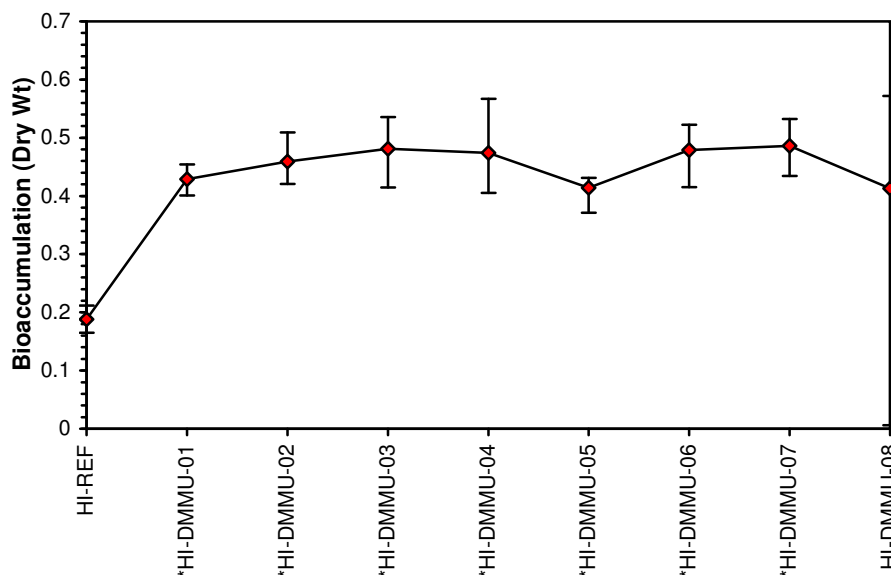
Conc-mg/Kg	Transform: Reciprocal						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.1882	0.0000	5.3570	4.7170	6.0606	10.061	5	
*HI-DMMU-01	0.4290	0.2966	2.3373	2.2026	2.4938	5.866	5	15.00
*HI-DMMU-02	0.4586	0.3331	2.1929	1.9646	2.3810	8.268	5	15.00
*HI-DMMU-03	0.4814	0.3612	2.0939	1.8657	2.4096	10.143	5	15.00
*HI-DMMU-04	0.4738	0.3518	2.1462	1.7637	2.4691	14.259	5	15.00
*HI-DMMU-05	0.4140	0.2781	2.4228	2.3202	2.6954	6.374	5	15.00
*HI-DMMU-06	0.4788	0.3580	2.1007	1.9157	2.4096	8.801	5	15.00
*HI-DMMU-07	0.4856	0.3663	2.0682	1.8797	2.3041	7.414	5	15.00
HI-DMMU-08	0.4131	0.2770	32.6779	1.7483	#####	210.147	5	20.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.35468	0.945	4.65573	29.5564
Bartlett's Test indicates unequal variances (p = 4.93E-53)	266.704	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

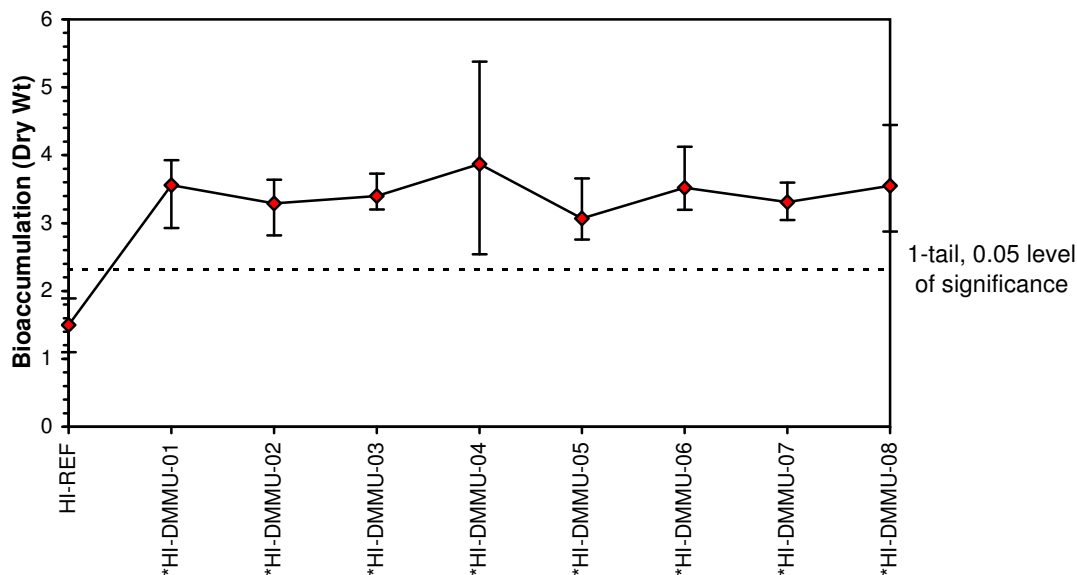
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Nickel, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	1.1000	1.2900	1.8900	1.6100	1.6200
HI-DMMU-01	2.9300	3.9300	3.8900	3.4500	3.6200
HI-DMMU-02	3.6100	3.4100	2.9800	3.6400	2.8200
HI-DMMU-03	3.2000	3.3800	3.2700	3.7300	3.4300
HI-DMMU-04	5.3800	4.1000	3.2300	4.0900	2.5400
HI-DMMU-05	3.6600	3.2200	2.8700	2.7600	2.8600
HI-DMMU-06	3.2000	3.2900	4.1300	3.4500	3.5500
HI-DMMU-07	3.4800	3.5900	3.0900	3.0400	3.3300
HI-DMMU-08	2.8700	2.8800	4.1100	4.4400	3.4300

Conc-mg/Kg	Transform: Untransformed						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	1.5020	0.0000	1.5020	1.1000	1.8900	20.593	5			
*HI-DMMU-01	3.5640	-4.1076	3.5640	2.9300	3.9300	11.383	5	6.291	2.480	0.8128
*HI-DMMU-02	3.2920	-3.5657	3.2920	2.8200	3.6400	11.328	5	5.461	2.480	0.8128
*HI-DMMU-03	3.4020	-3.7849	3.4020	3.2000	3.7300	6.008	5	5.797	2.480	0.8128
*HI-DMMU-04	3.8680	-4.7131	3.8680	2.5400	5.3800	27.603	5	7.219	2.480	0.8128
*HI-DMMU-05	3.0740	-3.1315	3.0740	2.7600	3.6600	12.071	5	4.796	2.480	0.8128
*HI-DMMU-06	3.5240	-4.0279	3.5240	3.2000	4.1300	10.360	5	6.169	2.480	0.8128
*HI-DMMU-07	3.3060	-3.5936	3.3060	3.0400	3.5900	7.236	5	5.504	2.480	0.8128
*HI-DMMU-08	3.5460	-4.0717	3.5460	2.8700	4.4400	20.097	5	6.236	2.480	0.8128

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97238	0.945	0.29455	2.33496		
Bartlett's Test indicates equal variances (p = 0.02)	17.8401	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	0.81284	0	2.34651	0.26856	1.5E-06	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: NI--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Nickel, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	1.1000	1.2900	1.8900	1.6100	1.6200
HI-DMMU-01	2.9300	3.9300	3.8900	3.4500	3.6200
HI-DMMU-02	3.6100	3.4100	2.9800	3.6400	2.8200
HI-DMMU-03	3.2000	3.3800	3.2700	3.7300	3.4300
HI-DMMU-04	5.3800	4.1000	3.2300	4.0900	2.5400
HI-DMMU-05	3.6600	3.2200	2.8700	2.7600	2.8600
HI-DMMU-06	3.2000	3.2900	4.1300	3.4500	3.5500
HI-DMMU-07	3.4800	3.5900	3.0900	3.0400	3.3300
HI-DMMU-08	2.8700	2.8800	4.1100	4.4400	3.4300

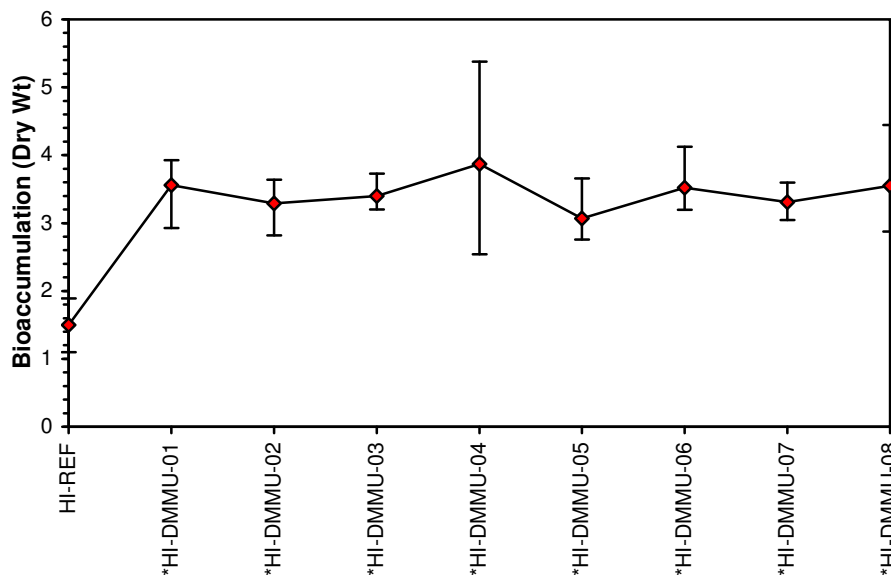
Conc-mg/Kg	Transform: Reciprocal						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	1.5020	0.0000	0.6904	0.5291	0.9091	21.870	5	
*HI-DMMU-01	3.5640	-4.1076	0.2838	0.2545	0.3413	12.428	5	15.00
*HI-DMMU-02	3.2920	-3.5657	0.3070	0.2747	0.3546	11.758	5	15.00
*HI-DMMU-03	3.4020	-3.7849	0.2948	0.2681	0.3125	5.776	5	15.00
*HI-DMMU-04	3.8680	-4.7131	0.2755	0.1859	0.3937	28.767	5	15.00
*HI-DMMU-05	3.0740	-3.1315	0.3288	0.2732	0.3623	11.137	5	15.00
*HI-DMMU-06	3.5240	-4.0279	0.2860	0.2421	0.3125	9.547	5	15.00
*HI-DMMU-07	3.3060	-3.5936	0.3038	0.2786	0.3289	7.260	5	15.00
*HI-DMMU-08	3.5460	-4.0717	0.2911	0.2252	0.3484	19.626	5	15.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.93679	0.945	0.8349	4.33334
Bartlett's Test indicates unequal variances (p = 2.00E-04)	30.1408	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

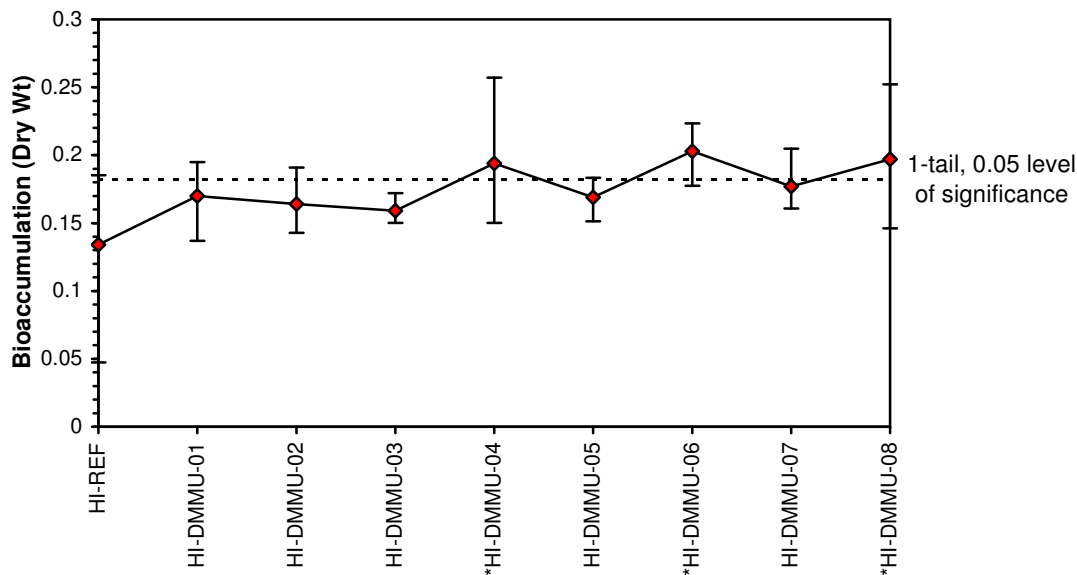
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Silver, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.1530	0.1520	0.1850	0.1320	0.0471
HI-DMMU-01	0.1830	0.1710	0.1370	0.1950	0.1640
HI-DMMU-02	0.1910	0.1820	0.1490	0.1560	0.1430
HI-DMMU-03	0.1720	0.1620	0.1500	0.1600	0.1510
HI-DMMU-04	0.2570	0.1860	0.1500	0.1960	0.1810
HI-DMMU-05	0.1830	0.1630	0.1670	0.1510	0.1790
HI-DMMU-06	0.2230	0.2120	0.2230	0.1770	0.1780
HI-DMMU-07	0.1820	0.1620	0.1610	0.1760	0.2050
HI-DMMU-08	0.2300	0.1460	0.2520	0.2020	0.1540

Conc-mg/Kg	Transform: Untransformed						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	0.1338	0.0000	0.1338	0.0471	0.1850	38.904	5			
HI-DMMU-01	0.1700	0.0418	0.1700	0.1370	0.1950	12.888	5	1.869	2.480	0.0480
HI-DMMU-02	0.1642	0.0351	0.1642	0.1430	0.1910	12.857	5	1.569	2.480	0.0480
HI-DMMU-03	0.1590	0.0291	0.1590	0.1500	0.1720	5.660	5	1.301	2.480	0.0480
*HI-DMMU-04	0.1940	0.0695	0.1940	0.1500	0.2570	20.199	5	3.109	2.480	0.0480
HI-DMMU-05	0.1686	0.0402	0.1686	0.1510	0.1830	7.614	5	1.797	2.480	0.0480
*HI-DMMU-06	0.2026	0.0794	0.2026	0.1770	0.2230	11.526	5	3.553	2.480	0.0480
HI-DMMU-07	0.1772	0.0501	0.1772	0.1610	0.2050	10.138	5	2.241	2.480	0.0480
*HI-DMMU-08	0.1968	0.0727	0.1968	0.1460	0.2520	23.546	5	3.253	2.480	0.0480

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97492	0.945	-0.3979	1.58262		
Bartlett's Test indicates equal variances (p = 0.02)	17.6448	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	0.04801	0	0.00233	0.00094	0.02925	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ag--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Silver, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.1530	0.1520	0.1850	0.1320	0.0471
HI-DMMU-01	0.1830	0.1710	0.1370	0.1950	0.1640
HI-DMMU-02	0.1910	0.1820	0.1490	0.1560	0.1430
HI-DMMU-03	0.1720	0.1620	0.1500	0.1600	0.1510
HI-DMMU-04	0.2570	0.1860	0.1500	0.1960	0.1810
HI-DMMU-05	0.1830	0.1630	0.1670	0.1510	0.1790
HI-DMMU-06	0.2230	0.2120	0.2230	0.1770	0.1780
HI-DMMU-07	0.1820	0.1620	0.1610	0.1760	0.2050
HI-DMMU-08	0.2300	0.1460	0.2520	0.2020	0.1540

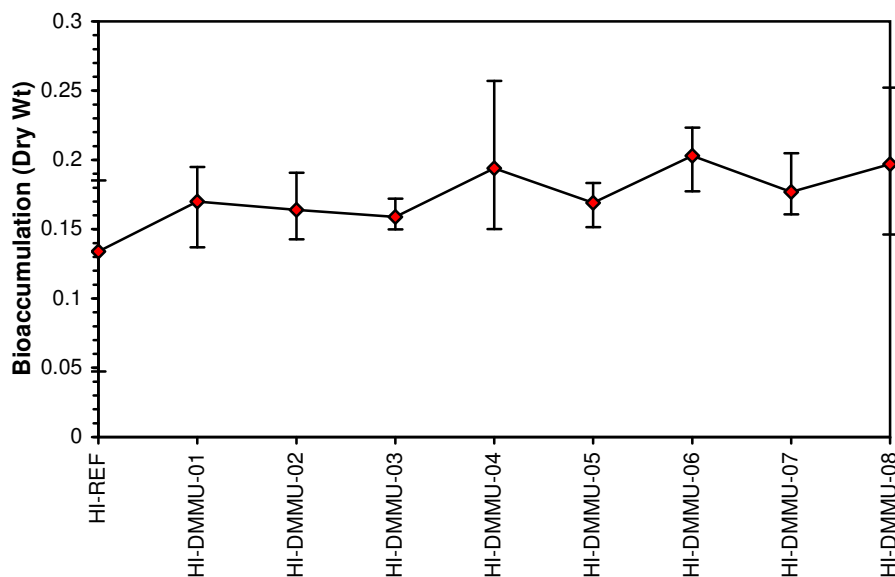
Conc-mg/Kg	Transform: Reciprocal						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.1338	0.0000	9.4655	5.4054	21.2314	69.960	5	
HI-DMMU-01	0.1700	0.0418	5.9675	5.1282	7.2993	13.925	5	21.00
HI-DMMU-02	0.1642	0.0351	6.1690	5.2356	6.9930	12.445	5	23.00
HI-DMMU-03	0.1590	0.0291	6.3052	5.8140	6.6667	5.569	5	24.00
HI-DMMU-04	0.1940	0.0695	5.3122	3.8911	6.6667	18.701	5	19.00
HI-DMMU-05	0.1686	0.0402	5.9593	5.4645	6.6225	7.759	5	22.00
HI-DMMU-06	0.2026	0.0794	4.9907	4.4843	5.6497	11.920	5	17.00
HI-DMMU-07	0.1772	0.0501	5.6877	4.8780	6.2112	9.639	5	19.00
HI-DMMU-08	0.1968	0.0727	5.3219	3.9683	6.8493	24.182	5	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.63352	0.945	3.84395	22.7856
Bartlett's Test indicates unequal variances (p = 5.19E-11)	64.8423	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

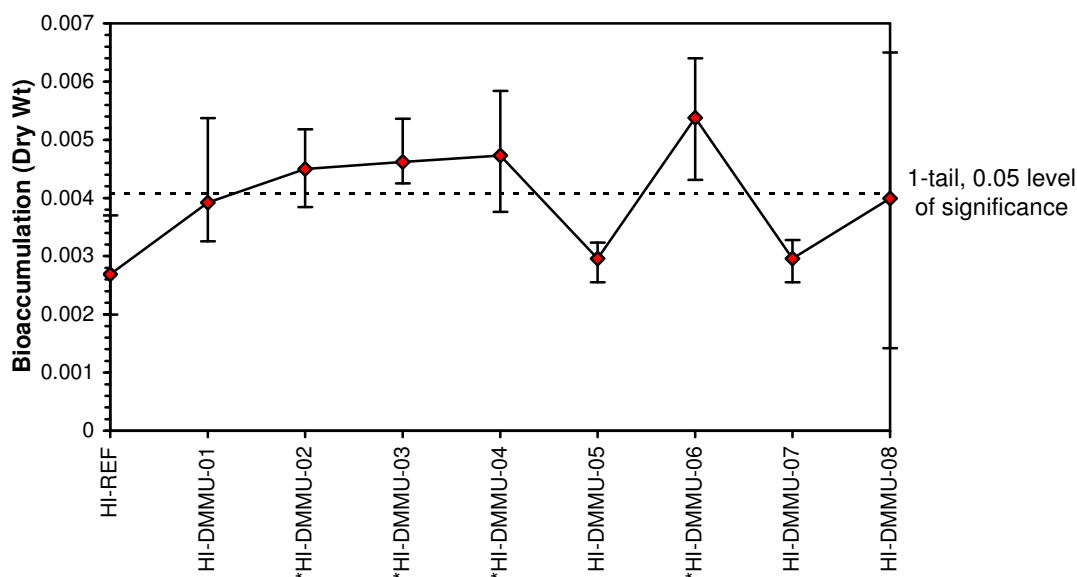
Start Date: Test ID: THA--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Thallium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0021	0.0020	0.0034	0.0023	0.0037
HI-DMMU-01	0.0033	0.0037	0.0039	0.0054	0.0034
HI-DMMU-02	0.0051	0.0038	0.0052	0.0044	0.0039
HI-DMMU-03	0.0054	0.0043	0.0043	0.0048	0.0044
HI-DMMU-04	0.0056	0.0045	0.0040	0.0058	0.0038
HI-DMMU-05	0.0032	0.0031	0.0026	0.0027	0.0032
HI-DMMU-06	0.0053	0.0053	0.0055	0.0064	0.0043
HI-DMMU-07	0.0026	0.0032	0.0029	0.0033	0.0029
HI-DMMU-08	0.0032	0.0042	0.0065	0.0045	0.0014

Conc-mg/Kg	Transform: Untransformed						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	0.0027	0.0000	0.0027	0.0020	0.0037	30.136	5			
HI-DMMU-01	0.0039	0.0012	0.0039	0.0033	0.0054	21.528	5	2.203	2.480	0.0014
*HI-DMMU-02	0.0045	0.0018	0.0045	0.0038	0.0052	14.331	5	3.230	2.480	0.0014
*HI-DMMU-03	0.0046	0.0019	0.0046	0.0043	0.0054	10.035	5	3.444	2.480	0.0014
*HI-DMMU-04	0.0047	0.0020	0.0047	0.0038	0.0058	19.911	5	3.644	2.480	0.0014
HI-DMMU-05	0.0030	0.0003	0.0030	0.0026	0.0032	10.517	5	0.485	2.480	0.0014
*HI-DMMU-06	0.0054	0.0027	0.0054	0.0043	0.0064	13.838	5	4.802	2.480	0.0014
HI-DMMU-07	0.0030	0.0003	0.0030	0.0026	0.0033	10.047	5	0.488	2.480	0.0014
HI-DMMU-08	0.0040	0.0013	0.0040	0.0014	0.0065	46.635	5	2.317	2.480	0.0014

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95913	0.945	0.13686	2.87736		
Bartlett's Test indicates equal variances (p = 0.01)	19.2175	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	0.00139	0	4.3E-06	7.9E-07	1.4E-04	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: THA--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Thallium, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0021	0.0020	0.0034	0.0023	0.0037
HI-DMMU-01	0.0033	0.0037	0.0039	0.0054	0.0034
HI-DMMU-02	0.0051	0.0038	0.0052	0.0044	0.0039
HI-DMMU-03	0.0054	0.0043	0.0043	0.0048	0.0044
HI-DMMU-04	0.0056	0.0045	0.0040	0.0058	0.0038
HI-DMMU-05	0.0032	0.0031	0.0026	0.0027	0.0032
HI-DMMU-06	0.0053	0.0053	0.0055	0.0064	0.0043
HI-DMMU-07	0.0026	0.0032	0.0029	0.0033	0.0029
HI-DMMU-08	0.0032	0.0042	0.0065	0.0045	0.0014

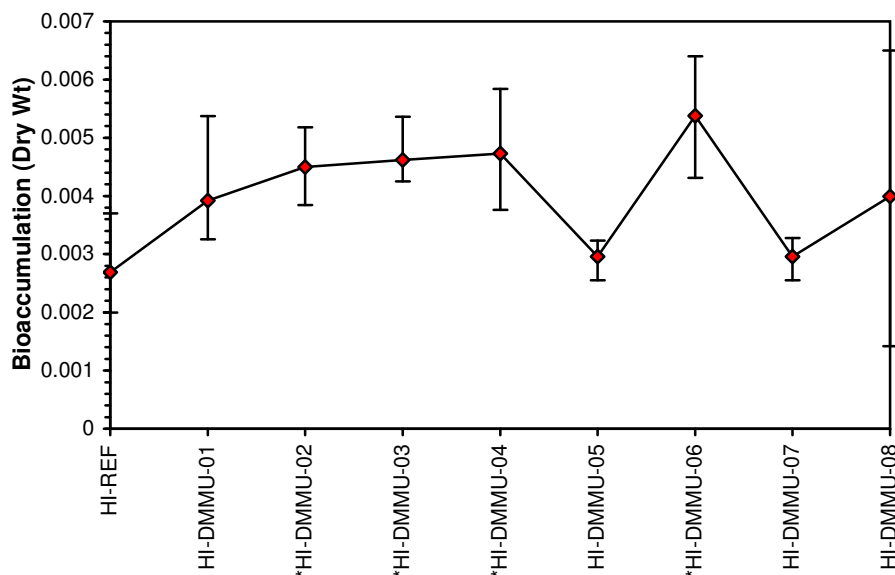
Conc-mg/Kg	Transform: Reciprocal							Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%	N		
HI-REF	0.0027	0.0000	398.54	270.27	502.51	27.425	5		
HI-DMMU-01	0.0039	0.0012	262.98	186.22	306.75	17.823	5	19.00	16.00
*HI-DMMU-02	0.0045	0.0018	226.00	193.05	260.42	14.243	5	15.00	16.00
*HI-DMMU-03	0.0046	0.0019	218.18	186.57	235.29	9.328	5	15.00	16.00
*HI-DMMU-04	0.0047	0.0020	218.14	171.23	265.96	19.432	5	15.00	16.00
HI-DMMU-05	0.0030	0.0003	341.22	309.60	392.16	11.007	5	25.00	16.00
*HI-DMMU-06	0.0054	0.0027	188.87	156.25	232.02	14.495	5	15.00	16.00
HI-DMMU-07	0.0030	0.0003	340.66	304.88	392.16	10.337	5	25.00	16.00
HI-DMMU-08	0.0040	0.0013	324.66	153.85	704.23	67.515	5	22.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.81268	0.945	2.2202	11.7087
Bartlett's Test indicates unequal variances (p = 2.22E-06)	40.8575	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: ZNC--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Zinc, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	56.90	177.00	146.00	64.10	59.30
HI-DMMU-01	96.20	118.00	112.00	105.00	101.00
HI-DMMU-02	116.00	115.00	107.00	112.00	98.00
HI-DMMU-03	113.00	117.00	107.00	112.00	114.00
HI-DMMU-04	134.00	117.00	94.10	109.00	85.40
HI-DMMU-05	106.00	112.00	98.10	95.60	104.00
HI-DMMU-06	102.00	105.00	113.00	101.00	105.00
HI-DMMU-07	106.00	120.00	105.00	111.00	117.00

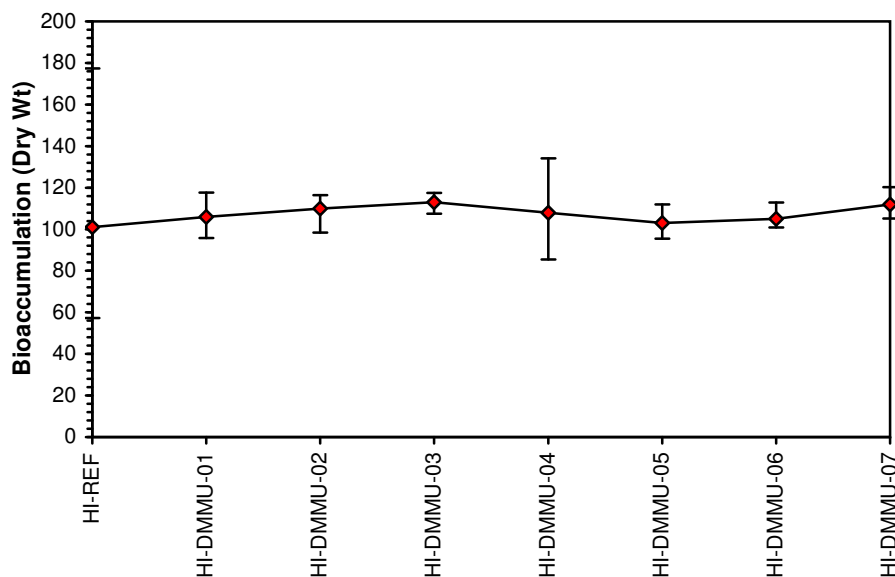
Conc-mg/Kg	Transform: Untransformed						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	100.66	0.0000	100.66	56.90	177.00	56.298	5	
HI-DMMU-01	106.44	-0.0580	106.44	96.20	118.00	8.151	5	25.00
HI-DMMU-02	109.60	-0.0897	109.60	98.00	116.00	6.723	5	25.00
HI-DMMU-03	112.60	-0.1198	112.60	107.00	117.00	3.239	5	25.00
HI-DMMU-04	107.90	-0.0726	107.90	85.40	134.00	17.718	5	25.00
HI-DMMU-05	103.14	-0.0249	103.14	95.60	112.00	6.315	5	25.00
HI-DMMU-06	105.20	-0.0456	105.20	101.00	113.00	4.479	5	25.00
HI-DMMU-07	111.80	-0.1118	111.80	105.00	120.00	5.913	5	25.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.82962	0.94	1.17664	5.95253
Bartlett's Test indicates unequal variances (p = 1.06E-08)	50.6932	18.4753		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: ZNC--DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Zinc, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	56.90	177.00	146.00	64.10	59.30
HI-DMMU-01	96.20	118.00	112.00	105.00	101.00
HI-DMMU-02	116.00	115.00	107.00	112.00	98.00
HI-DMMU-03	113.00	117.00	107.00	112.00	114.00
HI-DMMU-04	134.00	117.00	94.10	109.00	85.40
HI-DMMU-05	106.00	112.00	98.10	95.60	104.00
HI-DMMU-06	102.00	105.00	113.00	101.00	105.00
HI-DMMU-07	106.00	120.00	105.00	111.00	117.00

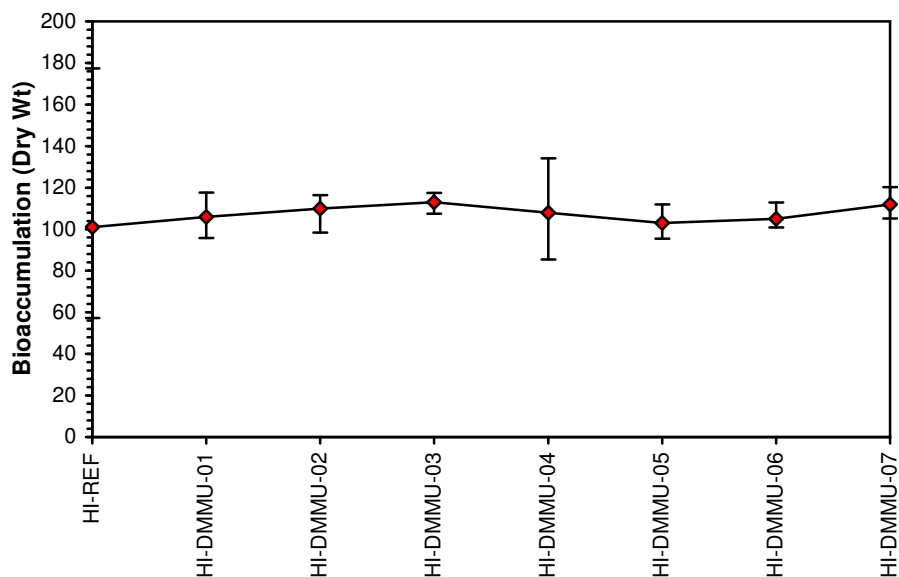
Conc-mg/Kg	Mean	N-Mean	Transform: Reciprocal				Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%		
HI-REF	100.66	0.0000	0.0125	0.0056	0.0176	46.148	5	
HI-DMMU-01	106.44	-0.0580	0.0094	0.0085	0.0104	8.072	5	25.00
HI-DMMU-02	109.60	-0.0897	0.0092	0.0086	0.0102	7.086	5	25.00
HI-DMMU-03	112.60	-0.1198	0.0089	0.0085	0.0093	3.292	5	25.00
HI-DMMU-04	107.90	-0.0726	0.0095	0.0075	0.0117	17.698	5	25.00
HI-DMMU-05	103.14	-0.0249	0.0097	0.0089	0.0105	6.278	5	25.00
HI-DMMU-06	105.20	-0.0456	0.0095	0.0088	0.0099	4.316	5	25.00
HI-DMMU-07	111.80	-0.1118	0.0090	0.0083	0.0095	5.867	5	25.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.80493	0.94	-0.9035	5.38592
Bartlett's Test indicates unequal variances (p = 3.88E-10)	57.9463	18.4753		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ant-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Anthracene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-07	32.700	50.300	28.600	25.300	25.200

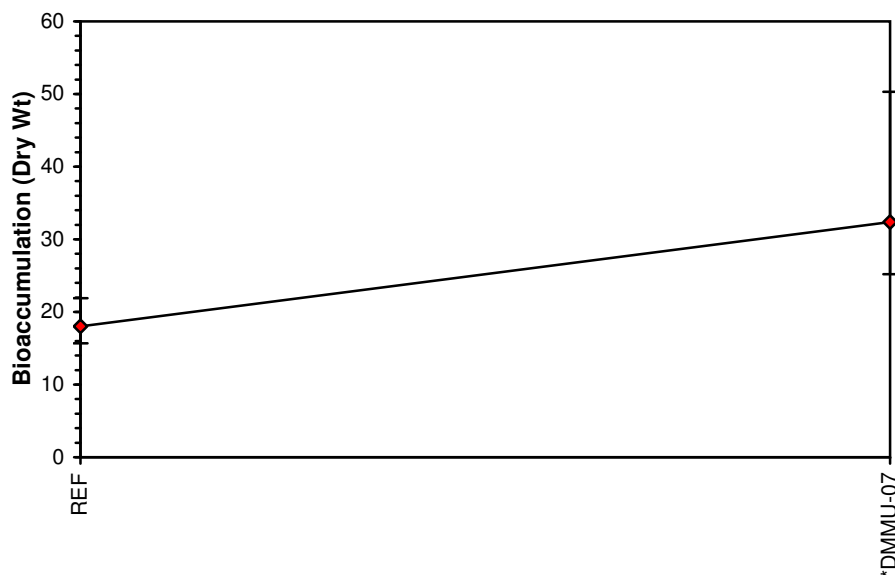
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	18.000	0.0000	18.000	15.700	21.900	14.213	5		
*DMMU-07	32.420	-0.8482	32.420	25.200	50.300	32.247	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.81676	0.842	1.8667	4.55127
F-Test indicates equal variances (p = 0.02)	16.6993	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

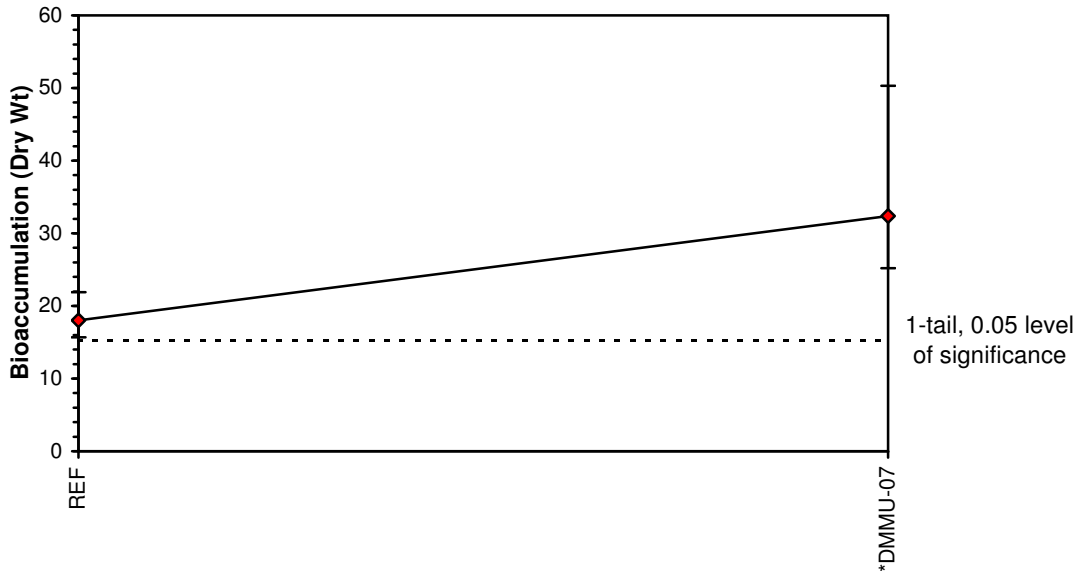
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Anthracene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-07	32.700	50.300	28.600	25.300	25.200

Conc-ppb	Mean	N-Mean	Transform: Reciprocal					1-Tailed		
			Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
REF	18.000	0.0000	0.0564	0.0457	0.0637	13.192	5			
*DMMU-07	32.420	-0.8482	0.0329	0.0199	0.0397	24.907	5	4.740	1.860	0.0092

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.87557	0.842	-0.8263	-0.6422		
F-Test indicates equal variances (p = 0.85)	1.21515	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-2.4887	0	0.00138	6.1E-05	0.00146	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: BAPt-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Benzo-A-pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-05	19.700	22.200	20.400	19.200	30.400

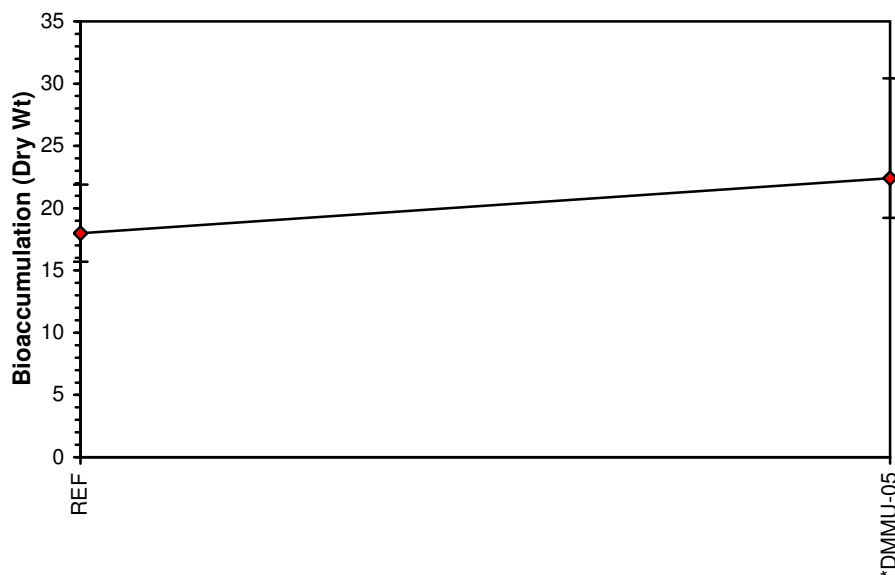
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	18.000	0.0000	18.000	15.700	21.900	14.213	5		
*DMMU-05	22.380	-0.2576	22.380	19.200	30.400	20.666	5	18.50	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.82381	0.842	1.58318	2.14348
F-Test indicates equal variances (p = 0.28)	3.26845	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

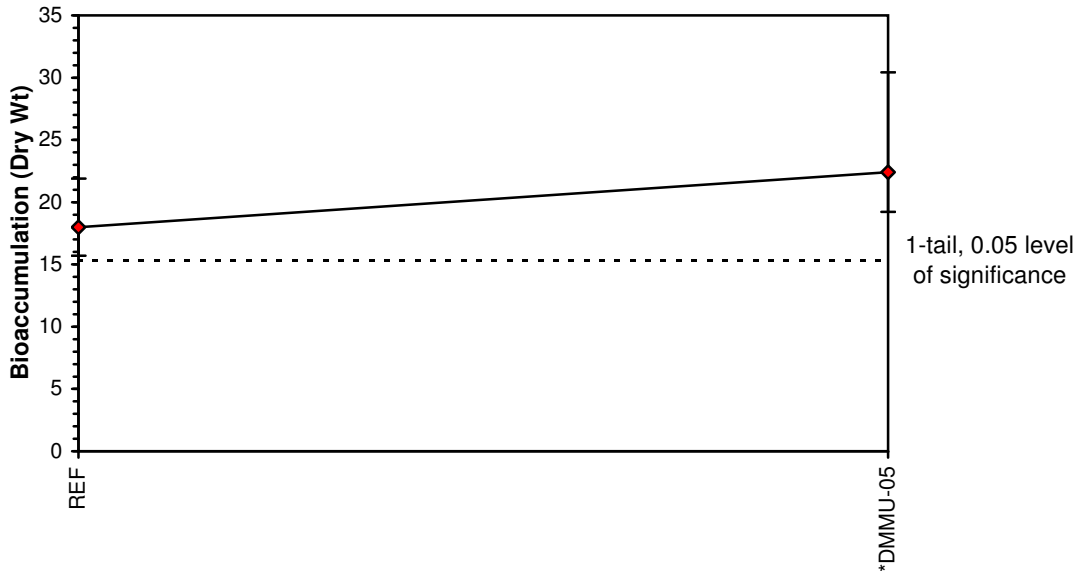
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Benzo-A-pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-05	19.700	22.200	20.400	19.200	30.400

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	18.000	0.0000	0.0564	0.0457	0.0637	13.192	5			
*DMMU-05	22.380	-0.2576	0.0460	0.0329	0.0521	16.904	5	2.170	1.860	0.0089

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.86627	0.842	-0.9891	-0.3388		
F-Test indicates equal variances (p = 0.94)	1.09051	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-2.4274	0	0.00027	5.8E-05	0.06185	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: FLTt-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Fluoranthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-07	87.500	155.000	84.100	77.100	58.100

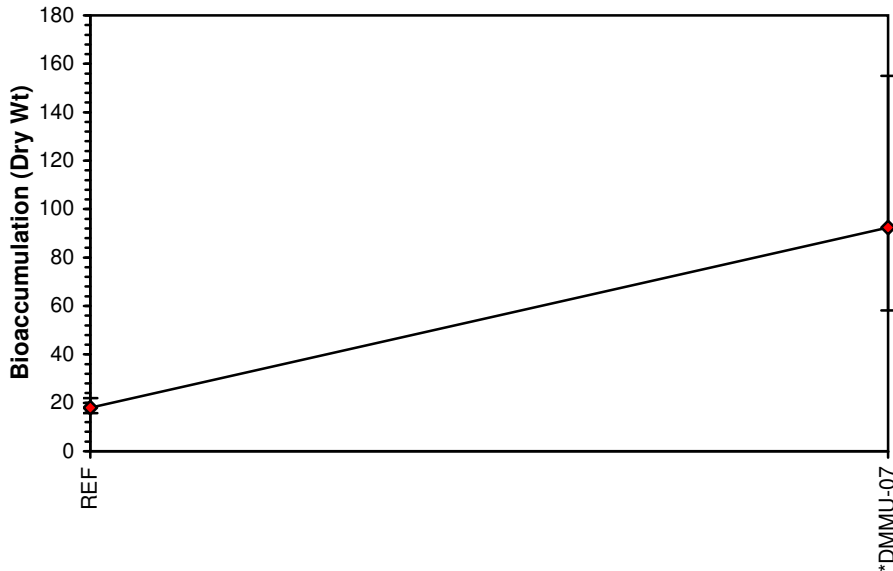
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	18.000	0.0000	18.000	15.700	21.900	14.213	5		
*DMMU-07	92.360	-4.3741	92.360	58.100	155.000	39.863	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.76202	0.842	1.87779	5.68557
F-Test indicates unequal variances (p = 1.38E-04)	207.114	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

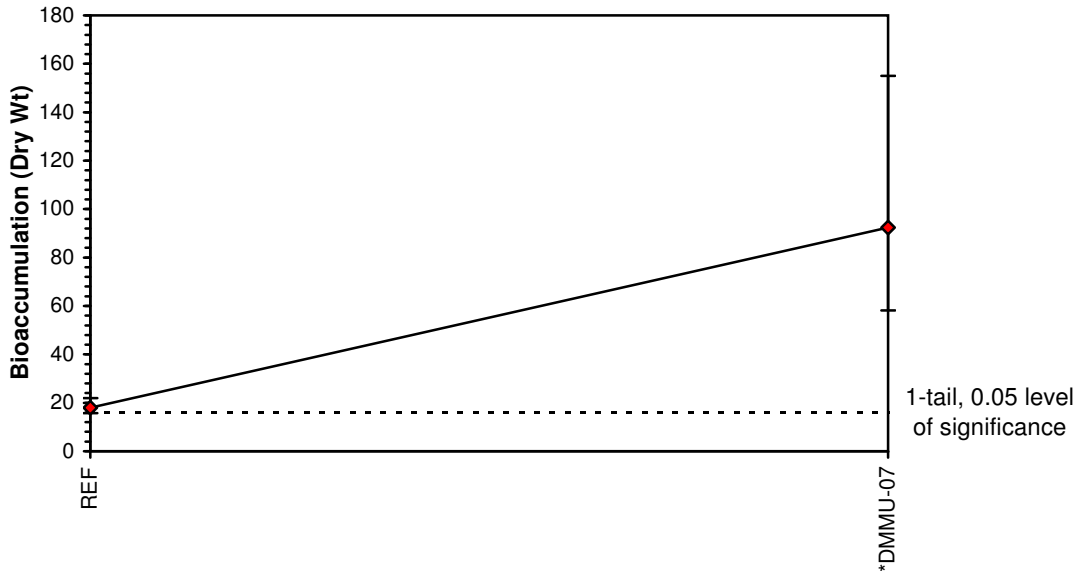
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Fluoranthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-07	87.500	155.000	84.100	77.100	58.100

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	18.000	0.0000	0.0564	0.0457	0.0637	13.192	5	11.855	1.860	0.0070
*DMMU-07	92.360	-4.3741	0.0120	0.0065	0.0172	32.091	5			

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95561	0.842	-0.6307	-0.0757		
F-Test indicates equal variances (p = 0.23)	3.73837	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-1.9492	0	0.00493	3.5E-05	2.4E-06	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

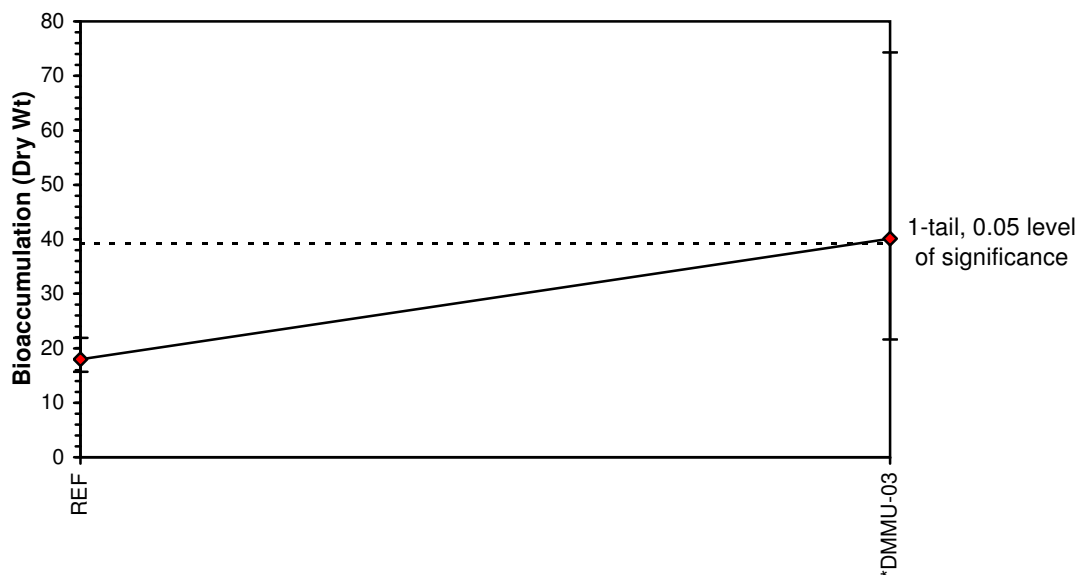
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Fluorene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-03	24.700	50.500	21.600	29.400	74.300

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	18.000	0.0000	18.000	15.700	21.900	14.213	5				
*DMMU-03	40.100	-1.3000	40.100	21.600	74.300	55.366	5	2.211	2.132	21.307	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.8965	0.842	1.2581	2.59886		
F-Test indicates unequal variances (p = 1.02E-03)	75.3132	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates significant differences Treatments vs REF	21.3072	0	1221.03	249.735	0.05797	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

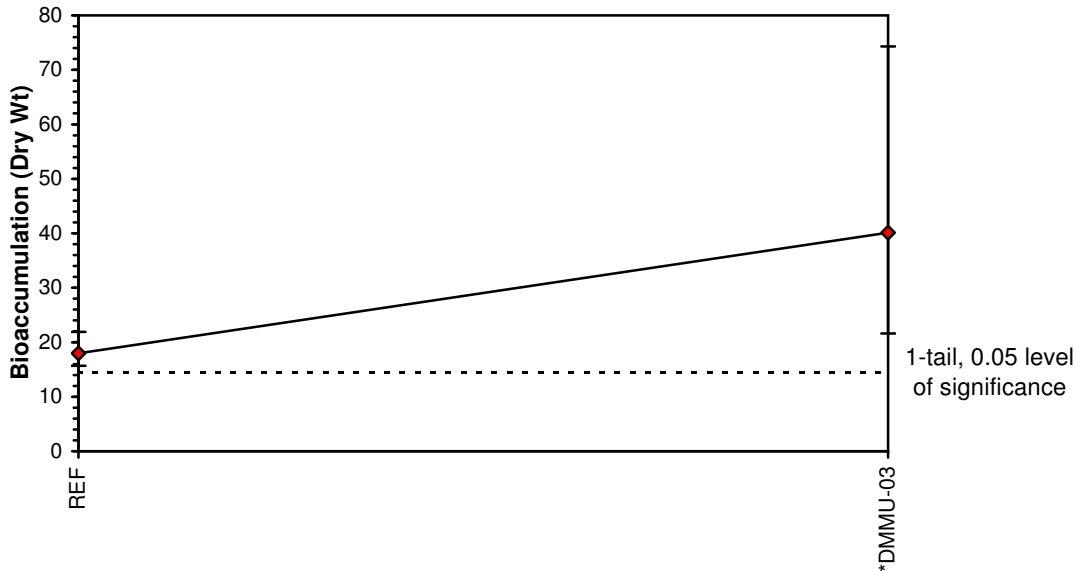
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Fluorene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-03	24.700	50.500	21.600	29.400	74.300

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	18.000	0.0000	0.0564	0.0457	0.0637	13.192	5			
*DMMU-03	40.100	-1.3000	0.0308	0.0135	0.0463	44.912	5	3.642	1.860	0.0131

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.9561	0.842	-0.3229	-0.9114		
F-Test indicates equal variances (p = 0.26)	3.45943	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-3.3351	0	0.00164	0.00012	0.00657	1, 8

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: PHE-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Phenanthrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-03	53.800	71.300	50.000	54.400	106.000
DMMU-07	80.200	137.000	79.300	61.400	61.600

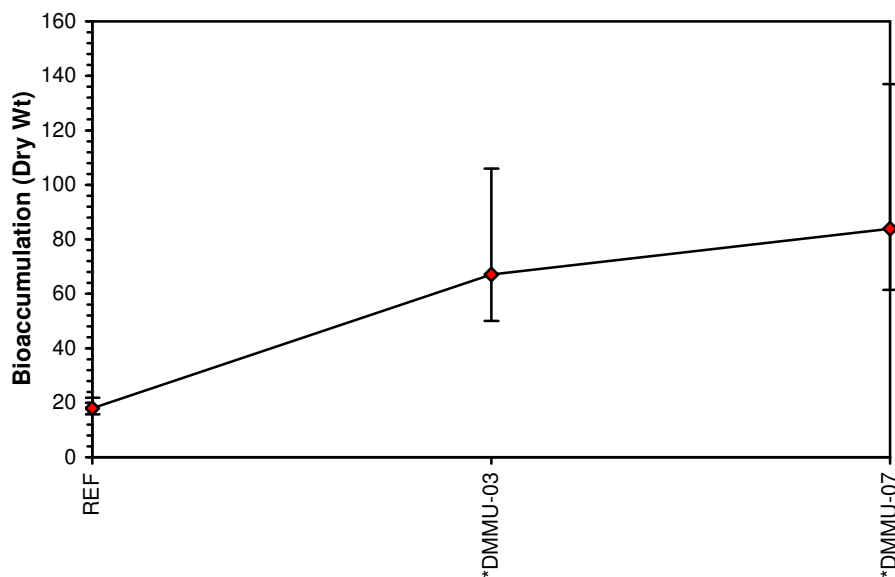
Conc-ppb	Mean	N-Mean	Transform: Untransformed				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	18.000	0.0000	18.000	15.700	21.900	14.213	5		
*DMMU-03	67.100	-2.8882	67.100	50.000	106.000	34.643	5	15.00	18.00
*DMMU-07	83.900	-3.8765	83.900	61.400	137.000	37.016	5	15.00	18.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.8103	0.881	1.62262	2.64679
Bartlett's Test indicates unequal variances (p = 1.47E-03)	13.0464	9.21035		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

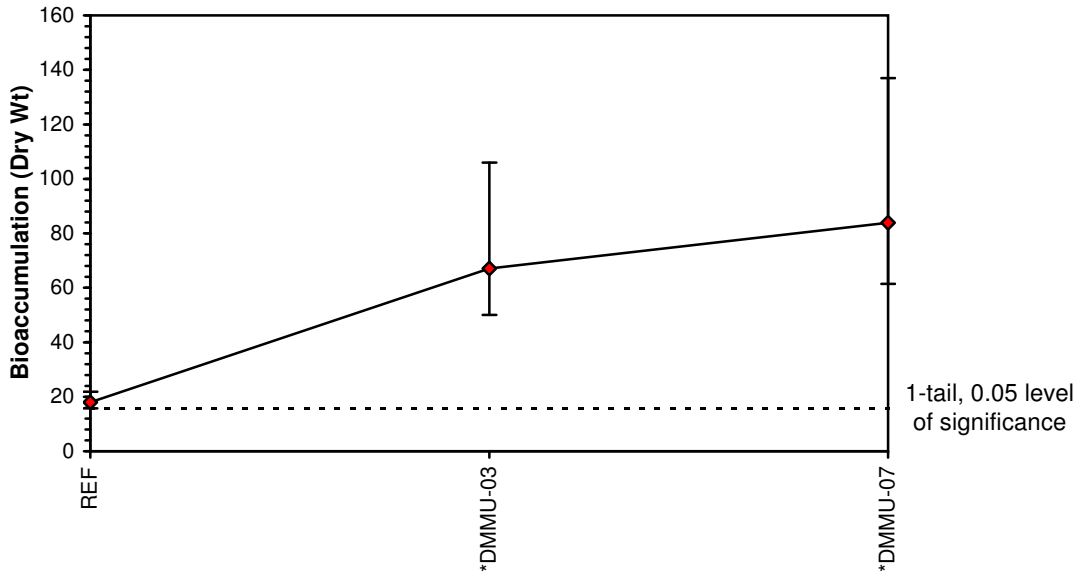
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Phenanthrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.200	17.000	19.200	21.900	15.700
DMMU-03	53.800	71.300	50.000	54.400	106.000
DMMU-07	80.200	137.000	79.300	61.400	61.600

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	18.000	0.0000	0.0564	0.0457	0.0637	13.192	5			
*DMMU-03	67.100	-2.8882	0.0161	0.0094	0.0200	26.981	5	11.786	2.110	0.0072
*DMMU-07	83.900	-3.8765	0.0130	0.0073	0.0163	28.357	5	12.695	2.110	0.0072

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.9416	0.881	-0.7171	-0.1214		
Bartlett's Test indicates equal variances (p = 0.36)	2.05723	9.21035				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs REF	-2.0115	0	0.00293	2.9E-05	3.2E-08	2, 12

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: PYR-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.20	17.00	19.20	21.90	15.70
DMMU-03	32.10	32.00	33.20	29.40	21.10
DMMU-07	95.20	180.00	111.00	107.00	72.40

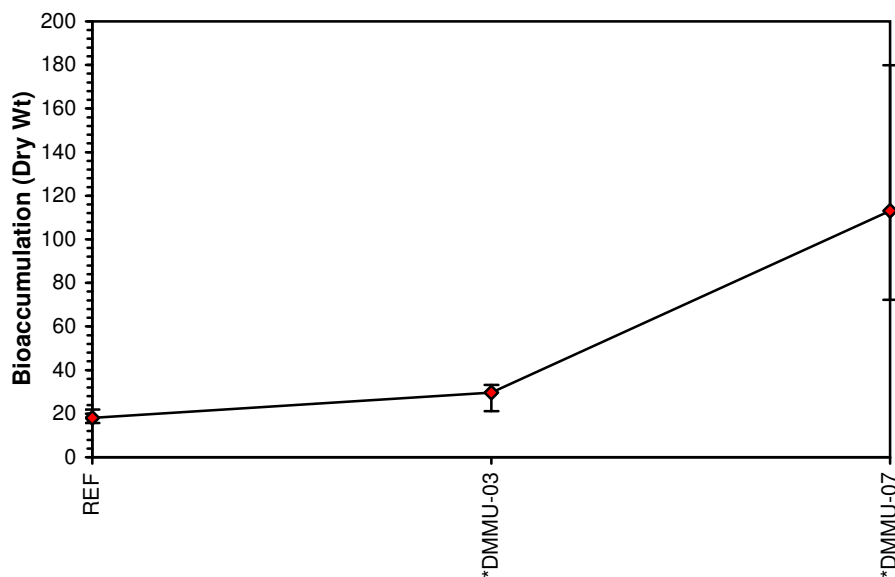
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	18.00	0.0000	18.000	15.700	21.900	14.213	5		
*DMMU-03	29.56	-0.6800	29.560	21.100	33.200	16.681	5	16.00	18.00
*DMMU-07	113.12	-5.5953	113.120	72.400	180.000	35.620	5	15.00	18.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.70446	0.881	1.80569	7.4774
Bartlett's Test indicates unequal variances (p = 8.67E-06)	23.3124	9.21035		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

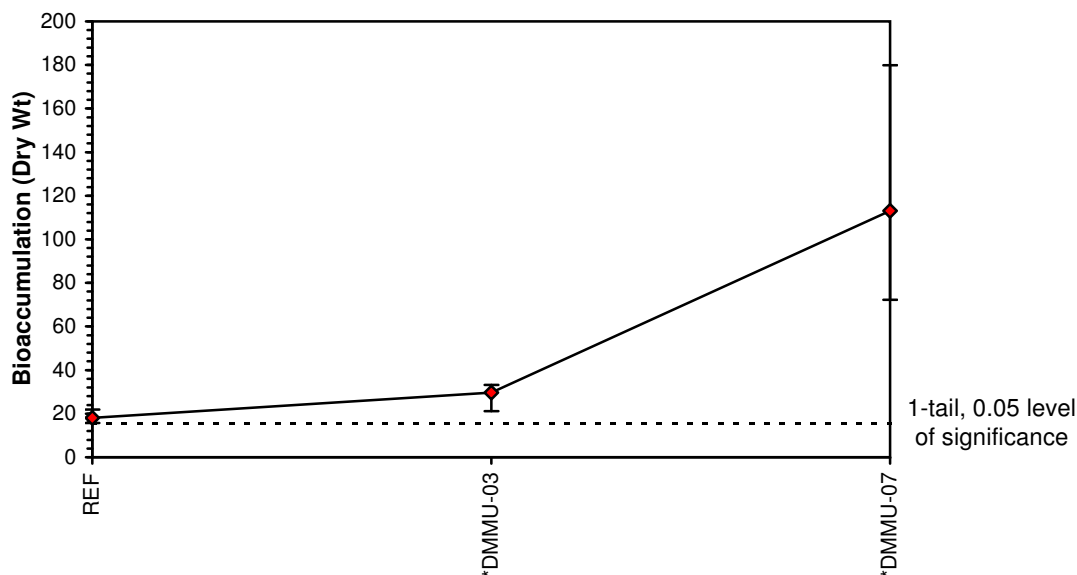
Start Date: Test ID: PYR-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	16.20	17.00	19.20	21.90	15.70
DMMU-03	32.10	32.00	33.20	29.40	21.10
DMMU-07	95.20	180.00	111.00	107.00	72.40

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	18.00	0.0000	0.0564	0.0457	0.0637	13.192	5			
*DMMU-03	29.56	-0.6800	0.0348	0.0301	0.0474	20.681	5	5.497	2.110	0.0083
*DMMU-07	113.12	-5.5953	0.0096	0.0056	0.0138	30.808	5	11.891	2.110	0.0083

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96554	0.881	0.454	0.63332		
Bartlett's Test indicates equal variances (p = 0.23)	2.96958	9.21035				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs REF	-2.2737	0	0.00274	3.9E-05	2.3E-07	2, 12

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: LPH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total LPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	97.20	102.00	115.20	131.40	94.20
DMMU-03	137.00	151.30	158.00	146.00	190.40
DMMU-05	118.20	133.20	122.40	115.20	126.00
DMMU-07	209.30	276.50	197.10	177.90	180.80

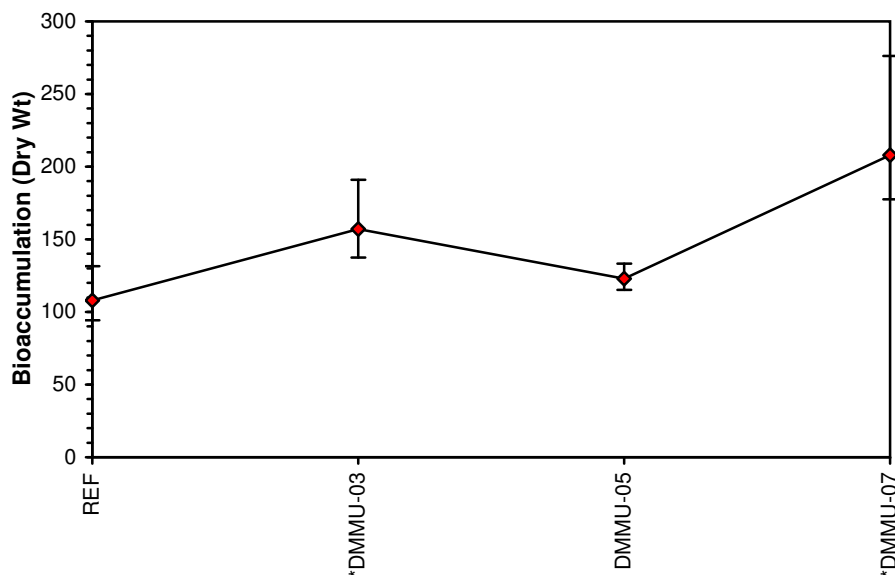
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	108.00	0.0000	108.00	94.20	131.40	14.213	5		
*DMMU-03	156.54	-0.4536	156.54	137.00	190.40	13.049	5	15.00 17.00	
DMMU-05	123.00	-0.1402	123.00	115.20	133.20	5.710	5	19.50 17.00	
*DMMU-07	208.32	-0.9376	208.32	177.90	276.50	19.288	5	15.00 17.00	

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.86295	0.905	1.66224	4.02141
Bartlett's Test indicates equal variances (p = 0.02)	9.65583	11.3449		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: LPH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total LPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	97.20	102.00	115.20	131.40	94.20
DMMU-03	137.00	151.30	158.00	146.00	190.40
DMMU-05	118.20	133.20	122.40	115.20	126.00
DMMU-07	209.30	276.50	197.10	177.90	180.80

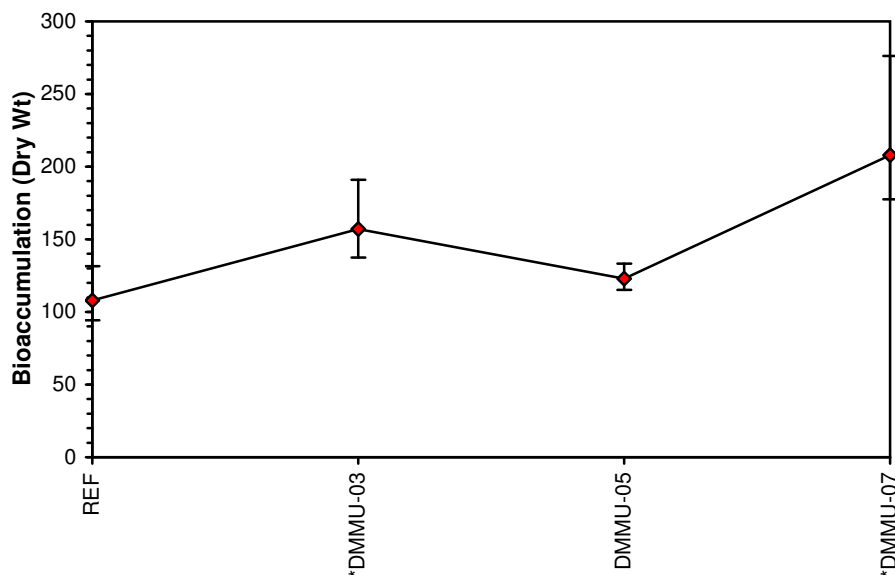
Conc-ppb	Mean	N-Mean	Transform: Log					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	108.00	0.0000	2.0301	1.9741	2.1186	2.937	5		
*DMMU-03	156.54	-0.4536	2.1918	2.1367	2.2797	2.467	5	15.00	17.00
DMMU-05	123.00	-0.1402	2.0893	2.0615	2.1245	1.177	5	19.50	17.00
*DMMU-07	208.32	-0.9376	2.3129	2.2502	2.4417	3.350	5	15.00	17.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.89705	0.905	1.08337	0.71916
Bartlett's Test indicates equal variances (p = 0.26)	4.02531	11.3449		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: HPH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total HPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	194.70	204.00	230.70	262.50	157.10
DMMU-03	219.20	212.00	227.60	235.40	211.00
DMMU-05	196.90	222.00	203.90	191.90	219.50
DMMU-07	375.60	513.40	373.50	366.40	318.50

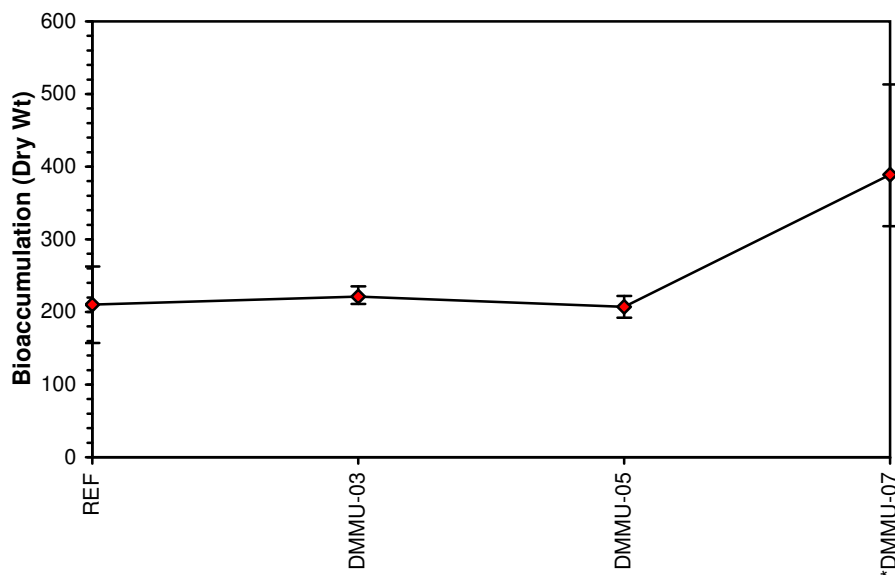
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	209.80	0.0000	209.80	157.10	262.50	18.846	5		
DMMU-03	221.04	-0.0538	221.04	211.00	235.40	4.719	5	24.00	17.00
DMMU-05	206.84	0.0142	206.84	191.90	222.00	6.490	5	29.00	17.00
*DMMU-07	389.48	-0.8605	389.48	318.50	513.40	18.769	5	15.00	17.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.84034	0.905	1.52179	5.19384
Bartlett's Test indicates unequal variances (p = 1.76E-03)	15.0641	11.3449		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

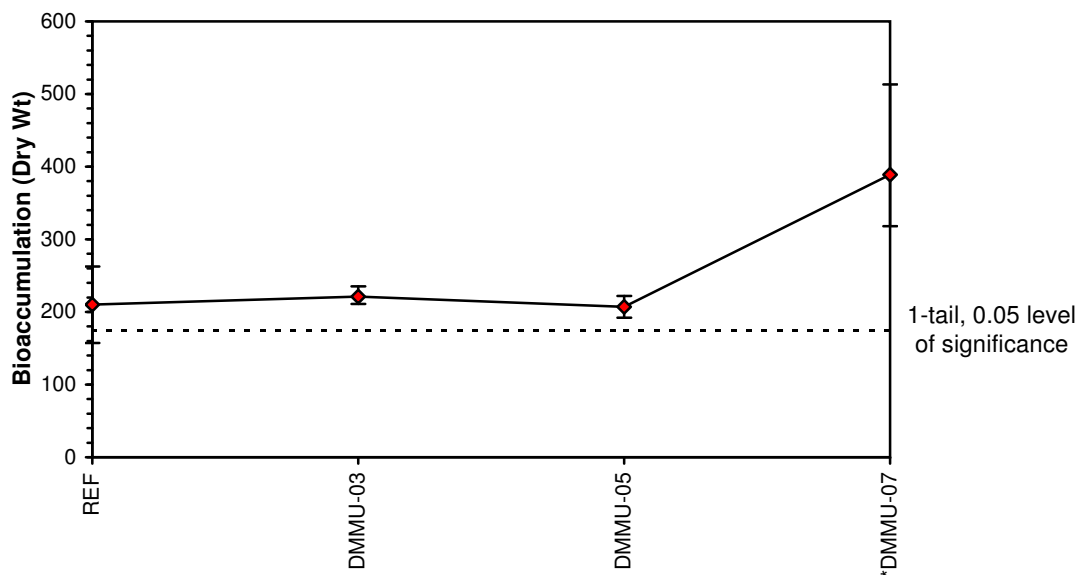
Start Date: Test ID: HPH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total HPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	194.70	204.00	230.70	262.50	157.10
DMMU-03	219.20	212.00	227.60	235.40	211.00
DMMU-05	196.90	222.00	203.90	191.90	219.50
DMMU-07	375.60	513.40	373.50	366.40	318.50

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	209.80	0.0000	0.0049	0.0038	0.0064	19.620	5			
DMMU-03	221.04	-0.0538	0.0045	0.0042	0.0047	4.653	5	1.066	2.230	0.0008
DMMU-05	206.84	0.0142	0.0049	0.0045	0.0052	6.450	5	0.166	2.230	0.0008
*DMMU-07	389.48	-0.8605	0.0026	0.0019	0.0031	16.328	5	6.431	2.230	0.0008

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.91855	0.905	0.59037	3.09107		
Bartlett's Test indicates equal variances (p = 0.03)	9.28945	11.3449				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs REF	-28.23	0	5.8E-06	3.1E-07	1.8E-05	3, 16

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: PAH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	291.90	306.00	345.90	393.90	251.30
DMMU-03	356.20	363.30	385.60	381.40	401.40
DMMU-05	315.10	355.20	326.30	307.10	345.50
DMMU-07	584.90	789.90	570.60	544.30	499.30

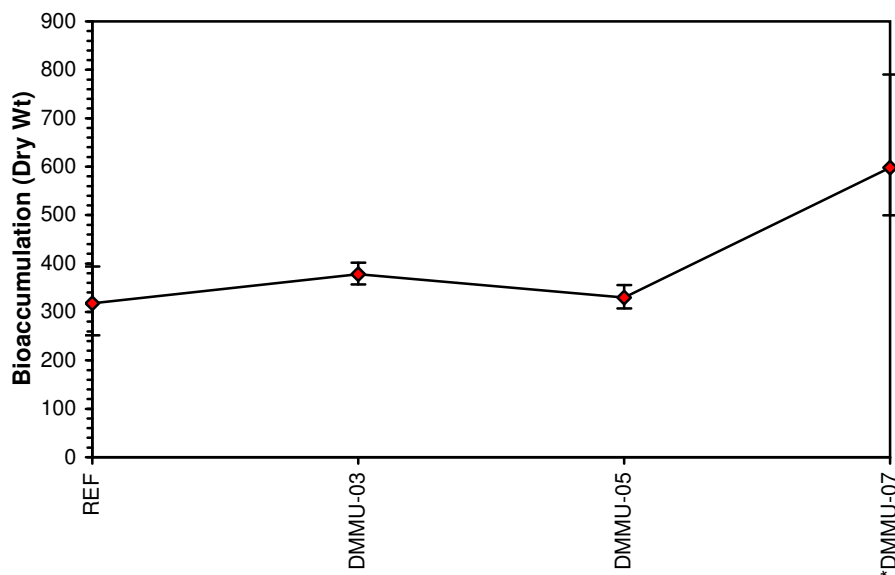
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	317.80	0.0000	317.80	251.30	393.90	17.100	5		
DMMU-03	377.58	-0.1887	377.58	356.20	401.40	4.788	5	19.00	17.00
DMMU-05	329.84	-0.0380	329.84	307.10	355.20	6.130	5	24.00	17.00
*DMMU-07	597.80	-0.8838	597.80	499.30	789.90	18.772	5	15.00	17.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.83729	0.905	1.78162	5.80724
Bartlett's Test indicates unequal variances (p = 2.26E-03)	14.5334	11.3449		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

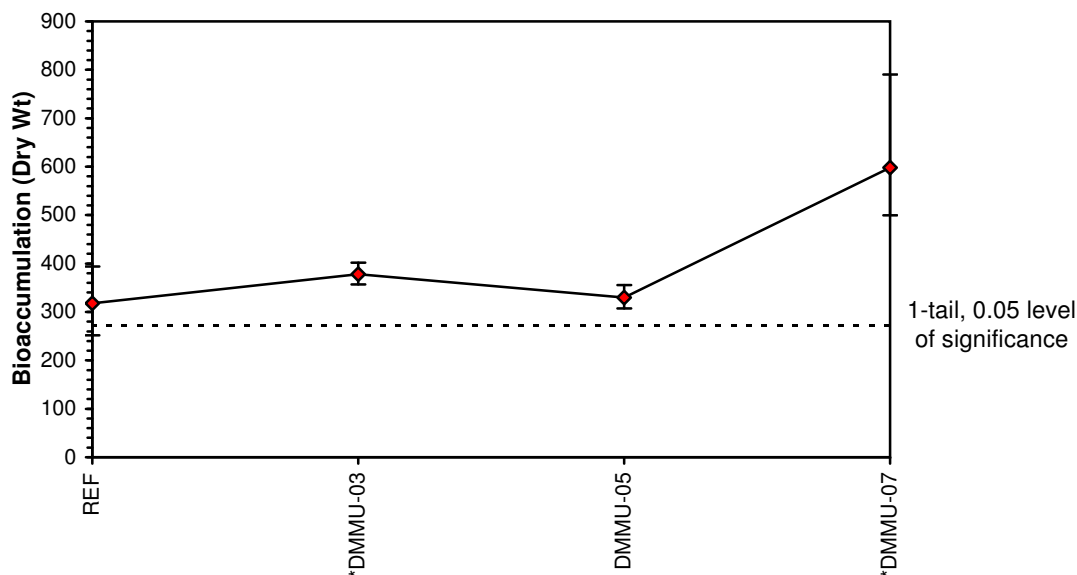
Start Date: Test ID: PAH-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Total PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	291.90	306.00	345.90	393.90	251.30
DMMU-03	356.20	363.30	385.60	381.40	401.40
DMMU-05	315.10	355.20	326.30	307.10	345.50
DMMU-07	584.90	789.90	570.60	544.30	499.30

Conc-ppb	Mean	N-Mean	Transform: Reciprocal					1-Tailed		
			Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
REF	317.80	0.0000	0.0032	0.0025	0.0040	16.962	5			
*DMMU-03	377.58	-0.1887	0.0027	0.0025	0.0028	4.783	5	2.755	2.230	0.0005
DMMU-05	329.84	-0.0380	0.0030	0.0028	0.0033	6.084	5	0.873	2.230	0.0005
*DMMU-07	597.80	-0.8838	0.0017	0.0013	0.0020	16.003	5	7.319	2.230	0.0005

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.94962	0.905	0.05929	2.04184		
Bartlett's Test indicates equal variances (p = 0.04)	8.41251	11.3449				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs REF	-38.744	0	2.3E-06	1.1E-07	7.8E-06	3, 16

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: B2P-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Bis(2=ethylhexyl) phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	25.50	38.50	173.00	74.70	15.70
DMMU-03	124.00	116.00	88.70	85.60	105.00
DMMU-08	131.00	175.00	127.00	139.00	179.00

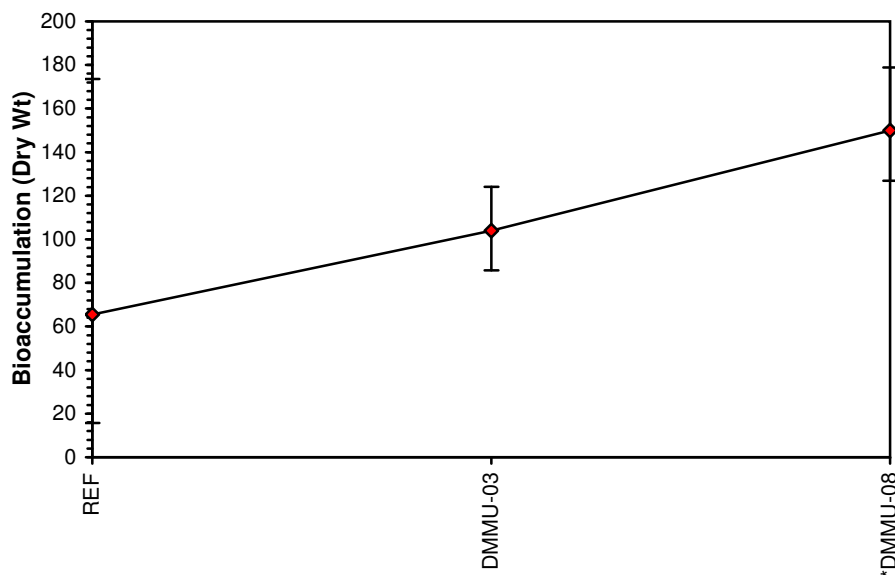
Conc-ppb	Mean	N-Mean	Transform: Untransformed				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	65.48	0.0000	65.48	15.70	173.00	97.936	5		
DMMU-03	103.86	-0.5952	103.86	85.60	124.00	16.094	5	20.00	18.00
*DMMU-08	150.20	-1.3139	150.20	127.00	179.00	16.567	5	18.00	18.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.87153	0.881	1.60567	3.9899
Bartlett's Test indicates equal variances (p = 0.03)	6.76644	9.21035		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: B2P-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Bis(2=ethylhexyl) phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	25.50	38.50	173.00	74.70	15.70
DMMU-03	124.00	116.00	88.70	85.60	105.00
DMMU-08	131.00	175.00	127.00	139.00	179.00

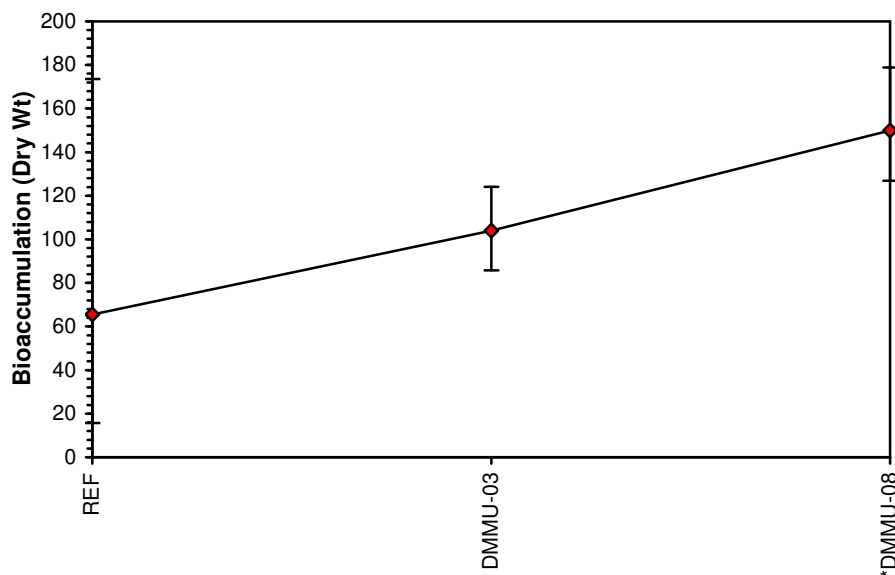
Conc-ppb	Mean	N-Mean	Transform: Reciprocal				Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%		
REF	65.48	0.0000	0.0296	0.0058	0.0637	77.350	5	
DMMU-03	103.86	-0.5952	0.0098	0.0081	0.0117	16.231	5	20.00
*DMMU-08	150.20	-1.3139	0.0068	0.0056	0.0079	15.863	5	18.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.79123	0.881	1.00593	4.67231
Bartlett's Test indicates unequal variances (p = 4.15E-07)	29.3898	9.21035		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

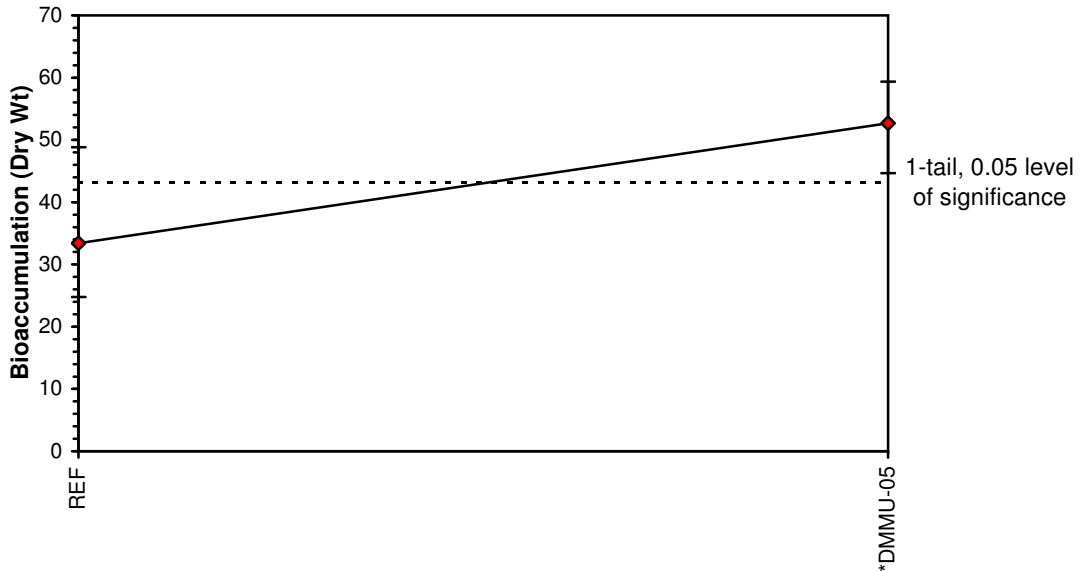
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Diethyl phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	27.500	34.400	24.800	48.800	31.700
DMMU-05	45.900	57.700	55.900	44.700	59.400

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	33.440	0.0000	33.440	24.800	48.800	27.965	5				
*DMMU-05	52.720	-0.5943	52.720	44.700	59.400	13.086	5	3.710	1.860	9.664	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.92571	0.842	0.71256	-0.0075		
F-Test indicates equal variances (p = 0.57)	1.83756	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	9.66411	0	929.296	67.5225	0.00596	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

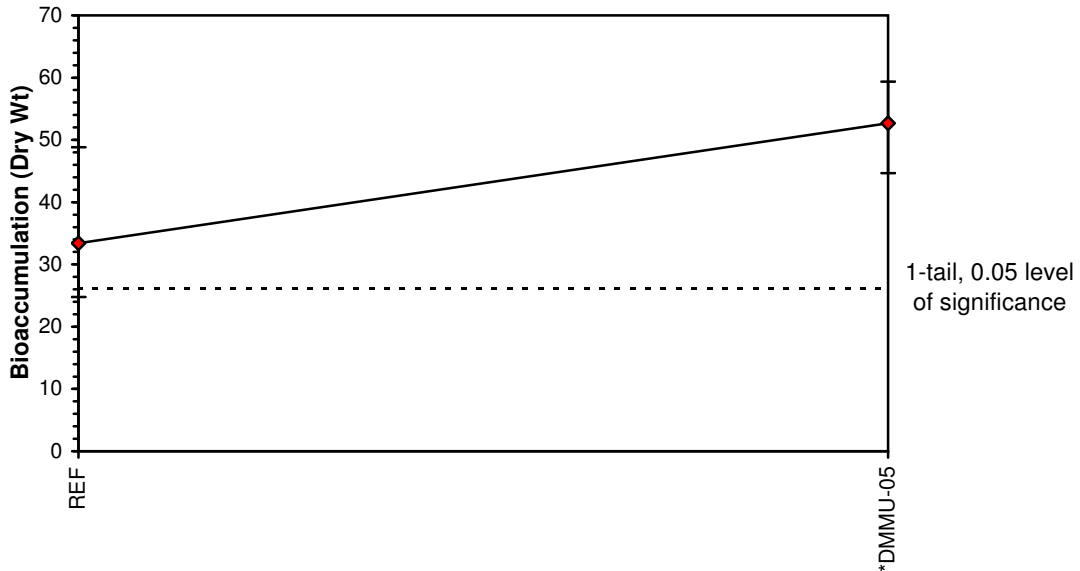
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Diethyl phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	27.500	34.400	24.800	48.800	31.700
DMMU-05	45.900	57.700	55.900	44.700	59.400

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	33.440	0.0000	0.0316	0.0205	0.0403	23.953	5			
*DMMU-05	52.720	-0.5943	0.0192	0.0168	0.0224	13.637	5	3.442	1.860	0.0067

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.94602	0.842	-0.5152	1.4984		
F-Test indicates equal variances (p = 0.06)	8.29841	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-5.5179	0	0.00038	3.2E-05	0.0088	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: DBP-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Di-n-Butyl) phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	38.400	23.200	34.300	50.100	30.700
DMMU-02	80.800	95.300	91.700	121.000	101.000
DMMU-03	35.100	44.400	34.200	32.700	84.800
DMMU-04	76.200	74.400	72.300	73.600	66.500
DMMU-05	19.700	115.000	20.400	19.200	21.000
DMMU-06	93.600	44.000	22.000	27.300	21.300
DMMU-07	84.200	66.900	70.200	56.400	56.300
DMMU-08	38.100	60.400	60.300	58.800	70.900

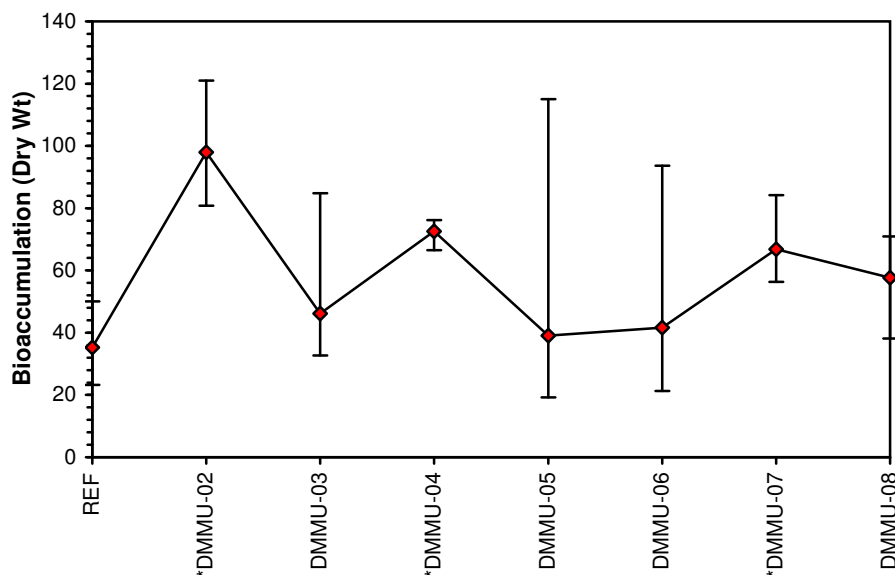
Conc-ppb	Mean	N-Mean	Transform: Untransformed				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	35.340	0.0000	35.340	23.200	50.100	28.198	5		
*DMMU-02	97.960	-1.8235	97.960	80.800	121.000	15.148	5	15.00	16.00
DMMU-03	46.240	-0.3174	46.240	32.700	84.800	47.660	5	24.00	16.00
*DMMU-04	72.600	-1.0850	72.600	66.500	76.200	5.084	5	15.00	16.00
DMMU-05	39.060	-0.1083	39.060	19.200	115.000	108.698	5	35.00	16.00
DMMU-06	41.640	-0.1835	41.640	21.300	93.600	73.143	5	30.00	16.00
*DMMU-07	66.800	-0.9161	66.800	56.300	84.200	17.276	5	15.00	16.00
DMMU-08	57.700	-0.6511	57.700	38.100	70.900	20.755	5	17.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.80248	0.94	2.04711	5.38935
Bartlett's Test indicates unequal variances (p = 1.48E-03)	23.3437	18.4753		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: DBP-DW-AV Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: AV  
 Comments: Di-n-Butyl) phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	38.400	23.200	34.300	50.100	30.700
DMMU-02	80.800	95.300	91.700	121.000	101.000
DMMU-03	35.100	44.400	34.200	32.700	84.800
DMMU-04	76.200	74.400	72.300	73.600	66.500
DMMU-05	19.700	115.000	20.400	19.200	21.000
DMMU-06	93.600	44.000	22.000	27.300	21.300
DMMU-07	84.200	66.900	70.200	56.400	56.300
DMMU-08	38.100	60.400	60.300	58.800	70.900

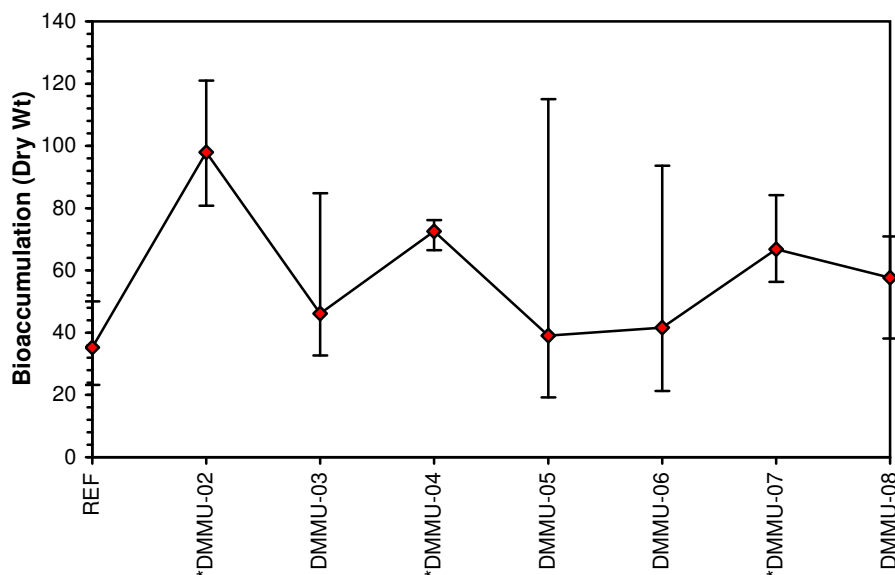
Conc-ppb	Mean	N-Mean	Transform: Reciprocal				Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%		
REF	35.340	0.0000	0.0302	0.0200	0.0431	28.486	5	
*DMMU-02	97.960	-1.8235	0.0104	0.0083	0.0124	14.422	5	15.00
DMMU-03	46.240	-0.3174	0.0245	0.0118	0.0306	31.633	5	24.00
*DMMU-04	72.600	-1.0850	0.0138	0.0131	0.0150	5.329	5	15.00
DMMU-05	39.060	-0.1083	0.0416	0.0087	0.0521	44.413	5	35.00
DMMU-06	41.640	-0.1835	0.0325	0.0107	0.0469	47.810	5	30.00
*DMMU-07	66.800	-0.9161	0.0153	0.0119	0.0178	16.302	5	15.00
DMMU-08	57.700	-0.6511	0.0181	0.0141	0.0262	25.946	5	17.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.87087	0.94	-1.5828	4.77842
Bartlett's Test indicates unequal variances (p = 5.33E-07)	41.9459	18.4753		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ant-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Antimony , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0144	0.0150	0.0151	0.0155	0.0151
DMMU-01	0.0174	0.0183	0.0218	0.0352	0.0179
DMMU-02	0.0165	0.0172	0.0156	0.0177	0.0172
DMMU-03	0.0206	0.0180	0.0168	0.0184	0.0158
DMMU-04	0.0170	0.0150	0.0142	0.0166	0.0220
DMMU-05	0.0281	0.0200	0.0253	0.0284	0.0327
DMMU-06	0.0205	0.0156	0.0577	0.0156	0.0158
DMMU-07	0.0159	0.0179	0.0149	0.0168	0.0134
DMMU-08	0.0181	0.0152	0.0158	0.0162	0.0212

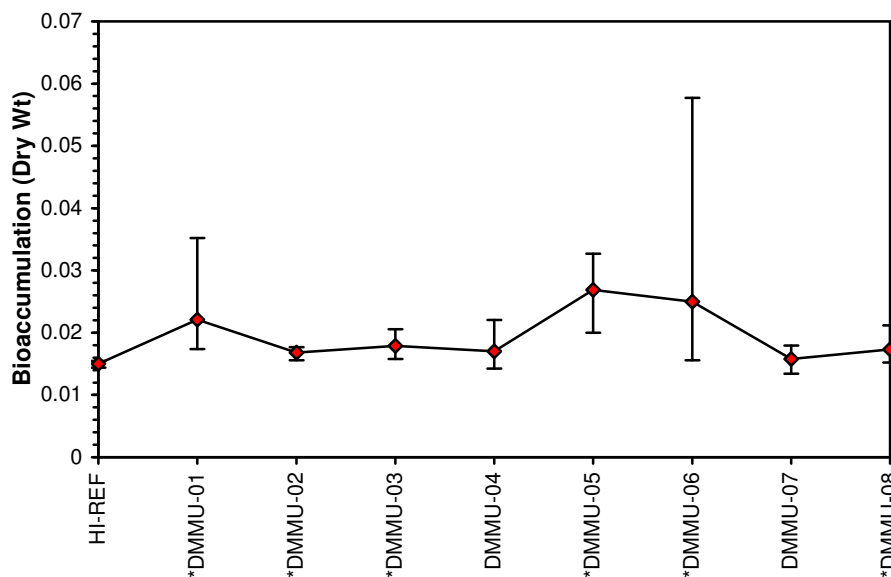
Conc-mg/Kg	Transform: Untransformed						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.0150	0.0000	0.0150	0.0144	0.0155	2.638	5	
*DMMU-01	0.0221	0.0072	0.0221	0.0174	0.0352	33.971	5	15.00 16.00
*DMMU-02	0.0168	0.0018	0.0168	0.0156	0.0177	4.835	5	15.00 16.00
*DMMU-03	0.0179	0.0029	0.0179	0.0158	0.0206	10.125	5	15.00 16.00
DMMU-04	0.0170	0.0020	0.0170	0.0142	0.0220	17.931	5	23.50 16.00
*DMMU-05	0.0269	0.0121	0.0269	0.0200	0.0327	17.387	5	15.00 16.00
*DMMU-06	0.0250	0.0102	0.0250	0.0156	0.0577	73.392	5	15.00 16.00
DMMU-07	0.0158	0.0008	0.0158	0.0134	0.0179	10.971	5	24.00 16.00
*DMMU-08	0.0173	0.0023	0.0173	0.0152	0.0212	14.076	5	16.00 16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.69629	0.945	3.24208	16.4062
Bartlett's Test indicates unequal variances (p = 3.21E-11)	65.8979	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ant-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Antimony , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0144	0.0150	0.0151	0.0155	0.0151
DMMU-01	0.0174	0.0183	0.0218	0.0352	0.0179
DMMU-02	0.0165	0.0172	0.0156	0.0177	0.0172
DMMU-03	0.0206	0.0180	0.0168	0.0184	0.0158
DMMU-04	0.0170	0.0150	0.0142	0.0166	0.0220
DMMU-05	0.0281	0.0200	0.0253	0.0284	0.0327
DMMU-06	0.0205	0.0156	0.0577	0.0156	0.0158
DMMU-07	0.0159	0.0179	0.0149	0.0168	0.0134
DMMU-08	0.0181	0.0152	0.0158	0.0162	0.0212

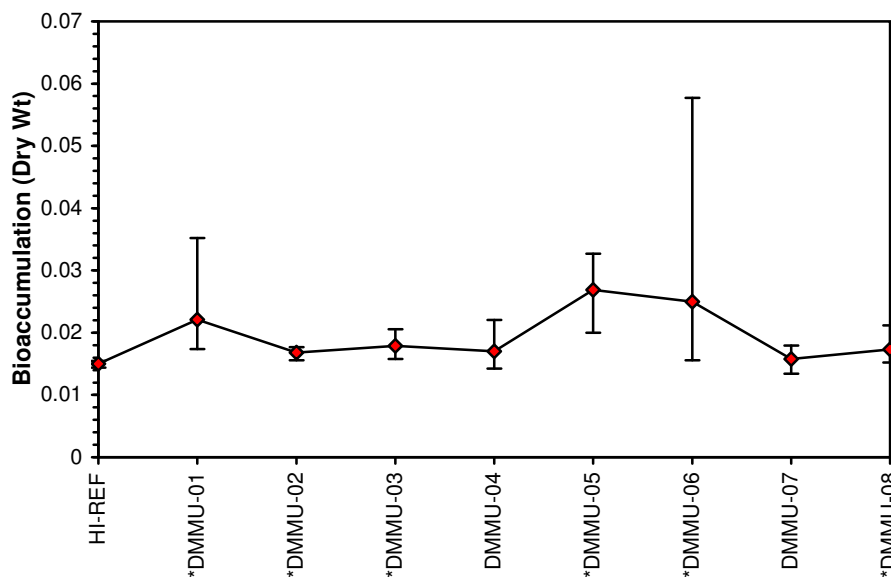
Conc-mg/Kg	Transform: Reciprocal						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.0150	0.0000	66.616	64.516	69.444	2.677	5	
*DMMU-01	0.0221	0.0072	48.453	28.409	57.471	24.917	5	15.00
*DMMU-02	0.0168	0.0018	59.497	56.497	64.103	4.981	5	15.00
*DMMU-03	0.0179	0.0029	56.252	48.544	63.291	9.889	5	15.00
DMMU-04	0.0170	0.0020	60.322	45.455	70.423	15.848	5	23.50
*DMMU-05	0.0269	0.0121	38.181	30.581	50.000	19.193	5	15.00
*DMMU-06	0.0250	0.0102	51.522	17.331	64.103	39.200	5	15.00
DMMU-07	0.0158	0.0008	64.005	55.866	74.627	11.322	5	24.00
*DMMU-08	0.0173	0.0023	58.645	47.170	65.789	12.799	5	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.89407	0.945	-1.4819	4.35414
Bartlett's Test indicates unequal variances (p = 1.89E-03)	24.4992	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

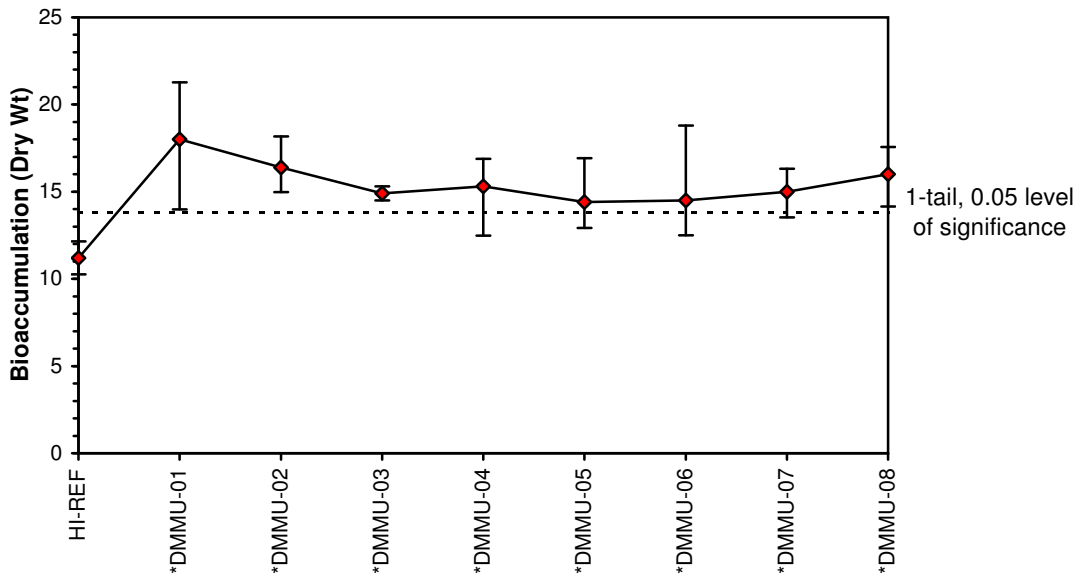
Start Date: Test ID: ARS-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Arsenic , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	11.100	11.300	12.200	10.300	11.300
DMMU-01	17.600	18.400	18.800	21.300	14.000
DMMU-02	16.900	18.200	16.500	15.500	15.000
DMMU-03	14.700	15.300	14.500	15.000	15.000
DMMU-04	15.900	16.900	12.500	15.000	16.300
DMMU-05	15.000	16.900	13.200	12.900	13.900
DMMU-06	18.800	12.500	15.000	13.200	13.000
DMMU-07	13.500	14.700	16.300	15.400	15.000
DMMU-08	15.500	15.700	14.200	17.200	17.600

Conc-mg/Kg	Transform: Untransformed						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	11.240	0.0000	11.240	10.300	12.200	6.021	5			
*DMMU-01	18.020	-0.6621	18.020	14.000	21.300	14.642	5	6.525	2.480	2.577
*DMMU-02	16.420	-0.5059	16.420	15.000	18.200	7.624	5	4.985	2.480	2.577
*DMMU-03	14.900	-0.3574	14.900	14.500	15.300	2.069	5	3.522	2.480	2.577
*DMMU-04	15.320	-0.3984	15.320	12.500	16.900	11.234	5	3.927	2.480	2.577
*DMMU-05	14.380	-0.3066	14.380	12.900	16.900	11.293	5	3.022	2.480	2.577
*DMMU-06	14.500	-0.3184	14.500	12.500	18.800	17.811	5	3.138	2.480	2.577
*DMMU-07	14.980	-0.3652	14.980	13.500	16.300	6.831	5	3.599	2.480	2.577
*DMMU-08	16.040	-0.4688	16.040	14.200	17.600	8.578	5	4.620	2.480	2.577

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97685	0.945	0.22398	1.61681		
Bartlett's Test indicates equal variances (p = 0.02)	18.4656	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	2.57681	0	16.8951	2.699	4.5E-05	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

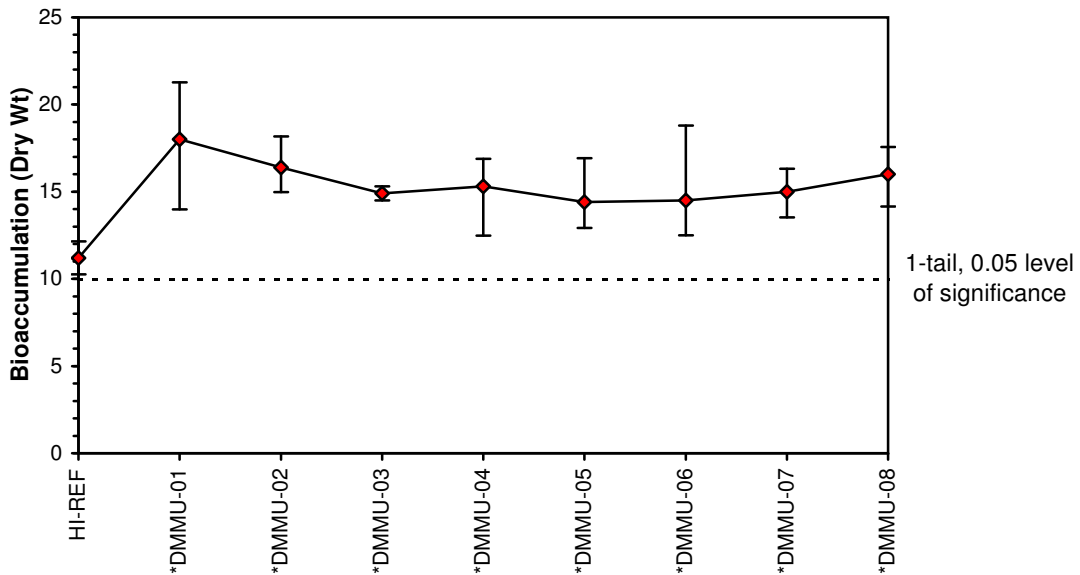
Start Date: Test ID: ARS-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Arsenic , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	11.100	11.300	12.200	10.300	11.300
DMMU-01	17.600	18.400	18.800	21.300	14.000
DMMU-02	16.900	18.200	16.500	15.500	15.000
DMMU-03	14.700	15.300	14.500	15.000	15.000
DMMU-04	15.900	16.900	12.500	15.000	16.300
DMMU-05	15.000	16.900	13.200	12.900	13.900
DMMU-06	18.800	12.500	15.000	13.200	13.000
DMMU-07	13.500	14.700	16.300	15.400	15.000
DMMU-08	15.500	15.700	14.200	17.200	17.600

Conc-mg/Kg	Transform: Reciprocal						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	11.240	0.0000	0.0892	0.0820	0.0971	6.043	5			
*DMMU-01	18.020	-0.6621	0.0565	0.0469	0.0714	16.057	5	7.488	2.480	0.0108
*DMMU-02	16.420	-0.5059	0.0612	0.0549	0.0667	7.511	5	6.426	2.480	0.0108
*DMMU-03	14.900	-0.3574	0.0671	0.0654	0.0690	2.072	5	5.061	2.480	0.0108
*DMMU-04	15.320	-0.3984	0.0660	0.0592	0.0800	12.545	5	5.318	2.480	0.0108
*DMMU-05	14.380	-0.3066	0.0702	0.0592	0.0775	10.601	5	4.357	2.480	0.0108
*DMMU-06	14.500	-0.3184	0.0705	0.0532	0.0800	15.430	5	4.289	2.480	0.0108
*DMMU-07	14.980	-0.3652	0.0670	0.0613	0.0741	6.976	5	5.090	2.480	0.0108
*DMMU-08	16.040	-0.4688	0.0627	0.0568	0.0704	8.708	5	6.074	2.480	0.0108

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.98175	0.945	0.02122	0.83543		
Bartlett's Test indicates equal variances (p = 0.09)	13.8442	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	-1.2125	0	0.00042	4.8E-05	1.4E-06	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: CHR-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Chromium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.3270	0.3800	0.3670	0.4890	0.3430
DMMU-01	0.3320	0.4940	0.5430	0.6780	1.7900
DMMU-02	0.6040	0.9050	1.4200	1.4000	0.7570
DMMU-03	0.4660	0.6530	0.6880	0.7840	0.5790
DMMU-04	0.3370	0.3310	1.1100	1.2900	2.7600
DMMU-05	1.7600	0.6790	2.5000	4.6300	3.5100
DMMU-06	1.0500	2.5700	0.9220	1.4700	1.7900
DMMU-07	0.3500	0.3680	0.3700	0.4590	0.6680
DMMU-08	0.3270	0.3800	0.3670	0.4890	0.3430

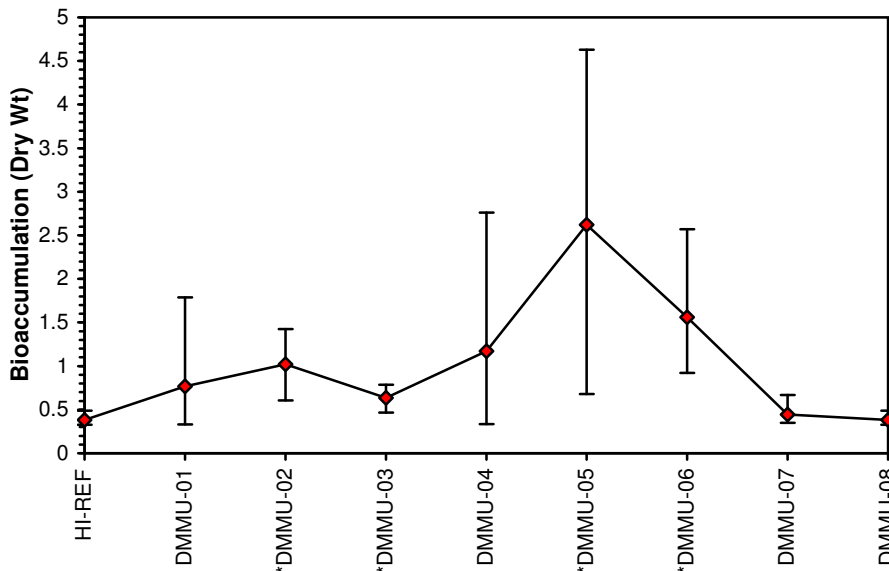
Conc-mg/Kg	Transform: Untransformed						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	0.3812	0.0000	0.3812	0.3270	0.4890	16.705	5	
DMMU-01	0.7674	0.6241	0.7674	0.3320	1.7900	76.217	5	19.00
*DMMU-02	1.0172	1.0278	1.0172	0.6040	1.4200	36.778	5	15.00
*DMMU-03	0.6340	0.4085	0.6340	0.4660	0.7840	18.833	5	16.00
DMMU-04	1.1656	1.2676	1.1656	0.3310	2.7600	85.188	5	23.00
*DMMU-05	2.6158	3.6112	2.6158	0.6790	4.6300	58.459	5	15.00
*DMMU-06	1.5604	1.9056	1.5604	0.9220	2.5700	42.368	5	15.00
DMMU-07	0.4430	0.0999	0.4430	0.3500	0.6680	29.965	5	23.00
DMMU-08	0.3812	0.0000	0.3812	0.3270	0.4890	16.705	5	27.50

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.87391	0.945	0.54241	3.93486
Bartlett's Test indicates unequal variances (p = 1.57E-09)	57.3096	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

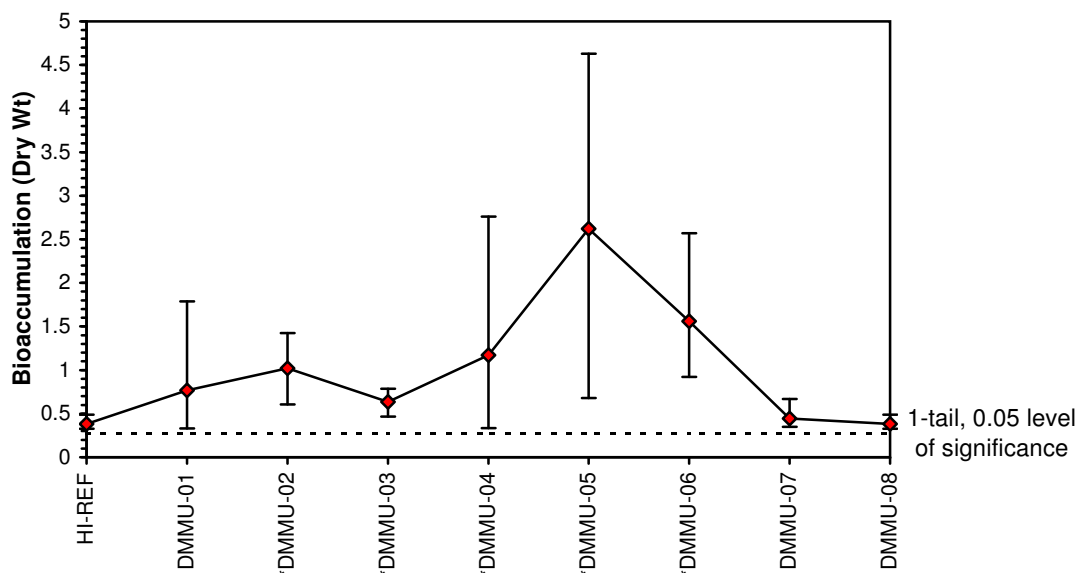
Start Date: Test ID: CHR-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Chromium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.3270	0.3800	0.3670	0.4890	0.3430
DMMU-01	0.3320	0.4940	0.5430	0.6780	1.7900
DMMU-02	0.6040	0.9050	1.4200	1.4000	0.7570
DMMU-03	0.4660	0.6530	0.6880	0.7840	0.5790
DMMU-04	0.3370	0.3310	1.1100	1.2900	2.7600
DMMU-05	1.7600	0.6790	2.5000	4.6300	3.5100
DMMU-06	1.0500	2.5700	0.9220	1.4700	1.7900
DMMU-07	0.3500	0.3680	0.3700	0.4590	0.6680
DMMU-08	0.3270	0.3800	0.3670	0.4890	0.3430

Conc-mg/Kg	Transform: Reciprocal						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	0.3812	0.0000	2.6750	2.0450	3.0581	14.549	5			
DMMU-01	0.7674	0.6241	1.7823	0.5587	3.0120	49.917	5	2.208	2.480	1.0026
*DMMU-02	1.0172	1.0278	1.1000	0.7042	1.6556	37.011	5	3.896	2.480	1.0026
*DMMU-03	0.6340	0.4085	1.6267	1.2755	2.1459	20.437	5	2.593	2.480	1.0026
*DMMU-04	1.1656	1.2676	1.6054	0.3623	3.0211	79.953	5	2.646	2.480	1.0026
*DMMU-05	2.6158	3.6112	0.5884	0.2160	1.4728	87.030	5	5.161	2.480	1.0026
*DMMU-06	1.5604	1.9056	0.7330	0.3891	1.0846	38.779	5	4.803	2.480	1.0026
DMMU-07	0.4430	0.0999	2.3906	1.4970	2.8571	23.527	5	0.703	2.480	1.0026
DMMU-08	0.3812	0.0000	2.6750	2.0450	3.0581	14.549	5	0.000	2.480	1.0026

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96381	0.945	0.29362	0.76653		
Bartlett's Test indicates equal variances (p = 0.04)	16.3275	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	-0.1019	0	3.08017	0.40862	7.3E-06	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

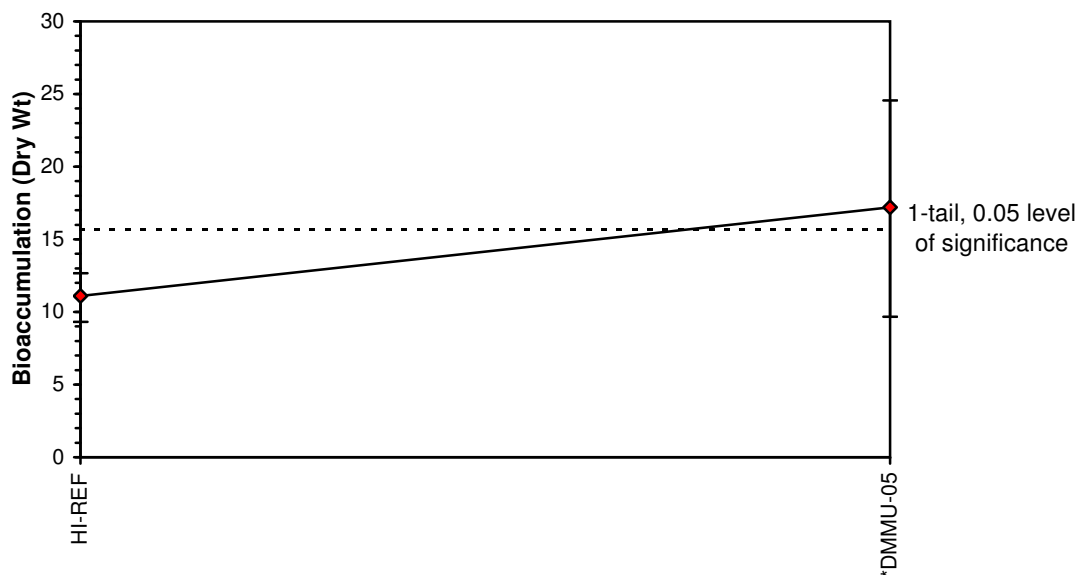
Start Date: Test ID: Cu-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Copper , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	12.700	11.600	9.340	10.900	11.100
DMMU-05	18.100	9.730	16.000	17.800	24.600

Conc-mg/Kg	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
HI-REF	11.128	0.0000	11.1280	9.3400	12.7000	10.954	5				
*DMMU-05	17.246	-0.6041	17.2460	9.7300	24.6000	30.841	5	2.507	1.860	4.5379	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.87437	0.842	-0.0858	3.30671		
F-Test indicates equal variances (p = 0.01)	19.0388	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs HI-REF	4.53791	0	93.5748	14.888	0.03654	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

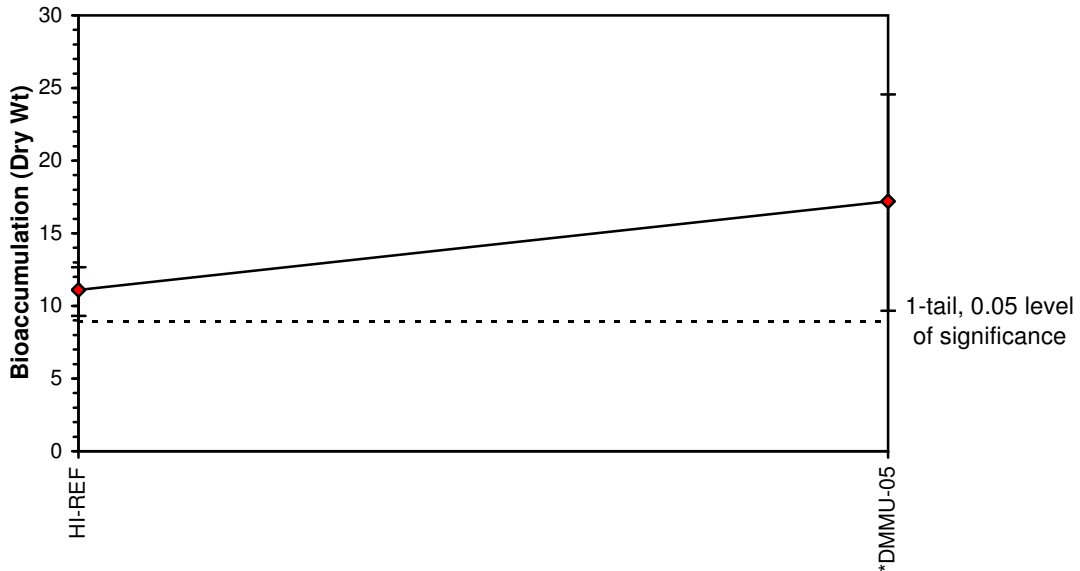
Start Date: Test ID: Cu-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Copper , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	12.700	11.600	9.340	10.900	11.100
DMMU-05	18.100	9.730	16.000	17.800	24.600

Conc-mg/Kg	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
HI-REF	11.128	0.0000	0.0908	0.0787	0.1071	11.456	5			
*DMMU-05	17.246	-0.6041	0.0635	0.0407	0.1028	36.843	5	2.385	1.860	0.0213

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.87568	0.842	1.40899	2.76205		
F-Test indicates equal variances (p = 0.15)	5.05708	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs HI-REF	-2.0925	0	0.00186	0.00033	0.04419	1, 8

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Pb-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Lead, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.4140	0.3610	0.3010	0.3460	0.3650
DMMU-01	0.5610	0.5480	0.6630	0.7050	0.7640
DMMU-02	0.7080	0.7520	0.6700	0.6700	0.8420
DMMU-03	0.7570	0.7490	0.6830	0.6960	0.6070
DMMU-04	0.5970	0.6110	0.5420	0.7340	1.0800
DMMU-05	1.1800	0.6520	1.0600	1.1500	1.1900
DMMU-06	0.7320	0.6070	0.5930	0.6370	0.6320
DMMU-07	0.7020	0.8780	0.7120	0.7120	0.7630
DMMU-08	0.7440	0.5960	0.6240	0.6650	0.6120

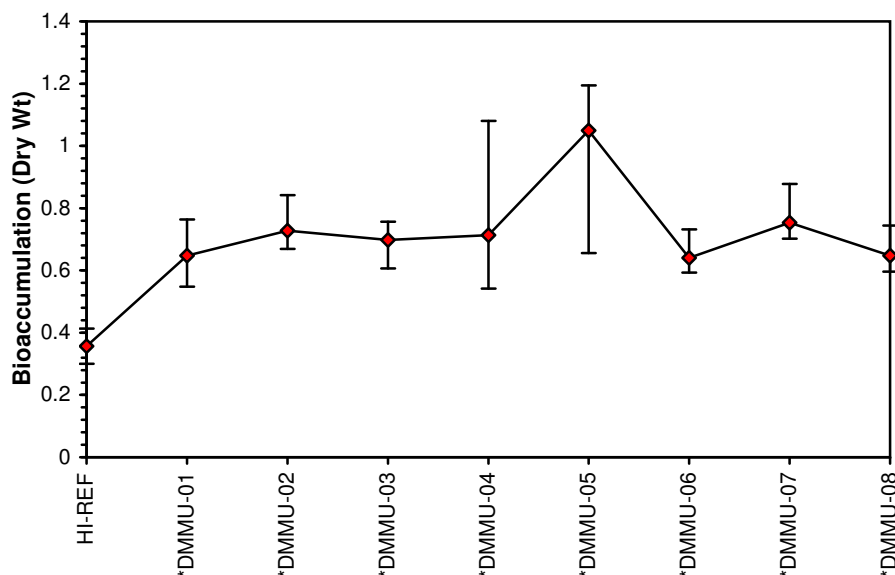
Conc-mg/Kg	Transform: Untransformed							Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%	N		
HI-REF	0.3574	0.0000	0.3574	0.3010	0.4140	11.353	5		
*DMMU-01	0.6482	0.4525	0.6482	0.5480	0.7640	14.327	5	15.00	16.00
*DMMU-02	0.7284	0.5773	0.7284	0.6700	0.8420	9.876	5	15.00	16.00
*DMMU-03	0.6984	0.5307	0.6984	0.6070	0.7570	8.648	5	15.00	16.00
*DMMU-04	0.7128	0.5531	0.7128	0.5420	1.0800	30.433	5	15.00	16.00
*DMMU-05	1.0464	1.0722	1.0464	0.6520	1.1900	21.631	5	15.00	16.00
*DMMU-06	0.6402	0.4401	0.6402	0.5930	0.7320	8.496	5	15.00	16.00
*DMMU-07	0.7534	0.6162	0.7534	0.7020	0.8780	9.773	5	15.00	16.00
*DMMU-08	0.6482	0.4525	0.6482	0.5960	0.7440	9.153	5	15.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.91644	0.945	-0.1733	5.3541
Bartlett's Test indicates unequal variances (p = 2.24E-03)	24.0555	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

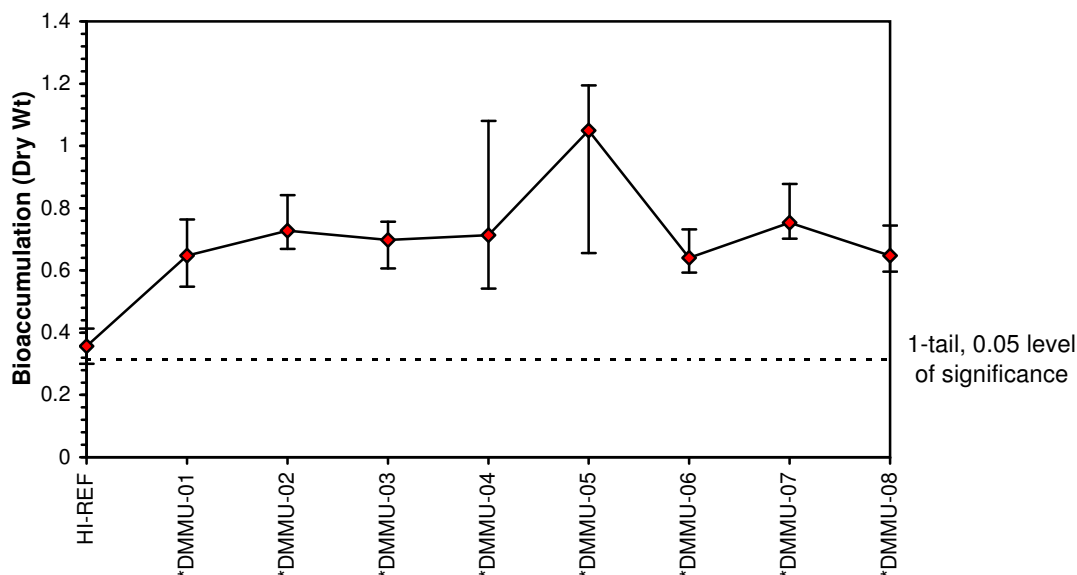
Start Date: Test ID: Pb-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Lead, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.4140	0.3610	0.3010	0.3460	0.3650
DMMU-01	0.5610	0.5480	0.6630	0.7050	0.7640
DMMU-02	0.7080	0.7520	0.6700	0.6700	0.8420
DMMU-03	0.7570	0.7490	0.6830	0.6960	0.6070
DMMU-04	0.5970	0.6110	0.5420	0.7340	1.0800
DMMU-05	1.1800	0.6520	1.0600	1.1500	1.1900
DMMU-06	0.7320	0.6070	0.5930	0.6370	0.6320
DMMU-07	0.7020	0.8780	0.7120	0.7120	0.7630
DMMU-08	0.7440	0.5960	0.6240	0.6650	0.6120

Conc-mg/Kg	Transform: Reciprocal						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	0.3574	0.0000	2.8275	2.4155	3.3223	11.589	5			
*DMMU-01	0.6482	0.4525	1.5686	1.3089	1.8248	14.434	5	8.834	2.480	0.3534
*DMMU-02	0.7284	0.5773	1.3830	1.1876	1.4925	9.278	5	10.137	2.480	0.3534
*DMMU-03	0.6984	0.5307	1.4409	1.3210	1.6474	9.101	5	9.731	2.480	0.3534
*DMMU-04	0.7128	0.5531	1.4890	0.9259	1.8450	24.127	5	9.393	2.480	0.3534
*DMMU-05	1.0464	1.0722	1.0069	0.8403	1.5337	29.529	5	12.776	2.480	0.3534
*DMMU-06	0.6402	0.4401	1.5704	1.3661	1.6863	7.880	5	8.822	2.480	0.3534
*DMMU-07	0.7534	0.6162	1.3366	1.1390	1.4245	8.906	5	10.462	2.480	0.3534
*DMMU-08	0.6482	0.4525	1.5524	1.3441	1.6779	8.562	5	8.948	2.480	0.3534

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97259	0.945	0.13038	1.4241		
Bartlett's Test indicates equal variances (p = 0.12)	12.7859	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	-0.0393	0	1.25703	0.05077	1.9E-12	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

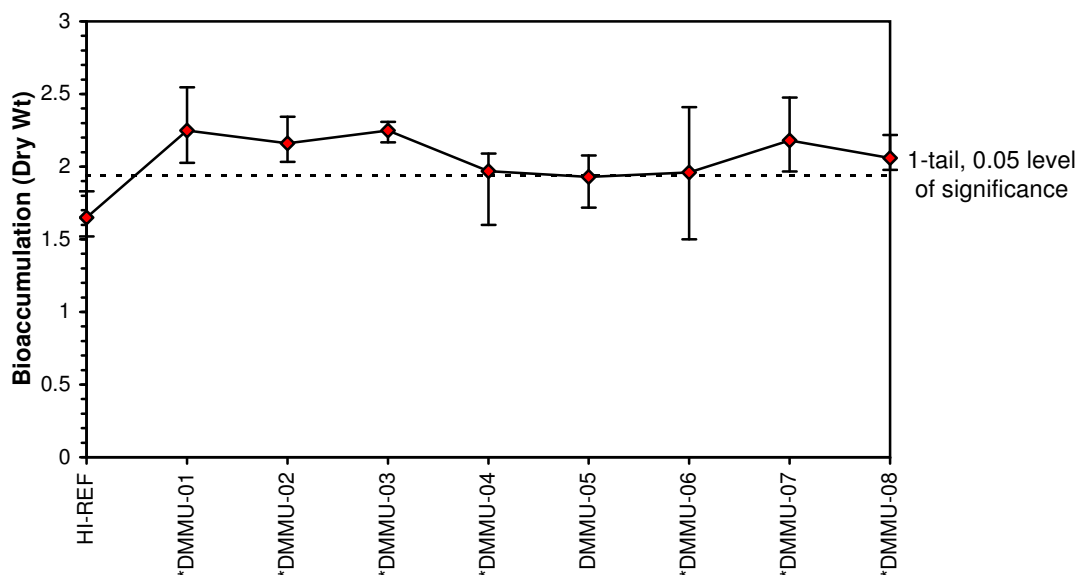
Start Date: Test ID: Sel-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Selenium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	1.6200	1.8300	1.5900	1.6900	1.5200
DMMU-01	2.1400	2.2800	2.5500	2.2700	2.0300
DMMU-02	2.3000	2.3400	2.0700	2.0400	2.0300
DMMU-03	2.1700	2.3000	2.2700	2.2100	2.3100
DMMU-04	2.0700	2.0800	1.6000	2.0100	2.0900
DMMU-05	2.0800	2.0600	1.9600	1.8400	1.7200
DMMU-06	2.4100	1.9000	1.5000	2.0300	1.9600
DMMU-07	2.0200	2.4800	2.2600	2.1900	1.9700
DMMU-08	2.2200	2.1100	2.0200	1.9800	1.9800

Conc-mg/Kg	Transform: Untransformed						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	1.6500	0.0000	1.6500	1.5200	1.8300	7.132	5			
*DMMU-01	2.2540	-0.9292	2.2540	2.0300	2.5500	8.640	5	5.206	2.480	0.2877
*DMMU-02	2.1560	-0.7785	2.1560	2.0300	2.3400	7.008	5	4.361	2.480	0.2877
*DMMU-03	2.2520	-0.9262	2.2520	2.1700	2.3100	2.672	5	5.188	2.480	0.2877
*DMMU-04	1.9700	-0.4923	1.9700	1.6000	2.0900	10.618	5	2.758	2.480	0.2877
DMMU-05	1.9320	-0.4338	1.9320	1.7200	2.0800	7.870	5	2.430	2.480	0.2877
*DMMU-06	1.9600	-0.4769	1.9600	1.5000	2.4100	16.584	5	2.672	2.480	0.2877
*DMMU-07	2.1840	-0.8215	2.1840	1.9700	2.4800	9.331	5	4.602	2.480	0.2877
*DMMU-08	2.0620	-0.6338	2.0620	1.9800	2.2200	4.998	5	3.551	2.480	0.2877

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.98141	0.945	-0.11	1.35163		
Bartlett's Test indicates equal variances (p = 0.15)	12.076	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	0.28775	0	0.18755	0.03366	1.3E-04	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

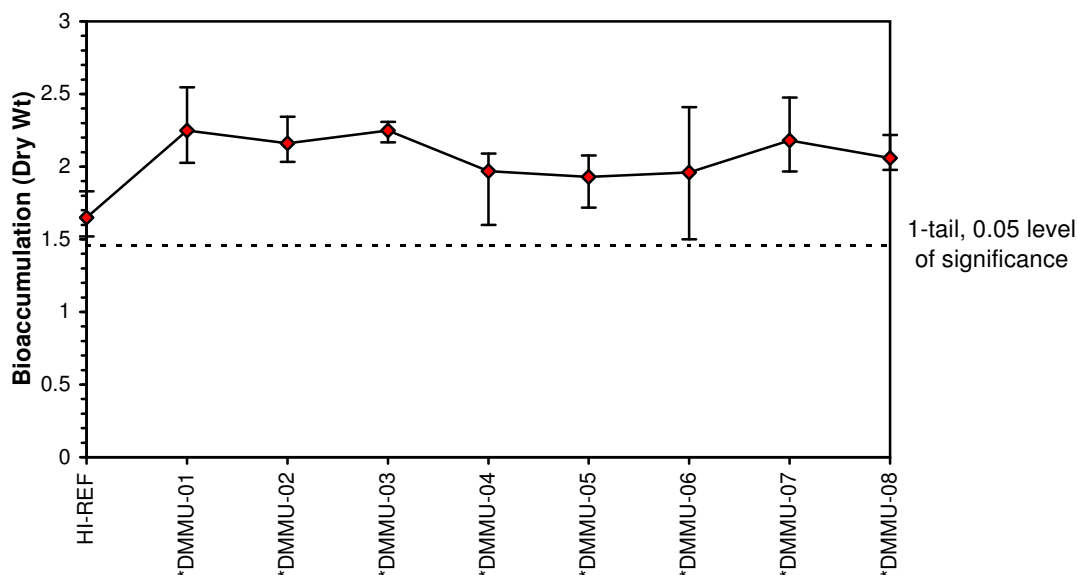
Start Date: Test ID: Sel-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Selenium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	1.6200	1.8300	1.5900	1.6900	1.5200
DMMU-01	2.1400	2.2800	2.5500	2.2700	2.0300
DMMU-02	2.3000	2.3400	2.0700	2.0400	2.0300
DMMU-03	2.1700	2.3000	2.2700	2.2100	2.3100
DMMU-04	2.0700	2.0800	1.6000	2.0100	2.0900
DMMU-05	2.0800	2.0600	1.9600	1.8400	1.7200
DMMU-06	2.4100	1.9000	1.5000	2.0300	1.9600
DMMU-07	2.0200	2.4800	2.2600	2.1900	1.9700
DMMU-08	2.2200	2.1100	2.0200	1.9800	1.9800

Conc-mg/Kg	Transform: Reciprocal						1-Tailed			
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
HI-REF	1.6500	0.0000	0.6085	0.5464	0.6579	6.908	5			
*DMMU-01	2.2540	-0.9292	0.4462	0.3922	0.4926	8.392	5	5.341	2.480	0.0753
*DMMU-02	2.1560	-0.7785	0.4656	0.4274	0.4926	6.837	5	4.703	2.480	0.0753
*DMMU-03	2.2520	-0.9262	0.4443	0.4329	0.4608	2.699	5	5.404	2.480	0.0753
*DMMU-04	1.9700	-0.4923	0.5130	0.4785	0.6250	12.294	5	3.144	2.480	0.0753
*DMMU-05	1.9320	-0.4338	0.5203	0.4808	0.5814	8.126	5	2.904	2.480	0.0753
*DMMU-06	1.9600	-0.4769	0.5221	0.4149	0.6667	17.504	5	2.842	2.480	0.0753
*DMMU-07	2.1840	-0.8215	0.4610	0.4032	0.5076	9.095	5	4.855	2.480	0.0753
*DMMU-08	2.0620	-0.6338	0.4859	0.4505	0.5051	4.845	5	4.035	2.480	0.0753

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.94746	0.945	0.84178	2.68015		
Bartlett's Test indicates equal variances (p = 0.04)	16.4073	20.0902				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates significant differences Treatments vs HI-REF	-0.181	0	0.0135	0.00231	8.3E-05	8, 36

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

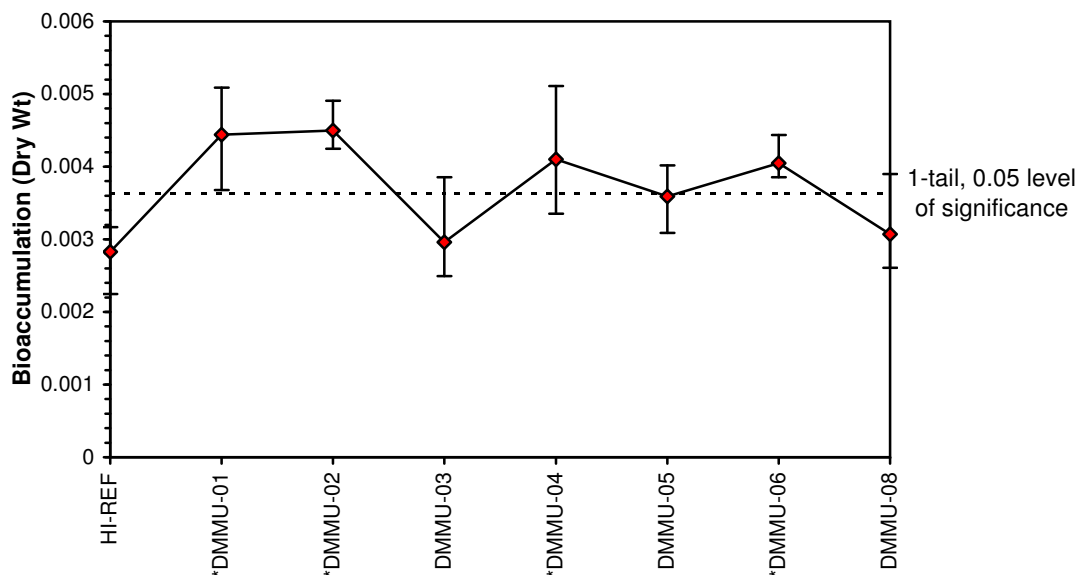
Start Date: Test ID: Tha-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Thallium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0030	0.0032	0.0023	0.0029	0.0028
DMMU-01	0.0037	0.0039	0.0051	0.0048	0.0047
DMMU-02	0.0049	0.0044	0.0045	0.0043	0.0044
DMMU-03	0.0026	0.0031	0.0025	0.0039	0.0027
DMMU-04	0.0037	0.0037	0.0034	0.0046	0.0051
DMMU-05	0.0036	0.0031	0.0038	0.0040	0.0035
DMMU-06	0.0044	0.0040	0.0039	0.0039	
DMMU-08	0.0027	0.0028	0.0026	0.0034	0.0039

Conc-mg/Kg	Mean	N-Mean	Transform: Untransformed				CV%	N	1-Tailed		
			Mean	Min	Max	t-Stat			Critical	MSD	
HI-REF	0.0028	0.0000	0.0028	0.0023	0.0032	12.485	5				
*DMMU-01	0.0044	0.0016	0.0044	0.0037	0.0051	13.900	5	5.203	2.596	0.0008	
*DMMU-02	0.0045	0.0017	0.0045	0.0043	0.0049	5.465	5	5.410	2.596	0.0008	
DMMU-03	0.0030	0.0001	0.0030	0.0025	0.0039	18.325	5	0.401	2.596	0.0008	
*DMMU-04	0.0041	0.0013	0.0041	0.0034	0.0051	17.586	5	4.096	2.596	0.0008	
DMMU-05	0.0036	0.0008	0.0036	0.0031	0.0040	9.578	5	2.459	2.596	0.0008	
*DMMU-06	0.0040	0.0012	0.0040	0.0039	0.0044	6.702	4	3.700	2.596	0.0009	
DMMU-08	0.0031	0.0002	0.0031	0.0026	0.0039	17.762	5	0.777	2.596	0.0008	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96995	0.939	0.40492	-0.3223		
Bartlett's Test indicates equal variances (p = 0.42)	7.04461	18.4753				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Bonferroni t Test indicates significant differences Treatments vs HI-REF	0.0008	0	2.3E-06	2.4E-07	3.1E-06	7, 31

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

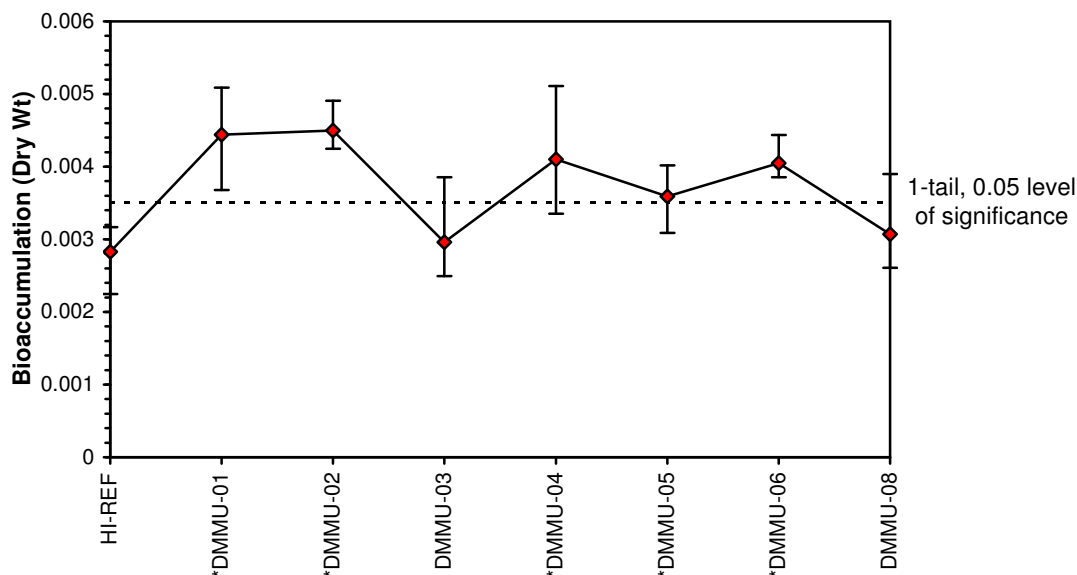
Start Date: Test ID: Tha-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Thallium , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	0.0030	0.0032	0.0023	0.0029	0.0028
DMMU-01	0.0037	0.0039	0.0051	0.0048	0.0047
DMMU-02	0.0049	0.0044	0.0045	0.0043	0.0044
DMMU-03	0.0026	0.0031	0.0025	0.0039	0.0027
DMMU-04	0.0037	0.0037	0.0034	0.0046	0.0051
DMMU-05	0.0036	0.0031	0.0038	0.0040	0.0035
DMMU-06	0.0044	0.0040	0.0039	0.0039	
DMMU-08	0.0027	0.0028	0.0026	0.0034	0.0039

Conc-mg/Kg	Mean	N-Mean	Transform: Log				CV%	N	1-Tailed		
			Mean	Min	Max	t-Stat			Critical	MSD	
HI-REF	0.0028	0.0000	-2.5509	-2.6478	-2.4989	-2.267	5				
*DMMU-01	0.0044	0.0016	-2.3561	-2.4342	-2.2933	-2.631	5	5.242	2.596	0.0965	
*DMMU-02	0.0045	0.0017	-2.3469	-2.3716	-2.3089	-0.991	5	5.489	2.596	0.0965	
DMMU-03	0.0030	0.0001	-2.5347	-2.6038	-2.4145	-2.946	5	0.436	2.596	0.0965	
*DMMU-04	0.0041	0.0013	-2.3926	-2.4750	-2.2916	-3.120	5	4.258	2.596	0.0965	
*DMMU-05	0.0036	0.0008	-2.4463	-2.5100	-2.3958	-1.734	5	2.814	2.596	0.0965	
*DMMU-06	0.0040	0.0012	-2.3938	-2.4145	-2.3536	-1.189	4	3.985	2.596	0.1023	
DMMU-08	0.0031	0.0002	-2.5178	-2.5834	-2.4089	-2.936	5	0.891	2.596	0.0965	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97365	0.939	0.31015	-0.3079		
Bartlett's Test indicates equal variances (p = 0.37)	7.64374	18.4753				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Bonferroni t Test indicates significant differences Treatments vs HI-REF	0.0007	0	0.03349	0.00345	2.4E-06	7, 31

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: ZNC-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Zinc , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	103.00	116.00	107.00	113.00	109.00
DMMU-02	312.00	319.00	179.00	73.70	359.00
DMMU-04	216.00	157.00	114.00	57.30	114.00
DMMU-05	475.00	244.00	92.70	53.20	55.00
DMMU-06	156.00	84.90	111.00	140.00	77.20
DMMU-07	190.00	602.00	185.00	305.00	61.80
DMMU-08	394.00	212.00	224.00	209.00	348.00

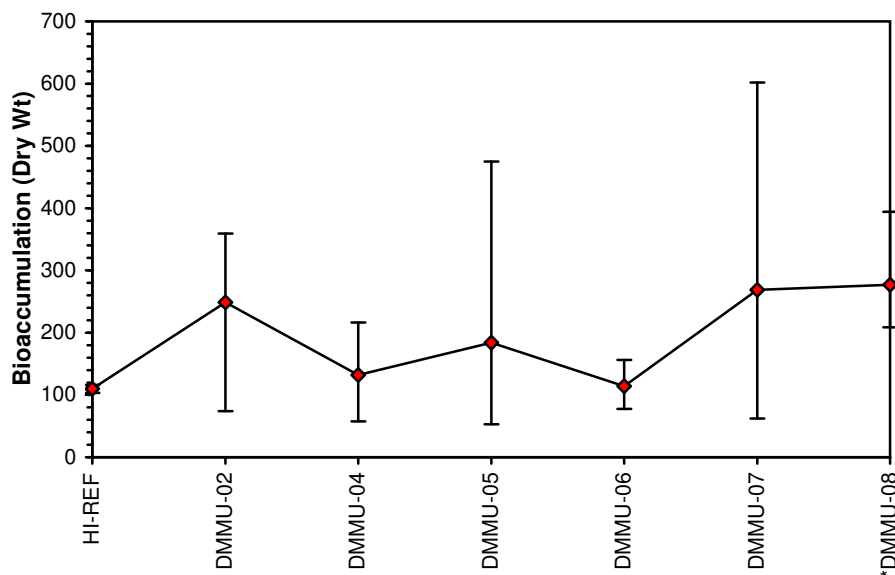
Conc-mg/Kg	Mean	N-Mean	Transform: Untransformed				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
HI-REF	109.60	0.0000	109.60	103.00	116.00	4.634	5		
DMMU-02	248.54	-1.2794	248.54	73.70	359.00	47.860	5	20.00	16.00
DMMU-04	131.66	-0.2031	131.66	57.30	216.00	44.787	5	22.00	16.00
DMMU-05	183.98	-0.6849	183.98	53.20	475.00	98.126	5	30.00	16.00
DMMU-06	113.82	-0.0389	113.82	77.20	156.00	29.955	5	27.00	16.00
DMMU-07	268.76	-1.4656	268.76	61.80	602.00	76.347	5	20.00	16.00
*DMMU-08	277.40	-1.5451	277.40	209.00	394.00	31.420	5	15.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.92364	0.934	1.07012	2.56297
Bartlett's Test indicates unequal variances (p = 1.02E-05)	33.0555	16.8119		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: ZNC-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Zinc , mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	103.00	116.00	107.00	113.00	109.00
DMMU-02	312.00	319.00	179.00	73.70	359.00
DMMU-04	216.00	157.00	114.00	57.30	114.00
DMMU-05	475.00	244.00	92.70	53.20	55.00
DMMU-06	156.00	84.90	111.00	140.00	77.20
DMMU-07	190.00	602.00	185.00	305.00	61.80
DMMU-08	394.00	212.00	224.00	209.00	348.00

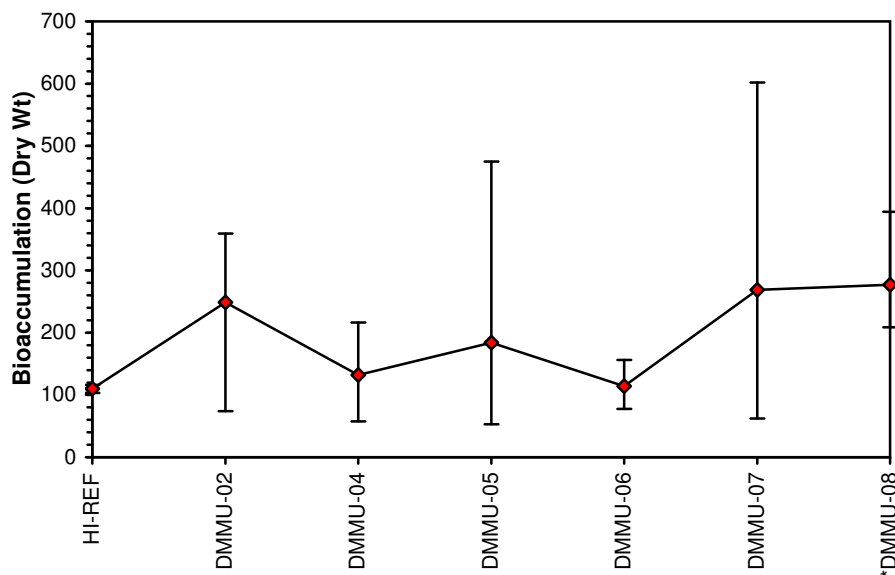
Conc-mg/Kg	Mean	N-Mean	Transform: Reciprocal				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
HI-REF	109.60	0.0000	0.0091	0.0086	0.0097	4.645	5		
DMMU-02	248.54	-1.2794	0.0057	0.0028	0.0136	80.641	5	20.00	16.00
DMMU-04	131.66	-0.2031	0.0092	0.0046	0.0175	53.632	5	22.00	16.00
DMMU-05	183.98	-0.6849	0.0108	0.0021	0.0188	71.605	5	30.00	16.00
DMMU-06	113.82	-0.0389	0.0095	0.0064	0.0130	30.113	5	27.00	16.00
DMMU-07	268.76	-1.4656	0.0064	0.0017	0.0162	89.716	5	20.00	16.00
*DMMU-08	277.40	-1.5451	0.0039	0.0025	0.0048	27.892	5	15.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.90859	0.934	0.72522	0.73332
Bartlett's Test indicates unequal variances (p = 2.81E-04)	25.4576	16.8119		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date:                      Test ID: TPH-DW-MM                      Sample ID:                      HARBOR ISL  
 End Date:                        Lab ID: NWDLS                              Sample Type:                    MARINE SED  
 Sample Date:                    Protocol: EPADM91-EPA 503/8-91/001    Test Species:                  MM-Mercenaria mercenaria  
 Comments:    TPH, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	94	437.037	390	388	371
HI-DMMU-01	1154.41	1482.01	1246.48	972.973	1051.28
HI-DMMU-02	366.906	3625.9	499.315	2338.03	4924.14
HI-DMMU-03	7975.21	22377.6	2028.99	1138.89	1294.52
HI-DMMU-04	1073.33	1379.03	2237.76	1604.17	1589.15
HI-DMMU-05	2181.16	18074.1	15035	14965.5	17954.5
HI-DMMU-06	18392.9	4087.84	8417.27	20863.3	21571.4
HI-DMMU-07	21386.9	24504.5	20420.2	11532.3	19160.3
HI-DMMU-08	9007.63	1000	23538.5	19026.5	25390.6

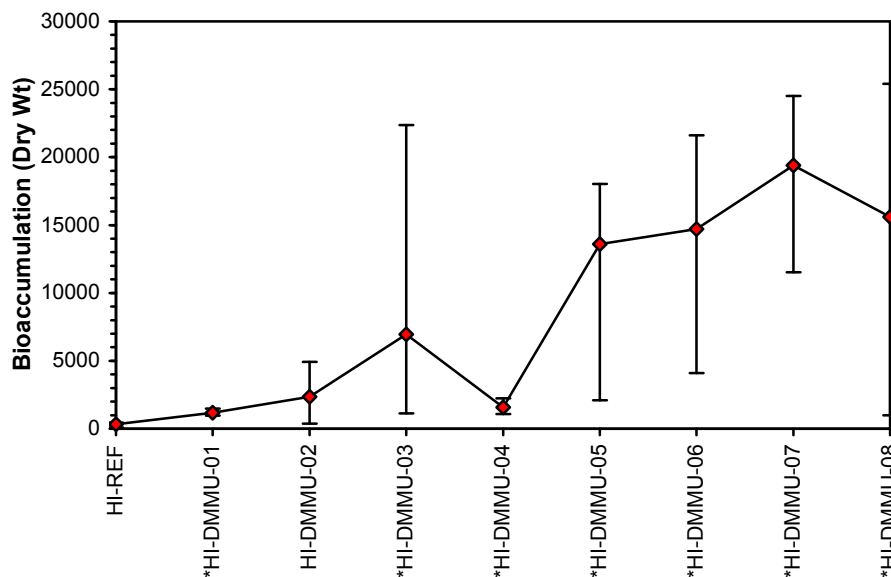
Conc-mg/Kg	Transform: Untransformed						Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%		
HI-REF	336.007	0.0000	336.007	94	437.037	40.920	5	
*HI-DMMU-01	1181.43	-2.5236	1181.43	972.973	1482.01	16.700	5	15.00
HI-DMMU-02	2350.86	-6.0143	2350.86	366.906	4924.14	84.037	5	19.00
*HI-DMMU-03	6963.04	-19.7818	6963.04	1138.89	22377.6	130.254	5	15.00
*HI-DMMU-04	1576.69	-3.7034	1576.69	1073.33	2237.76	27.102	5	15.00
*HI-DMMU-05	13642.1	-39.7187	13642.1	2181.16	18074.1	48.247	5	15.00
*HI-DMMU-06	14666.5	-42.7768	14666.5	4087.84	21571.4	54.003	5	15.00
*HI-DMMU-07	19400.8	-56.9086	19400.8	11532.3	24504.5	24.854	5	15.00
*HI-DMMU-08	15592.7	-45.5412	15592.7	1000	25390.6	66.280	5	15.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.93928	0.945	-0.1841	1.64428
Bartlett's Test indicates unequal variances (p = 2.09E-12)	71.8612	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date:                      Test ID: TPH-DW-MM                      Sample ID:                      HARBOR ISL  
 End Date:                        Lab ID: NWDLS                      Sample Type:                   MARINE SED  
 Sample Date:                    Protocol: EPADM91-EPA 503/8-91/001   Test Species:                 MM-Mercenaria mercenaria  
 Comments:    TPH, mg/kg

Conc-mg/Kg	1	2	3	4	5
HI-REF	94	437.037	390	388	371
HI-DMMU-01	1154.41	1482.01	1246.48	972.973	1051.28
HI-DMMU-02	366.906	3625.9	499.315	2338.03	4924.14
HI-DMMU-03	7975.21	22377.6	2028.99	1138.89	1294.52
HI-DMMU-04	1073.33	1379.03	2237.76	1604.17	1589.15
HI-DMMU-05	2181.16	18074.1	15035	14965.5	17954.5
HI-DMMU-06	18392.9	4087.84	8417.27	20863.3	21571.4
HI-DMMU-07	21386.9	24504.5	20420.2	11532.3	19160.3
HI-DMMU-08	9007.63	1000	23538.5	19026.5	25390.6

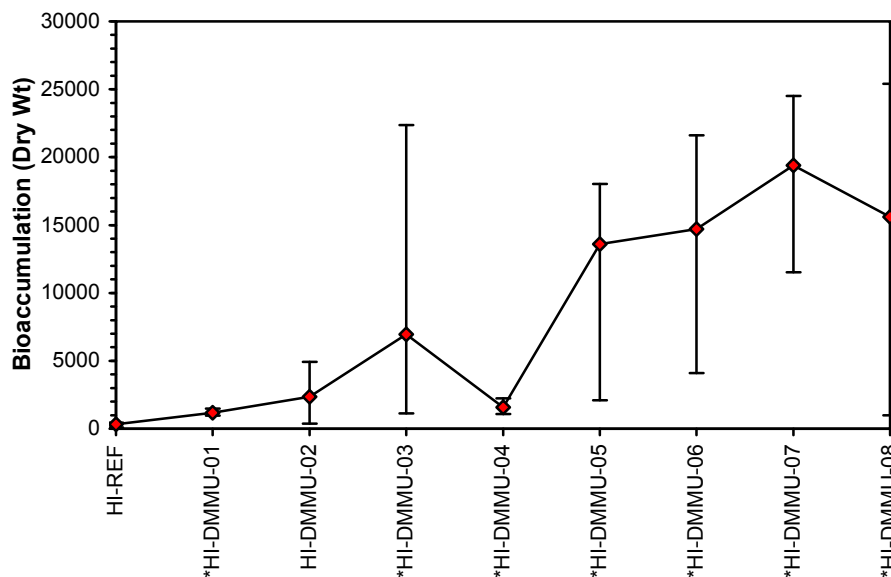
Conc-mg/Kg	Transform: Reciprocal							Rank Sum	1-Tailed Critical
	Mean	N-Mean	Mean	Min	Max	CV%	N		
HI-REF	336.007	0.0000	0.0042	0.0023	0.0106	87.382	5		
*HI-DMMU-01	1181.43	-2.5236	0.0009	0.0007	0.0010	15.741	5	15.00	16.00
HI-DMMU-02	2350.86	-6.0143	0.0011	0.0002	0.0027	102.997	5	19.00	16.00
*HI-DMMU-03	6963.04	-19.7818	0.0005	0.0000	0.0009	80.715	5	15.00	16.00
*HI-DMMU-04	1576.69	-3.7034	0.0007	0.0004	0.0009	26.348	5	15.00	16.00
*HI-DMMU-05	13642.1	-39.7187	0.0001	0.0001	0.0005	126.491	5	15.00	16.00
*HI-DMMU-06	14666.5	-42.7768	0.0001	0.0000	0.0002	83.011	5	15.00	16.00
*HI-DMMU-07	19400.8	-56.9086	0.0001	0.0000	0.0001	32.967	5	15.00	16.00
*HI-DMMU-08	15592.7	-45.5412	0.0002	0.0000	0.0010	168.927	5	15.00	16.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.60488	0.945	3.89584	22.3774
Bartlett's Test indicates unequal variances (p = 1.57E-19)	107.01	20.0902		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates significant differences  
 Treatments vs HI-REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

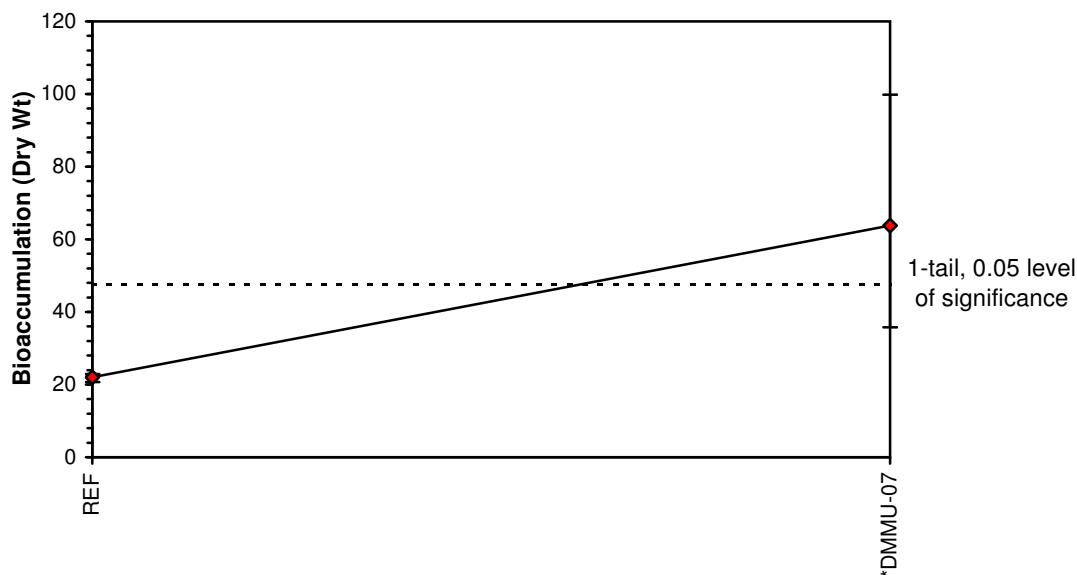
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Acenaphthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	60.500	81.600	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5				
*DMMU-07	63.800	-1.9962	63.800	35.800	99.800	42.305	5	3.464	2.132	25.747	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.89709	0.842	0.45021	1.16809		
F-Test indicates unequal variances (p = 7.18E-06)	912.901	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates significant differences Treatments vs REF	25.7467	0	4376.46	364.647	0.00851	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

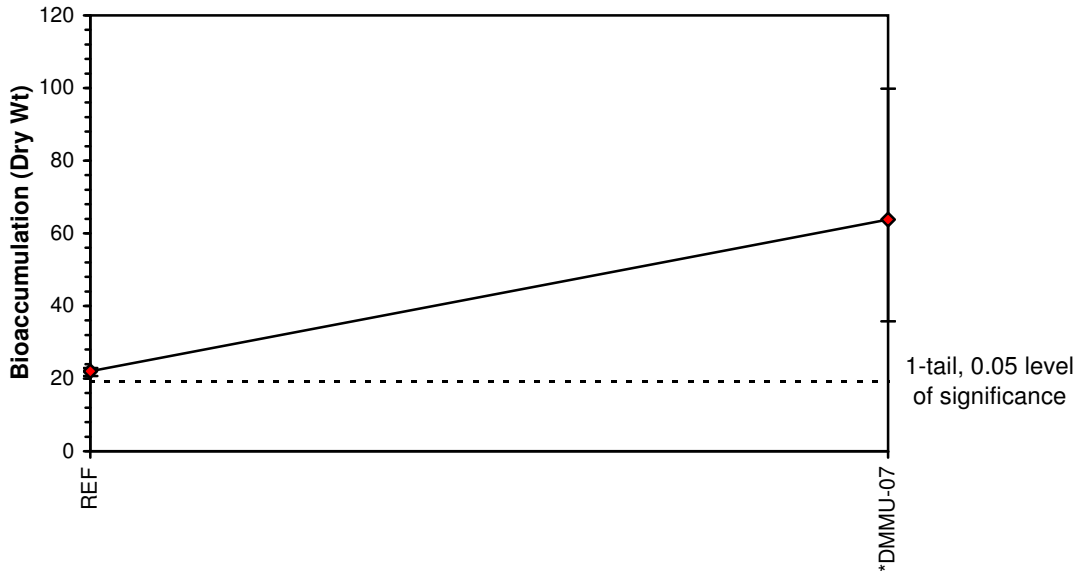
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Acenaphthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	60.500	81.600	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5			
*DMMU-07	63.800	-1.9962	0.0182	0.0100	0.0279	42.222	5	7.749	1.860	0.0066

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96857	0.842	0.3758	0.20843		
F-Test indicates equal variances (p = 0.02)	16.5515	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-2.7644	0	0.00188	3.1E-05	5.5E-05	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ant-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Anthracene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	18.800	17.500	41.100	21.600	17.500
DMMU-08	35.600	44.400	41.300	99.800	35.800

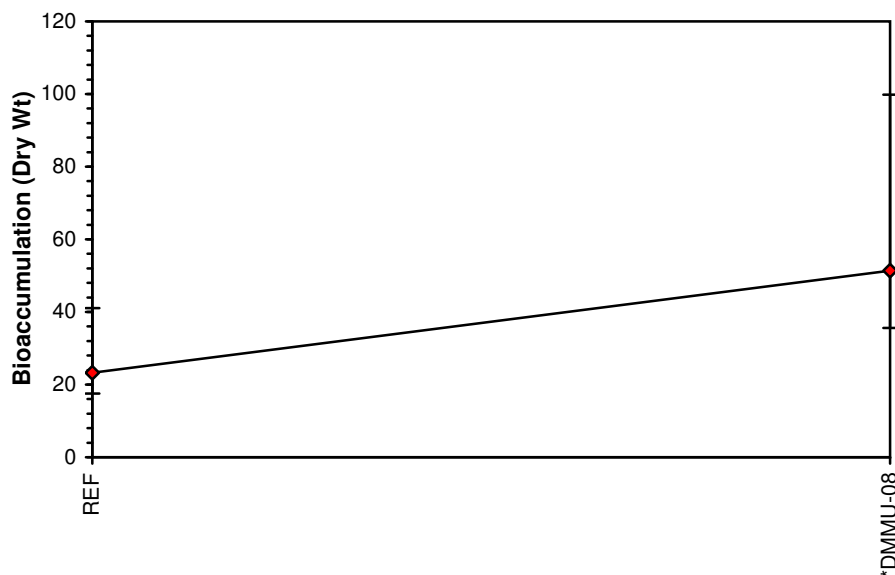
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	23.300	0.0000	23.300	17.500	41.100	43.306	5		
*DMMU-08	51.380	-1.2592	51.380	35.600	99.800	53.182	5	17.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.7345	0.842	2.07875	4.46059
F-Test indicates equal variances (p = 0.08)	7.33332	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: Ant-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Anthracene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	18.800	17.500	41.100	21.600	17.500
DMMU-08	35.600	44.400	41.300	99.800	35.800

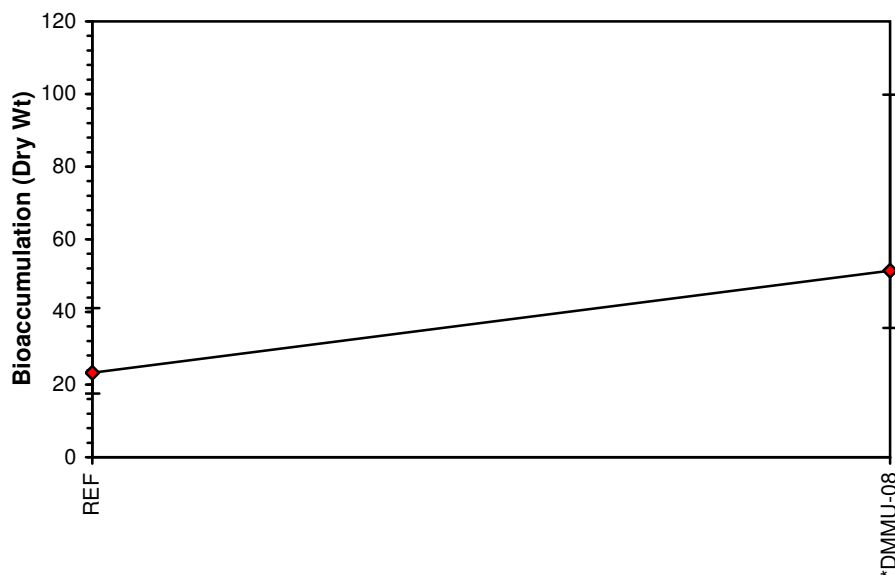
Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	23.300	0.0000	0.0476	0.0243	0.0571	28.880	5		
*DMMU-08	51.380	-1.2592	0.0226	0.0100	0.0281	32.837	5	17.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.82618	0.842	-1.5221	1.9358
F-Test indicates equal variances (p = 0.26)	3.44773	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: FLT-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Fluoranthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	81.700	170.000	75.300	99.800	57.600

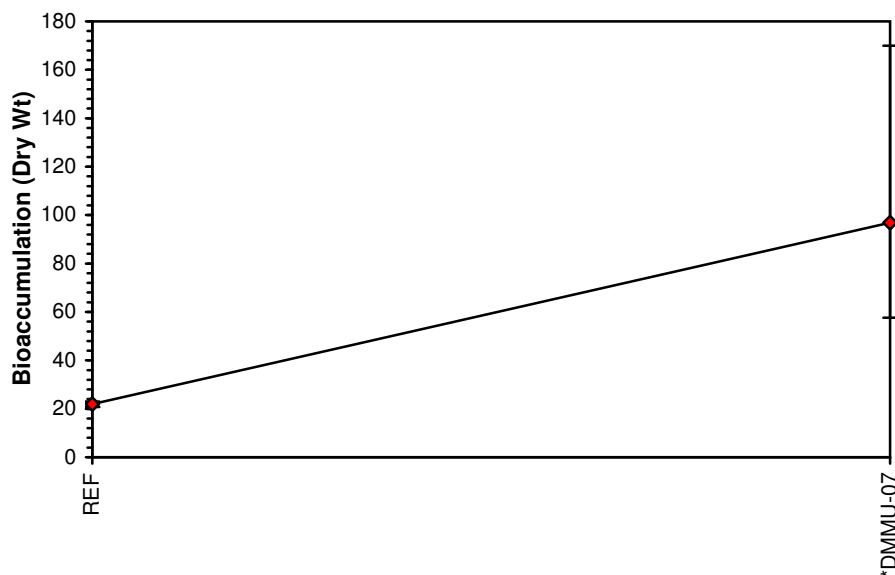
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5		
*DMMU-07	96.880	-3.5744	96.880	57.600	170.000	44.975	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.76582	0.842	1.79407	5.22792
F-Test indicates unequal variances (p = 1.06E-06)	2379.11	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

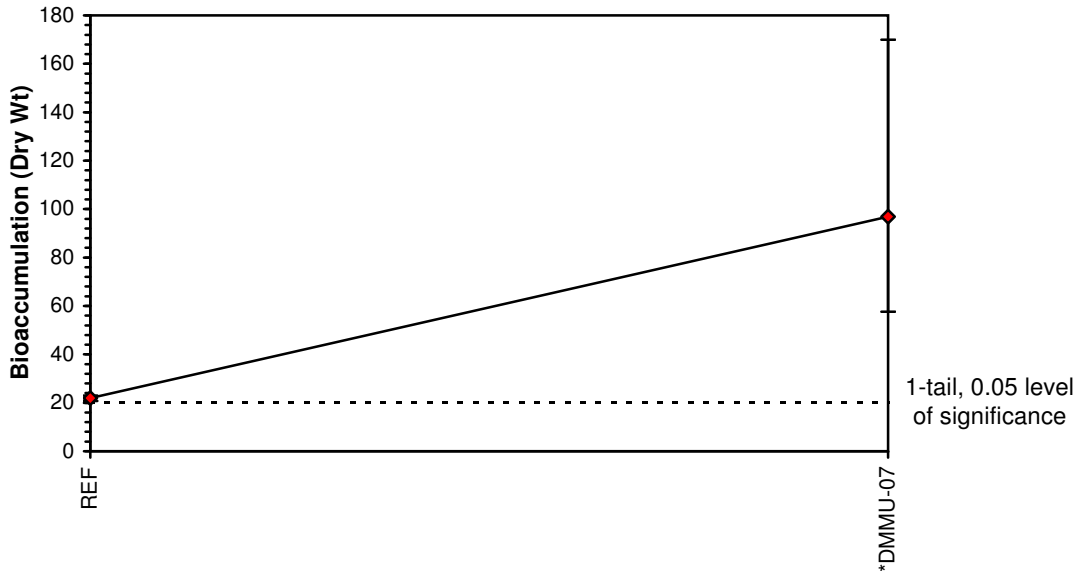
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Fluoranthene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	81.700	170.000	75.300	99.800	57.600

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5	16.345	1.860	0.0039
*DMMU-07	96.880	-3.5744	0.0118	0.0059	0.0174	35.958	5			

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97475	0.842	-0.076	1.10364		
F-Test indicates equal variances (p = 0.15)	5.01506	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-1.7076	0	0.00286	1.1E-05	2.0E-07	1, 8

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

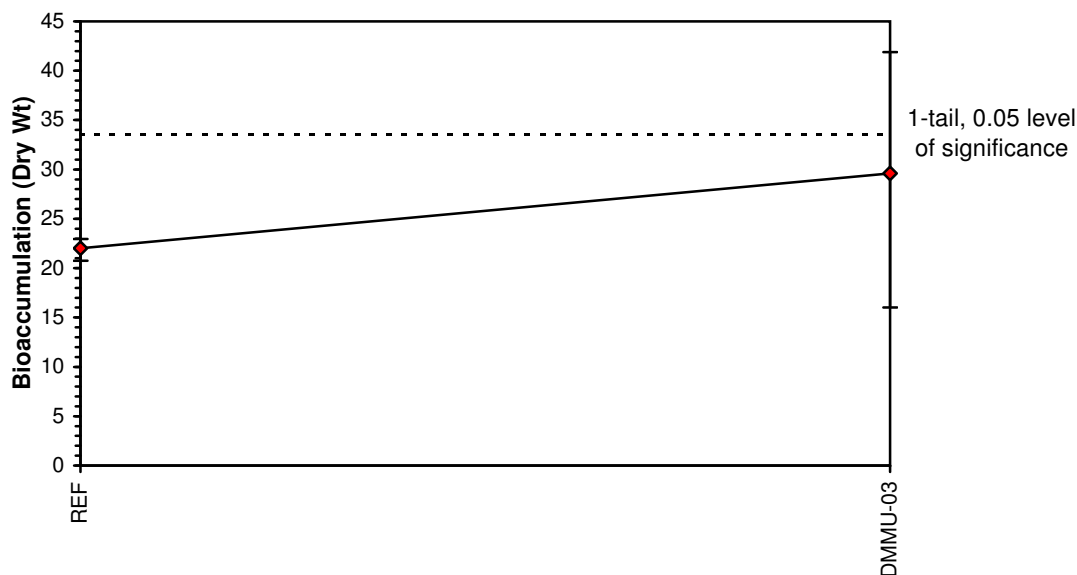
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Fluorene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-03	36.600	36.700	41.900	17.000	16.000

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5	1.405	2.132	11.653	
DMMU-03	29.640	-0.3664	29.640	16.000	41.900	41.128	5				

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution ( $p > 0.05$ )	0.90835	0.842	-0.5202	-0.0045		
F-Test indicates unequal variances ( $p = 1.71E-04$ )	186.219	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences Treatments vs REF	11.6533	0	147.456	74.7005	0.19765	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

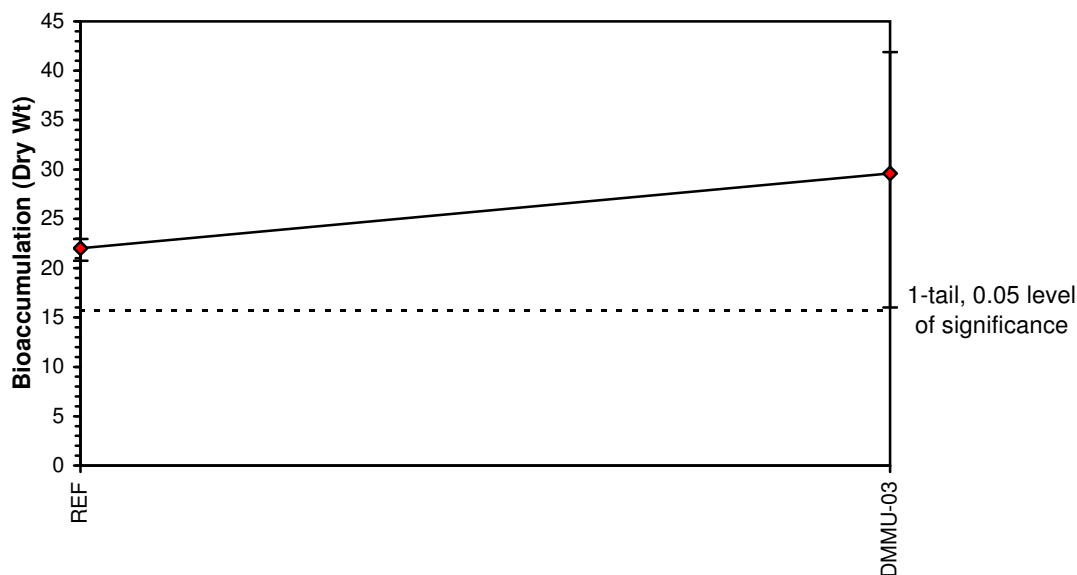
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Fluorene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-03	36.600	36.700	41.900	17.000	16.000

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5	0.661	2.132	0.0182
DMMU-03	29.640	-0.3664	0.0400	0.0239	0.0625	47.560	5			

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.90042	0.842	0.67122	-0.1519		
F-Test indicates unequal variances (p = 5.69E-04)	101.314	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences Treatments vs REF	-6.2573	0	8E-05	0.00018	0.52703	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

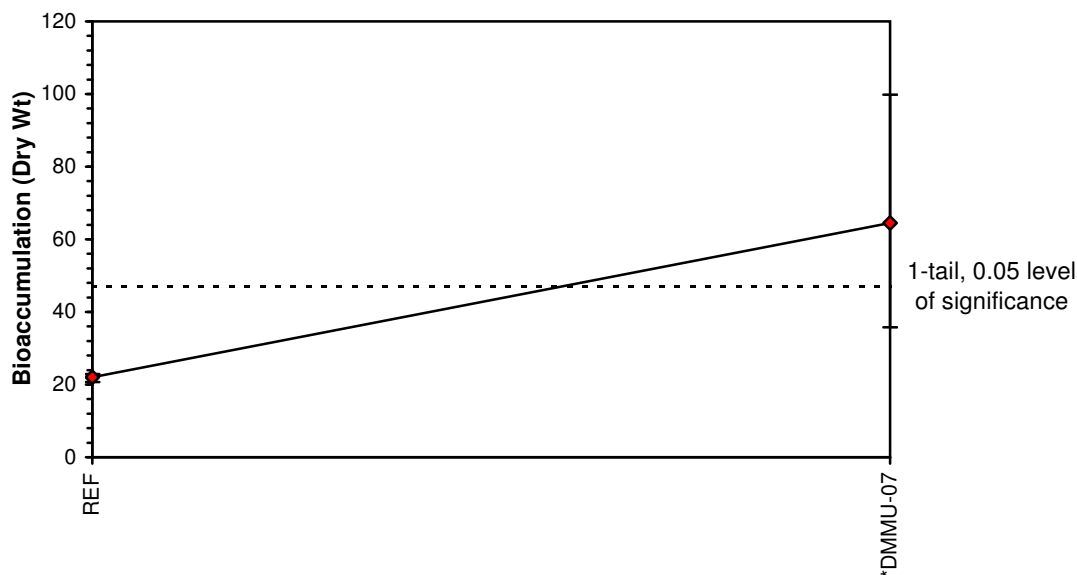
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Phenathrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	71.200	74.500	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5	3.626	2.132	25.026	
*DMMU-07	64.520	-2.0305	64.520	35.800	99.800	40.660	5				

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.89073	0.842	0.23311	1.55397		
F-Test indicates unequal variances (p = 8.04E-06)	862.44	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates significant differences Treatments vs REF	25.0258	0	4528.38	344.513	0.00673	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

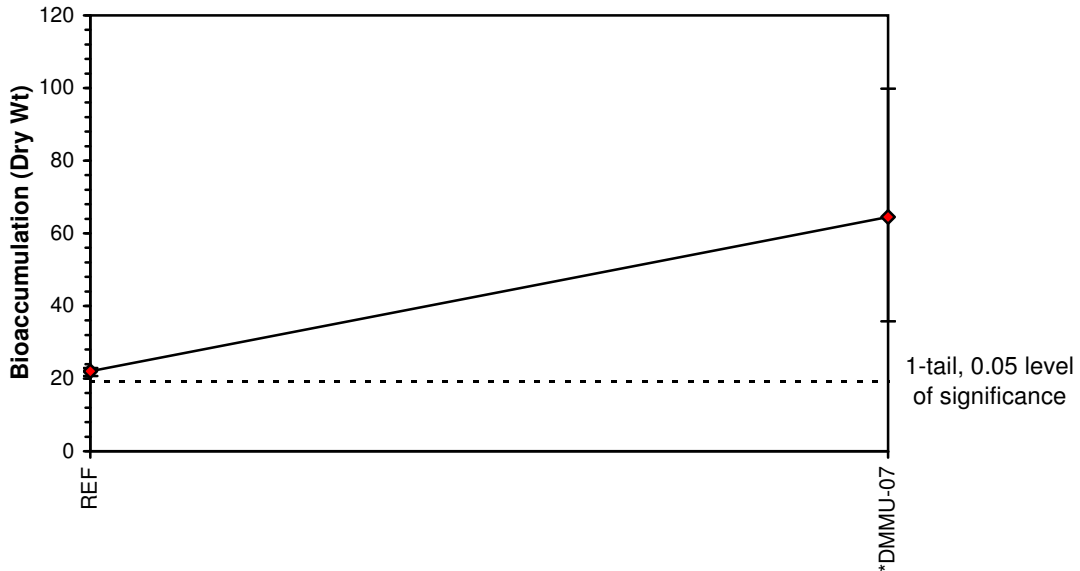
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 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Phenathrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	71.200	74.500	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5			
*DMMU-07	64.520	-2.0305	0.0179	0.0100	0.0279	42.984	5	7.799	1.860	0.0066

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97073	0.842	0.58042	0.18028		
F-Test indicates equal variances (p = 0.02)	16.6621	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-2.772	0	0.00191	3.1E-05	5.2E-05	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

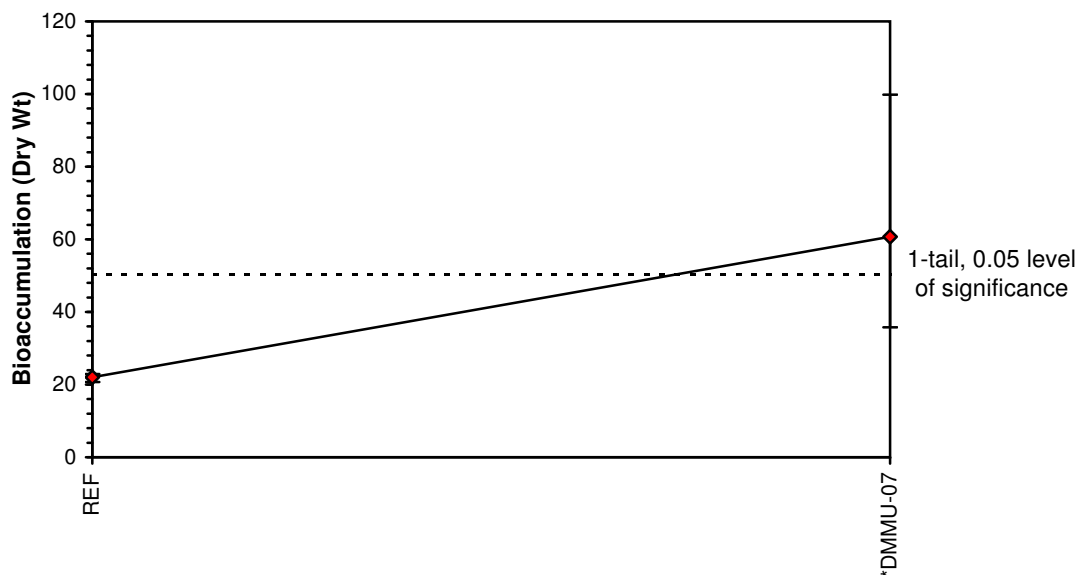
Start Date: Test ID: PYR-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	40.800	85.700	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5				
*DMMU-07	60.680	-1.8473	60.680	35.800	99.800	49.069	5	2.907	2.132	28.400	

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.8871	0.842	0.7979	0.452		
F-Test indicates unequal variances (p = 4.85E-06)	1110.96	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates significant differences Treatments vs REF	28.3999	0	3748.1	443.673	0.01969	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

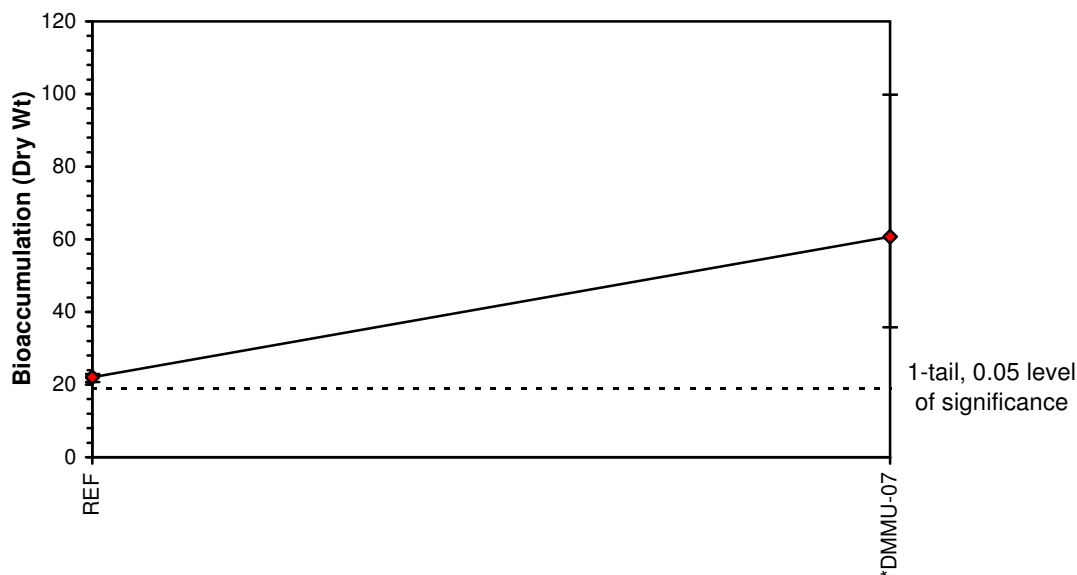
Start Date: Test ID: PYR-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Pyrene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-07	40.800	85.700	41.300	99.800	35.800

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5	6.884	1.860	0.0070
*DMMU-07	60.680	-1.8473	0.0197	0.0100	0.0279	41.731	5			

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.95264	0.842	-0.4916	-0.2822		
F-Test indicates equal variances (p = 0.01)	18.905	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-2.92	0	0.00168	3.5E-05	1.3E-04	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: LPH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total LPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	124.20	128.40	135.00	137.40	133.80
DMMU-07	202.90	259.20	247.80	598.80	214.80

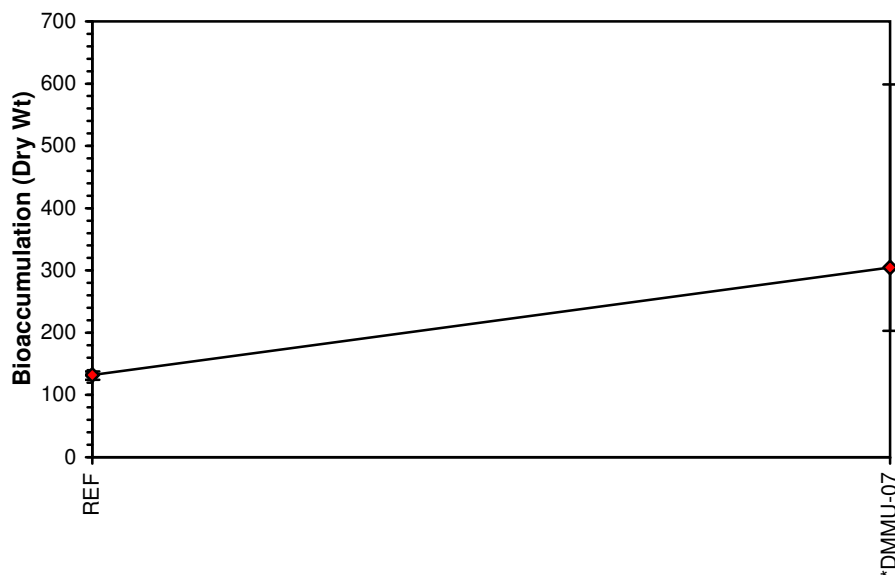
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	131.76	0.0000	131.76	124.20	137.40	4.068	5		
*DMMU-07	304.70	-1.3226	304.70	202.90	598.80	54.486	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.69781	0.842	2.39113	6.79164
F-Test indicates unequal variances (p = 6.50E-06)	959.412	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: LPH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total LPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	124.20	128.40	135.00	137.40	133.80
DMMU-07	202.90	259.20	247.80	598.80	214.80

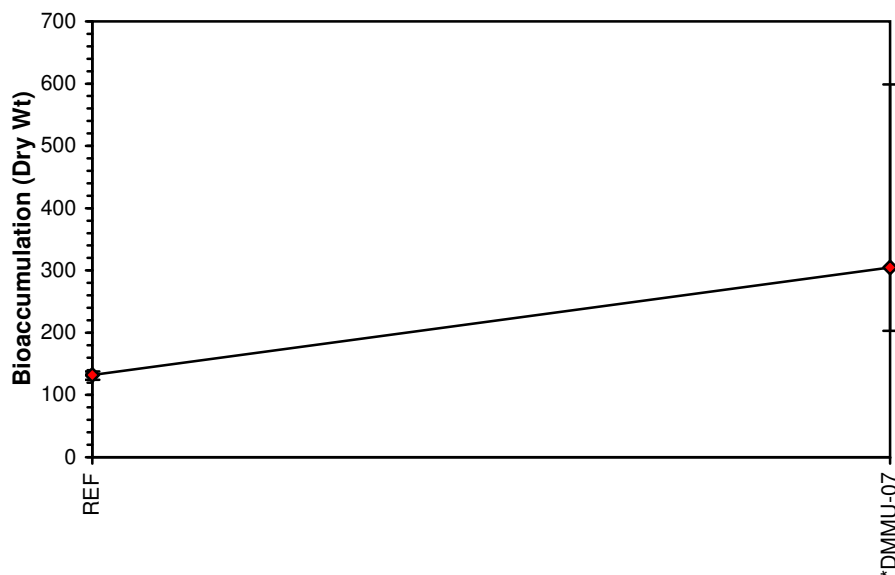
Conc-ppb	Mean	N-Mean	Transform: Log				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	131.76	0.0000	2.1195	2.0941	2.1380	0.841	5		
*DMMU-07	304.70	-1.3226	2.4449	2.3073	2.7773	7.807	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.74717	0.842	2.16408	6.08467
F-Test indicates unequal variances (p = 4.46E-04)	114.63	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: HPH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total HPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	206.90	213.90	224.90	229.10	223.00
DMMU-07	356.00	444.00	454.30	998.40	393.80

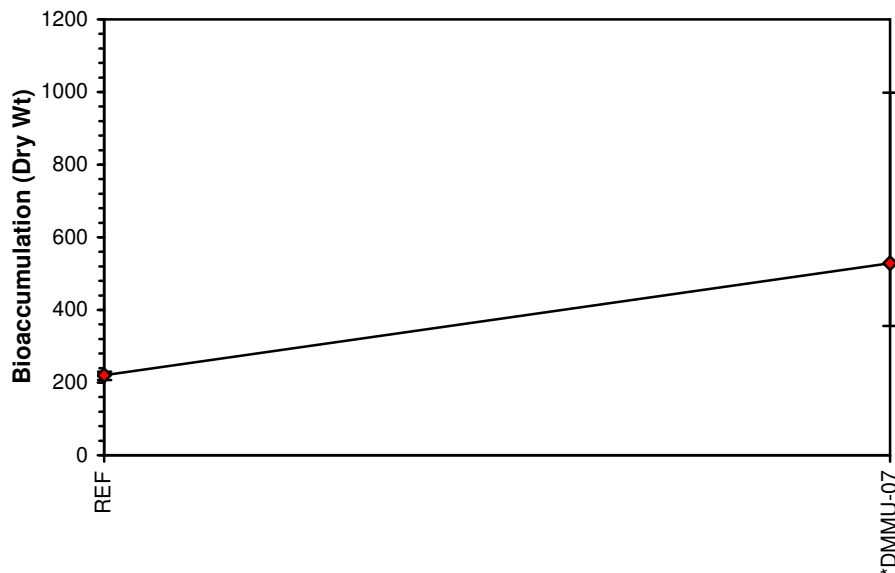
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	219.56	0.0000	219.56	206.90	229.10	4.097	5		
*DMMU-07	529.30	-1.4172	529.30	356.00	998.40	50.106	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.70522	0.842	2.37032	6.74561
F-Test indicates unequal variances (p = 7.92E-06)	869.241	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

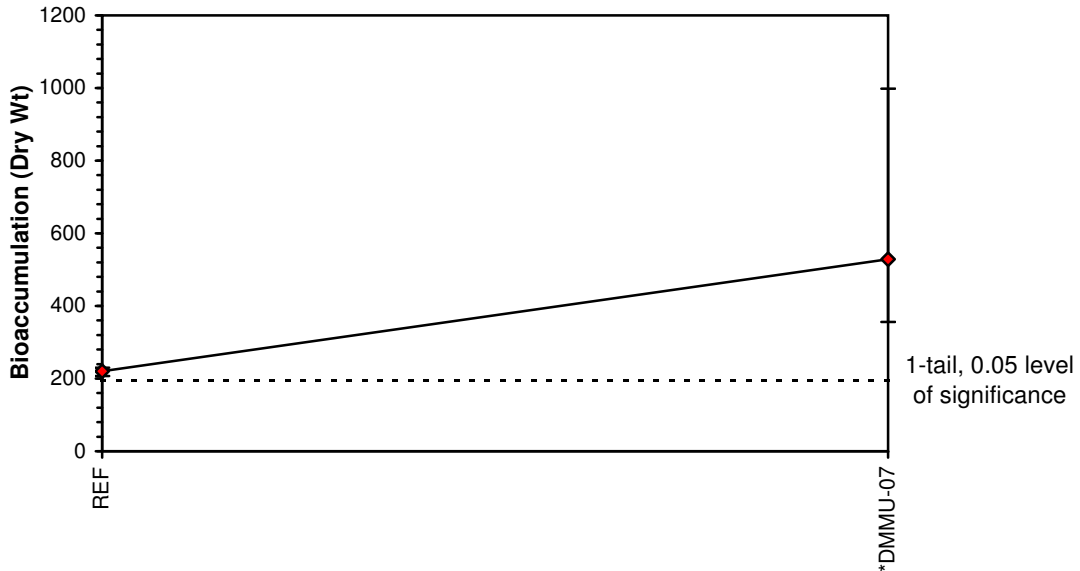
Start Date: Test ID: HPH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total HPAH PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	206.90	213.90	224.90	229.10	223.00
DMMU-07	356.00	444.00	454.30	998.40	393.80

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	219.56	0.0000	0.0046	0.0044	0.0048	4.169	5			
*DMMU-07	529.30	-1.4172	0.0022	0.0010	0.0028	32.041	5	7.475	1.860	0.0006

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.86384	0.842	-1.5419	4.01776		
F-Test indicates equal variances (p = 0.03)	13.2586	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-25.381	0	1.4E-05	2.6E-07	7.1E-05	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: PAH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	331.10	342.30	359.90	366.50	356.80
DMMU-07	558.90	703.20	702.10	1597.20	608.60

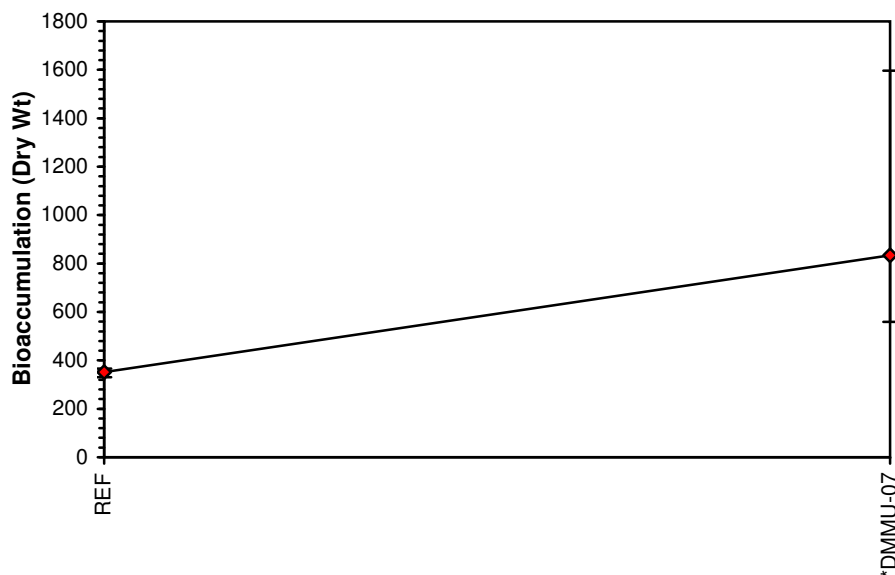
Conc-ppb	Mean	N-Mean	Transform: Untransformed				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	351.32	0.0000	351.32	331.10	366.50	4.086	5		
*DMMU-07	834.00	-1.3778	834.00	558.90	1597.20	51.693	5	15.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.70088	0.842	2.38121	6.77208
F-Test indicates unequal variances (p = 7.35E-06)	901.949	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

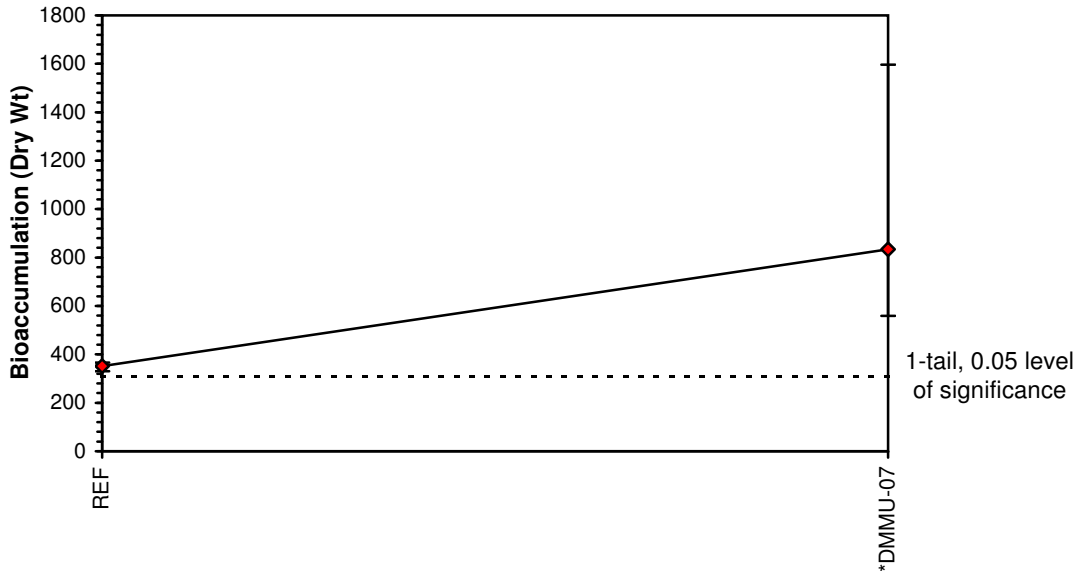
Start Date: Test ID: PAH-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Total PAHs ,ug/kg

Conc-ppb	1	2	3	4	5
REF	331.10	342.30	359.90	366.50	356.80
DMMU-07	558.90	703.20	702.10	1597.20	608.60

Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%			Critical	MSD
REF	351.32	0.0000	0.0029	0.0027	0.0030	4.158	5	7.065	1.860	0.0004
*DMMU-07	834.00	-1.3778	0.0014	0.0006	0.0018	32.562	5			

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.85552	0.842	-1.5893	4.12731		
F-Test indicates equal variances (p = 0.02)	14.396	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs REF	-41.915	0	5.4E-06	1.1E-07	1.1E-04	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

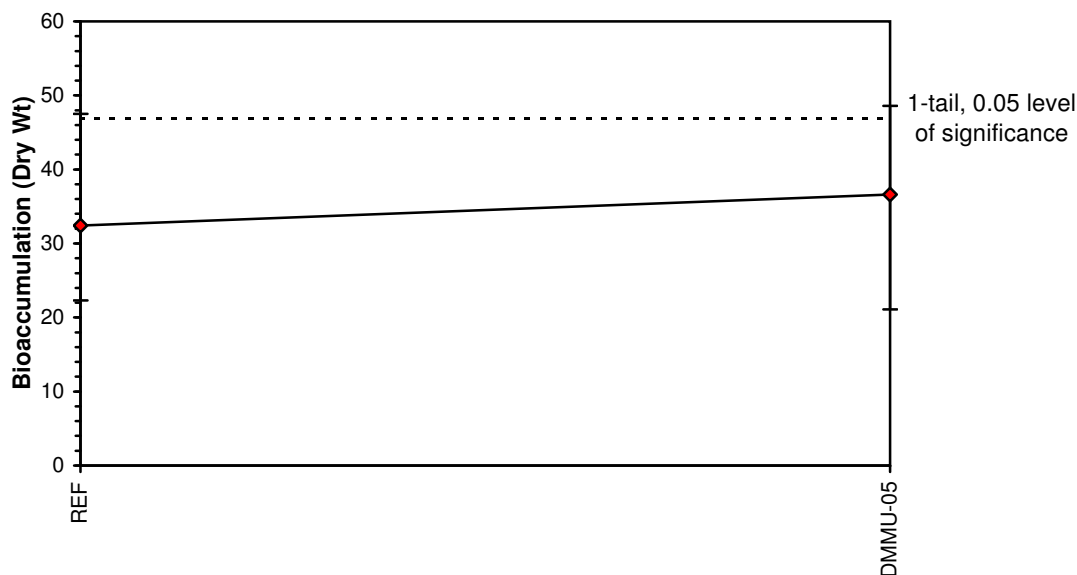
Start Date: Test ID: Dep-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Diethyl Phtalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	47.500	46.900	22.500	22.900	22.300
DMMU-05	44.200	37.500	21.100	31.600	48.600

Conc-ppb	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed	
			Mean	Min	Max	CV%	Critical			MSD	
REF	32.420	0.0000	32.420	22.300	47.500	41.627	5	0.540	1.860	14.382	
DMMU-05	36.600	-0.1330	36.600	21.100	48.600	29.548	5				

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution ( $p > 0.05$ )	0.89214	0.842	0.17298	-1.7889		
F-Test indicates equal variances ( $p = 0.68$ )	1.55728	23.1539				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences Treatments vs REF	14.3821	0	43.681	149.544	0.6036	1, 8

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

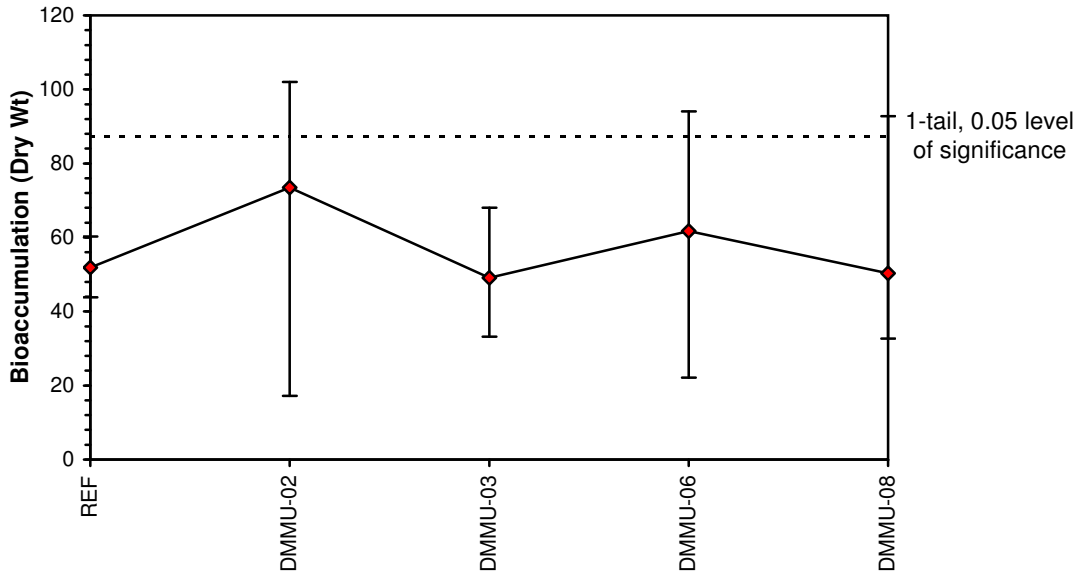
Start Date: Test ID: DBP-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Di-n-butyl Phthalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	58.100	60.200	43.800	50.300	47.000
DMMU-02	17.200	93.000	102.000	87.800	67.600
DMMU-03	68.000	48.400	48.900	46.900	33.200
DMMU-06	22.100	94.100	85.700	36.300	70.300
DMMU-08	53.100	39.100	33.800	92.800	32.700

Conc-ppb	Mean	N-Mean	Transform: Untransformed					1-Tailed		
			Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
REF	51.880	0.0000	51.880	43.800	60.200	13.613	5			
DMMU-02	73.520	-0.4253	73.520	17.200	102.000	46.133	5	1.406	2.300	35.409
DMMU-03	49.080	0.0550	49.080	33.200	68.000	25.272	5	-0.182	2.300	35.409
DMMU-06	61.700	-0.1930	61.700	22.100	94.100	50.692	5	0.638	2.300	35.409
DMMU-08	50.300	0.0311	50.300	32.700	92.800	49.915	5	-0.103	2.300	35.409

Auxiliary Tests	Statistic	Critical	Skew	Kurt		
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.97898	0.918	-0.442	0.72765		
Bartlett's Test indicates equal variances (p = 0.05)	9.44253	13.2767				
Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test indicates no significant differences Treatments vs REF	35.4095	0	535.491	592.548	0.48051	4, 20

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: DBP-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Di-n-butyl Phtalate ,ug/kg

Conc-ppb	1	2	3	4	5
REF	58.100	60.200	43.800	50.300	47.000
DMMU-02	17.200	93.000	102.000	87.800	67.600
DMMU-03	68.000	48.400	48.900	46.900	33.200
DMMU-06	22.100	94.100	85.700	36.300	70.300
DMMU-08	53.100	39.100	33.800	92.800	32.700

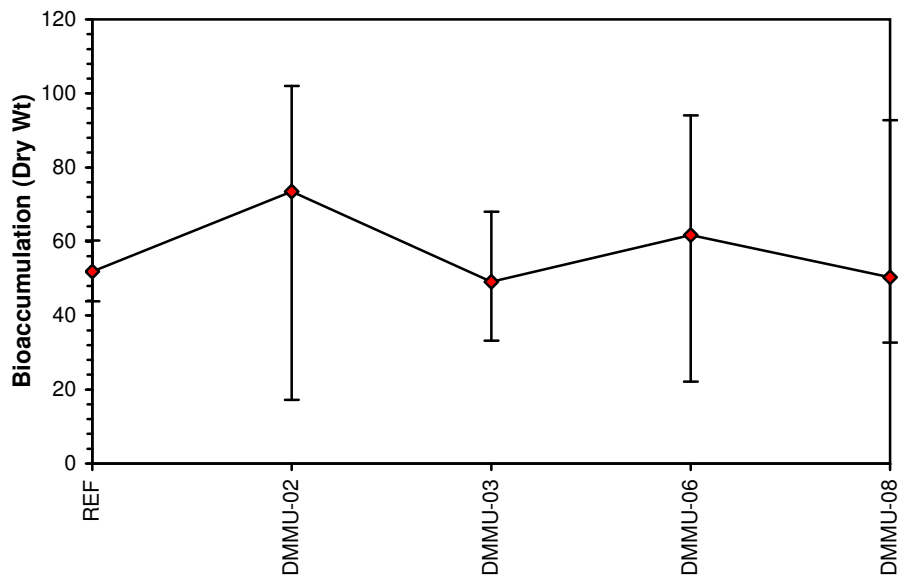
Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	51.880	0.0000	0.0196	0.0166	0.0228	13.515	5		
DMMU-02	73.520	-0.4253	0.0210	0.0098	0.0581	99.449	5	20.00	17.00
DMMU-03	49.080	0.0550	0.0215	0.0147	0.0301	25.776	5	30.00	17.00
DMMU-06	61.700	-0.1930	0.0219	0.0106	0.0452	67.367	5	25.00	17.00
DMMU-08	50.300	0.0311	0.0231	0.0108	0.0306	35.892	5	32.00	17.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.83502	0.918	1.81482	4.3289
Bartlett's Test indicates unequal variances (p = 5.22E-03)	14.7635	13.2767		

**Hypothesis Test (1-tail, 0.05)**

Steel's Many-One Rank Test indicates no significant differences  
 Treatments vs REF

**Dose-Response Plot**



**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: HXC-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Hexachlorocyclopentadiene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-05	17.800	18.100	16.900	97.800	18.700

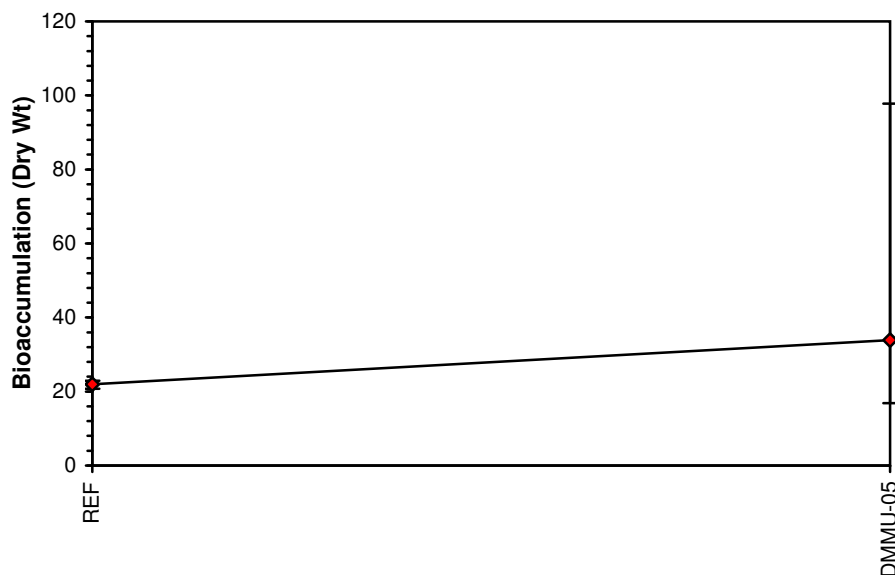
Conc-ppb	Mean	N-Mean	Transform: Untransformed					Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%	N		
REF	21.960	0.0000	21.960	20.700	22.900	4.068	5	35.00	19.00
DMMU-05	33.860	-0.5677	33.860	16.900	97.800	105.580	5		

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.64496	0.842	2.51113	7.13164
F-Test indicates unequal variances (p = 2.34E-06)	1601.53	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates no significant differences  
 Treatments vs REF

**Dose-Response Plot**





**Evaluation of Dredge Materials for Bioaccumulation-Bioaccumulation (Dry Wt)**

Start Date: Test ID: HXC-DW-MM Sample ID: HARBOR ISL  
 End Date: Lab ID: NWDLS Sample Type: MARINE SED  
 Sample Date: Protocol: EPADM91-EPA 503/8-91/001 Test Species: MM-Mercenaria mercenaria  
 Comments: Hexachlorocyclopentadiene ,ug/kg

Conc-ppb	1	2	3	4	5
REF	20.700	21.400	22.500	22.900	22.300
DMMU-05	17.800	18.100	16.900	97.800	18.700

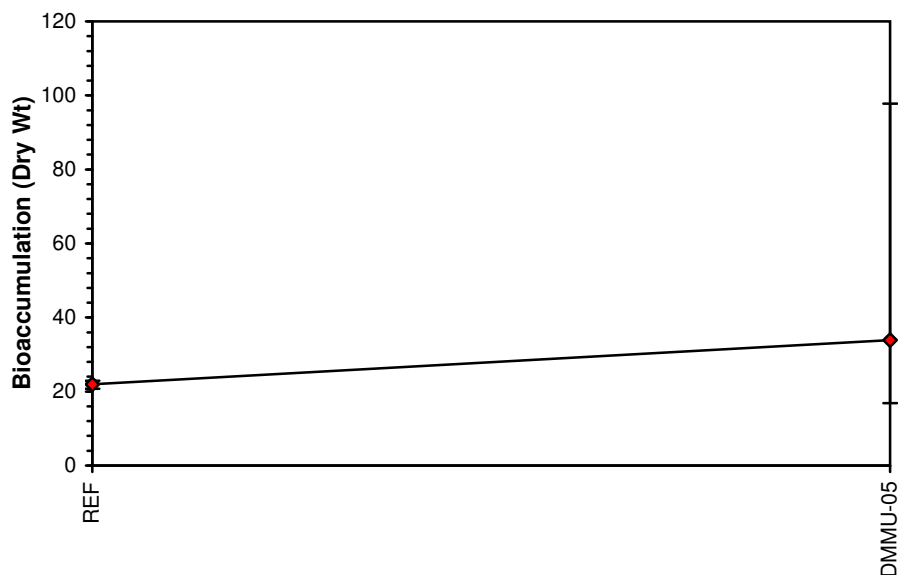
Conc-ppb	Mean	N-Mean	Transform: Reciprocal				N	Rank Sum	1-Tailed Critical
			Mean	Min	Max	CV%			
REF	21.960	0.0000	0.0456	0.0437	0.0483	4.140	5		
DMMU-05	33.860	-0.5677	0.0469	0.0102	0.0592	43.925	5	35.00	19.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.7087	0.842	-2.4206	6.79134
F-Test indicates unequal variances (p = 4.15E-04)	118.887	23.1539		

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates no significant differences  
 Treatments vs REF

**Dose-Response Plot**



**APPENDIX G**  
**TOXICITY LAB REPORT**



May 18, 2023

## LAB REPORT

Gregg Pawlak  
Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Report ID: 20230518145318MM

RE: PCCA HI & CDP Resampling 2023

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from our quality system will be noted in the case narrative. All analyses performed by North Water District Laboratory Services, Inc. unless noted.

For questions regarding this report, contact Monica Martin at 936-321-6060.

Sincerely,

Monica O. Martin  
Chief Administrative Officer



Terracon_Houston 11555 Clay Road Houston, TX 77043	Project: PCCA HI & CDP Resampling 2023 Project Number: Project Manager: Gregg Pawlak	<b>Reported:</b> 05/18/2023 14:53
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### Work Order Case Narrative

A total of 9 samples were collected on:

<u>Laboratory ID</u>	<u>Sample Name</u>	<u>Sample Date</u>
23A1459-15	HI-DMMU-1-S	01/16/2023 14:20
23A1459-19	HI-DMMU-2-S	01/16/2023 17:20
23A1459-23	HI-DMMU-3-S	01/19/2023 15:20
23A1459-26	HI-DMMU-4-S	01/19/2023 17:00
23A1459-29	HI-DMMU-5-S	01/18/2023 09:40
23A1459-33	HI-DMMU-6-S	01/18/2023 11:15
23A1459-37	HI-DMMU-7-S	01/16/2023 16:37
23A1459-42	HI-DMMU-8-S	01/18/2023 14:10
23A1459-47	REF-S	01/27/2023 09:20

Samples were received and accepted at NWDLS on 01/19/2023 - 01/30//2023. Any receiving discrepancies are recorded and stored in NWDLS' database. The samples received a Work Order of 23A1459. The lab sample IDs, client sample IDs, and dates of collection can be found at the top of each result page.

Any QC that did not meet the laboratory specified control limits was flagged and reported with qualifiers. For additional information, please refer to the included quality control data pages.

## Toxicology Testing Summary

SPP BIOASSAY	SP BIOASSAY	BIOACCUMULATION
Zooplankton <i>Americamysis bahia</i> (<24 hrs.), Crustacean <i>Americamysis bahia</i> , & Fish <i>Menidia beryllina</i>	Filter Feeder <i>Americamysis bahia</i> & Deposit-Feeder / Burrower <i>Leptocheirus plumulosus</i>	Filter Feeder <i>Mercenaria mercenaria</i> & Deposit-Feeder / Burrower <i>Alitta virens</i>
HI-DMMU-1 elutriate	HI-DMMU-1 composite	HI-DMMU-1 composite
HI-DMMU-2 elutriate	HI-DMMU-2 composite	HI-DMMU-2 composite
HI-DMMU-3 elutriate	HI-DMMU-3 composite	HI-DMMU-3 composite
HI-DMMU-4 elutriate	HI-DMMU-4 composite	HI-DMMU-4 composite
HI-DMMU-5 elutriate	HI-DMMU-5 composite	HI-DMMU-5 composite
HI-DMMU-6 elutriate	HI-DMMU-6 composite	HI-DMMU-6 composite
HI-DMMU-7 elutriate	HI-DMMU-7 composite	HI-DMMU-7 composite
HI-DMMU-8 elutriate	HI-DMMU-8 composite	HI-DMMU-8 composite
N/A	REF composite	REF composite

Statistical analyses are described in the SAP and the RIA and are designed to determine whether the test results are significantly different from the results of the Reference. All statistical comparisons were at the 95% confidence level and are included herein, if needed.

Statistical calculations were performed for any SPP bioassay if survival in any 100% test treatment was less than the survival in the Control and the difference exceeded 10%. For the SP bioassay, statistical comparisons of mean survival were made for each species and for the total number of organisms, if (1) mean survival for any station test was less than that for the Reference, and (2) the difference between Reference and test survival was at least 10% (20% for the amphipods). For the bioaccumulation assessment, statistical comparisons of mean concentrations were made for each parameter and species if the mean concentration of the parameter for any station test tissue was greater than that for the Reference tissue.

## Suspended Particulate Phase (SPP - Elutriate) Toxicology Analysis Summary

Bioassay analysis of the suspended particulate phase (elutriate) from each channel station, noted above, was conducted. Procedures for performing these tests can be found in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA, 2002), Appendix E of the Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. –Testing Manual (EPA/USACE, 1998) and the RIA.

The NWDLS Toxicology Laboratory has separate areas for water and sediment storage, culture of test organisms, and testing to minimize cross-contamination between areas.

Testing was performed at  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for all bioassays. Lighting was arranged for each test phase so that light intensity was approximately 1200 microwatt ( $\mu\text{w}$ )/square centimeters ( $\text{cm}^2$ ) using cool-white fluorescent bulbs with a 16-hour light and 8-hour dark cycle.

Two test organisms and three life stages were tested in the SPP bioassay: the silverside minnow, *Menidia beryllina* (15 days old); and the mysid shrimp, *Americamysis bahia*, at the adult (7 days old) and post-larval (<24 hours old) life stages. These organisms are all cultured at the NWDLS Toxicology Laboratory.

The SPP, after preparation, was transferred to the test containers, either 1,000- or 500-milliliter (ml) disposable food-grade, polypropylene cups (containing 800- or 250-ml test solution, respectively), and mixed with laboratory-prepared seawater (Instant Ocean [HMM]) in appropriate proportions to give three replicates each of 10%, 50%, and 100% concentrations of SPP per station. Containers filled with 100% HMM were used as controls for the tests. The sediment used for the preparation was not sieved.

- Once prepared, the elutriates were tested for ammonia. No samples contained total ammonia > 30 mg/L.
- No prepared samples presented the odor of hydrogen sulfide.

After the test containers were prepared and determined to be at the appropriate temperature, 10 silverside minnows or 10 adult mysids were added randomly to each 800-ml cup. Ten post larval mysids were added to each 250-ml test container. The loading factor in all vessels was less than  $\frac{1}{2}$  gram of test organism tissue per liter of medium. Counts were made after 24 and 48 hours in the post-larval mysid bioassays, and after 24, 48, 72, and 96 hours in the adult mysid and silverside minnow bioassays to monitor the number of surviving organisms.

Using hand-held meters, temperature, dissolved oxygen (DO), pH, salinity, and ammonia were recorded daily. The fish were not fed, but the mysids, being highly cannibalistic, were given 1 drop of suspended *Artemia* (brine shrimp) nauplii per test cup twice daily.

## SPP – Preparation Summary

<b>HI-DMMU-1</b>	
Original Salinity	28.2 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	14:10
Mix Time End	14:40
<b>HI-DMMU-2</b>	
Original Salinity	28.2 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	14:20
Mix Time End	14:50

<b>HI-DMMU-3</b>	
Original Salinity	28.3 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	11:35
Mix Time End	12:05
<b>HI-DMMU-4</b>	
Original Salinity	28.3 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	10:50
Mix Time End	11:20





<b>HI-DMMU-5</b>	
Original Salinity	27.7 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	11:50
Mix Time End	12:20
<b>HI-DMMU-6</b>	
Original Salinity	26.9 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	12:00
Mix Time End	12:30



<b>HI-DMMU-7</b>	
Original Salinity	27.5 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	12:15
Mix Time End	12:45
<b>HI-DMMU-8</b>	
Original Salinity	27.4 %
Salinity After DI Added	29 %
Water Volume	48 L
Sediment Volume	12 L
Date	02/13/2023
Mix Time Start	12:30
Mix Time End	13:00

**SPP – Mysid Shrimp 48-hr (*Americamysis bahia*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Americamysis bahia</i>	Test Type	SPP 48 hr
Number of Replicates	5	Number of Organisms/ Replicate	10
Test Organism Batch Number	23-0103-48h Mb SPP	Organism Date of Birth or Date Received	02/14/2023
Organism Source	NWDLS	Organism Age at Test Initiation	< 24 hr
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L	Reference Toxicant	Potassium Chloride – see graph
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Test Initiation Date/Time	02/14/2023 09:00	Test Termination Date/Time	02/16/2023 09:00
Renewal of Test Solution	None	Feeding	Twice Daily

Sample ID	Concentration (%)	Mean Survival (%)	Statistically Different Compared to Control (yes/no)	LC <sub>50</sub> (%)
HI-DMMU-1	0	100	---	>100
	10	100	---	
	50	100	---	
	100	98	No	
HI-DMMU-2	0	96	---	>100
	10	94	---	
	50	100	---	
	100	100	No	
HI-DMMU-3	0	100	---	>100
	10	100	---	
	50	98	---	
	100	98	No	
HI-DMMU-4	0	98	---	>100
	10	100	---	
	50	100	---	
	100	100	No	
HI-DMMU-5	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	
HI-DMMU-6	0	100	---	>100
	10	98	---	
	50	96	---	
	100	96	No	
HI-DMMU-7	0	98	---	>100
	10	98	---	
	50	96	---	
	100	94	No	
HI-DMMU-8	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	

# CETIS Analytical Report

Report Date: 27 Mar-23 16:41 (p 1 of 1)  
 Test Code/ID: 23A1459.11 / 08-5577-2766

## Mysidopsis 48-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 04-3898-3047	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:41	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 03-7705-8972	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 18-1531-1219	<b>Code:</b> 6C337373	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

REF-S

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	802649	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

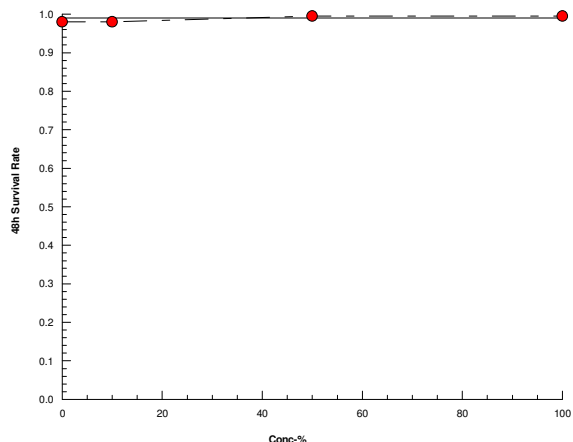
### 48h Survival Rate Summary

Conc-%	Code	Count	Mean	Calculated Variate(A/B)					Isotonic Variate		
				Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.99	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.99	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.99	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.99	0.0%

### 48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.9000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	0.9000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:59 (p 1 of 1)  
 Test Code/ID: 23A1459.1 / 12-7360-4923

## Mysidopsis 48-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 20-0403-1027	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:59	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 13-7365-7169	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 15-8295-5602	<b>Code:</b> 5E59FC52	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 1

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	964798	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

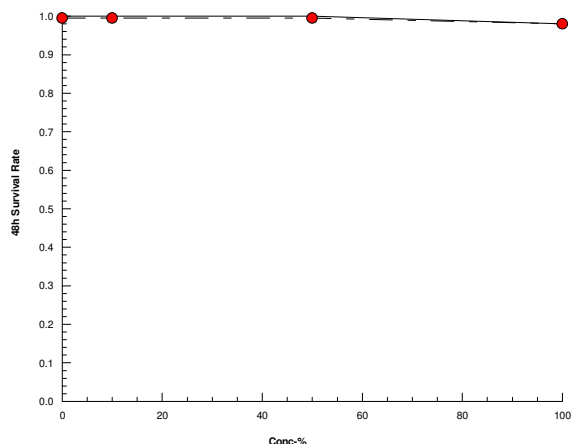
### 48h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%

### 48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.9000	1.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:58 (p 1 of 1)  
**Test Code/ID:** 23A1459.2 / 07-2187-4306

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 06-3840-1776	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:58	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 11-3499-0462	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 07-4817-1684	<b>Code:</b> 2C9831A4	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI DMMU 2

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1377420	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

**48h Survival Rate Summary**

**Calculated Variate(A/B)**

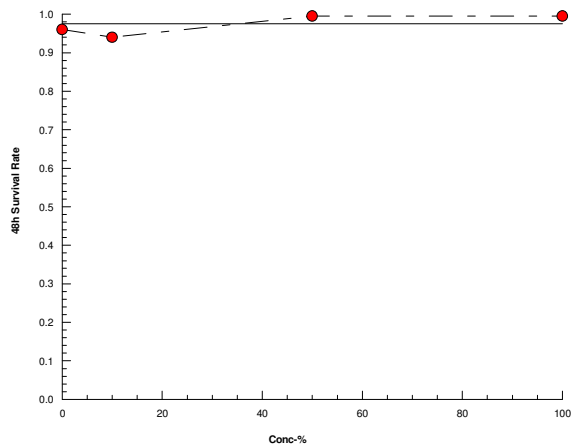
**Isotonic Variate**

Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.9000	1.0000	0.0548	5.71%	0.0%	48/50	0.975	0.0%
10		5	0.9400	0.8000	1.0000	0.0894	9.52%	2.08%	47/50	0.975	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-4.17%	50/50	0.975	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	-4.17%	50/50	0.975	0.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	0.9000	1.0000	1.0000	1.0000
10		1.0000	0.8000	0.9000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:56 (p 1 of 1)  
**Test Code/ID:** 23A1459.3 / 20-6819-9476

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 11-4635-9989	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:56	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 02-1377-7010	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 06-6779-9296	<b>Code:</b> 27CDCF00	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI DMMU 3

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	298834	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

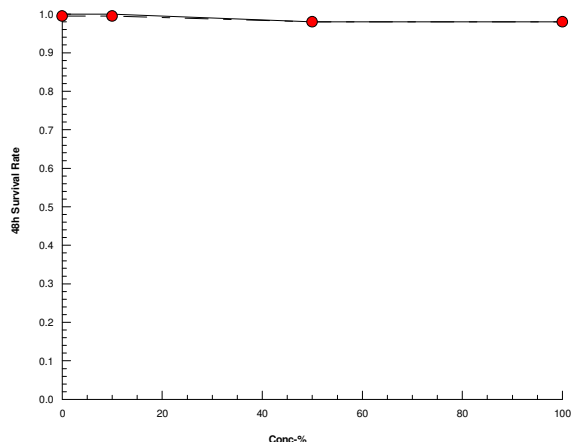
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	0.9000	1.0000	1.0000
100		0.9000	1.0000	1.0000	1.0000	1.0000

**Graphics**





# CETIS Analytical Report

Report Date: 27 Mar-23 16:54 (p 1 of 1)  
 Test Code/ID: 23A1459.4 / 18-7439-4816

## Mysidopsis 48-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 08-5957-2063	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:54	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 12-5360-6739	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 08-5883-0284	<b>Code:</b> 3330B5CC	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 4

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2080517	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

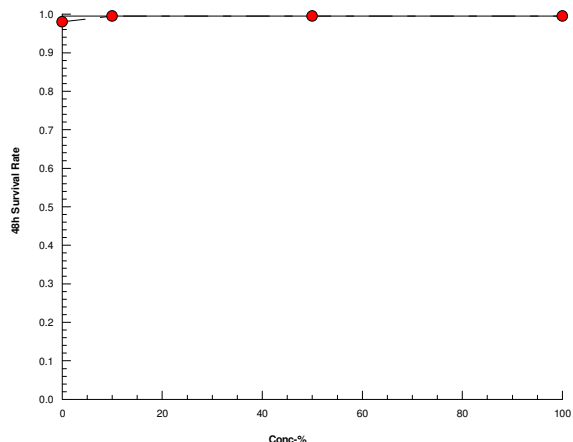
### 48h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.995	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.995	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.995	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.995	0.0%

### 48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:53 (p 1 of 1)  
 Test Code/ID: 23A1459.5 / 11-9275-4125

## Mysidopsis 48-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 08-9378-8224	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:52	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 06-9965-2125	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 11-3336-4259	<b>Code:</b> 438DC423	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 5

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	410280	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

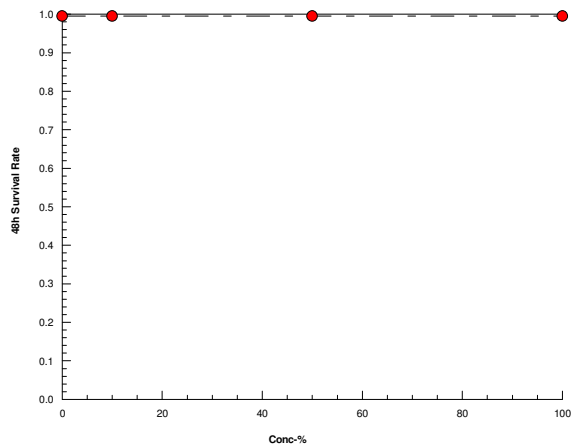
### 48h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

### 48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:51 (p 1 of 1)  
**Test Code/ID:** 23A1459.6 / 07-7609-7732

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 09-1958-6958	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:50	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 00-7414-4496	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 14-2657-5293	<b>Code:</b> 5507CFBD	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI DMMU 6

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	773144	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

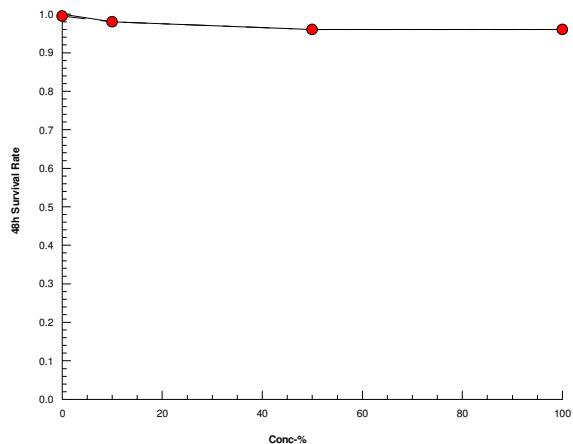
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
50		5	0.9600	0.8000	1.0000	0.0894	9.32%	4.0%	48/50	0.96	4.0%
100		5	0.9600	0.9000	1.0000	0.0548	5.71%	4.0%	48/50	0.96	4.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		0.8000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.9000	0.9000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:49 (p 1 of 1)  
**Test Code/ID:** 23A1459.7 / 07-3021-7548

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 04-8960-4979	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:48	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 05-5809-3455	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 01-0353-4475	<b>Code:</b> 62BCF8B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 7

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1058451	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

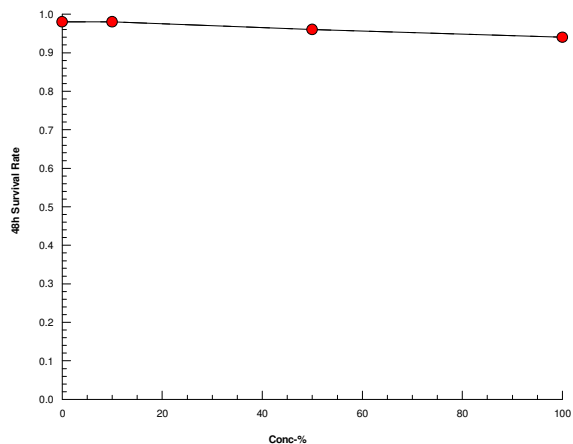
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
50		5	0.9600	0.8000	1.0000	0.0894	9.32%	2.04%	48/50	0.96	2.04%
100		5	0.9400	0.9000	1.0000	0.0548	5.83%	4.08%	47/50	0.94	4.08%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.9000	1.0000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	0.8000
100		0.9000	0.9000	0.9000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:46 (p 1 of 1)  
**Test Code/ID:** 23A1459.8 / 17-5662-1483

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 13-5049-2427	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:46	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 08-0968-7093	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 13-5646-7016	<b>Code:</b> 50DA0B48	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 8

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	735524	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

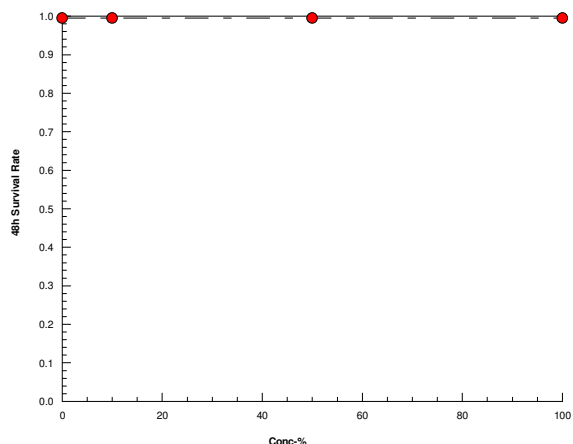
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:45 (p 1 of 1)  
**Test Code/ID:** 23A1459.9 / 13-1757-2847

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 02-5765-8567	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:45	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 02-0532-4785	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 14-2512-3867	<b>Code:</b> 54F1AA1B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

CDP 6

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	932117	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

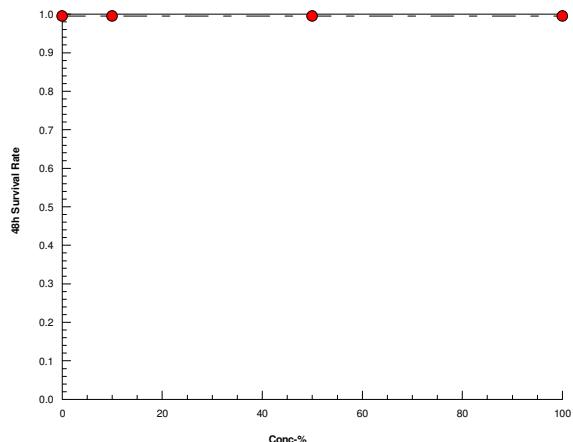
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:43 (p 1 of 1)  
**Test Code/ID:** 23A1459.10 / 12-3350-9953

**Mysidopsis 48-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 21-0813-1034	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:43	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 02-7724-5033	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 09:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 16 Feb-23 09:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 48h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 10-6672-3179	<b>Code:</b> 3F94E76B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 19h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

CDP 7

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	147753	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

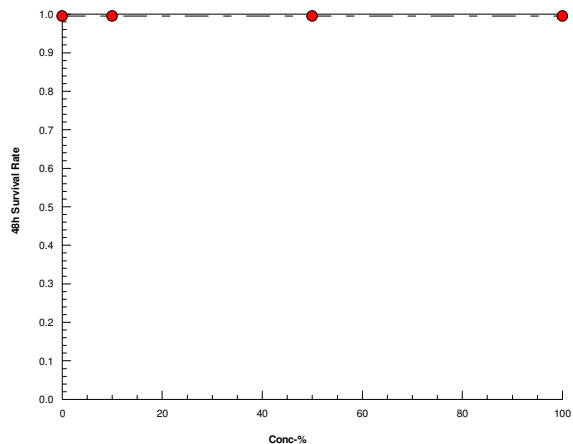
**48h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**48h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



Client	PCCA HI & CDP Resampling 2023	WO No.	23A1459
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48 h Acute <i>Mysidopsis bahia</i> Toxicity Test Condition Summary Test Method EPA821-R-02-012-2007.0; NWDLS SOP No. 4017; EPA 503/8-91/001; NWDLS SOP No. 4046			
Test Organism:	<i>Mysidopsis bahia</i>	Age Class:	<24hrs old
Test Type:	SPP	Test Duration:	48 h
Temperature:	20 ± 2°C	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber size:	500 mL cups	Cleaning:	Daily during test counts
No. of Replicates:	5	No. organisms per Replicate:	10
Test Solution Volume	375 mL (minimum)	Dilution Water:	LAB-W
Renewal of test solution:	None	Aeration:	None
Feeding:	Twice daily	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria	≥ 90% survival in control	Sample Holding Time Requirements:	24 h maximum for first use.

Test Concentrations (%):	Control, 10, 50, 100	Sites:	REF, HI-DMMU 1-8, CDP 6-7
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Test Organism Batch #	23-0123-48hMB SPP	DOB	2-14-23
Source	NWDLS	Age (days)	624h

Sample Date/Time:	1-16-23 / 1420	Sediment : Water ratio	1 : 4
Sediment Volume	12 L	Water Volume	48 L

Test Initiation Date/Time:	2-14-23	0900	Test Initiation Initials:	RLG / ADJ
24h Counts Date/Time:	2-15-23	0915	24h Counts Initials:	RLG
48h Termination Date/Time:	2-16-23	0900	48h Termination Initials:	RLG

1st Feed Date/Time/Initials:	2-14-23	1500	RLG	2nd Feed Date/Time/Initials:	2-15-23	0730	RLG
3rd Feed Date/Time/Initials:	2-15-23	1545	RLG	4th Feed Date/Time/Initials:	2-16-23	0715	RLG

This test was conducted in accordance with the method standards or according to the exception(s) as noted:

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

RLG  
Initial Review



Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms		
		0 hr	24 hr	48 hr			0 hr	24 hr	48 hr			0 hr	24 hr	48 hr
REF-Cont	A	10	10	10	HI-DMMU-1 50	A	10	10	10	HI-DMMU-3 CONT	A	10	10	10
	B	10	10	9		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
REF 10	A	10	10	10	HI-DMMU-1 100	A	10	10	10	HI-DMMU-3 10	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	9		D	10	10	10
	E	10	10	9		E	10	10	10		E	10	10	10
REF 50	A	10	10	10	HI-DMMU-2 Cont	A	10	9	9	HI-DMMU-3 50	A	10	10	10
	B	10	10	10		B	10	9	9		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	9	9
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
REF 100	A	10	10	10	HI-DMMU-2 10	A	10	10	10	HI-DMMU-3 100	A	10	9	9
	B	10	10	10		B	10	8	8		B	10	10	10
	C	10	10	10		C	10	10	9		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
HI-DMMU-1 Cont	A	10	10	10	HI-DMMU-2 50	A	10	10	10	HI-DMMU-4 CONT	A	10	9	9
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
HI-DMMU-1 10	A	10	10	10	HI-DMMU-2 100	A	10	10	10	HI-DMMU-4 10	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

TRC  
Initial Review

Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms		
		0 hr	24 hr	48 hr			0 hr	24 hr	48 hr			0 hr	24 hr	48 hr
HI-DMMU-4 50	A	10	10	10	HI-DMMU-6 CONT	A	10	10	10	HI-DMMU-7 50	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	9	8
HI-DMMU-4 100	A	10	10	10	HI-DMMU-6 10	A	10	10	10	HI-DMMU-7 100	A	10	10	9
	B	10	10	10		B	10	10	9		B	10	10	9
	C	10	10	10		C	10	10	10		C	10	9	9
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
HI-DMMU-5 CONT	A	10	10	10	HI-DMMU-6 50	A	10	10	8	HI-DMMU-8 CONT	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
HI-DMMU-5 10	A	10	10	10	HI-DMMU-6 100	A	10	10	10	HI-DMMU-8 10	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	9	9		D	10	10	10
	E	10	10	10		E	10	9	9		E	10	10	10
HI-DMMU-5 50	A	10	10	10	HI-DMMU-7 CONT	A	10	10	10	HI-DMMU-8 50	A	10	10	10
	B	10	10	10		B	10	10	9		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10
HI-DMMU-5 100	A	10	10	10	HI-DMMU-7 10	A	10	10	9	HI-DMMU-8 100	A	10	10	10
	B	10	10	10		B	10	10	10		B	10	10	10
	C	10	10	10		C	10	10	10		C	10	10	10
	D	10	10	10		D	10	10	10		D	10	10	10
	E	10	10	10		E	10	10	10		E	10	10	10

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

TDL  
Initial Review

Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms			Conc. (%)	Rep	No. of Surviving Organisms		
		0 hr	24 hr	48 hr			0 hr	24 hr	48 hr			0 hr	24 hr	48 hr
CDP 6 CONT	A	10	10	10	CDP 7 50	A	10	10	10		A			
	B	10	10	10		B	10	10	10		B			
	C	10	10	10		C	10	10	10		C			
	D	10	10	10		D	10	10	10		D			
	E	10	10	10		E	10	10	10		E			
CDP 6 10	A	10	10	10	CDP 7 100	A	10	10	10		A			
	B	10	10	10		B	10	10	10		B			
	C	10	10	10		C	10	10	10		C			
	D	10	10	10		D	10	10	10		D			
	E	10	10	10		E	10	10	10		E			
CDP 6 50	A	10	10	10		A					A			
	B	10	10	10		B					B			
	C	10	10	10		C					C			
	D	10	10	10		D					D			
	E	10	10	10		E					E			
CDP 6 100	A	10	10	10		A					A			
	B	10	10	10		B					B			
	C	10	10	10		C					C			
	D	10	10	10		D					D			
	E	10	10	10		E					E			
CDP 7 CONT	A	10	10	10		A					A			
	B	10	10	10		B					B			
	C	10	10	10		C					C			
	D	10	10	10		D					D			
	E	10	10	10		E					E			
CDP 7 10	A	10	10	10		A					A			
	B	10	10	10		B					B			
	C	10	10	10		C					C			
	D	10	10	10		D					D			
	E	10	10	10		E					E			

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

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Initial Review

Water Quality Parameters - *Mysidopsis bahia*

Conc. (%)	pH / Dissolved Oxygen (mg/L)		
	0 hr	24 hr	48 hr
REF Cont	8.1 / 8.0	8.0 / 7.5	7.9 / 7.6
REF 10	8.1 / 7.8	7.9 / 7.7	7.9 / 7.6
REF 50	8.1 / 7.8	7.9 / 7.7	7.9 / 7.5
REF 100	8.2 / 7.7	8.1 / 7.7	7.9 / 7.5
HI-DMMU-1 Cont	8.1 / 8.0	8.0 / 7.8	8.0 / 7.6
HI-DMMU-1 10	8.0 / 7.4	8.0 / 7.8	7.9 / 7.6
HI-DMMU-1 50	8.1 / 7.7	8.0 / 7.7	7.9 / 7.7
HI-DMMU-1 100	8.1 / 7.7	8.0 / 7.7	7.9 / 7.6
HI-DMMU-2 Cont	8.1 / 8.0	8.0 / 7.6	7.9 / 7.4
HI-DMMU-2 10	7.9 / 7.4	7.9 / 7.6	7.9 / 7.4
HI-DMMU-2 50	8.0 / 7.7	8.1 / 7.7	7.9 / 7.6
HI-DMMU-2 100	8.2 / 7.8	8.1 / 7.6	7.9 / 7.6
HI-DMMU-3 Cont	8.1 / 8.0	8.0 / 7.8	8.0 / 7.5
HI-DMMU-3 10	8.1 / 8.0	8.0 / 7.8	8.0 / 7.5
HI-DMMU-3 50	8.2 / 7.9	8.1 / 7.7	8.0 / 7.4
HI-DMMU-3 100	8.2 / 7.9	8.1 / 7.8	8.1 / 7.4
HI-DMMU-4 Cont	8.1 / 8.0	8.0 / 7.7	8.0 / 7.6
HI-DMMU-4 10	8.1 / 8.0	8.1 / 7.8	8.0 / 7.5
HI-DMMU-4 50	8.2 / 7.7	8.2 / 7.6	8.1 / 7.4
HI-DMMU-4 100	8.2 / 7.8	8.2 / 7.7	8.1 / 7.3
HI-DMMU-5 Cont	8.1 / 8.0	8.0 / 7.9	8.0 / 7.7
HI-DMMU-5 10	8.2 / 7.9	8.1 / 7.8	7.9 / 7.4
HI-DMMU-5 50	8.3 / 7.8	8.3 / 7.7	8.0 / 7.7
HI-DMMU-5 100	8.4 / 7.8	8.3 / 7.7	8.0 / 7.7
Meter No. 732/4526	732/4526	732/4526	732/4526

Conc. (%)	pH / Dissolved Oxygen (mg/L)		
	0 hr	24 hr	48 hr
HI-DMMU-6 Cont	8.1 / 8.0	8.0 / 7.8	7.9 / 7.6
HI-DMMU-6 10	8.2 / 7.9	8.1 / 7.7	8.1 / 7.5
HI-DMMU-6 50	8.3 / 7.9	8.2 / 7.6	8.1 / 7.5
HI-DMMU-6 100	8.3 / 7.9	8.2 / 7.6	8.2 / 7.4
HI-DMMU-7 Cont	8.1 / 8.0	8.2 / 7.8	8.1 / 7.4
HI-DMMU-7 10	8.1 / 7.9	8.2 / 7.7	8.1 / 7.6
HI-DMMU-7 50	8.1 / 7.9	8.2 / 7.7	8.1 / 7.4
HI-DMMU-7 100	8.3 / 7.9	8.2 / 7.7	7.9 / 7.5
HI-DMMU-8 Cont	8.1 / 8.0	8.2 / 7.6	7.9 / 7.6
HI-DMMU-8 10	8.1 / 7.9	8.1 / 7.8	7.9 / 7.6
HI-DMMU-8 50	8.1 / 7.8	8.1 / 7.4	7.8 / 7.5
HI-DMMU-8 100	8.4 / 7.9	8.3 / 7.4	7.9 / 7.4
CDP-6 Cont	8.1 / 8.0	8.2 / 7.3	7.9 / 7.3
CDP-6 10	8.2 / 7.9	8.2 / 7.2	7.9 / 7.3
CDP-6 50	8.1 / 7.9	8.2 / 7.1	8.0 / 7.7
CDP-6 100	8.1 / 8.0	8.1 / 7.6	8.0 / 7.1
CDP-7 Cont	8.1 / 8.0	8.1 / 7.1	8.0 / 7.1
CDP-7 10	8.1 / 8.0	8.1 / 7.1	8.0 / 7.1
CDP-7 50	8.1 / 8.0	8.2 / 7.2	8.0 / 7.0
CDP-7 100	8.2 / 8.0	8.2 / 7.2	8.0 / 7.0
Meter. No.	732/4526	732/4526	732/4526

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

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Initial Review

Conc. (%)	Temperature °C / Salinity (‰)		
	0 hr	24 hr	48 hr
REF Cont	20 / 29	20 / 29	20 / 29
REF 10	/	/	/
REF 50	/	/	/
REF 100	/	/	/
HI-DMMU-1 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-1 10	/	/	/
HI-DMMU-1 50	/	/	/
HI-DMMU-1 100	/	/	/
HI-DMMU-2 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-2 10	/	/	/
HI-DMMU-2 50	/	/	/
HI-DMMU-2 100	/	/	/
HI-DMMU-3 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-3 10	/	/	20 / 29
HI-DMMU-3 50	/	/	20 / 28
HI-DMMU-3 100	/	/	20 / 30
HI-DMMU-4 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-4 10	/	/	/
HI-DMMU-4 50	/	/	/
HI-DMMU-4 100	/	/	/
HI-DMMU-5 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-5 10	/	/	/
HI-DMMU-5 50	/	/	/
HI-DMMU-5 100	/	/	/
Meter No.	732 / 456	732 / 456	732 / 456

Conc. (%)	Temperature °C / Salinity (‰)		
	0 hr	24 hr	48 hr
HI-DMMU-6 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-6 10	/	/	/
HI-DMMU-6 50	/	/	/
HI-DMMU-6 100	/	/	/
HI-DMMU-7 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-7 10	/	/	/
HI-DMMU-7 50	/	/	/
HI-DMMU-7 100	/	/	/
HI-DMMU-8 Cont	20 / 29	20 / 29	20 / 29
HI-DMMU-8 10	/	/	20 / 29
HI-DMMU-8 50	/	/	20 / 29
HI-DMMU-8 100	/	/	20 / 30
CDP-6 Cont	20 / 29	20 / 29	20 / 29
CDP-6 10	/	/	/
CDP-6 50	/	/	/
CDP-6 100	/	/	/
CDP-7 Cont	20 / 29	20 / 29	20 / 29
CDP-7 10	/	/	/
CDP-7 50	/	/	/
CDP-7 100	/	/	/
Meter No.	732 / 456	732 / 456	732 / 456

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

Water Quality Parameters - *Mysidopsis bahia*

Ammonia Meter # 566					
Concentration	Day 0	Day 2 (48h)		Day 0	Day 2 (48h)
REF Control	.001	.002	HI-DMMU-6 Cont		
			HI-DMMU-6 10	0.36	0.39
REF10%	0.53	0.51	HI-DMMU-6 50	1.39	1.47
REF 50%	2.36	2.16	HI-DMMU-6 100	2.76	2.82
REF 100%	4.88	4.76	HI-DMMU-7 Cont	.001	.002
HI-DMMU-1 Control	.001	.002	HI-DMMU-7 10	0.17	0.20
HI-DMMU-1 10%	0.22	0.21	HI-DMMU-7 50	0.94	1.01
HI-DMMU-1 50%	0.95	0.96	HI-DMMU-7 100	1.87	1.74
HI-DMMU-1 100%	1.94	1.76	HI-DMMU-8 Cont	.001	.002
HI-DMMU-2 Control	.001	.002	HI-DMMU-8 10	0.31	0.29
HI-DMMU-2 10%	0.31	0.32	HI-DMMU-8 50	1.18	1.09
HI-DMMU-2 50%	1.05	1.02	HI-DMMU-8 100	2.44	2.17
HI-DMMU-2 100%	2.30	2.12	CDP-6 Cont	.001	.002
HI-DMMU-3 Control	.001	.002	CDP-6 10	0.29	0.25
HI-DMMU-3 10%	0.29	.022	CDP-6 50	1.49	1.32
HI-DMMU-3 50%	1.02	0.94	CDP-6 100	2.46	2.69
HI-DMMU-3 100%	1.96	1.87	CDP-7 Cont	.001	.002
HI-DMMU-4 Control	.001	.002	CDP-7 10	0.93	0.28
HI-DMMU-4 10%	0.47	0.39	CDP-7 50	<del>2.69</del> 0	1.54
HI-DMMU-4 50%	1.67	1.61	CDP-7 100	2.09	2.23
HI-DMMU-4 100%	3.21	3.12	HI DMMU 6-Cont	.001	.002
HI-DMMU-5 Control	.001	.002			
HI-DMMU-5 10%	.026	.024			
HI-DMMU-5 50%	1.08	0.99			
HI-DMMU-5 100%	2.12	1.87			

DEC 14-23 → [1.49]

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

m  
Initial Review

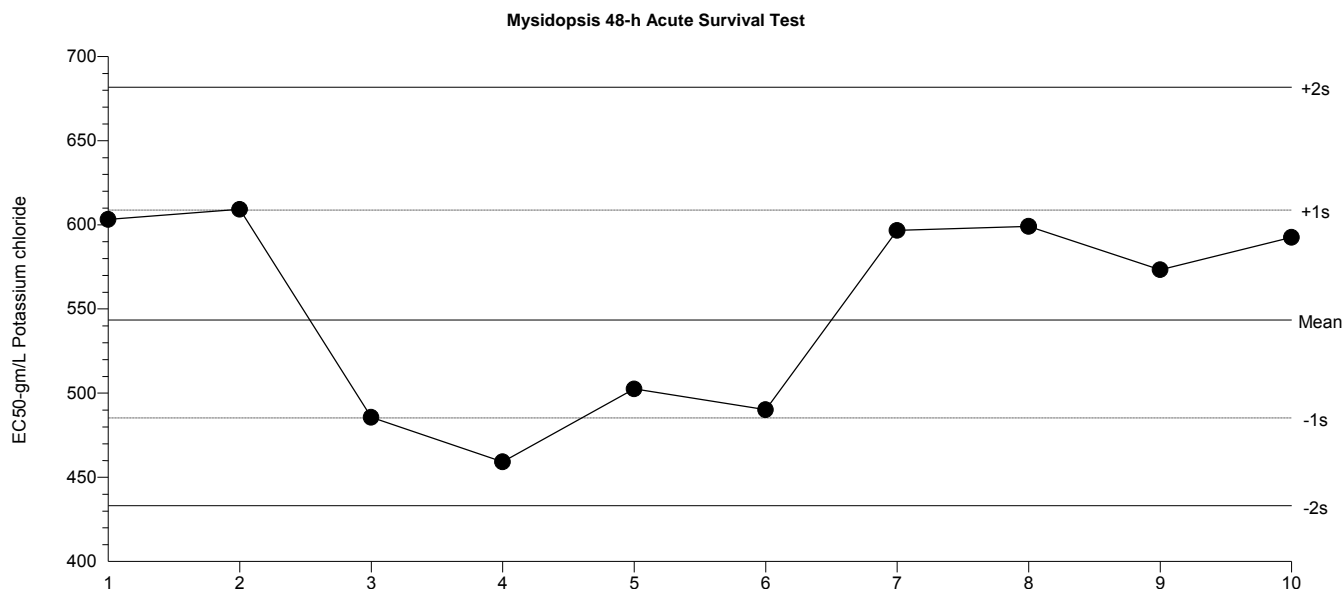
Mysidopsis 48-h Acute Survival Test

All Matching Labs

Test Type: Survival (48h)  
 Protocol: EPA/821/R-02-012 (2002)

Organism: Mysidopsis bahia (Atlantic Mysid)  
 Endpoint: 48h Survival Rate

Material: Potassium chloride  
 Source: Reference Toxicant-REF



Mean: 543.5      Count: 9      -1s Warning Limit: 485.2      -2s Action Limit: 433.2  
 Sigma: n/a      CV: 11.40%      +1s Warning Limit: 608.7      +2s Action Limit: 681.8

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	8	10:40	603.2	59.75	0.9198			11-4029-7877	00-6903-6189	NWDLS Environ. Toxicol.
2			22	11:00	609.2	65.69	1.006	(+)		17-1255-3679	09-9649-9926	NWDLS Environ. Toxicol.
3		Jul	20	12:00	485.7	-57.83	-0.9921			00-3428-8131	12-2103-9982	NWDLS Environ. Toxicol.
4		Aug	31	15:30	459.2	-84.3	-1.486	(-)		04-2380-2666	13-3086-6489	NWDLS Environ. Toxicol.
5		Sep	21	14:45	502.5	-40.99	-0.6914			02-5545-6554	08-3249-2729	NWDLS Environ. Toxicol.
6		Oct	19	14:50	490.2	-53.32	-0.9106			01-7881-8764	05-0941-1726	NWDLS Environ. Toxicol.
7		Nov	3	15:00	596.6	53.16	0.8229			21-1147-5418	04-3682-3896	NWDLS Environ. Toxicol.
8		Dec	2	13:00	599.1	55.58	0.8586			01-4642-6338	20-0189-2319	NWDLS Environ. Toxicol.
9	2023	Jan	3	11:45	573.3	29.82	0.4711			13-2485-9186	20-8222-8016	NWDLS Environ. Toxicol.
10		Feb	1	13:15	592.5	49.03	0.7617			20-3680-6494	04-2603-0477	NWDLS Environ. Toxicol.

# CETIS Analytical Report

Report Date: 06 Feb-23 09:22 (p 1 of 1)  
 Test Code/ID: 23-0038 / 20-3680-6494

## Mysidopsis 48-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 04-2603-0477	<b>Endpoint:</b> 48h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 06 Feb-23 9:20	<b>Analysis:</b> Untrimmed Spearman-Kärber	<b>Status Level:</b> 1
<b>Batch ID:</b> 00-5533-1432	<b>Test Type:</b> Survival (48h)	<b>Analyst:</b> Loan Bui
<b>Start Date:</b> 01 Feb-23 13:15	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 03 Feb-23 14:15	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 49h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 02-0224-8492	<b>Code:</b> C0E112C	<b>Project:</b> 047000100 0400.X
<b>Sample Date:</b> 01 Feb-23 12:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant
<b>Receipt Date:</b> 01 Feb-23 12:00	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 75m	<b>Client:</b> North Water District Laboratory Services, In	

### Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0	0.00%	2.773	0.008012	592.5	571.1	614.8

### Test Acceptability Criteria

#### TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.9	>>	Yes	Passes Criteria

### 48h Survival Rate Summary

#### Calculated Variate(A/B)

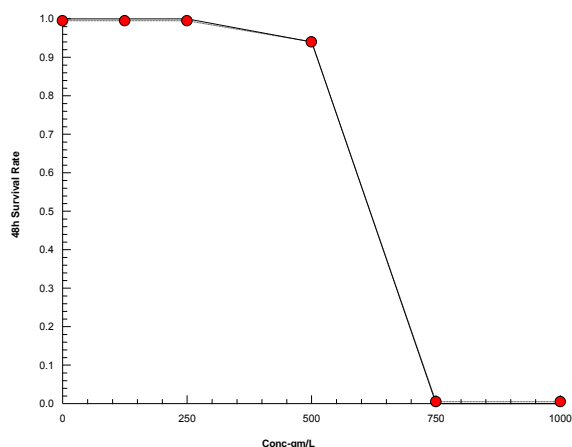
#### Isotonic Variate

Conc-gm/L	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
125		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
250		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
500		5	0.9400	0.9000	1.0000	0.0548	5.83%	6.0%	47/50	0.94	6.0%
750		5	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%
1000		5	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%

### 48h Survival Rate Detail

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
125		1.0000	1.0000	1.0000	1.0000	1.0000
250		1.0000	1.0000	1.0000	1.0000	1.0000
500		0.9000	1.0000	0.9000	1.0000	0.9000
750		0.0000	0.0000	0.0000	0.0000	0.0000
1000		0.0000	0.0000	0.0000	0.0000	0.0000

### Graphics







Client	NWDLS KCI STOX - Mb48	Login	23-0038	NWDLS Job No.	11111
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BGB0497

48 h Acute *Mysidopsis bahia* Toxicity Test Condition Summary  
 Test Method EPA-821-R-02-012-2007.0; NWDLS SOP No. 4017

Test Organism:	<i>Mysidopsis bahia</i>	Age Class:	1-5 d old
Test Type:	Acute Static	Test Duration:	48 h
Temperature:	20 ± 1, or 25 ± 1	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber size:	300 mL cups	Cleaning:	Daily during test renewal
No. of Replicates:	5	No. organisms per Replicate:	10
Test Solution Volume:	200 mL (minimum)	Dilution Water:	LAB-W
Renewal of test solution:	At 24 h	Aeration:	None
Feeding:	Twice daily	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria:	> 90% survival in control	Sampling Holding Time Requirements:	N/A

Test Concentrations (mg/L):	Cont, 125, 250, 500, 750, 1000
-----------------------------	--------------------------------

Test Organism Batch #	23-026 ①	DOB	1-27-23
Source	NWDLS	Age (days)	5d

STOX Prep Date/Time/Initials	2-1-23 1200 LBU	Analytical Standard Record Number:	2302056
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Water Batch ID	2301000
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Test Initiation Date/Time:	2-1-23 1315	Test Initiation Initials:	LBU / VJC
Test Renewal Date/Time:	2-2-23 1315	Test Renewal Initials:	LBU
Test Termination Date/Time:	2-3-23 1415	Test Termination Initials:	LBU

1st Feed Date/Time/Batch Id:	2-1-23 1530 2216116	2nd Feed Date/Time/Batch Id:	2-2-23 0754 2216115
3rd Feed Date/Time/Batch Id:	2-2-23 1513 2216115	4th Feed Date/Time/Batch Id:	2-3-23 0749 2216115

This test was conducted in accordance with the method standards or according to the exception(s) as noted:

Comments ① IELBU 2-1-23 → [23-0126] TDS Entry: VJC 2-3-23

Vynna Chitole  
 Final Review Signature

Data Sheet Preparation - Initials: LBU/VJC Date: 1-27-23

End of Test First Review - Initials: LBU Date: 2-3-23

Codes: IE-incorrect entry; IL-illegible; WC-wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

Acute Toxicity Test with *Mysidopsis bahia*

Conc. (mg/L)	Rep.	No. of Surviving Organisms			Conc. (mg/L)	Rep.	No. of Surviving Organisms		
		0 hr	24 hr	48 hr			0 hr	24 hr	48 hr
Control	A	10	10	10	750	A	10	0	0
	B	10	10	10		B	10	0	0
	C	10	10	10		C	10	0	0
	D	10	10	10		D	10	0	0
	E	10	10	10		E	10	0	0
125	A	10	10	10	1000	A	10	0	0
	B	10	10	10		B	10	0	0
	C	10	10	10		C	10	0	0
	D	10	10	10		D	10	0	0
	E	10	10	10		E	10	0	0
250	A	10	10	10		A			
	B	10	10	10		B			
	C	10	10	10		C			
	D	10	10	10		D			
	E	10	10	10		E			
500	A	10	9	9		A			
	B	10	10	10		B			
	C	10	10	9		C			
	D	10	10	10		D			
	E	10	9	9		E			

Comments:

Water Quality Parameters - *Mysidopsis bahia*

Conc. (mg/L)	pH			
	0 hr	24 hr Old	24 hr New	48 hr
Cont.	8.0	7.7	8.1	7.5
125	8.1	7.7	8.1	7.6
250	8.1	7.8	8.2	7.6
500	8.1	7.7	8.2	7.6
750	8.1	7.8	8.2	—
1000	8.2	7.9	8.2	—
Meter No.	737	737	737	737
Time	1315	1130	1130	1030
Initials	LBU	A0J/VJC	A0J/VJC	A0J/VJC

Conc. (mg/L)	Temp. °C (Actual) Offset: 0 (±0C)			
	0 hr	24 hr Old	24 hr New	48 hr
Cont.	26.4	23.8	24.8	24.5
125	26.2	23.7	25.4	24.4
250	26.2	23.6	25.5	24.3
500	26.4	23.6	25.4	24.4
750	26.2	23.6	25.3	—
1000	26.2	23.7	25.6	—
Therm. No.	4WS	737	737	737
Time	1315	1130	1130	1030
Initials	LBU	A0J/VJC	A0J/VJC	A0J/VJC

Conc. (mg/L)	Dissolved Oxygen (mg/L)			
	0 hr	24 hr Old	24 hr New	48 hr
Cont.	8.3	6.8	8.3	6.9
125	8.3	6.7	8.3	6.7
250	8.3	7.0	8.2	6.5
500	8.3	6.7	8.2	6.6
750	8.3	6.9	8.2	—
1000	8.3	7.1	8.2	—
Meter No.	YS16	YS16	YS16	YS16
Time	1315	1130	1130	1030
Initials	LBU	A0J/VJC	A0J/VJC	A0J/VJC

Conc. (mg/L)	Salinity (‰)	
	0 hr	24 hr
Cont.	26.8	N/A
125	26.9	
250	27.1	
500	27.3	
750	27.7	
1000	27.9	
Meter No.	948	948 *
Time	1315	—
Initials	LBU	—

Comments: \*NA

# Analytical Standard Record

**2302056**

Description: 24/48 MB KCl STOX Working Solution (1000 mg/L) Expires: 02/03/2023  
Standard Type: Analyte Spike Prepared: 02/01/2023  
Solvent: - Prepared By: Loan Bui  
Final Volume (mls): 8000 Department: Toxicology  
Vials: 1 Last Edit: 02/02/2023 17:43 by LBU  
Comments: Measure 8g of KCl and dispense into 1L volumetric flask. Bring final volume to 1L using 25ppt seawater; add stir bar, and mix until KCl is fully dissolved. dispense solution into labeled cubitainer. Use same volumetric flask to measure and add 7L.

Analyte	Parent	CAS Number	Concentration	Units
				mg/L

### Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2206331	Potassium chloride, ACS, 99-100.5%	06/09/2022	Thermo Fisher Scientific	Q181022	06/09/2024	06/21/2022 14:04 by VJC	8
2300100	24/48 MB KCl STOX Working Solution (1000mg/L)	01/03/2023	NWDLS	-	02/03/2023	01/03/2023 12:28 by VJC	8000

**24/48 MB KCl STOX Working Solution (1000mg/L)**

**2302056**

**Expires 02/03/2023**



LBU  
Reviewed By

2-2-23  
Date

**SPP – Mysid Shrimp 96-hr (*Americamysis bahia*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Americamysis bahia</i>	Test Type	SPP 96 hr
Number of Replicates	5	Number of Organisms/ Replicate	10
Test Organism Batch Number	23-0118	Organism Date of Birth or Date Received	02/09/2023
Organism Source	NWDLS	Organism Age at Test Initiation	5 days
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L	Reference Toxicant	Potassium Chloride – see graph
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Test Initiation Date/Time	02/14/2023 10:00	Test Termination Date/Time	02/18/2023 10:00
Renewal of Test Solution	None	Feeding	Twice daily

Sample ID	Concentration (%)	Mean Survival (%)	Statistically Different Compared to Control (yes/no)	LC <sub>50</sub> (%)
HI-DMMU-1	0	100	---	>100
	10	100	---	
	50	100	---	
	100	98	No	
HI-DMMU-2	0	98	---	>100
	10	100	---	
	50	100	---	
	100	98	No	
HI-DMMU-3	0	96	---	>100
	10	98	---	
	50	98	---	
	100	98	No	
HI-DMMU-4	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	
HI-DMMU-5	0	100	---	>100
	10	98	---	
	50	96	---	
	100	94	No	
HI-DMMU-6	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	
HI-DMMU-7	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	
HI-DMMU-8	0	100	---	>100
	10	100	---	
	50	100	---	
	100	100	No	

**CETIS Analytical Report**

**Report Date:** 18 May-23 14:16 (p 1 of 1)  
**Test Code/ID:** 23A1459 / 10-9248-7125

**Mysidopsis 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 08-8838-8074	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 18 May-23 14:16	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-1994-8295	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5 d
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

REF

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	760283	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

**96h Survival Rate Summary**

**Calculated Variate(A/B)**

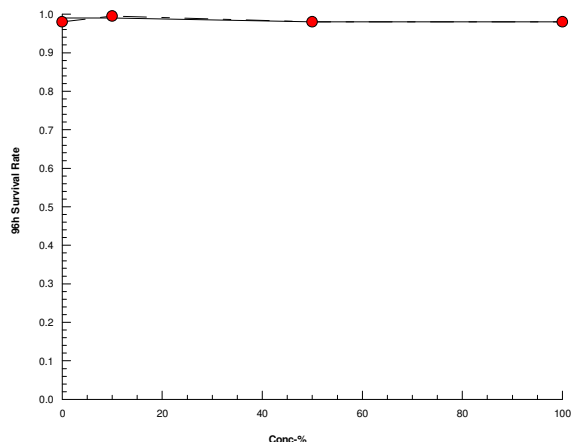
**Isotonic Variate**

Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.99	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.99	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	1.01%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	1.01%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.9000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	0.9000	1.0000	1.0000

**Graphics**



# CETIS Analytical Report

Report Date: 27 Mar-23 16:18 (p 1 of 1)  
 Test Code/ID: 23A1459-01 / 12-5026-0964

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 09-2727-6620	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:17	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 11-0557-4849	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 06-2806-4066	<b>Code:</b> 256F7F42	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 1

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1099236	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

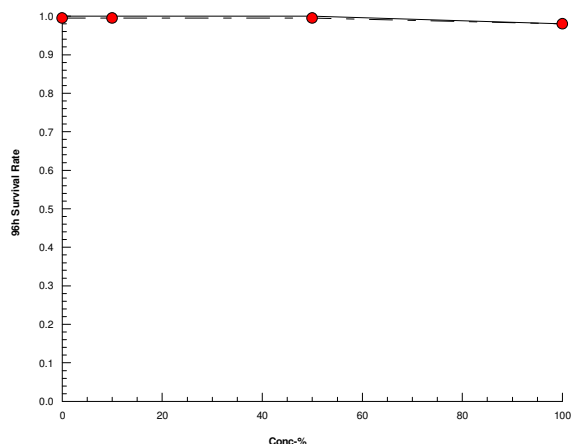
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.9000	1.0000

### Graphics





# CETIS Analytical Report

Report Date: 27 Mar-23 16:16 (p 1 of 1)  
 Test Code/ID: 23A1459-02 / 13-7259-9074

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 07-2263-5301	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:16	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 16-4928-3037	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5
<b>Sample ID:</b> 17-1006-4746	<b>Code:</b> 65ED846A	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU 2

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	583460	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

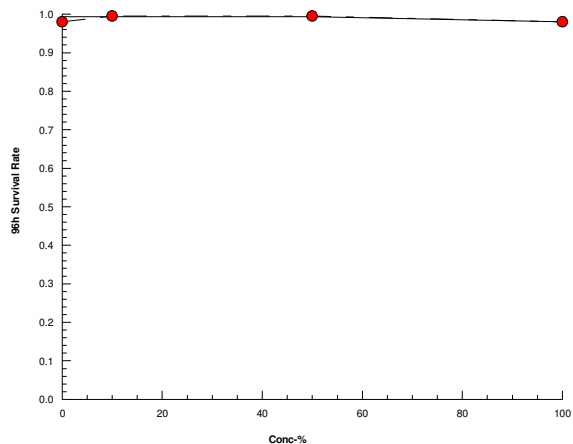
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.9933	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.9933	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.9933	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	1.34%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	0.9000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		0.9000	1.0000	1.0000	1.0000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:14 (p 1 of 1)  
 Test Code/ID: 23A1459-03 / 20-4316-7634

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 11-0974-4555	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:14	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 10-1432-9903	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 04-1176-9109	<b>Code:</b> 188B1915	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU 3

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	411250	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

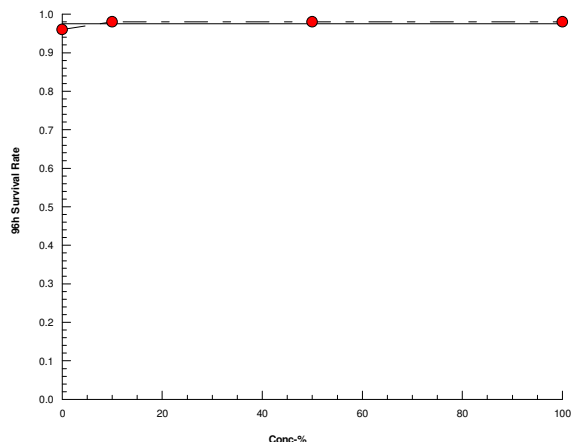
### 96h Survival Rate Summary

Conc-%	Code	Count	Mean	Calculated Variate(A/B)				Isotonic Variate			
				Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.975	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.975	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.975	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.975	0.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.8000	1.0000	1.0000	1.0000
10		1.0000	1.0000	0.9000	1.0000	1.0000
50		1.0000	0.9000	1.0000	1.0000	1.0000
100		0.9000	1.0000	1.0000	1.0000	1.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:06 (p 1 of 1)  
**Test Code/ID:** 23A1459-04 / 16-3186-1480

**Mysidopsis 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 10-6173-3082	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:06	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 01-4380-7929	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5
<b>Sample ID:</b> 16-3728-2208	<b>Code:</b> 6196F1A0	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1692265	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

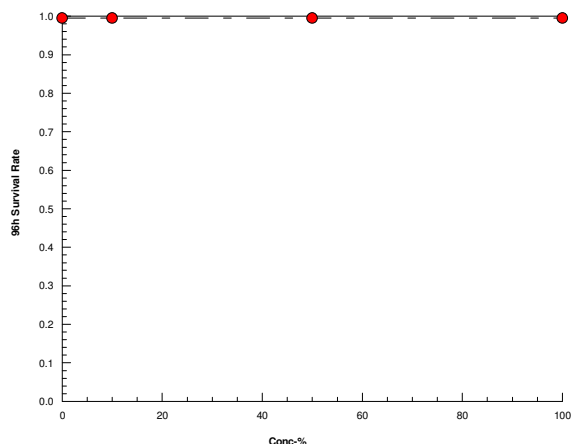
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



# CETIS Analytical Report

Report Date: 27 Mar-23 16:07 (p 1 of 1)  
 Test Code/ID: 23A1459-05 / 06-7188-7142

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 13-7641-3183	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:07	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 07-9211-5464	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 05-5460-6125	<b>Code:</b> 210E9E2D	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU 5

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	360619	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

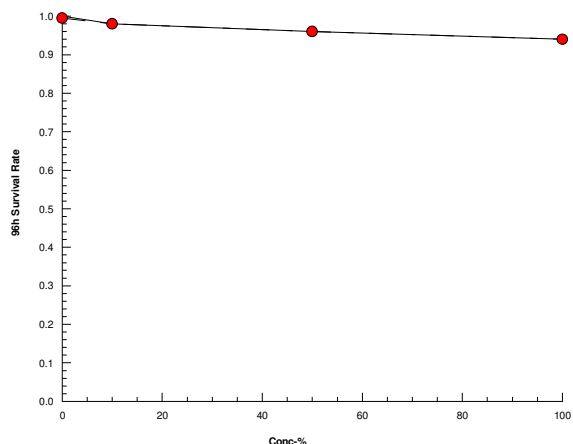
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
50		5	0.9600	0.8000	1.0000	0.0894	9.32%	4.0%	48/50	0.96	4.0%
100		5	0.9400	0.8000	1.0000	0.0894	9.52%	6.0%	47/50	0.94	6.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		0.8000	1.0000	1.0000	1.0000	1.0000
100		1.0000	0.9000	0.8000	1.0000	1.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:09 (p 1 of 1)  
**Test Code/ID:** 23A1459-06 / 19-3672-8373

**Mysidopsis 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 02-5137-6368	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:08	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 02-7455-8522	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 03-4624-0548	<b>Code:</b> 14A33624	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 6

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1662936	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

**96h Survival Rate Summary**

**Calculated Variate(A/B)**

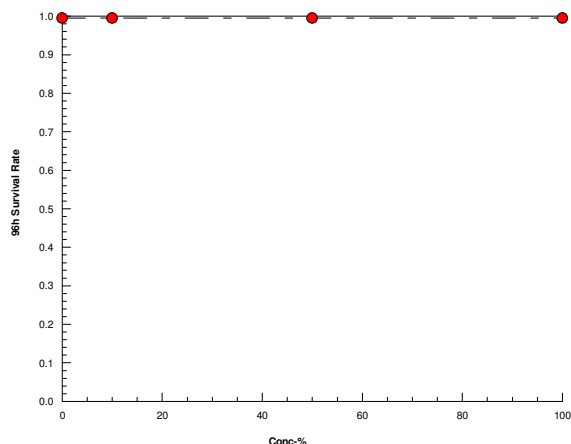
**Isotonic Variate**

Conc-%	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:09 (p 1 of 1)  
**Test Code/ID:** 23A1459-07 / 15-4096-4323

**Mysidopsis 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 00-1718-6494	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:09	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 15-2293-9982	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 10-0539-3221	<b>Code:</b> 3BED1545	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 7

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2019310	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

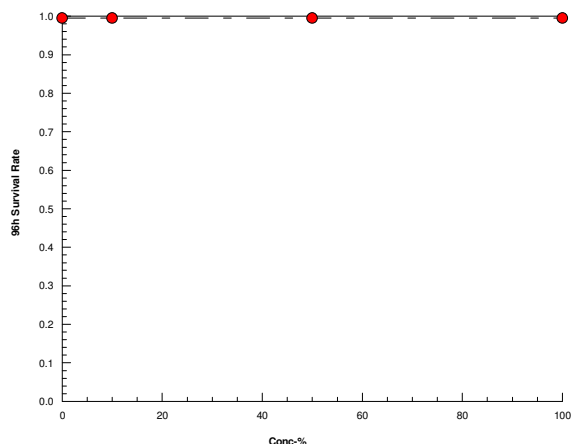
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:10 (p 1 of 1)  
**Test Code/ID:** 23A1459-08 / 19-4486-4905

**Mysidopsis 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 05-2892-6221	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:10	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 05-2922-3581	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 06-6783-0522	<b>Code:</b> 27CE48FA	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 8

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1609203	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

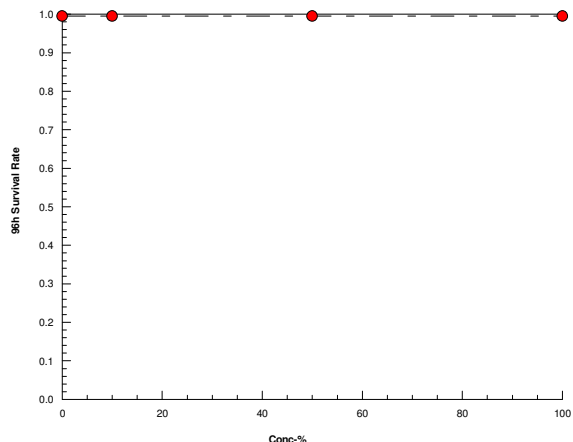
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
100		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000

**Graphics**



# CETIS Analytical Report

Report Date: 27 Mar-23 16:11 (p 1 of 1)  
 Test Code/ID: 23A1459-09 / 10-3770-5993

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 18-9608-0225	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:11	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 07-2628-3666	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5d
<b>Sample ID:</b> 13-1488-4427	<b>Code:</b> 4E5F8B4B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

CDP 6

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	911899	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

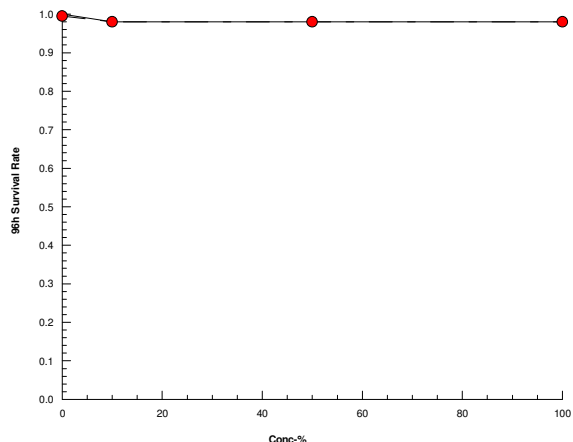
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	0.9000

### Graphics





# CETIS Analytical Report

Report Date: 27 Mar-23 16:11 (p 1 of 1)  
 Test Code/ID: 23A1459-10 / 03-8777-4108

## Mysidopsis 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 05-7264-7363	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:11	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-1994-8295	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 10:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-23 10:00	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 96h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5 d
<b>Sample ID:</b> 09-3349-1754	<b>Code:</b> 37A3F42A	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

CDP-7

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	639167	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

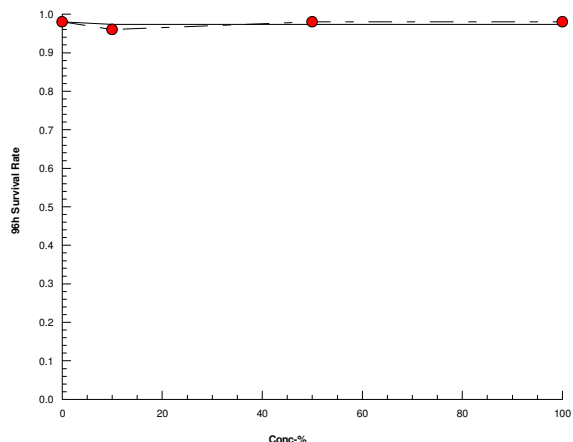
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)					Isotonic Variate			
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
10		5	0.9600	0.8000	1.0000	0.0894	9.32%	2.04%	48/50	0.9733	0.68%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.9733	0.68%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.9733	0.68%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	1.0000	1.0000	1.0000	1.0000
10		1.0000	0.8000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	0.9000	1.0000	1.0000

### Graphics



Client	PCCA HI & CDP Resampling 2023	WO No.	23A1459
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96 h Acute <i>Mysidopsis bahia</i> Toxicity Test Condition Summary			
Test Method EPA821-R-02-012-2007.0; NWDLS SOP No. 4017; EPA 503/8-91/001; NWDLS SOP No. 4046			
Test Organism:	<i>Mysidopsis bahia</i>	Age Class:	1-5 days old
Test Type:	SPP	Test Duration:	96 h
Temperature:	20 ± 2°C	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber size:	500 mL cups	Cleaning:	Daily during test counts
No. of Replicates:	5	No. organisms per Replicate:	10
Test Solution Volume	750 mL (minimum)	Dilution Water:	LAB-W
Renewal of test solution:	None	Aeration:	None
Feeding:	Twice daily	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria	≥ 90% survival in control	Sample Holding Time Requirements:	24 h maximum for first use.

Test Concentrations (%):	Control, 10, 50, 100	Sites:	REF, HI-DMMU 1-8, CDP 6-7
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Test Organism Batch #	23-0118	DOB	2-9-23
Source	NWDLS	Age (days)	5 d.o

Sample Date/Time:	1-16-23 / 1400	Sediment : Water ratio	1 : 4
Sediment Volume	122	Water Volume	482

Hour	Date	Time	Initials	Hour	Date	Time	Initials
0h Initiation	2-17-23	1000	ML/VSL	72h Counts	2-17-23	1000	ML
24h Counts	2-15-23	1000	ML	96h Termination	2-17-23	1000	ML
48h Counts	2-16-23	1005	ML				

Day	0		1		2		3		4	
	Time	Initials	Time	Initials	Time	Initials	Time	Initials	Time	Initials
AM Feed	—	—	0730	ML	0715	ML	0740	ML	0724	ML
PM Feed	1500	ML	1545	ML	1530	DS	1510	ML	—	—

This test was conducted in accordance with the method standards or according to the exception(s) as noted:

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

ML  
Initial Review

**Acute Toxicity Test with *Mysidopsis bahia***

Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
REF-Cont	A	10	10	10	10	10	HI-DMMU -1 50	A	10	10	10	10	10	HI-DMMU -3 CONT	A	10	10	10	10	10
	B	10	10	10	9	9		B	10	10	10	10	10		B	10	8	8	8	8
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
REF 10	A	10	10	10	10	10	HI-DMMU -1 100	A	10	10	10	10	10	HI-DMMU -3 10	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	9	9	9	9
	D	10	10	10	10	10		D	10	10	10	9	9		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
REF 50	A	10	9	9	9	9	HI-DMMU -2 Cont	A	10	10	10	10	10	HI-DMMU -3 50	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	9	9
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	9	9	9		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
REF 100	A	10	10	10	10	10	HI-DMMU -2 10	A	10	10	10	10	10	HI-DMMU -3 100	A	10	9	9	9	9
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	9	9		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU -1 Cont	A	10	10	10	10	10	HI-DMMU -2 50	A	10	10	10	10	10	HI-DMMU -4 CONT	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU -1 10	A	10	10	10	10	10	HI-DMMU -2 100	A	10	10	9	9	9	HI-DMMU -4 10	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

Initial Review

Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-4 50	A	10	10	10	10	10	HI-DMMU-6 CONT	A	10	10	10	10	10	HI-DMMU-7 50	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-4 100	A	10	10	10	10	10	HI-DMMU-6 10	A	10	10	10	10	10	HI-DMMU-7 100	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 CONT	A	10	10	10	10	10	HI-DMMU-6 50	A	10	10	10	10	10	HI-DMMU-8 CONT	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 10	A	10	10	10	10	10	HI-DMMU-6 100	A	10	10	10	10	10	HI-DMMU-8 10	A	10	10	10	10	10
	B	10	10	10	9	9		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 50	A	10	9	9	9	8	HI-DMMU-7 CONT	A	10	10	10	10	10	HI-DMMU-8 50	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 100	A	10	10	10	10	10	HI-DMMU-7 10	A	10	10	10	10	10	HI-DMMU-8 100	A	10	10	10	10	10
	B	10	10	9	9	9		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	9	9	9	8		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

MLC  
Initial Review

Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
CDP 6 CONT	A	10	10	10	10	10	CDP 7 50	A	10	10	10	10	10		A					
	B	10	10	10	10	10		B	10	10	10	10	10		B					
	C	10	10	10	10	10		C	10	10	10	10	10		C					
	D	10	10	10	10	10		D	10	10	10	10	10		D					
	E	10	10	10	10	10		E	10	10	10	10	5		E					
CDP 6 10	A	10	10	10	10	10	CDP 7 100	A	10	10	10	10	10		A					
	B	10	10	10	10	5		B	10	10	10	10	10		B					
	C	10	10	10	10	10		C	10	10	10	10	5		C					
	D	10	10	10	10	10		D	10	10	10	10	10		D					
	E	10	10	10	10	10		E	10	10	10	10	10		E					
CDP 6 50	A	10	10	10	5	5		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	10	10	10	10		E							E					
CDP 6 100	A	10	10	10	10	10		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	5	5	5	5		E							E					
CDP 7 CONT	A	10	10	5	5	5		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	10	10	10	10		E							E					
CDP 7 10	A	10	10	10	10	10		A							A					
	B	10	10	5	5	5		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	10	10	10	10		E							E					

**Water Quality Parameters - *Mysidopsis bahia***

Conc. (%)	pH / Dissolved Oxygen (mg/L)				
	0 hr	24 hr	48 hr	72 hr	96 hr
REF Cont	8.1/8.2	7.9/7.8	7.9/7.7	7.9/7.6	7.5/7.5
REF 10	8.1/7.8	7.9/7.8	7.9/7.6	7.9/7.6	7.5/7.5
REF 50	8.1/7.8	7.9/7.7	8.0/7.6	7.9/7.6	7.5/7.4
REF 100	8.2/7.7	7.9/7.6	7.8/7.5	7.9/7.5	7.5/7.6
HI-DMMU-1 Cont	8.1/8.2	8.2/7.8	7.5/7.6	7.5/7.7	7.2/7.5
HI-DMMU-1 10	8.0/7.9	7.9/7.8	7.5/7.6	7.5/7.7	7.2/7.5
HI-DMMU-1 50	8.1/7.7	7.4/7.7	7.8/7.6	7.8/7.7	7.2/7.5
HI-DMMU-1 100	8.1/7.7	7.9/7.6	7.8/7.6	7.8/7.1	7.2/7.4
HI-DMMU-2 Cont	8.1/8.2	7.9/7.7	7.9/7.6	7.8/7.5	7.8/7.4
HI-DMMU-2 10	7.6/7.6	7.9/7.7	7.9/7.6	7.8/7.3	7.2/7.4
HI-DMMU-2 50	8.0/7.7	7.8/7.7	7.8/7.6	7.7/7.4	7.2/7.4
HI-DMMU-2 100	8.2/7.8	7.8/7.6	7.7/7.6	7.5/7.5	7.2/7.4
HI-DMMU-3 Cont	8.1/8.2	7.9/7.8	7.5/7.6	7.5/7.6	7.6/7.4
HI-DMMU-3 10	8.2/7.9	7.9/7.8	7.8/7.7	7.8/7.6	7.3/7.5
HI-DMMU-3 50	8.2/7.9	7.7/7.8	7.8/7.6	7.8/7.6	7.5/7.5
HI-DMMU-3 100	8.2/7.9	7.6/7.7	7.6/7.5	7.7/7.6	7.5/7.5
HI-DMMU-4 Cont	8.1/8.2	7.9/7.8	7.9/7.6	7.9/7.6	7.8/7.0
HI-DMMU-4 10	8.2/7.7	7.7/7.7	7.5/7.6	7.5/7.6	7.5/7.5
HI-DMMU-4 50	8.2/7.7	7.7/7.7	7.7/7.6	7.3/7.5	7.2/7.5
HI-DMMU-4 100	8.2/7.8	7.7/7.7	7.7/7.6	7.5/7.5	7.2/7.4
HI-DMMU-5 Cont	8.1/8.2	7.9/7.9	7.5/7.8	7.5/7.6	7.2/7.5
HI-DMMU-5 10	8.3/7.9	7.7/7.9	7.8/7.7	7.8/7.6	7.2/7.4
HI-DMMU-5 50	8.3/7.9	7.7/7.9	7.7/7.7	7.7/7.6	7.0/7.4
HI-DMMU-5 100	8.4/7.8	7.7/7.9	7.8/7.6	7.7/7.5	7.6/7.6
Meter No.	2374456	7341456	7321456	734456	7371456

Conc. (%)	pH / Dissolved Oxygen (mg/L)				
	0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-6 Cont	8.1/8.2	7.9/7.8	7.8/7.7	7.7/7.7	7.5/7.6
HI-DMMU-6 10	8.2/7.9	7.8/7.4	7.7	7.2/7.2	7.7/6.5
HI-DMMU-6 50	8.2/7.9	7.8/7.7	7.7	7.9/7.3	7.7/6.9
HI-DMMU-6 100	8.3/7.9	7.8/7.7	7.7	7.8/7.1	7.7/6.9
HI-DMMU-7 Cont	8.1/8.2	7.9/7.7	7.9/7.5	7.5/7.4	7.2/7.6
HI-DMMU-7 10	8.1/7.9	7.9/7.7	7.7	7.7/7.4	7.7/7.0
HI-DMMU-7 50	8.1/7.9	7.9/7.6	7.7	7.7/7.2	7.5/7.0
HI-DMMU-7 100	8.3/7.9	7.9/7.6	7.7	7.8/7.2	7.7/6.9
HI-DMMU-8 Cont	8.1/8.2	7.9/7.6	7.7	7.8/7.4	7.6/7.8
HI-DMMU-8 10	8.1/7.9	7.9/7.6	7.8/7.4	7.7/7.6	7.6/7.6
HI-DMMU-8 50	8.1/7.8	7.8/7.6	7.7/7.4	7.7/7.0	7.6/7.5
HI-DMMU-8 100	8.4/7.9	7.8/7.5	7.7/7.3	7.7/7.0	7.6/7.5
CDP-6 Cont	8.1/8.2	7.9/7.8	7.7/7.7	7.6/7.0	7.7/7.4
CDP-6 10	8.2/8.2	7.8/7.8	7.7/7.4	7.7/7.0	7.7/7.5
CDP-6 50	8.3/7.9	7.7/7.7	7.7/7.4	7.6/7.0	7.7/7.5
CDP-6 100	8.3/7.9	7.7/7.6	7.6/7.4	7.6/7.0	7.7/7.0
CDP-7 Cont	8.1/8.2	7.9/7.6	7.8/7.4	7.6/7.0	7.7/7.4
CDP-7 10	8.1/8.2	7.8/7.6	7.7/7.3	7.6/7.0	7.5/7.5
CDP-7 50	8.1/8.2	7.8/7.6	7.7/7.2	7.6/7.0	7.5/7.5
CDP-7 100	8.2/8.2	7.8/7.6	7.6/7.2	7.6/7.0	7.7/7.6
Meter No.	2374456	7341456	7321456	734456	7371456

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

Initial Review

Conc. (%)	Temperature °C / Salinity (‰)				
	0 hr	24 hr	48 hr	72 hr	96 hr
REF Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
REF 10	/ /	/ /	/ /	/ /	/ /
REF 50	/ /	/ /	/ /	/ /	/ /
REF 100	/ /	/ /	/ /	/ /	/ /
HI-DMMU-1 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-1 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-1 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-1 100	/ /	/ /	/ /	/ /	/ /
HI-DMMU-2 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-2 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-2 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-2 100	/ /	/ /	/ /	/ /	/ /
HI-DMMU-3 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-3 10	/ /	/ /	/ /	/ 29	/ 29
HI-DMMU-3 50	/ /	/ /	/ /	/ 29	/ 29
HI-DMMU-3 100	/ /	/ /	/ /	/ 29	/ 30
HI-DMMU-4 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-4 10	/ /	/ /	/ /	/ 29	/ 29
HI-DMMU-4 50	/ /	/ /	/ /	/ 29	/ 29
HI-DMMU-4 100	/ /	/ /	/ /	/ 30	/ 30
HI-DMMU-5 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-5 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-5 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-5 100	/ /	/ /	/ /	/ /	/ /
Meter No.	/	/	/	/	/

Conc. (%)	Temperature °C / Salinity (‰)				
	0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-6 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-6 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-6 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-6 100	/ /	/ /	/ /	/ /	/ /
HI-DMMU-7 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-7 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-7 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-7 100	/ /	/ /	/ /	/ /	/ /
HI-DMMU-8 Cont	20 / 29	20 / 29	20 / 29	20 / 29	20 / 29
HI-DMMU-8 10	/ /	/ /	/ /	/ /	/ /
HI-DMMU-8 50	/ /	/ /	/ /	/ /	/ /
HI-DMMU-8 100	/ /	/ /	/ /	/ /	/ /
CDP-6 Cont	20 / 29	20 /	20 / 29	20 / 29	20 / 29
CDP-6 10	/ /	/ /	/ /	/ 29	/ 29
CDP-6 50	/ /	/ /	/ /	/ 29	/ 29
CDP-6 100	/ /	/ /	/ 30	/ 29	/ 30
CDP-7 Cont	20 / 29	20 /	20 / 29	20 / 29	20 / 29
CDP-7 10	/ /	/ /	/ /	/ /	/ /
CDP-7 50	/ /	/ /	/ /	/ /	/ /
CDP-7 100	/ /	/ /	/ /	/ /	/ /
Meter No.	/	/	/	/	/

Comments:

Water Quality Parameters - *Mysidopsis bahia*

Ammonia Meter # 566

Concentration	Day 0	Day 4 (96h)	HI-DMMU-6 Cont	Day 0	Day 4 (96h)
REF Control	0.001	.002	HI-DMMU-6 10	0.36	0.29
REF10%	0.53	0.49	HI-DMMU-6 50	1.39	1.24
REF 50%	2.36	2.26	HI-DMMU-6 100	2.76	2.63
REF 100%	4.88	3.97	HI-DMMU-7 Cont	0.001	.002
HI-DMMU-1 Control	0.001	0.002	HI-DMMU-7 10	0.17	0.19
HI-DMMU-1 10%	0.22	0.19	HI-DMMU-7 50	0.96	0.86
HI-DMMU-1 50%	0.52	0.54	HI-DMMU-7 100	1.87	1.66
HI-DMMU-1 100%	1.94	1.88	HI-DMMU-8 Cont	0.001	.002
HI-DMMU-2 Control	0.001	.002	HI-DMMU-8 10	0.31	0.28
HI-DMMU-2 10%	0.31	0.29	HI-DMMU-8 50	1.16	1.04
HI-DMMU-2 50%	1.05	1.12	HI-DMMU-8 100	2.44	1.96
HI-DMMU-2 100%	2.30	1.96	CDP-6 Cont	0.001	.003
HI-DMMU-3 Control	0.001	.002	CDP-6 10	0.29	0.22
HI-DMMU-3 10%	0.24	0.19	CDP-6 50	1.49	1.23
HI-DMMU-3 50%	1.02	1.03	CDP-6 100	2.76	2.39
HI-DMMU-3 100%	1.96	1.76	CDP-7 Cont	0.001	.002
HI-DMMU-4 Control	0.001	.002	CDP-7 10	0.33	0.32
HI-DMMU-4 10%	0.42	0.38	CDP-7 50	1.49	1.61
HI-DMMU-4 50%	1.67	1.72	CDP-7 100	2.69	2.45
HI-DMMU-4 100%	3.21	3.12	HI-DMMU-6 Cont	0.001	.002
HI-DMMU-5 Control	0.001	.002			
HI-DMMU-5 10%	0.26	0.26			
HI-DMMU-5 50%	1.08	1.01			
HI-DMMU-5 100%	2.12	2.21			



Mysidopsis 7-d Survival, Growth and Fecundity Test

All Matching Labs

Test Type: Growth-Survival-Fec (7d)

Organism: Mysidopsis bahia (Atlantic Mysid)

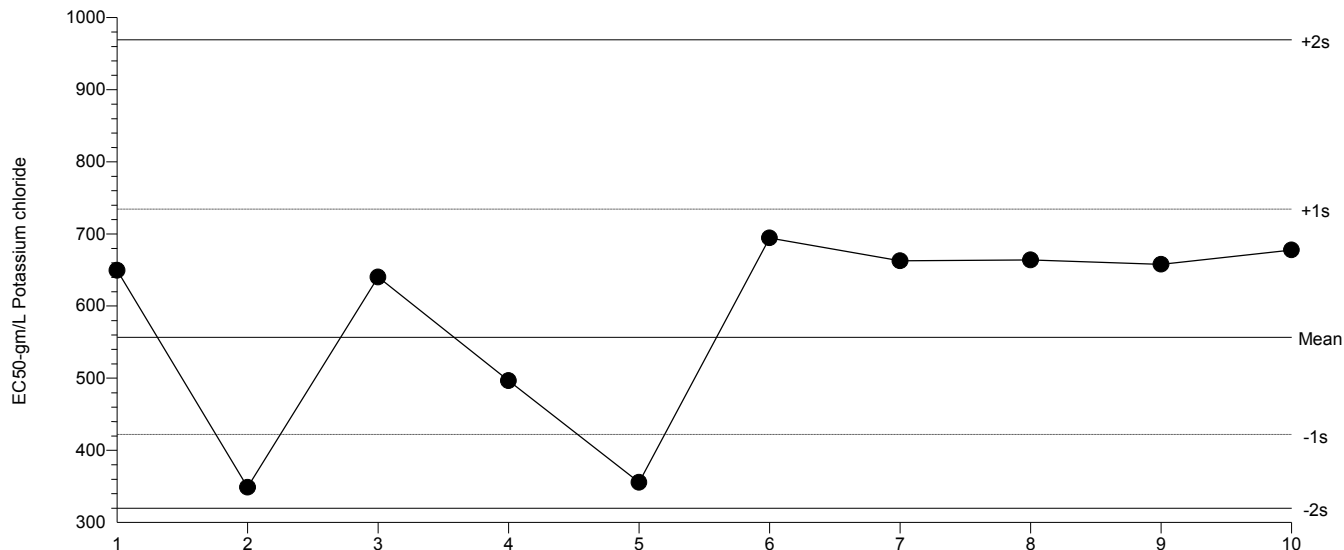
Material: Potassium chloride

Protocol: EPA/821/R-02-014 (2002)

Endpoint: 7d Survival Rate

Source: Reference Toxicant-REF

Mysidopsis 7-d Survival, Growth and Fecundity Test



Mean: 556.7      Count: 9      -1s Warning Limit: 421.9      -2s Action Limit: 319.8  
 Sigma: n/a      CV: 28.30%      +1s Warning Limit: 734.5      +2s Action Limit: 969.1

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	13:15	649.6	92.88	0.5567			01-6211-0221	11-5901-8122	NWDLS Environ. Toxicol.
2			22	16:00	348.7	-208	-1.688	(-)		09-3616-1421	00-9150-0822	NWDLS Environ. Toxicol.
3		Jul	20	14:40	640.2	83.48	0.5041			11-8307-1033	20-9270-2210	NWDLS Environ. Toxicol.
4		Aug	31	10:45	496.5	-60.21	-0.4129			18-6777-7018	18-1763-7164	NWDLS Environ. Toxicol.
5		Sep	21	13:15	355.5	-201.2	-1.618	(-)		13-6667-4200	15-5979-0136	NWDLS Environ. Toxicol.
6		Oct	19	12:00	694.4	137.7	0.7976			09-3115-0814	15-7275-3360	NWDLS Environ. Toxicol.
7		Nov	3	13:45	662.7	106	0.629			19-3160-7260	04-3340-0504	NWDLS Environ. Toxicol.
8		Dec	12	13:00	663.9	107.2	0.6353			06-4905-6652	20-1321-0134	NWDLS Environ. Toxicol.
9	2023	Jan	3	10:30	657.9	101.2	0.6024			05-5770-2114	18-8602-2070	NWDLS Environ. Toxicol.
10		Feb	2	10:30	677.7	121	0.7098			08-8071-4725	11-7916-4212	NWDLS Environ. Toxicol.

Mysidopsis 7-d Survival, Growth and Fecundity Test

All Matching Labs

Test Type: Growth-Survival-Fec (7d)

Organism: Mysidopsis bahia (Atlantic Mysid)

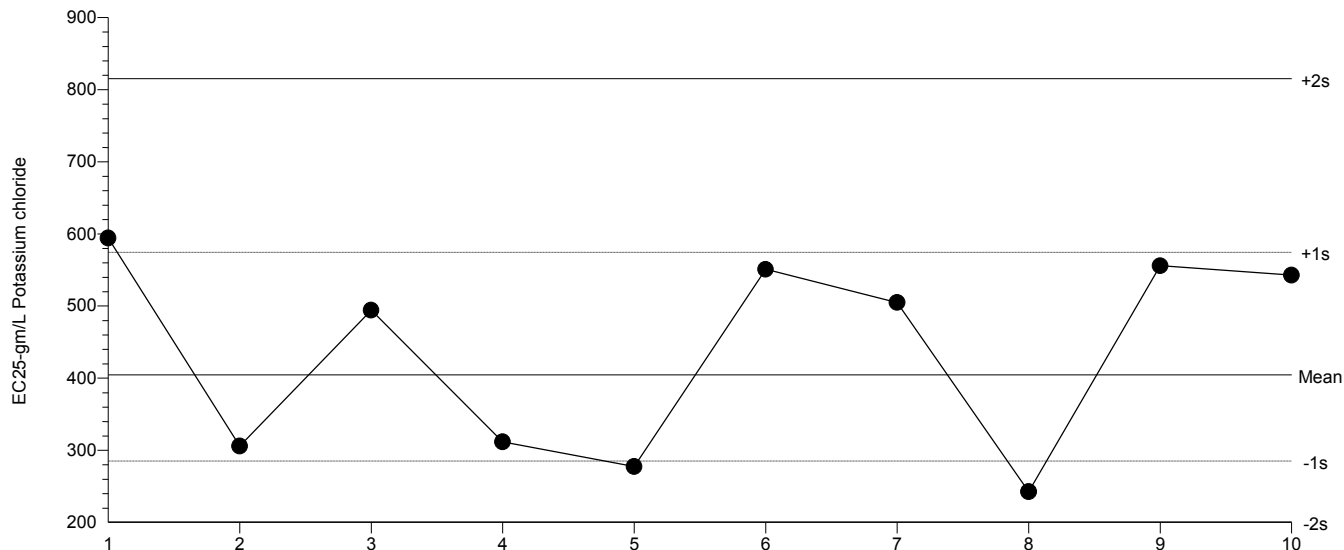
Material: Potassium chloride

Protocol: EPA/821/R-02-014 (2002)

Endpoint: Mean Dry Biomass-mg

Source: Reference Toxicant-REF

Mysidopsis 7-d Survival, Growth and Fecundity Test



Mean: 404.6      Count: 9      -1s Warning Limit: 285      -2s Action Limit: 200.8  
 Sigma: n/a      CV: 36.10%      +1s Warning Limit: 574.4      +2s Action Limit: 815.5

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	13:15	594.3	189.6	1.097	(+)		01-6211-0221	06-7581-2449	NWDLS Environ. Toxicol.
2			22	16:00	305.9	-98.73	-0.7983			09-3616-1421	03-4116-2000	NWDLS Environ. Toxicol.
3		Jul	20	14:40	494.2	89.56	0.5706			11-8307-1033	07-3382-9498	NWDLS Environ. Toxicol.
4		Aug	31	10:45	311.8	-92.88	-0.7442			18-6777-7018	09-8654-5792	NWDLS Environ. Toxicol.
5		Sep	21	13:15	277.5	-127.1	-1.076	(-)		13-6667-4200	10-8885-9716	NWDLS Environ. Toxicol.
6		Oct	19	12:00	550.9	146.2	0.8805			09-3115-0814	01-6337-8754	NWDLS Environ. Toxicol.
7		Nov	3	13:45	504.9	100.2	0.6317			19-3160-7260	19-5328-5189	NWDLS Environ. Toxicol.
8		Dec	12	13:00	242.7	-161.9	-1.459	(-)		06-4905-6652	20-7921-9787	NWDLS Environ. Toxicol.
9	2023	Jan	3	10:30	555.9	151.2	0.9062			05-5770-2114	18-4604-0045	NWDLS Environ. Toxicol.
10		Feb	2	10:30	542.8	138.2	0.8385			08-8071-4725	02-7679-2403	NWDLS Environ. Toxicol.

# CETIS Analytical Report

Report Date: 16 Feb-23 09:21 (p 1 of 1)  
 Test Code/ID: 23-0038g / 08-8071-4725

## Mysidopsis 7-d Survival, Growth and Fecundity Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 11-7916-4212	<b>Endpoint:</b> 7d Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 16 Feb-23 9:21	<b>Analysis:</b> Untrimmed Spearman-Kärber	<b>Status Level:</b> 1
<b>Batch ID:</b> 00-6254-9483	<b>Test Type:</b> Growth-Survival-Fec (7d)	<b>Analyst:</b> Dane DeGuzman
<b>Start Date:</b> 02 Feb-23 10:30	<b>Protocol:</b> EPA/821/R-02-014 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 09 Feb-23 11:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 7d 1h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 7d
<b>Sample ID:</b> 05-6268-9237	<b>Code:</b> 2189F4D5	<b>Project:</b> 047000100 0400.X
<b>Sample Date:</b> 02 Feb-23 09:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant
<b>Receipt Date:</b> 02 Feb-23 09:00	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 90m	<b>Client:</b> North Water District Laboratory Services, In	

### Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.06	0.00%	2.831	0.01021	677.7	646.6	710.3

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control CV	0.1028	<<	0.4	Yes	Passes Criteria
Control Resp	0.94	0.8	>>	Yes	Passes Criteria

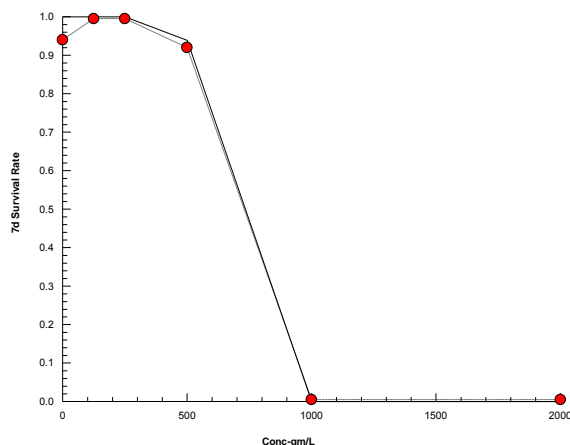
### 7d Survival Rate Summary

Conc-gm/L	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	10	0.9400	0.8000	1.0000	0.0966	10.28%	0.0%	47/50	0.98	0.0%
125		10	1.0000	1.0000	1.0000	0.0000	0.00%	-6.38%	50/50	0.98	0.0%
250		10	1.0000	1.0000	1.0000	0.0000	0.00%	-6.38%	50/50	0.98	0.0%
500		10	0.9200	0.6000	1.0000	0.1398	15.20%	2.13%	46/50	0.92	6.12%
1000		10	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%
2000		10	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%

### 7d Survival Rate Detail

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	1.0000	0.8000	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000	0.8000	1.0000
125		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
250		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500		0.8000	0.8000	1.0000	1.0000	1.0000	1.0000	1.0000	0.6000	1.0000	1.0000
1000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### Graphics



# CETIS Analytical Report

Report Date: 16 Feb-23 09:34 (p 1 of 2)  
 Test Code/ID: 23-0038g / 08-8071-4725

Mysidopsis 7-d Survival, Growth and Fecundity Test			NWDLS Environ. Toxicol. Lab		
Analysis ID: 02-7679-2403	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.4			
Analyzed: 16 Feb-23 9:33	Analysis: Linear Interpolation (ICPIN)	Status Level: 1			
Batch ID: 00-6254-9483	Test Type: Growth-Survival-Fec (7d)	Analyst: Dane DeGuzman			
Start Date: 02 Feb-23 10:30	Protocol: EPA/821/R-02-014 (2002)	Diluent: Laboratory Seawater			
Ending Date: 09 Feb-23 11:30	Species: Mysidopsis bahia	Brine: Instant Ocean			
Test Length: 7d 1h	Taxon: Malacostraca	Source: NWDLS	Age: 7d		
Sample ID: 05-6268-9237	Code: 2189F4D5	Project: 047000100 0400.X			
Sample Date: 02 Feb-23 09:00	Material: Potassium chloride	Source: Reference Toxicant			
Receipt Date: 02 Feb-23 09:00	CAS (PC):	Station:			
Sample Age: 90m	Client: North Water District Laboratory Services, In				

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	660708	200	Yes	Two-Point Interpolation

Test Acceptability Criteria		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control CV	0.1363	<<	0.4	Yes	Passes Criteria
Control Resp	0.413	0.2	>>	Yes	Passes Criteria

Point Estimates			
Level	gm/L	95% LCL	95% UCL
IC25	542.8	441	572.2

Mean Dry Biomass-mg Summary			Calculated Variate						Isotonic Variate	
Conc-gm/L	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	L	10	0.413	0.312	0.512	0.05629	13.63%	0.0%	0.4162	0.0%
125		10	0.4194	0.34	0.498	0.05996	14.30%	-1.55%	0.4162	0.0%
250		10	0.3484	0.294	0.426	0.03531	10.14%	15.64%	0.3484	16.29%
500		10	0.3414	0.276	0.41	0.04498	13.18%	17.34%	0.3414	17.97%
1000		10	0	0	0	0		100.0%	0	100.0%
2000		10	0	0	0	0		100.0%	0	100.0%

Mean Dry Biomass-mg Detail											
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	0.436	0.424	0.402	0.38	0.512	0.444	0.442	0.432	0.312	0.346
125		0.494	0.464	0.34	0.498	0.406	0.486	0.374	0.39	0.364	0.378
250		0.338	0.294	0.336	0.382	0.338	0.33	0.332	0.348	0.36	0.426
500		0.32	0.288	0.39	0.306	0.334	0.41	0.384	0.276	0.344	0.362
1000		0	0	0	0	0	0	0	0	0	0
2000		0	0	0	0	0	0	0	0	0	0

Mysidopsis 7-d Survival, Growth and Fecundity Test

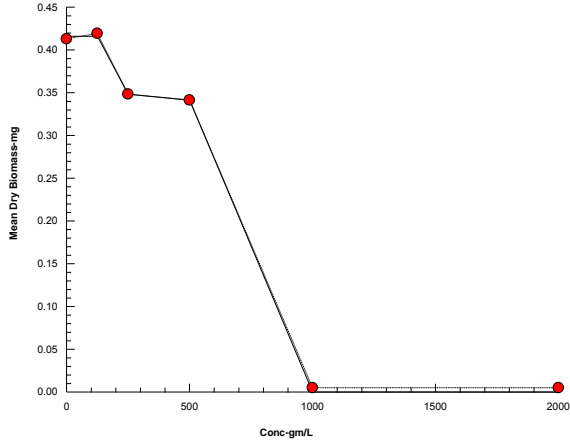
NWDLS Environ. Toxicol. Lab

Analysis ID: 02-7679-2403  
Analyzed: 16 Feb-23 9:33

Endpoint: Mean Dry Biomass-mg  
Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



Client:	NWDLS KCI STOX - Mb7	Permit #:	N/A	Outfall #:	N/A	Login #:	23-00384
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Chronic <i>Mysidopsis bahia</i> Test Condition Summary - EPA-821-R-02-014 Test Method 1007.0 - NWDLS SOP No. 4020			
Test Organism:	<i>Mysidopsis bahia</i>	Age Class:	7 d old
Test Type:	Static-renewal	Test Duration:	7 d
Temperature:	26 ± 1	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber Size:	12 oz plastic disposable cups	Cleaning:	daily during test renewal
No. of Replicates:	10	No. Organisms per Replicate:	5
Test Solution Volume:	250 mL	Dilution Water:	LAB W
Renewal of Test Solution:	Daily	Aeration:	None, unless DO < 4.0 mg/L
Feeding:	One drop; twice daily	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria:	≥80% survival in control; ≥.20 mg average dry weight in control	Sample Holding Time Requirements:	36 h maximum for first use; 72 h maximum for subsequent use.

Test Concentrations (mg/L):	Control, 125, 250, 500, 1000, 2000	DECHLOR:	N/A	Critical Dilution (mg/L):	N/A
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STOX 1 Prep Date/Time/Initials:	2-2-23	0900	DPD	Analytical Standard Record Number:	2302028
STOX 2 Prep Date/Time/Initials:	—	—	—	Analytical Standard Record Number:	—

Sample Use									
Day #	Date:	Sample ID	Diluent ID	Initials	Day #	Date:	Sample ID	Diluent ID	Initials
Day 0	2-2-23	23-0038 -1	2301333	DPD	Day 4	2-6-23	23-0038 -1	2301333	DPD
Day 1	2-3-23	23-0038 -1	2301333	DPD	Day 5	2-7-23	23-0038 -1	2301333	KFI
Day 2	2-4-23	23-0038 -1	2301333	DPD	Day 6	2-8-23	23-0038 -1	2301333	CBR
Day 3	2-5-23	23-0038 -1	2301333	BRM	Day 7	—	23-0038	—	—

♦♦

This test was conducted in accordance with the method standard or according to the exception(s) as noted:

Comments:

TDS entry: A03 2-15-23

Data Sheet Preparation: Initials: BDP/DPD Date: 1-25-23 Arturo Ornelas  
 End of Test Review: Initials: DPD Date: 2-9-23 Final Review (signature)

Codes: IE-incorrec entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

### Water Quality Parameters

DATE	2/2/23	2/3/23	2/4/23	2/5/23	2/6/23	2/7/23	2/8/23	2/9/23						
TIME	1030	0800	0800	0800	0800	0740	0740	0810	0810	0840	0840	0845	0845	0830
INITIALS	Mmm (BU)	DPD KRE	DPD KRE	DPD KRE	DPD KRE	Bmm KRE	Bmm KRE	DPD KRE	DPD KRE	A03 KRE	A03 KRE	A03 KRE	A03 KRE	A03 KRE
DAY	0	1	2	3	4	5	6	7						
Solution	New	Old	New	Old	New	Old	New	Old						
CONC. (mg/L)	pH OLD/NEW SOLUTION													
Cont	8.1	7.8	8.2	7.9	8.2	7.9	8.2	7.3	8.3	7.7	8.0	7.8	8.2	7.9
125	8.1	7.8	8.2	7.9	8.2	7.9	8.2	7.7	8.2	7.7	8.1	7.7	8.2	7.9
250	8.1	7.9	8.2	8.0	8.2	7.9	8.2	7.8	8.2	7.8	8.1	7.7	8.2	7.9
500	8.1	7.9	8.2	7.9	8.2	7.9	8.2	7.8	8.2	7.8	8.1	7.7	8.2	8.0
1000	8.1	7.9	8.2	-	-	-	-	-	-	-	-	-	-	-
2000	8.1	7.9	8.2	-	-	-	-	-	-	-	-	-	-	-
METER No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
CONC. (mg/L)	DISSOLVED OXYGEN (mg/L) OLD/NEW SOLUTION													
Cont	8.2	7.7	8.2	7.9	8.4	8.7	8.4	6.2	8.7	7.8	9.8	7.6	8.1	7.6
125	8.3	7.7	8.3	7.9	8.4	8.1	8.6	6.4	8.6	7.7	9.3	7.2	8.1	7.6
250	8.3	7.7	8.2	8.0	8.4	8.0	8.5	7.2	8.6	7.7	9.4	7.0	8.2	7.5
500	8.3	7.3	8.2	8.0	8.4	8.0	8.4	7.4	8.6	7.7	9.4	7.1	8.0	7.3
1000	8.3	7.5	8.2	-	-	-	-	-	-	-	-	-	-	-
2000	8.2	7.3	8.2	-	-	-	-	-	-	-	-	-	-	-
METER No.	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16
CONC. (mg/L)	TEMPERATURE (C) OLD/NEW SOLUTION (Actual)													
Cont	24.6	23.9	24.0	23.7	25.6	23.8	25.4	23.8	25.7	24.9	24.9	24.9	25.5	24.2
125	25.6	23.5	25.9	23.4	26.1	23.9	25.4	23.8	25.2	24.9	25.1	24.8	26.0	24.2
250	25.7	23.4	26.0	23.3	26.2	23.8	25.6	23.8	25.4	24.9	25.0	24.8	26.0	24.1
500	25.8	23.4	26.1	23.6	26.1	23.8	25.8	23.9	25.4	25.2	25.1	24.8	25.8	24.1
1000	25.8	23.3	26.1	-	-	-	-	-	-	-	-	-	-	-
2000	25.8	23.5	26.1	-	-	-	-	-	-	-	-	-	-	-
THERM No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
Offset (+°C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Comments: ① IE KRI L-3-23-7 [25.7]

### Water Quality Parameters (Cont'd.)

Salinity (‰)							
Conc (mg/L)	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Cont	26.3						
125	26.8						
250	27.0						
500	27.4						
1000	27.9						
2000	29.0						
Meter No.:	948	948	948	948	948	948	

### Biological Data

Test Organism Data			
Test Organism Batch #	23-0135	DOB	1-26-23
Source	NWDLS	Age	7d

Feeding							
Day	AM Batch #	PM Batch #	Initials	Day	AM Batch #	PM Batch #	Initials
0	////	2216115	////	4	2216106	2216106	SKW / SKW
1	2216115	2216115	MMB / SKW	5	2216106	2216106	SKW / MMB
2	2216115	2216115	MMB / MMB	6	2216106	2216106	MMB / MMB
3	2216115	2216106	MMB / MMB	7	2216105	////	SKW / ////

Comments:



Test Organisms

Conc (mg/L)	Rep	NUMBER OF SURVIVING ORGANISMS (DAY)								Conc (mg/L)	Rep	NUMBER OF SURVIVING ORGANISMS (DAY)							
		0	1	2	3	4	5	6	7			0	1	2	3	4	5	6	7
Cont	A	5	5	5	5	5	5	5	5	1000	A	5	0	0	0	0	0	0	0
	B	5	5	5	5	4	4	4	4		B	5	0	0	0	0	0	0	0
	C	5	5	5	5	5	5	5	5		C	5	0	0	0	0	0	0	0
	D	5	5	5	5	4	4	4	4		D	5	0	0	0	0	0	0	0
	E	5	5	5	5	5	5	5	5		E	5	0	0	0	0	0	0	0
	F	5	5	5	5	5	5	5	5		F	5	0	0	0	0	0	0	0
	G	5	5	5	5	5	5	5	5		G	5	0	0	0	0	0	0	0
	H	5	5	5	5	5	5	5	5		H	5	0	0	0	0	0	0	0
	I	5	5	5	5	4	4	4	4		I	5	0	0	0	0	0	0	0
	J	5	5	5	5	5	5	5	5		J	5	0	0	0	0	0	0	0
125	A	5	5	5	5	5	5	5	5	2000	A	5	0	0	0	0	0	0	0
	B	5	5	5	5	5	5	5	5		B	5	0	0	0	0	0	0	0
	C	5	5	5	5	5	5	5	5		C	5	0	0	0	0	0	0	0
	D	5	5	5	5	5	5	5	5		D	5	0	0	0	0	0	0	0
	E	5	5	5	5	5	5	5	5		E	5	0	0	0	0	0	0	0
	F	5	5	5	5	5	5	5	5		F	5	0	0	0	0	0	0	0
	G	5	5	5	5	5	5	5	5		G	5	0	0	0	0	0	0	0
	H	5	5	5	5	5	5	5	5		H	5	0	0	0	0	0	0	0
	I	5	5	5	5	5	5	5	5		I	5	0	0	0	0	0	0	0
	J	5	5	5	5	5	5	5	5		J	5	0	0	0	0	0	0	0
250	A	5	5	5	5	5	5	5	5		A								
	B	5	5	5	5	5	5	5	5		B								
	C	5	5	5	5	5	5	5	5		C								
	D	5	5	5	5	5	5	5	5		D								
	E	5	5	5	5	5	5	5	5		E								
	F	5	5	5	5	5	5	5	5		F								
	G	5	5	5	5	5	5	5	5		G								
	H	5	5	5	5	5	5	5	5		H								
	I	5	5	5	5	5	5	5	5		I								
	J	5	5	5	5	5	5	5	5		J								
500	A	5	5	5	4	4	4	4	4		A								
	B	5	4	4	4	4	4	4	4		B								
	C	5	5	5	5	5	5	5	5		C								
	D	5	5	5	5	5	5	5	5		D								
	E	5	5	5	5	5	5	5	5		E								
	F	5	5	5	5	5	5	5	5		F								
	G	5	5	5	5	5	5	5	5		G								
	H	5	4	3	3	3	3	3	3		H								
	I	5	5	5	5	5	5	5	5		I								
	J	5	5	5	5	5	5	5	5		J								
Date	2/2/23 4/3/23 2/4/23 2/6/23 2/6/23 2/7/23 2/8/23 2/9/23								Comments: OIL A03 2-8-23-P [3]										
Time	1030 0900 1000 1040 0825 0930 0930 1130																		
Init	DRO DRO DRO DRO KRI KRI A03 DRO																		

Codes: IE-incorrect entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

### Dry Tissue Weight

CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)	CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)
Cont	A	1	.00465	.00683	500	A	31	.00473	.00635
	B	2	.00467	.00679		B	32	.00464	.00608
	C	3	.00457	.00658		C	33	.00453	.00648
	D	4	.00454	.00644		D	34	.00462	.00615
	E	5	.00449	.00705		E	35	.00468	.00635
	F	6	.00448	.00670		F	36	.00472	.00677
	G	7	.00468	.00689		G	37	.00471	.00663
	H	8 *	.00454	.00670		H	38 *	.00468	.00606
	I	9	.00476	.00632		I	39	.00473	.00645
	J	10	.00442	.00615		J	40	.00455	.00636
125	A	11	.00470	.00717	1000	A	41	.00473	—
	B	12	.00449	.00681		B	42	.00461	—
	C	13	.00474	.00644		C	43	.00464	—
	D	14	.00431	.00680		D	44	.00459	—
	E	15	.00470	.00673		E	45	.00462	—
	F	16	.00456	.00699		F	46	.00464	—
	G	17	.00445	.00632		G	47	.00451	—
	H	18 *	.00439	.00634		H	48 *	.00463	—
	I	19	.00452	.00634		I	49	.00470	—
	J	20	.00441	.00630		J	50	.00455	—
250	A	21	.00450	.00619	2000	A	51	.00489	—
	B	22	.00436	.00583		B	52	.00471	—
	C	23	.00446	.00614		C	53	.00458	—
	D	24	.00424	.00615		D	54	.00466	—
	E	25	.00429	.00598		E	55	.00475	—
	F	26	.00444	.00609		F	56	.00467	—
	G	27	.00440	.00606		G	57	.00455	—
	H	28 *	.00455	.00629		H	58 *	.00459	—
	I	29	.00427	.00607		I	59	.00452	—
	J	30	.00475	.00688		J	60	.00494	—

Comments:



Test Notes

Comments	Date	Time	Initials

# Analytical Standard Record

**2302028**

Description: Mysid STOX Work Soln (KCI) Expires: 02/09/2023  
Standard Type: Analyte Spike Prepared: 02/02/2023  
Solvent: - Prepared By: Dane De Guzman  
Final Volume (mls): 30000 Department: Toxicology  
Vials: 1 Last Edit: 02/02/2023 09:40 by DPD  
Comments: Measured 60.0g of KCI standard into 1-L volumetric flask and bring to volume with 25ppt saltwater. Add additional 29L to bring final solution to 30L. See attached PDF-file for dilution scheme.

Analyte	Parent	CAS Number	Concentration	Units
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mg/L

### Parent Standards used:

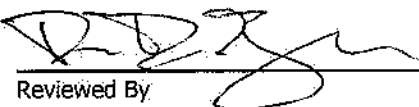
Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2201575	Potassium chloride	02/10/2022	Thermo Fisher Scientific	T02H024	02/10/2025	07/19/2022 09:43 by TRG	60
2301333	Lab Saltwater	01/19/2023	-	-	06/06/2023	01/23/2023 11:25 by AOJ	30000

**Mysid STOX Work Soln (KCI)**

**2302028**

**Expires 02/09/2023**



  
Reviewed By

2-2-23  
Date

Nwds KCL  
STX

Mb -23-0038

1	59
2	28
3	39
4	30
5	14
6	8
7	11
8	52
9	18
10	54
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11	19
12	58
13	10
14	49
15	12
16	33
17	50
18	36
19	34
20	40
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21	42
22	43
23	2
24	1
25	35
26	45
27	15
28	7
29	51
30	53
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33	24
34	29
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36	17
37	6
38	21
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40	38
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42	37
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48	47
49	60
50	55
<hr/>	
51	31
52	23
53	25
54	16
55	3
56	26
57	4
58	57
59	22
60	13

**SPP – Inland Silverside Minnow 96-hr (*Menidia beryllina*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Menidia beryllina</i>	Test Type	SPP 96 hr
Number of Replicates	5	Number of Organisms/ Replicate	10
Test Organism Batch Number	23-0123-96h IS SPP	Organism Date of Birth or Date Received	01/31/2023
Organism Source	NWDLS	Organism Age at Test Initiation	14 days
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L	Reference Toxicant	Potassium Chloride – see graph
Sample ID	HI-DMMU-1	Field Sampling Date /Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Test Initiation Date/Time	02/14/2023 11:00	Test Termination Date/Time	02/18/2023 11:00
Renewal of Test Solution	None	Feeding	Twice Daily

Sample ID	Concentration (%)	Mean Survival (%)	Statistically Different Compared to Control (yes/no)	LC <sub>50</sub> (%)
HI-DMMU-1	0	98	---	>100
	10	94	---	
	50	100	---	
	100	96	No	
HI-DMMU-2	0	98	---	>100
	10	100	---	
	50	100	---	
	100	98	No	
HI-DMMU-3	0	94	---	>100
	10	98	---	
	50	98	---	
	100	98	No	
HI-DMMU-4	0	96	---	>100
	10	94	---	
	50	98	---	
	100	98	No	
HI-DMMU-5	0	100	---	>100
	10	100	---	
	50	98	---	
	100	98	No	
HI-DMMU-6	0	96	---	>100
	10	94	---	
	50	94	---	
	100	94	No	
HI-DMMU-7	0	96	---	>100
	10	98	---	
	50	98	---	
	100	96	No	
HI-DMMU-8	0	96	---	>100
	10	96	---	
	50	96	---	
	100	96	No	



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:19 (p 1 of 1)  
**Test Code/ID:** 23A1459-011 / 17-1307-7317

**Inland Silverside 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 02-2676-0418	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:19	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 13-4283-8304	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 10-6131-3563	<b>Code:</b> 3F425C1B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

REF-S

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1677314	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.94	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

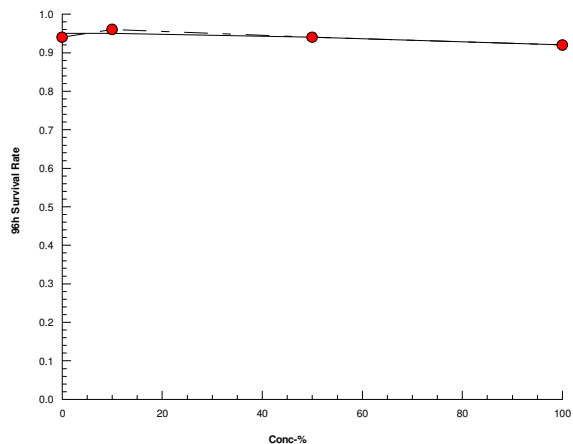
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9400	0.9000	1.0000	0.0548	5.83%	0.0%	47/50	0.95	0.0%
10		5	0.9600	0.9000	1.0000	0.0548	5.71%	-2.13%	48/50	0.95	0.0%
50		5	0.9400	0.8000	1.0000	0.0894	9.52%	0.0%	47/50	0.94	1.05%
100		5	0.9200	0.8000	1.0000	0.0837	9.09%	2.13%	46/50	0.92	3.16%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	0.9000	1.0000	1.0000	0.9000
10		0.9000	0.9000	1.0000	1.0000	1.0000
50		1.0000	1.0000	0.8000	0.9000	1.0000
100		1.0000	1.0000	0.9000	0.9000	0.8000

**Graphics**



# CETIS Analytical Report

Report Date: 27 Mar-23 16:27 (p 1 of 1)  
 Test Code/ID: 23A1459-001 / 17-9089-1295

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 01-4727-2594	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:27	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 07-3195-7167	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 19-9681-8103	<b>Code:</b> 770506B7	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU-1

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1431275	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

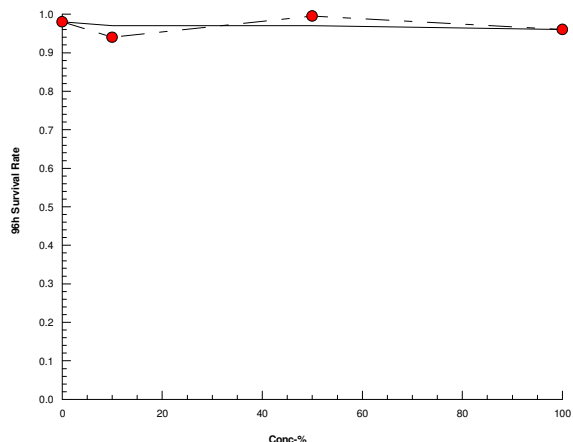
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
10		5	0.9400	0.9000	1.0000	0.0548	5.83%	4.08%	47/50	0.97	1.02%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.97	1.02%
100		5	0.9600	0.9000	1.0000	0.0548	5.71%	2.04%	48/50	0.96	2.04%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	0.9000	1.0000	1.0000
10		0.9000	0.9000	0.9000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	0.9000	0.9000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:26 (p 1 of 1)  
 Test Code/ID: 23A1459-002 / 00-9478-2558

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 13-5640-4352	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:26	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-4409-1068	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b> 14
<b>Sample ID:</b> 00-1790-7557	<b>Code:</b> 1113F65	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU 2

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1893767	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

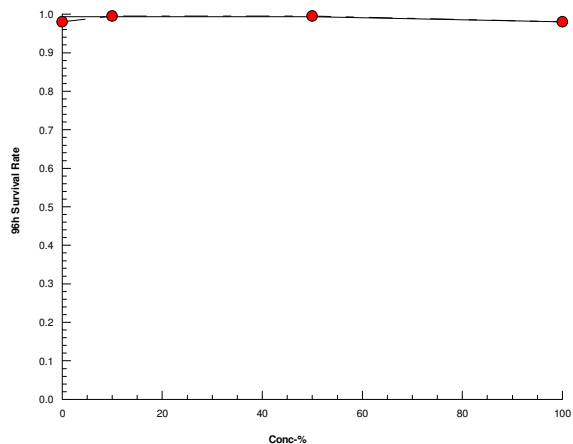
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.9933	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.9933	0.0%
50		5	1.0000	1.0000	1.0000	0.0000	0.00%	-2.04%	50/50	0.9933	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	1.34%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	0.9000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.9000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:25 (p 1 of 1)  
 Test Code/ID: 23A1459-003 / 08-9139-0591

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 18-2778-5311	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:25	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 04-2630-0061	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 06-9169-5129	<b>Code:</b> 293A6E19	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI-DMMU 3

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	243593	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.94	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

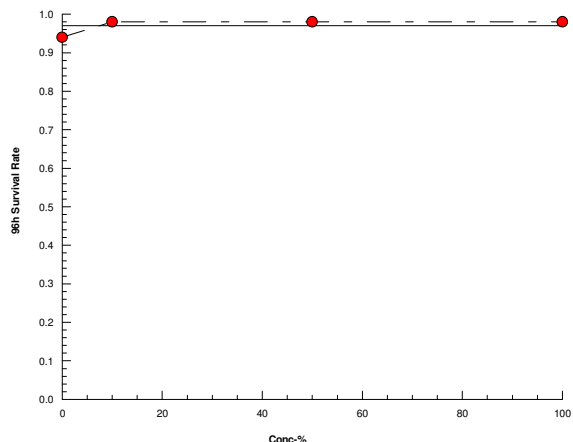
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)					Isotonic Variate			
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9400	0.8000	1.0000	0.0894	9.52%	0.0%	47/50	0.97	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	-4.26%	49/50	0.97	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	-4.26%	49/50	0.97	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	-4.26%	49/50	0.97	0.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	1.0000	0.8000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	0.9000

### Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:25 (p 1 of 1)  
**Test Code/ID:** 23A1459-004 / 16-6335-7361

**Inland Silverside 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 09-1029-0457	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:24	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 03-4469-7152	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b> 14
<b>Sample ID:</b> 21-2240-8852	<b>Code:</b> 7E816394	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI-DMMU 4

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1459639	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

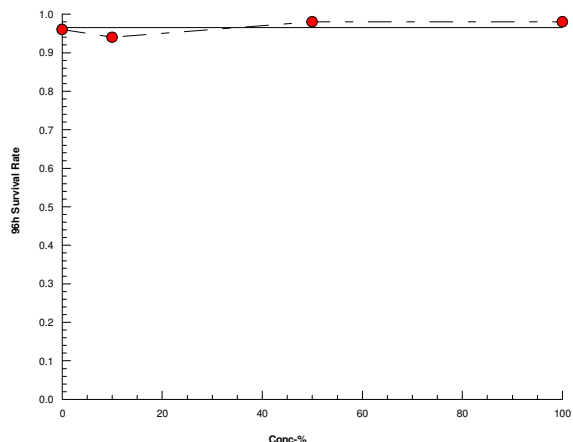
**96h Survival Rate Summary**

Conc-%	Code	Count	Mean	Calculated Variate(A/B)					Isotonic Variate		
				Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.9000	1.0000	0.0548	5.71%	0.0%	48/50	0.965	0.0%
10		5	0.9400	0.9000	1.0000	0.0548	5.83%	2.08%	47/50	0.965	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.965	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.965	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.9000	0.9000	1.0000	1.0000
10		0.9000	0.9000	0.9000	1.0000	1.0000
50		1.0000	1.0000	0.9000	1.0000	1.0000
100		0.9000	1.0000	1.0000	1.0000	1.0000

**Graphics**



# CETIS Analytical Report

Report Date: 27 Mar-23 16:24 (p 1 of 1)  
 Test Code/ID: 23A1459-005 / 15-5185-5992

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 13-5129-8652	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:24	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 06-8856-1561	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b> 14d
<b>Sample ID:</b> 19-8013-9660	<b>Code:</b> 7606888C	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 5

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	13593	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

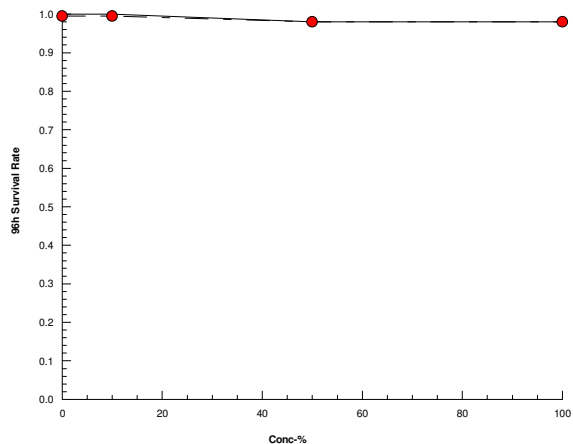
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
10		5	1.0000	1.0000	1.0000	0.0000	0.00%	0.0%	50/50	1	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	2.0%	49/50	0.98	2.0%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000	1.0000
100		0.9000	1.0000	1.0000	1.0000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:23 (p 1 of 1)  
 Test Code/ID: 23A1459-006 / 19-1201-3249

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 04-8030-1995	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:23	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 01-5056-7804	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 06-4770-0120	<b>Code:</b> 269B1E98	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU6

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1765801	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

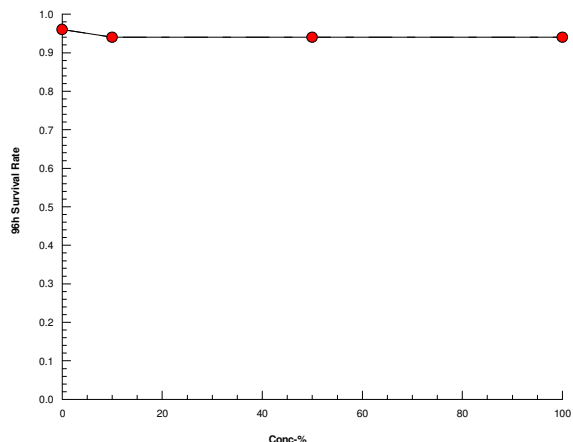
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.96	0.0%
10		5	0.9400	0.8000	1.0000	0.0894	9.52%	2.08%	47/50	0.94	2.08%
50		5	0.9400	0.9000	1.0000	0.0548	5.83%	2.08%	47/50	0.94	2.08%
100		5	0.9400	0.7000	1.0000	0.1342	14.27%	2.08%	47/50	0.94	2.08%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.8000	1.0000	1.0000	1.0000
10		1.0000	1.0000	0.9000	0.8000	1.0000
50		0.9000	0.9000	0.9000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.7000	1.0000

### Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 16:23 (p 1 of 1)  
 Test Code/ID: 23A1459-007 / 05-1613-8505

## Inland Silverside 96-h Acute Survival Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 06-5549-3239	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:22	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 19-0644-9093	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 20-4511-7660	<b>Code:</b> 79E604DC	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

HI DMMU 7

### Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1603368	200	Yes	Two-Point Interpolation

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

### Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

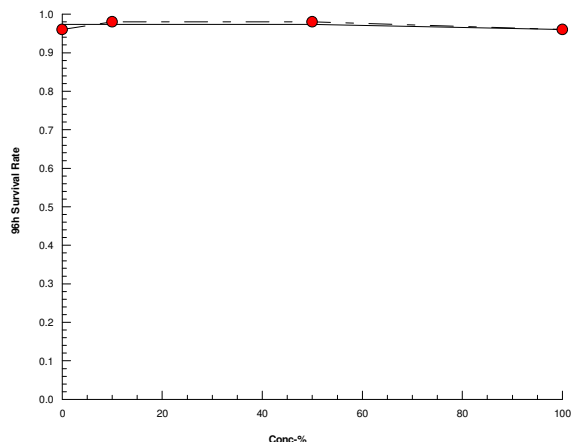
### 96h Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.9733	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.9733	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	-2.08%	49/50	0.9733	0.0%
100		5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.96	1.37%

### 96h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.8000	1.0000	1.0000	1.0000	1.0000
10		0.9000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	1.0000	0.8000	1.0000

### Graphics





**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:22 (p 1 of 1)  
**Test Code/ID:** 23A1459-008 / 00-6602-5119

**Inland Silverside 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 16-5940-8363	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:22	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 18-8680-1787	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 21-3364-2289	<b>Code:</b> 7F2CCC31	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

HI DMMU 8

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1045820	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.96	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

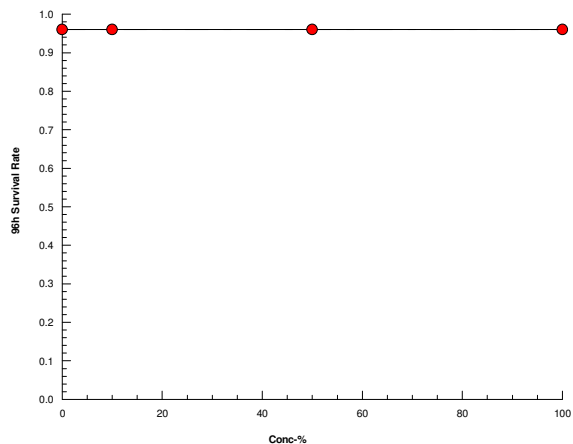
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.96	0.0%
10		5	0.9600	0.9000	1.0000	0.0548	5.71%	0.0%	48/50	0.96	0.0%
50		5	0.9600	0.9000	1.0000	0.0548	5.71%	0.0%	48/50	0.96	0.0%
100		5	0.9600	0.8000	1.0000	0.0894	9.32%	0.0%	48/50	0.96	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.8000	1.0000	1.0000	1.0000	1.0000
10		1.0000	1.0000	1.0000	0.9000	0.9000
50		0.9000	0.9000	1.0000	1.0000	1.0000
100		1.0000	0.8000	1.0000	1.0000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:20 (p 1 of 1)  
**Test Code/ID:** 23A1459-009 / 16-3613-3283

**Inland Silverside 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 20-6780-6135	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:20	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-3904-4533	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 05-5045-9103	<b>Code:</b> 20CF56DF	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

CDP-6

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	4112	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

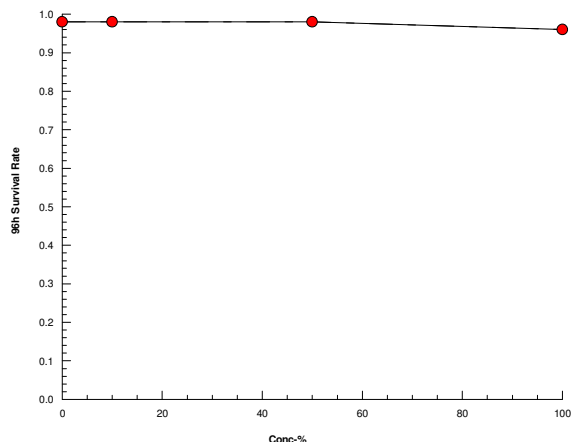
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
100		5	0.9600	0.8000	1.0000	0.0894	9.32%	2.04%	48/50	0.96	2.04%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	0.9000	1.0000	1.0000	1.0000	1.0000
10		1.0000	0.9000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9000	1.0000
100		1.0000	1.0000	1.0000	0.8000	1.0000

**Graphics**



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 16:20 (p 1 of 1)  
**Test Code/ID:** 23A1459-010 / 12-1500-3178

**Inland Silverside 96-h Acute Survival Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 07-1915-2840	<b>Endpoint:</b> 96h Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 16:20	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1
<b>Batch ID:</b> 12-7894-2850	<b>Test Type:</b> Survival (96h)	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 14 Feb-23 11:00	<b>Protocol:</b> EPA/821/R-02-012 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 18 Feb-22 11:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> n/a	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b>
<b>Sample ID:</b> 01-9243-9835	<b>Code:</b> B78661B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-22 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 28d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

CDP 7

**Linear Interpolation Options**

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1090965	200	Yes	Two-Point Interpolation

**Test Acceptability Criteria**

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.98	0.9	>>	Yes	Passes Criteria

**Point Estimates**

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC50	>100	n/a	n/a	<1	n/a	n/a

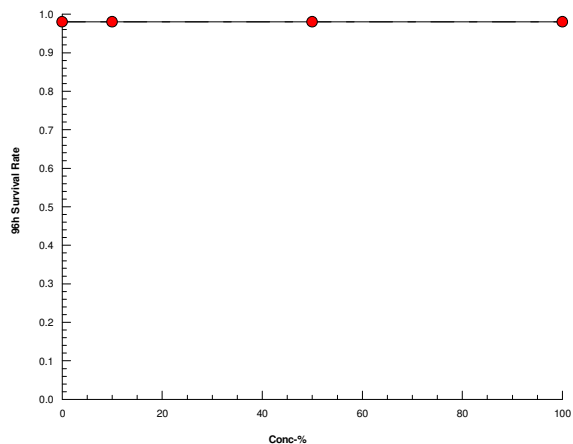
**96h Survival Rate Summary**

Conc-%	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
10		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
50		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%
100		5	0.9800	0.9000	1.0000	0.0447	4.56%	0.0%	49/50	0.98	0.0%

**96h Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	1.0000	1.0000	1.0000	0.9000
10		0.9000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	0.9000
100		1.0000	0.9000	1.0000	1.0000	1.0000

**Graphics**



Client	PCCA HI & CDP Resampling 2023	WO No.	23A1459
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96 h Acute <i>Menidia beryllina</i> Toxicity Test Condition Summary Test Method EPA821-R-02-012-2006.0; NWDLS SOP No. 4018; EPA 503/8-91/001; NWDLS SOP No. 4046			
Test Organism:	<i>Menidia beryllina</i>	Age Class:	9-14 days old
Test Type:	SPP	Test Duration:	96 h
Temperature:	20 ± 2°C	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber size:	500 mL cups	Cleaning:	Daily during test counts
No. of Replicates:	5	No. organisms per Replicate:	10
Test Solution Volume	750 mL (minimum)	Dilution Water:	LAB-W
Renewal of test solution:	None	Aeration:	None
Feeding:	Once at 48 hrs	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria	≥ 90% survival in control	Sample Holding Time Requirements:	24 h maximum for first use.

Test Concentrations (%):	Control, 10, 50, 100	Sites:	REF, HI-DMMU 1-8, CDP 6-7
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Test Organism Batch #	23-0123-96h IS SPP	DOB	1-31-23
Source	NWDLS	Age (days)	17d

Sample Date/Time:	1-16-23 / 1420	Sediment : Water ratio	1 : 4
Sediment Volume	12 L	Water Volume	48 L

Hour	Date	Time	Initials	Hour	Date	Time	Initials
0h Initiation	2-14-23	1100	ML/ADG	72h Counts	2-17-23	1110	ML
24h Counts	2-15-23	1100	ML	96h Termination	2-18-23	1100	ML
48h Counts	2-16-23	1105	ML	48 h Feed	2-16-23	0900	ML

This test was conducted in accordance with the method standards or according to the exception(s) as noted:

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

ML  
Initial Review

**Acute Toxicity Test with *Menidia beryllina***

Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
REF-Cont	A	10	10	9	9	9	HI-DMMU -1 50	A	10	10	10	10	10	HI-DMMU -3 CONT	A	10	10	10	9	9
	B	10	10	10	10	9		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	9	9	8
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	9	9	9		E	10	10	10	10	10		E	10	10	10	10	10
REF 10	A	10	10	9	9	9	HI-DMMU -1 100	A	10	10	10	10	10	HI-DMMU -3 10	A	10	10	10	10	10
	B	10	10	9	7	7		B	10	10	10	10	10		B	10	9	9	9	9
	C	10	10	10	10	10		C	10	9	9	9	9		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	9	9		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
REF 50	A	10	10	10	10	10	HI-DMMU -2 Cont	A	10	10	10	10	10	HI-DMMU -3 50	A	10	10	10	9	9
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	9	9	8		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	9	9	9		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	9	9	9	9		E	10	10	10	10	10
REF 100	A	10	10	10	10	10	HI-DMMU -2 10	A	10	10	10	10	10	HI-DMMU -3 100	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	9		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	9	9	9		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	8	8	8		E	10	10	10	10	10		E	10	9	9	9	9
HI-DMMU -1 Cont	A	10	10	10	10	10	HI-DMMU -2 50	A	10	10	10	10	10	HI-DMMU -4 CONT	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	9	9	9	9
	C	10	10	9	9	9		C	10	10	10	10	10		C	10	9	9	9	9
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU -1 10	A	10	10	10	10	9	HI-DMMU -2 100	A	10	10	10	10	10	HI-DMMU -4 10	A	10	10	9	9	9
	B	10	10	10	10	9		B	10	10	10	10	10		B	10	9	9	9	9
	C	10	10	10	10	9		C	10	10	10	10	10		C	10	10	10	9	9
	D	10	10	10	10	10		D	10	9	9	9	9		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10

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Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

Initial Review

Comments:

Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms					Conc. (%)	Rep	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-4 50	A	10	10	10	10	10	HI-DMMU-6 CONT	A	10	10	10	10	10	HI-DMMU-7 50	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	9	8	8		B	10	10	10	10	10
	C	10	10	10	10	9		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	9	9	9	9
HI-DMMU-4 100	A	10	10	10	9	9	HI-DMMU-6 10	A	10	10	10	10	HI-DMMU-7 100	A	10	10	10	10	10	
	B	10	10	10	10	10		B	10	10	10	10		B	10	10	10	10	10	
	C	10	10	10	10	10		C	10	10	10	9		9	C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	9		8	D	10	9	9	9	8
	E	10	10	10	10	10		E	10	10	10	10		10	E	10	10	10	10	10
HI-DMMU-5 CONT	A	10	10	10	10	10	HI-DMMU-6 50	A	10	10	10	9	9	HI-DMMU-8 CONT	A	10	10	10	10	8
	B	10	10	10	10	10		B	10	10	10	10	9		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	9	9		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 10	A	10	10	10	10	10	HI-DMMU-6 100	A	10	10	10	10	10	HI-DMMU-8 10	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	10
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	9	9	8	7		D	10	10	10	9	9
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	9
HI-DMMU-5 50	A	10	10	9	9	9	HI-DMMU-7 CONT	A	10	10	9	9	8	HI-DMMU-8 50	A	10	10	10	10	9
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	10	10	10	9
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10
HI-DMMU-5 100	A	10	10	10	10	9	HI-DMMU-7 10	A	10	9	9	9	9	HI-DMMU-8 100	A	10	10	10	10	10
	B	10	10	10	10	10		B	10	10	10	10	10		B	10	9	9	9	8
	C	10	10	10	10	10		C	10	10	10	10	10		C	10	10	10	10	10
	D	10	10	10	10	10		D	10	10	10	10	10		D	10	10	10	10	10
	E	10	10	10	10	10		E	10	10	10	10	10		E	10	10	10	10	10

Conc. (%)	R e p	No. of Surviving Organisms					Conc. (%)	R e p	No. of Surviving Organisms					Conc. (%)	R e p	No. of Surviving Organisms				
		0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr			0 hr	24 hr	48 hr	72 hr	96 hr
CDP 6 CONT	A	10	9	9	9	9	CDP 7 50	A	10	10	10	10	10		A					
	B	10	10	10	10	10		B	10	10	10	10	10		B					
	C	10	10	10	10	10		C	10	10	10	10	10		C					
	D	10	10	10	10	10		D	10	10	10	10	10		D					
	E	10	10	10	10	10		E	10	9	9	9	9		E					
CDP 6 10	A	10	10	10	10	10	CDP 7 100	A	10	10	10	10	10		A					
	B	10	10	10	10	9		B	10	10	10	6	9		B					
	C	10	10	10	10	10		C	10	10	10	10	10		C					
	D	10	10	10	10	10		D	10	10	10	10	10		D					
	E	10	10	10	10	10		E	10	10	10	10	10		E					
CDP 6 50	A	10	10	10	10	10		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	9	9		D							D					
	E	10	10	10	10	10		E							E					
CDP 6 100	A	10	10	10	10	10		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	8	8	8	8		D							D					
	E	10	10	10	10	10		E							E					
CDP 7 CONT	A	10	10	10	10	10		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	10	9	9	9		E							E					
CDP 7 10	A	10	10	10	10	9		A							A					
	B	10	10	10	10	10		B							B					
	C	10	10	10	10	10		C							C					
	D	10	10	10	10	10		D							D					
	E	10	10	10	10	10		E							E					

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

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Initial Review

Water Quality Parameters - *Menidia beryllina*

Conc. (%)	pH / Dissolved Oxygen (mg/L)				
	0 hr	24 hr	48 hr	72 hr	96 hr
REF Cont	8.1/8.0	8.0/7.8	7.9/7.7	7.8/7.6	7.7/7.5
REF 10	8.1/7.8	7.9/7.8	7.7/7.6	7.7/7.5	7.7/7.5
REF 50	8.1/7.8	7.6/7.7	7.8/7.6	7.7/7.5	7.6/7.5
REF 100	8.6/7.7	7.6/7.7	7.5/7.6	7.7/7.5	7.6/7.4
HI-DMMU-1 Cont	8.1/8.0	7.9/7.9	7.8/7.7	7.8/7.6	7.7/7.4
HI-DMMU-1 10	8.0/7.9	7.8/7.8	7.8/7.7	7.7/7.4	7.7/7.4
HI-DMMU-1 50	8.1/7.7	7.7/7.8	7.8/7.7	7.7/7.7	7.7/7.4
HI-DMMU-1 100	8.1/7.7	7.7/7.7	7.7/7.6	7.7/7.7	7.7/7.4
HI-DMMU-2 Cont	8.1/8.0	7.9/7.9	7.8/7.6	7.8/7.4	7.6/7.2
HI-DMMU-2 10	7.9/7.9	7.9/7.8	7.8/7.7	7.8/7.6	7.6/7.2
HI-DMMU-2 50	8.0/7.7	7.9/7.7	7.8/7.7	7.6/7.6	7.7/7.3
HI-DMMU-2 100	8.2/7.8	7.8/7.7	7.7/7.6	7.6/7.5	7.8/7.1
HI-DMMU-3 Cont	8.1/8.0	7.7/7.8	7.7/7.6	7.6/7.5	7.7/7.3
HI-DMMU-3 10	8.1/8.0	7.6/7.8	7.5/7.6	7.6/7.5	7.6/7.0
HI-DMMU-3 50	8.2/7.9	7.6/7.7	7.5/7.5	7.6/7.4	7.6/7.0
HI-DMMU-3 100	8.2/7.9	7.5/7.8	7.5/7.7	7.6/7.4	7.5/7.0
HI-DMMU-4 Cont	8.1/8.0	7.9/7.7	7.8/7.4	7.7/7.4	7.6/7.2
HI-DMMU-4 10	8.1/8.0	7.8/7.9	7.8/7.4	7.6/7.4	7.5/7.2
HI-DMMU-4 50	8.2/7.7	7.8/7.6	7.8/7.5	7.6/7.5	7.7/7.2
HI-DMMU-4 100	8.2/7.9	7.8/7.7	7.7/7.5	7.6/7.6	7.6/7.1
HI-DMMU-5 Cont	8.1/8.0	7.9/7.8	7.7/7.5	7.6/7.5	7.5/7.4
HI-DMMU-5 10	8.1/7.4	7.8/7.8	7.7/7.8	7.6/7.7	7.5/7.1
HI-DMMU-5 50	8.1/7.4	7.7/7.8	7.7/7.8	7.6/7.4	7.5/7.2
HI-DMMU-5 100	8.4/7.8	7.7/7.8	7.7/7.8	7.7/7.4	7.5/7.2
Meter No. 737/4526	732/4516	732/46	734/46	734/46	734/46

Conc. (%)	pH / Dissolved Oxygen (mg/L)				
	0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-6 Cont	8.1/8.0	7.9/7.7	7.8/7.6	7.6/7.5	7.7/7.4
HI-DMMU-6 10	8.2/7.9	8.0/7.8	7.8/7.6	7.6/7.5	7.7/7.4
HI-DMMU-6 50	8.3/7.9	8.0/7.8	7.8/7.6	7.6/7.5	7.7/7.4
HI-DMMU-6 100	8.3/7.9	8.0/7.8	7.9/7.7	7.6/7.5	7.5/7.4
HI-DMMU-7 Cont	8.1/8.0	7.9/7.8	7.8/7.9	7.7/7.5	7.6/7.4
HI-DMMU-7 10	8.1/7.9	8.0/7.8	7.9/7.4	7.7/7.5	7.7/7.3
HI-DMMU-7 50	8.1/7.9	7.9/7.8	7.9/7.4	7.6/7.4	7.6/7.4
HI-DMMU-7 100	8.3/7.9	7.9/7.8	7.8/7.9	7.6/7.7	7.5/7.4
HI-DMMU-8 Cont	8.1/8.0	7.9/7.6	7.8/7.4	7.7/7.2	7.6/7.2
HI-DMMU-8 10	8.1/7.9	7.9/7.7	7.8/7.7	7.7/7.4	7.6/7.4
HI-DMMU-8 50	8.1/7.8	7.8/7.7	7.8/7.7	7.7/7.4	7.7/7.4
HI-DMMU-8 100	8.4/7.9	7.9/7.6	7.7/7.7	7.5/7.6	7.2/7.4
CDP-6 Cont	8.1/8.0	7.8/7.7	7.7/7.7	7.5/7.5	7.7/7.3
CDP-6 10	8.2/7.9	7.8/7.6	7.8/7.7	7.7/7.5	7.6/7.1
CDP-6 50	8.3/7.9	7.8/7.8	7.8/7.7	7.7/7.5	7.6/7.1
CDP-6 100	8.3/7.9	7.8/7.4	8.0/7.7	7.6/7.5	7.5/7.0
CDP-7 Cont	8.1/8.0	7.9/7.4	8.0/7.7	7.8/7.7	7.7/7.3
CDP-7 10	8.1/8.0	7.8/7.6	7.9/7.6	7.5/7.7	7.5/7.4
CDP-7 50	8.1/8.0	7.9/7.4	7.9/7.5	7.9/7.6	7.7/7.0
CDP-7 100	8.2/8.0	7.9/7.7	7.9/7.5	7.6/7.6	7.7/7.6
Meter No.	732/46	734/46	734/46	734/46	734/46



Conc. (%)	Temperature °C / Salinity (‰)				
	0 hr	24 hr	48 hr	72 hr	96 hr
REF Cont	20/29	20/29	20/29	20/29	20/29
REF 10	20/29	20/29	20/29	20/29	20/29
REF 50	20/29	20/29	20/29	20/29	20/29
REF 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-1 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-1 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-1 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-1 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-2 Cont	20/29	20/29	20/29	20/30	20/30
HI-DMMU-2 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-2 50	20/29	20/29	20/29	20/30	20/29
HI-DMMU-2 100	20/29	20/29	20/29	20/30	20/30
HI-DMMU-3 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-3 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-3 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-3 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-4 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-4 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-4 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-4 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-5 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-5 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-5 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-5 100	20/29	20/29	20/29	20/29	20/30
Meter No.	210/294	210/294	210/294	210/294	210/294

Conc. (%)	Temperature °C / Salinity (‰)				
	0 hr	24 hr	48 hr	72 hr	96 hr
HI-DMMU-6 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-6 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-6 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-6 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-7 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-7 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-7 50	20/29	20/29	20/29	20/29	20/29
HI-DMMU-7 100	20/29	20/29	20/29	20/29	20/29
HI-DMMU-8 Cont	20/29	20/29	20/29	20/29	20/29
HI-DMMU-8 10	20/29	20/29	20/29	20/29	20/29
HI-DMMU-8 50	20/29	20/29	20/29	20/30	20/30
HI-DMMU-8 100	20/29	20/29	20/29	20/30	20/30
CDP-6 Cont	20/29	20/29	20/29	20/29	20/29
CDP-6 10	20/29	20/29	20/29	20/29	20/29
CDP-6 50	20/29	20/29	20/29	20/29	20/29
CDP-6 100	20/29	20/29	20/29	20/29	20/29
CDP-7 Cont	20/29	20/29	20/29	20/29	20/29
CDP-7 10	20/29	20/29	20/29	20/29	20/29
CDP-7 50	20/29	20/29	20/29	20/29	20/29
CDP-7 100	20/29	20/29	20/29	20/29	20/29
Meter No.	210/	210/	210/	210/	210/

Comments:

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

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Initial Review

Water Quality Parameters - *Menidia beryllina*

Ammonia Meter # 566					
Concentration	Day 0	Day 4 (96h)	HI-DMMU-6 Cont	Day 0	Day 4 (96h)
REF Control	.001	.002	HI-DMMU-6 10	0.36	0.29
REF10%	0.53	0.50	HI-DMMU-6 50	1.34	1.08
REF 50%	2.36	2.21	HI-DMMU-6 100	2.74	2.64
REF 100%	4.88	4.76	HI-DMMU-7 Cont	.001	.002
HI-DMMU-1 Control	0.001	.002	HI-DMMU-7 10	0.17	0.12
HI-DMMU-1 10%	0.22	0.29	HI-DMMU-7 50	0.94	0.87
HI-DMMU-1 50%	0.94	1.06	HI-DMMU-7 100	1.82	1.92
HI-DMMU-1 100%	1.94	2.01	HI-DMMU-8 Cont	.001	.002
HI-DMMU-2 Control	.001	.002	HI-DMMU-8 10	0.31	0.19
HI-DMMU-2 10%	0.31	0.25	HI-DMMU-8 50	1.16	0.99
HI-DMMU-2 50%	1.05	1.09	HI-DMMU-8 100	2.44	2.31
HI-DMMU-2 100%	2.30	2.11	CDP-6 Cont	.001	.002
HI-DMMU-3 Control	.001	.002	CDP-6 10	0.29	0.16
HI-DMMU-3 10%	0.29	0.19	CDP-6 50	1.49	1.24
HI-DMMU-3 50%	1.02	0.86	CDP-6 100	2.76	2.56
HI-DMMU-3 100%	1.96	1.79	CDP-7 Cont	.001	.002
HI-DMMU-4 Control	.001	.002	CDP-7 10	0.37	0.29
HI-DMMU-4 10%	0.42	0.53	CDP-7 50	1.49	1.36
HI-DMMU-4 50%	1.67	1.45	CDP-7 100	2.09	2.47
HI-DMMU-4 100%	3.21	3.09	HI-DMMU-2 Cont	.001	.002
HI-DMMU-5 Control	.001	.002			
HI-DMMU-5 10%	0.26	0.19			
HI-DMMU-5 50%	1.08	0.95			
HI-DMMU-5 100%	2.12	1.96			

Data correction codes: IE-incorrect entry; WC- wrong column; WR-wrong row; TN-transposed number; ONV-organism not visible

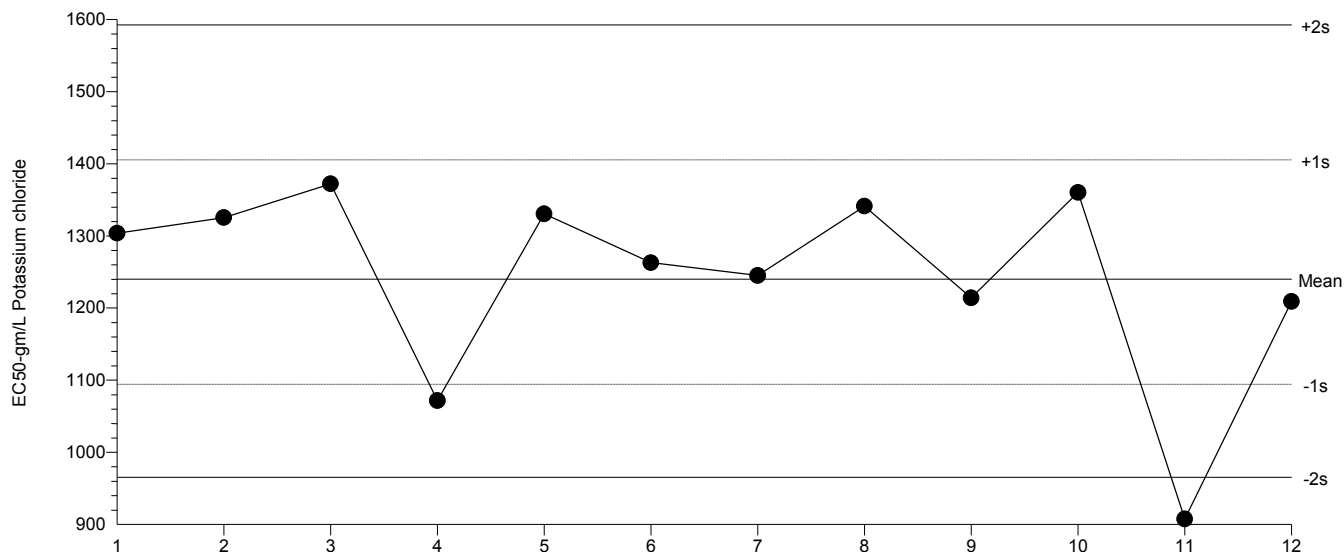
JRL  
Initial Review

Inland Silverside 7-d Larval Survival and Growth Test

All Matching Labs

Test Type: Growth-Survival (7d)      Organism: Menidia beryllina (Inland Silverside)      Material: Potassium chloride  
 Protocol: EPA/821/R-02-014 (2002)      Endpoint: 7d Survival Rate      Source: Reference Toxicant-REF

Inland Silverside 7-d Larval Survival and Growth Test



Mean: 1240      Count: 11      -1s Warning Limit: 1094      -2s Action Limit: 965.6  
 Sigma: n/a      CV: 12.60%      +1s Warning Limit: 1405      +2s Action Limit: 1593

Quality Control Data

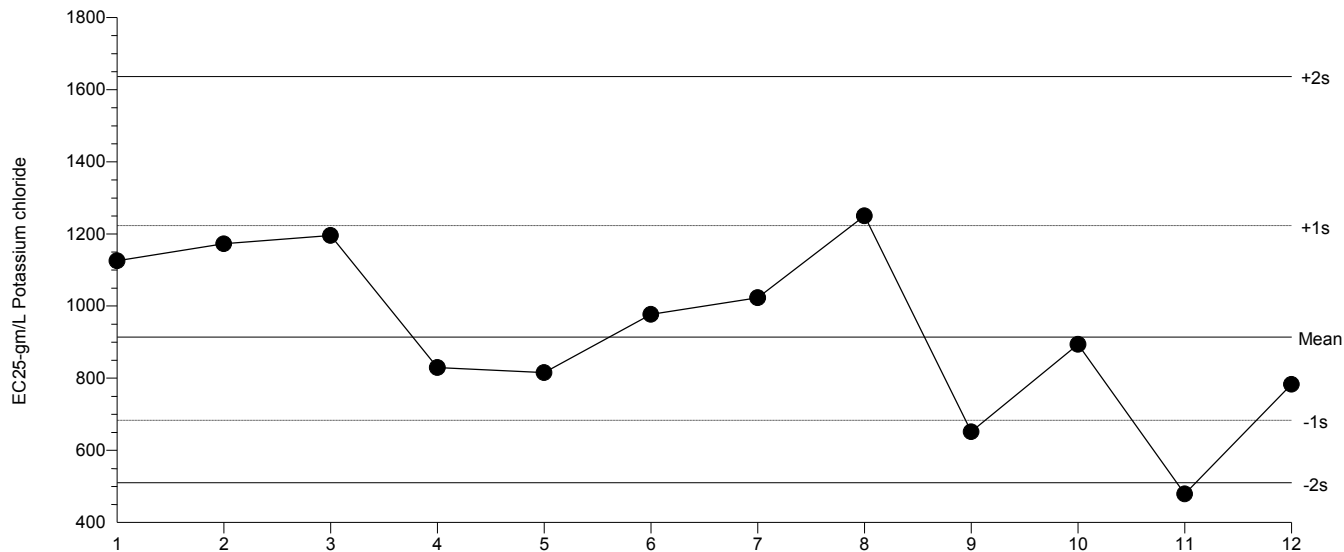
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	14:00	1304	63.62	0.3999			21-0733-6817	12-9756-8876	NWDLS Environ. Toxicol.
2			22	16:30	1325	85.28	0.5316			06-9820-7448	08-3343-3400	NWDLS Environ. Toxicol.
3		Jul	20	14:00	1372	132.1	0.8089			04-3327-2237	09-2136-3057	NWDLS Environ. Toxicol.
4		Aug	31	14:00	1072	-168.4	-1.167	(-)		00-7357-5399	04-3638-1725	NWDLS Environ. Toxicol.
5		Sep	21	13:10	1331	90.49	0.563			19-5010-2951	10-6041-0723	NWDLS Environ. Toxicol.
6		Oct	19	12:30	1263	22.73	0.1452			14-8758-8127	09-2601-9551	NWDLS Environ. Toxicol.
7		Nov	3	12:10	1245	4.991	0.0321			19-0042-2283	06-4677-3049	NWDLS Environ. Toxicol.
8		Dec	19	12:00	1341	101	0.6261			12-9423-8120	19-6787-9140	NWDLS Environ. Toxicol.
9	2023	Jan	3	9:30	1214	-25.97	-0.1692			08-4361-7466	16-1040-9564	NWDLS Environ. Toxicol.
10			18	11:50	1360	120.1	0.7391			07-9240-7672	14-5325-7119	NWDLS Environ. Toxicol.
11		Feb	2	10:30	907.5	-332.6	-2.496	(-)	(-)	07-7481-5869	00-3563-2871	NWDLS Environ. Toxicol.
12			16	13:00	1209	-31.07	-0.2028			16-5741-0843	00-9267-7337	NWDLS Environ. Toxicol.

Inland Silverside 7-d Larval Survival and Growth Test

All Matching Labs

Test Type: Growth-Survival (7d)      Organism: Menidia beryllina (Inland Silverside)      Material: Potassium chloride  
 Protocol: EPA/821/R-02-014 (2002)      Endpoint: Mean Dry Biomass-mg      Source: Reference Toxicant-REF

Inland Silverside 7-d Larval Survival and Growth Test



Mean: 914.2      Count: 11      -1s Warning Limit: 683.1      -2s Action Limit: 510.5  
 Sigma: n/a      CV: 29.80%      +1s Warning Limit: 1223      +2s Action Limit: 1637

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	14:00	1126	211.4	0.7141			21-0733-6817	17-3189-9270	NWDLS Environ. Toxicol.
2			22	16:30	1173	258.4	0.8545			06-9820-7448	18-1516-3722	NWDLS Environ. Toxicol.
3		Jul	20	14:00	1196	281.5	0.9215			04-3327-2237	10-2833-6233	NWDLS Environ. Toxicol.
4		Aug	31	14:00	829.3	-84.82	-0.3343			00-7357-5399	13-8104-1347	NWDLS Environ. Toxicol.
5		Sep	21	13:10	815.3	-98.82	-0.3927			19-5010-2951	12-8093-9078	NWDLS Environ. Toxicol.
6		Oct	19	12:30	976.9	62.79	0.2281			14-8758-8127	02-0371-2541	NWDLS Environ. Toxicol.
7		Nov	3	12:10	1023	108.9	0.3863			19-0042-2283	13-9374-3918	NWDLS Environ. Toxicol.
8		Dec	19	12:00	1250	335.8	1.074	(+)		12-9423-8120	13-4506-3415	NWDLS Environ. Toxicol.
9	2023	Jan	3	9:30	651.3	-262.8	-1.164	(-)		08-4361-7466	04-2200-5192	NWDLS Environ. Toxicol.
10			18	11:50	893.7	-20.49	-0.07781			07-9240-7672	21-0019-2346	NWDLS Environ. Toxicol.
11		Feb	2	10:30	478.9	-435.3	-2.22	(-)	(-)	07-7481-5869	09-5599-2356	NWDLS Environ. Toxicol.
12			16	13:00	782.9	-131.3	-0.5321			16-5741-0843	06-2226-5122	NWDLS Environ. Toxicol.

# CETIS Analytical Report

Report Date: 24 Feb-23 13:28 (p 1 of 1)  
 Test Code/ID: 23-0166a / 16-5741-0843

## Inland Silverside 7-d Larval Survival and Growth Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 00-9267-7337	<b>Endpoint:</b> 7d Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 24 Feb-23 13:27	<b>Analysis:</b> Trimmed Spearman-Kärber	<b>Status Level:</b> 1
<b>Batch ID:</b> 05-1959-5547	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Loan Bui
<b>Start Date:</b> 16 Feb-23 13:00	<b>Protocol:</b> EPA/821/R-02-014 (2002)	<b>Diluent:</b> Laboratory Water
<b>Ending Date:</b> 23 Feb-23 15:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 7d 2h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b> <24
<b>Sample ID:</b> 19-6361-4490	<b>Code:</b> 750A611A	<b>Project:</b> 047000100 0400.X
<b>Sample Date:</b> 16 Feb-23 12:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant
<b>Receipt Date:</b> 16 Feb-23 12:00	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 60m	<b>Client:</b> North Water District Laboratory Services, In	

### Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.04	4.17%	3.082	0.02242	1209	1090	1341

### Test Acceptability Criteria

#### TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control CV	0.05705	<<	0.4	Yes	Passes Criteria
Control Resp	0.96	0.8	>>	Yes	Passes Criteria

### 7d Survival Rate Summary

#### Calculated Variate(A/B)

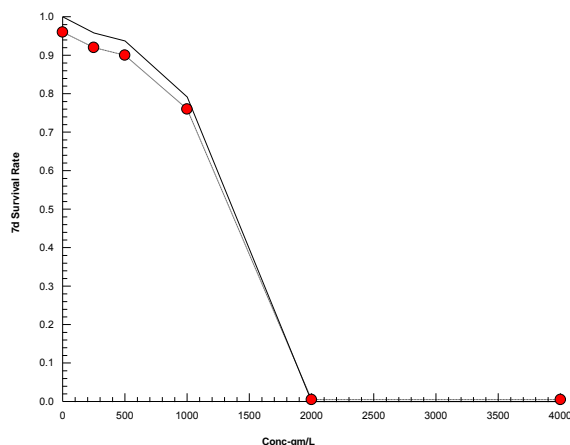
#### Isotonic Variate

Conc-gm/L	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	5	0.9600	0.9000	1.0000	0.0548	5.71%	0.0%	48/50	0.96	0.0%
250		5	0.9200	0.9000	1.0000	0.0447	4.86%	4.17%	46/50	0.92	4.17%
500		5	0.9000	0.8000	1.0000	0.0707	7.86%	6.25%	45/50	0.9	6.25%
1000		5	0.7600	0.6000	1.0000	0.1673	22.02%	20.83%	38/50	0.76	20.83%
2000		5	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%
4000		5	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%

### 7d Survival Rate Detail

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.0000	0.9000	1.0000	0.9000	1.0000
250		0.9000	0.9000	0.9000	1.0000	0.9000
500		0.8000	0.9000	0.9000	1.0000	0.9000
1000		1.0000	0.8000	0.6000	0.8000	0.6000
2000		0.0000	0.0000	0.0000	0.0000	0.0000
4000		0.0000	0.0000	0.0000	0.0000	0.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 24 Feb-23 13:29 (p 1 of 2)  
**Test Code/ID:** 23-0166a / 16-5741-0843

<b>Inland Silverside 7-d Larval Survival and Growth Test</b>			<b>NWDLS Environ. Toxicol. Lab</b>		
<b>Analysis ID:</b> 06-2226-5122	<b>Endpoint:</b> Mean Dry Biomass-mg	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 24 Feb-23 13:27	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1			
<b>Batch ID:</b> 05-1959-5547	<b>Test Type:</b> Growth-Survival (7d)	<b>Analyst:</b> Loan Bui			
<b>Start Date:</b> 16 Feb-23 13:00	<b>Protocol:</b> EPA/821/R-02-014 (2002)	<b>Diluent:</b> Laboratory Water			
<b>Ending Date:</b> 23 Feb-23 15:00	<b>Species:</b> Menidia beryllina	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 7d 2h	<b>Taxon:</b> Actinopterygii	<b>Source:</b> NWDLS <b>Age:</b> <24			
<b>Sample ID:</b> 19-6361-4490	<b>Code:</b> 750A611A	<b>Project:</b> 047000100 0400.X			
<b>Sample Date:</b> 16 Feb-23 12:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant			
<b>Receipt Date:</b> 16 Feb-23 12:00	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 60m	<b>Client:</b> North Water District Laboratory Services, In				

<b>Linear Interpolation Options</b>					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1867996	200	Yes	Two-Point Interpolation

<b>Test Acceptability Criteria</b>		<b>TAC Limits</b>			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control CV	0.1024	<<	0.4	Yes	Passes Criteria
Control Resp	1.474	0.5	>>	Yes	Passes Criteria

<b>Point Estimates</b>			
Level	gm/L	95% LCL	95% UCL
IC25	782.9	599.6	1062

<b>Mean Dry Biomass-mg Summary</b>			<b>Calculated Variate</b>						<b>Isotonic Variate</b>	
Conc-gm/L	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	L	5	1.474	1.271	1.626	0.1509	10.24%	0.0%	1.474	0.0%
250		5	1.376	1.232	1.506	0.1323	9.61%	6.66%	1.376	6.66%
500		5	1.343	1.217	1.47	0.1045	7.78%	8.9%	1.343	8.9%
1000		5	0.9234	0.712	1.221	0.1995	21.60%	37.35%	0.9234	37.35%
2000		5	0	0	0	0		100.0%	0	100.0%
4000		5	0	0	0	0		100.0%	0	100.0%

<b>Mean Dry Biomass-mg Detail</b>						
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	L	1.518	1.366	1.626	1.271	1.589
250		1.417	1.506	1.239	1.485	1.232
500		1.318	1.428	1.281	1.47	1.217
1000		1.221	0.988	0.712	0.92	0.776
2000		0	0	0	0	0
4000		0	0	0	0	0

# CETIS Analytical Report

Report Date: 24 Feb-23 13:29 (p 2 of 2)  
Test Code/ID: 23-0166a / 16-5741-0843

## Inland SilverSide 7-d Larval Survival and Growth Test

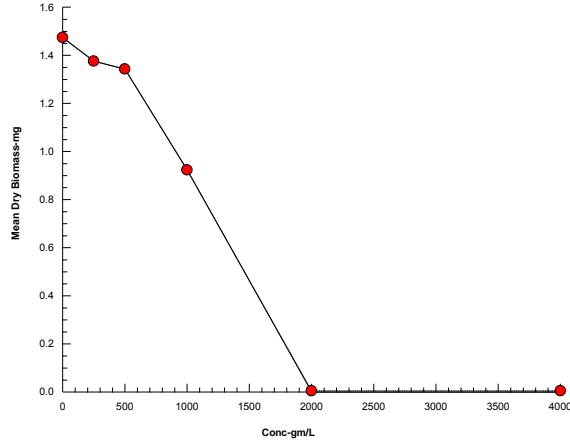
NWDLS Environ. Toxicol. Lab

Analysis ID: 06-2226-5122  
Analyzed: 24 Feb-23 13:27

Endpoint: Mean Dry Biomass-mg  
Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.9.4  
Status Level: 1

### Graphics



Chronic <i>Menidia beryllina</i> Test Condition Summary - EPA-821-R-02-014 Test Method 1006.0 : NWDLS SOP No. 4023			
Test Organism:	<i>Menidia beryllina</i>	Age Class:	7-11 d old
Test Type:	Static-renewal	Test Duration:	7 d
Temperature:	25 ± 1	Photoperiod:	16:8 h; ambient light, 50-100 ft-c
Test Chamber Size:	600 mL-1 L plastic disposable cups	Cleaning:	daily during test renewal
No. of Replicates:	5	No. Organisms per Replicate:	10
Test Solution Volume:	500 mL	Dilution Water:	LAB W
Renewal of Test Solution:	Daily	Aeration:	None, unless DO < 4.0 mg/L
Feeding:	Once on day 0, twice on days 1-6	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria:	≥ 80% survival in control; ≥ .50 mg average dry weight in control	Sample Holding Time Requirements:	36 h maximum for first use; 72 h maximum for subsequent use

Test Concentrations (mg/L):	Control, 250, 500, 1000, 2000, 4000	DECHLOR:	N/A	Critical Dilution (mg)/L:	N/A
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STOX 1 Prep. Date/Time/Initials:	2-16-23	1200	LBU	Analytical Standard Record Number	2303506
STOX 2 Prep. Date/Time/Initials:	—	—	—	Analytical Standard Record Number	—

Sample Use									
Day #	Date	Sample ID	Diluent ID	Initials	Day #	Date	Sample ID	Diluent ID	Initials
Day 0	2-16-23	23-0166-1	2301333	LBU	Day 4	2-20-23	23-0166-1	2301333	AOJ
Day 1	2-17-23	23-0166-1	2301333	AOJ	Day 5	2-21-23	23-0166-1	2301333	AOJ
Day 2	2-18-23	23-0166-1	2301333	DPD	Day 6	2-22-23	23-0166-1	2301333	KRF
Day 3	2-19-23	23-0166-1	2301333	KRF	Day 7	—	23-0166-1	—	—

This test was conducted in accordance with the method standard or according to the exception(s) as noted:

Comments: ① IELBU 2-17-23 → [AOJ]

Data Sheet Preparation : Initials: LBU Date: 02-16-23

End of Test Review : Initials: LBU Date: 2-23-23

Final Review (signature) [Signature]

Codes: IE-incorrect entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria



**Test Organism Data**

Test Organism Data			
Test Organism Batch #	23-0179	DOB	2-5-23
Source	NWDLS	Age	11d

Feeding							
Day	AM Batch #	PM Batch #	Initials	Day	AM Batch #	PM Batch #	Initials
0	////	2216107	////	4	2216110	2216110	AB / AB
1	2216107	2216107	SKW / SKW	5	2216110	2216110	TK / AB
2	2216107	2216107	SKW / SKW	6	2216110	2216110	AB / AB
3	2216107	2216107	AB / AB	7	////	////	////

CONC (mg/L)	NUMBER OF SURVIVING ORGANISMS (DAY)									CONC (mg/L)	NUMBER OF SURVIVING ORGANISMS (DAY)								
		0	1	2	3	4	5	6	7			0	1	2	3	4	5	6	7
Cont	A	10	10	10	10	10	10	10	10	2000	A	10	0	0	0	0	0	0	0
	B	10	10	10	10	10	10	9	9		B	10	0	0	0	0	0	0	0
	C	10	10	10	10	10	10	10	10		C	10	0	0	0	0	0	0	0
	D	10	9	9	9	9	9	9	9		D	10	0	0	0	0	0	0	0
	E	10	10	10	10	10	10	10	10		E	10	0	0	0	0	0	0	0
250	A	10	9	9	9	9	9	9	9	4000	A	10	0	0	0	0	0	0	0
	B	10	9	9	9	9	9	9	9		B	10	0	0	0	0	0	0	0
	C	10	9	9	9	9	9	9	9		C	10	0	0	0	0	0	0	0
	D	10	10	10	10	10	10	10	10		D	10	0	0	0	0	0	0	0
	E	10	9	9	9	9	9	9	9		E	10	0	0	0	0	0	0	0
500	A	10	9	8	8	8	8	8	8		A								
	B	10	9	9	9	9	9	9	9		B								
	C	10	9	9	9	9	9	9	9		C								
	D	10	10	10	10	10	10	10	10		D								
	E	10	9	9	9	9	9	9	9		E								
1000	A	10	10	10	10	10	10	10	10		A								
	B	10	9	9	9	9	8	8	8		B								
	C	10	6	6	6	6	4	6	6		C								
	D	10	8	8	8	8	8	8	8		D								
	E	10	7	7	7	7	7	7	6		E								
Date	2/18/23	2/19/23	2/20/23	2/21/23	2/22/23	2/23/23	2/24/23	2/25/23	Comments:										
Time	1300	1500	0915	1445	0830	1040	1310	1500											
Initials	LBV	LBV	DBD	BRM	DBR	BRM	GBR	LBV											

Codes: IE-incorrect entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

**Dry Tissue Weight**

CONC.	REP	PAN NO.	TARE	TOTAL	CONC.	REP	PAN NO.	TARE	TOTAL
Cont	A	1 *	.00675	.02193		A	31		
	B	2	.00717	.02053		B	32		
	C	3	.00699	.02325		C	33		
	D	4	.00678	.01949		D	34		
	E	5	.00737	.02326		E	35		
250	A	6	.00698	.02115	QA/QC (pans)	1		.00676	.02198
	B	7	.00671	.02177		15		.00664	.01881
	C	8	.00663	.01902		30		.00682	
	D	9	.00709	.02194					
	E	10	.00649	.01881					
500	A	11	.00711	.02029	BALANCE ID#		852		
	B	12	.00722	.02150	OVEN ID#		501		
	C	13	.00695	.01976	BALANCE VERIFICATION INITIALS		DDO		
	D	14	.00654	.02124	DATE/TARE WEIGHT INITIALS		2-16-23 / DDO		
	E	15 *	.00659	.01876	DATE DRYING INITIATED		2-23-23		
1000	A	16	.00713	.01934	TIME DRYING INITIATED		1530		
	B	17	.00679	.01667	OVEN TEMPERATURE (°C) (Actual/Corrected)		105 / 105		
	C	18	.00711	.01423	INITIALS		LBV		
	D	19	.00685	.01605	DATE/ TIME DRYING TERMINATED		2-24-23 105 / 105		
	E	20	.00711	.01487	OVEN TEMPERATURE (°C) (Actual/Corrected)		LBV		
2000	A	21	.00688	—	BALANCE VERIFICATION INITIALS		2-24-23 / LBV		
	B	22	.00700	—	TOTAL WEIGHT DATE/INITIALS		—		
	C	23	.00710	—	COMMENTS:				
	D	24	.00655	—					
	E	25	.00712	—					
4000	A	26	.00685	—	CONT = Control		CONC = Concentration		REP = Replicate
	B	27	.00678	—	Wt. = Weight		ORG. = Organism		
	C	28	.00674	—					
	D	29	.00714	—					
	E	30 *	.00684	—					

Codes: IE-incorrec entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

### Water Quality Parameters

DATE	2/16/23	2-17-23	2-18-23	2-19-23	2-20-23	2-21-23	2-22-23	2/23/23						
TIME	1300	0820	0820	0800	0800	0840	0840	0800	0800	0800	0800	0820	0820	0900
INITIALS	PPD/LBU	ADJ/KRF	ADJ/KRF	DPD/KRF	DPD/KRF	DPD/KRF	DPD/KRF	DPD/KRF	DPD/KRF	ADJ/BRM	ADJ/BRM	ADJ/KRF	ADJ/KRF	ADJ/DPD
DAY	0	1	2	3	4	5	6	7						
Solution	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old
CONC. (mg/L)	pH OLD/NEW SOLUTION													
Cont	8.2	7.6	8.1	7.8	8.2	8.0	8.3	7.7	8.3	8.0	8.3	7.8	8.0	7.9
250	8.0	7.7	8.2	7.9	8.2	7.9	8.3	7.8	8.2	8.0	8.2	7.9	8.1	7.9
500	8.1	7.8	8.2	7.8	8.2	7.9	8.3	7.8	8.2	8.0	8.2	7.9	8.1	7.9
1000	8.1	7.8	8.2	7.9	8.2	7.9	8.3	7.8	8.2	7.9	8.2	7.9	8.1	7.9
2000	8.1	7.8	8.2	—	—	—	—	—	—	—	—	—	—	—
4000	8.1	7.9	8.2	—	—	—	—	—	—	—	—	—	—	—
METER No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
CONC. (mg/L)	DISSOLVED OXYGEN (mg/L) OLD/NEW SOLUTION													
Cont	8.1	8.0	8.1	8.0	8.1	6.8	8.1	6.9	8.0	6.9	8.2	6.6	7.9	6.6
250	8.3	8.0	8.1	8.0	8.2	6.9	8.3	6.9	8.0	6.9	8.1	6.4	8.2	6.5
500	8.3	7.9	8.1	7.8	8.2	7.3	8.3	6.9	8.0	6.7	8.0	6.6	8.1	6.5
1000	8.3	7.8	8.0	7.8	8.2	7.2	8.2	6.9	8.0	6.7	8.0	6.6	8.1	6.4
2000	8.3	7.7	8.0	—	—	—	—	—	—	—	—	—	—	—
4000	8.3	7.6	8.0	—	—	—	—	—	—	—	—	—	—	—
METER No.	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6	YSI6
CONC. (mg/L)	TEMPERATURE (C) OLD/NEW SOLUTION (Actual)													
Cont	24.7	23.5	25.6	25.0	26.3	24.1	25.5	23.8	25.8	24.4	24.5	24.5	26.2	24.2
250	25.4	23.4	25.6	25.0	25.1	24.1	24.9	24.0	25.6	24.3	25.8	24.3	24.6	24.1
500	25.4	23.4	25.4	25.0	25.1	23.7	25.0	24.2	25.6	24.2	25.4	24.3	24.6	24.0
1000	25.4	23.6	25.4	25.0	25.0	24.1	25.1	24.6	25.4	24.4	25.7	24.5	24.9	24.3
2000	25.3	23.6	25.3	—	—	—	—	—	—	—	—	—	—	—
4000	25.0	23.9	25.4	—	—	—	—	—	—	—	—	—	—	—
THERM No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
Offset (+°C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

Codes: IE-Incorrect entry; IL-Illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria



RANDOM NUMBERS 1-30

NWDLS\_KCL STOK  
IS SW chronic  
23-0166

1	5
2	20
3	12
4	16
5	23
<hr/>	
6	3
7	18
8	14
9	8
10	22
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11	11
12	10
13	7
14	15
15	29
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16	2
17	24
18	26
19	25
20	4
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21	13
22	19
23	1
24	9
25	30
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26	17
27	27
28	21
29	6
30	28

# Analytical Standard Record

**2303506**

Description: Menidia STOX Work Soln (KCl) Expires: 02/23/2023  
Standard Type: Analyte Spike Prepared: 02/16/2023  
Solvent: - Prepared By: Loan Bui  
Final Volume (mls): 30000 Department: Toxicology  
Vials: 1 Last Edit: 02/23/2023 16:39 by LBU  
Comments: Measured 120.0g of KCl standard into 1-L volumetric flask and bring to volume with 25ppt saltwater. Add additional 29L to bring final solution to 30L. See attached PDF-file for dilution scheme.

Analyte	Parent	CAS Number	Concentration	Units
				mg/L

### Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2206331	Potassium chloride, ACS, 99-100.5%	06/09/2022	Thermo Fisher Scientific	Q18I022	06/09/2024	06/21/2022 14:04 by VJC	120
2301333	Lab Saltwater	01/19/2023	-	-	06/06/2023	01/23/2023 11:25 by AOJ	30000

### Menidia STOX Work Soln (KCl)

**2303506**

Expires 02/23/2023



LBU  
Reviewed By

2-23-23  
Date  
NWDL Report Package Page 100 of 200

## Solid Phase (SP - Sediment) Toxicology Analysis Summary

Sediment toxicity bioassays were conducted on the composite sediment samples from each channel station, the reference area composite, and a negative control. Procedures for performing these tests can be found in section 11.2.1.1 of the Green Book and as specified in Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Marine Invertebrates (EPA, 1994) or Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods (ASTM, 1994) or its most recent edition.

The NWDLS Toxicology Laboratory has separate areas for water and sediment storage, culture of test organisms, and testing to minimize cross-contamination between areas.

Testing was performed at  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for all bioassays. Lighting was arranged for each test phase so that light intensity was approximately 1200 microwatt ( $\mu\text{w}$ )/square centimeters ( $\text{cm}^2$ ) using cool-white fluorescent bulbs with a 16-hour light and 8-hour dark cycle.

Two organisms were tested in the SP bioassay: the amphipod, *Leptocheirus plumulosus* (3–5 millimeters [mm]) and the mysid shrimp, *Americamysis bahia* (5 days old). The mysid shrimp was cultured at the NWDLS Toxicology Laboratory, and the amphipod was purchased from Aquatic Research Organisms, Inc. (ARO), Hampton, New Hampshire.

The amphipods were shipped to the NWDLS laboratory via overnight express carrier and were contained in a wide-mouth jar filled with natural seawater, packaged in an insulated cooler with freeze gels to prevent overheating during transit. Any amphipods that did not burrow or that exhibited abnormal behavior in the first 4 hours, after being put into the test vessels, were replaced by healthy organisms. No organisms were held for more than 3 days. The sediment used for the SP bioassay was sieved.

The SP bioassay consisted of a 1-day settling period after the sediment was added, followed by 10 days (Days 1–10) of test-organism exposure. The bioassay vessels were partially filled with artificial seawater and enough sediment (test station, Reference, or Control) was placed in each vessel to meet the needs of the test organisms: a 2-cm layer on the bottom. Five replicates were prepared for each of the Test Stations, Reference, and Control. Different 1-liter jars were used for the amphipods and for the mysids. A loading factor of no more than  $\frac{1}{2}$  gram of test organism tissue per liter of medium was maintained.

Twenty-four hours after the addition of the sediment, or the end of the acclimation period for the new-work material, the water was changed, and organisms were placed in the test vessels (20 organisms per replicate).

- Once prepared, the sediment pore water was tested for ammonia. No samples contained total ammonia  $> 30$  mg/L.
- No test sediment presented the odor of hydrogen sulfide.

Temperature, DO, pH, salinity, and ammonia were recorded daily. Seventy-five percent of the water was siphoned off and replaced 1 hour before and 48 hours after test initiation and at 48-hour intervals thereafter.

After 10 days, the SP bioassay was terminated. The sediment was wet-sieved (0.5-mm screen) to remove surviving organisms, which were counted.

**SP – Amphipod 10 day (*Leptocheirus plumulosus*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Leptocheirus plumulosus</i>	Test Type	SP 10 day
Number of Replicates	5	Number of Organisms/ Replicate	20
Test Organism Batch Number	23-0213-LP	Organism Date of Birth or Date Received	02/24/2023
Organism Source	ARO	Organism Age at Test Initiation	3 – 5 mm
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	20 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L	Reference Toxicant	Cadmium Chloride – see graph
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Sample ID	REF	Field Sampling Date/Time	01/27/2023 09:20
Test Initiation Date/Time	02/24/2023 12:00	Test Termination Date/Time	03/06/2023 12:00
Renewal of Test Solution	See SP Summary	Feeding	None



Sample ID	Total # of Organisms	Survival (%)	Significant Effect (>20% effect)	Effect (%)
CONTROL	100	94	---	-3.30
REFERENCE	100	91	No	0.00
HI-DMMU-1	100	92	No	-1.10
HI-DMMU-2	100	89	No	2.20
HI-DMMU-3	100	91	No	0.00
HI-DMMU-4	100	90	No	1.10
HI-DMMU-5	100	88	No	3.30
HI-DMMU-6	100	87	No	4.40
HI-DMMU-7	100	90	No	1.10
HI-DMMU-8	100	91	No	0.00

**CETIS Analytical Report**

**Report Date:** 24 Mar-23 10:33 (p 1 of 3)  
**Test Code/ID:** 23A1459-1 / 03-1273-8749

**Leptocheirus 10-d Survival and Reburial Sediment Test**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 14-5640-6024	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 24 Mar-23 9:53	<b>Analysis:</b> No Statistical Comparisons Run	<b>Status Level:</b> 1
<b>Batch ID:</b> 08-0664-1591	<b>Test Type:</b> Survival-Reburial	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 24 Feb-23 12:00	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 06 Mar-23 12:00	<b>Species:</b> Leptocheirus plumulosus	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> Aquatic Research Organism <b>Age:</b> 3-5
<b>Sample ID:</b> 08-7859-8683	<b>Code:</b> 345E5A1B	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 38d 22h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

9.6=CDP 6 site and 9.7=CDP 7 site

**Test Acceptability Criteria**

**TAC Limits**

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.91	0.9	>>	Yes	Passes Criteria

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	2.854	3.166	0.1694	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	2.854		0.4958	Non-Significant Trend in Controls

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.027493	0.0027493	10	0.4086	0.9353	Non-Significant Effect
Error	0.296079	0.0067291	44			
Total	0.323572		54			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	4.664	23.21	0.9125	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9739	0.9417	0.2750	Normal Distribution

**Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	0.00%
1		5	0.9200	0.8860	0.9540	0.9000	0.9000	0.9500	0.0123	2.98%	-1.10%
2		5	0.8900	0.7979	0.9821	0.9000	0.8000	1.0000	0.0332	8.33%	2.20%
3		5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	0.00%
4		5	0.9000	0.8561	0.9439	0.9000	0.8500	0.9500	0.0158	3.93%	1.10%
5		5	0.8800	0.8092	0.9508	0.9000	0.8000	0.9500	0.0255	6.48%	3.30%
6		5	0.8700	0.7992	0.9408	0.8500	0.8000	0.9500	0.0255	6.55%	4.40%
7		5	0.9000	0.8379	0.9621	0.9000	0.8500	0.9500	0.0224	5.56%	1.10%
8		5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	0.00%
9.6		5	0.8900	0.8381	0.9419	0.9000	0.8500	0.9500	0.0187	4.70%	2.20%
9.7		5	0.8900	0.8381	0.9419	0.9000	0.8500	0.9500	0.0187	4.70%	2.20%

**CETIS Analytical Report**

**Report Date:** 24 Mar-23 10:33 (p 2 of 3)  
**Test Code/ID:** 23A1459-1 / 03-1273-8749

**Leptocheirus 10-d Survival and Reburial Sediment Test**

**NWDLS Environ. Toxicol. Lab**

**Analysis ID:** 14-5640-6024      **Endpoint:** Survival Rate      **CETIS Version:** CETISv1.9.4  
**Analyzed:** 24 Mar-23 9:53      **Analysis:** No Statistical Comparisons Run      **Status Level:** 1

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	0.00%
1		5	1.288	1.222	1.353	1.249	1.249	1.345	0.02357	4.09%	-1.19%
2		5	1.247	1.083	1.412	1.249	1.107	1.459	0.05911	10.59%	1.96%
3		5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	0.00%
4		5	1.253	1.177	1.329	1.249	1.173	1.345	0.02734	4.88%	1.51%
5		5	1.225	1.113	1.336	1.249	1.107	1.345	0.04013	7.33%	3.74%
6		5	1.21	1.097	1.323	1.173	1.107	1.345	0.0407	7.52%	4.94%
7		5	1.257	1.15	1.364	1.249	1.173	1.345	0.03856	6.86%	1.19%
8		5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	0.00%
9.6		5	1.238	1.15	1.326	1.249	1.173	1.345	0.03176	5.74%	2.71%
9.7		5	1.238	1.15	1.326	1.249	1.173	1.345	0.03176	5.74%	2.71%

**Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	0.9000	0.8500	0.9000	0.9500	0.9500
1		0.9000	0.9000	0.9500	0.9500	0.9000
2		0.8000	0.9000	0.8500	1.0000	0.9000
3		0.8500	0.9000	0.9500	0.9500	0.9000
4		0.9000	0.9000	0.8500	0.9000	0.9500
5		0.8000	0.8500	0.9000	0.9000	0.9500
6		0.9500	0.9000	0.8000	0.8500	0.8500
7		0.8500	0.9000	0.9500	0.9500	0.8500
8		0.8500	0.9000	0.9500	0.9000	0.9500
9.6		0.9000	0.8500	0.9000	0.9500	0.8500
9.7		0.9000	0.8500	0.8500	0.9500	0.9000

**Angular (Corrected) Transformed Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	1.249	1.173	1.249	1.345	1.345
1		1.249	1.249	1.345	1.345	1.249
2		1.107	1.249	1.173	1.459	1.249
3		1.173	1.249	1.345	1.345	1.249
4		1.249	1.249	1.173	1.249	1.345
5		1.107	1.173	1.249	1.249	1.345
6		1.345	1.249	1.107	1.173	1.173
7		1.173	1.249	1.345	1.345	1.173
8		1.173	1.249	1.345	1.249	1.345
9.6		1.249	1.173	1.249	1.345	1.173
9.7		1.249	1.173	1.173	1.345	1.249

Leptocheirus 10-d Survival and Reburial Sediment Test

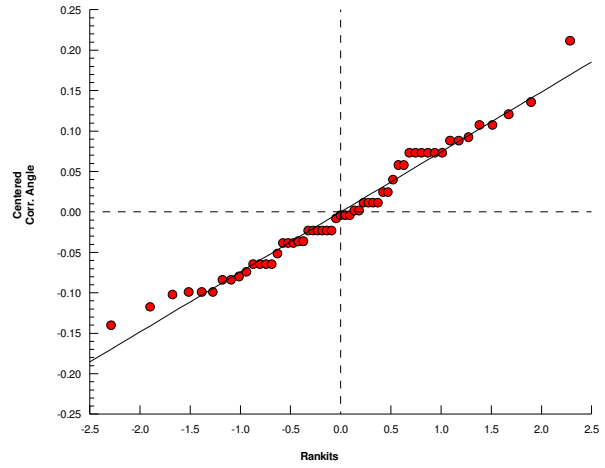
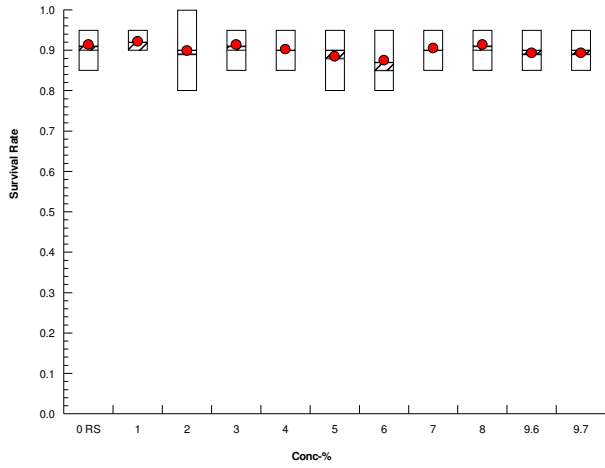
NWDLS Environ. Toxicol. Lab

Analysis ID: 14-5640-6024  
Analyzed: 24 Mar-23 9:53

Endpoint: Survival Rate  
Analysis: No Statistical Comparisons Run

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



Client/Project Name:	PCCA HI & CDP Resampling 2023	WO#:	23A1459
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**Leptocheirus plumulosus 10d Test Condition Summary - ASTM E 1367; NWDLS SOP No. 4151**

Test Material:	Sediment	Test Type:	10d Whole Sediment
Temperature:	20 °C ± 2 °C	Photoperiod:	24L:0D
Test Chamber:	1L glass beaker	No. Replicates:	5
Test Organism:	<b><i>Leptocheirus plumulosus</i></b>	Organism Source:	ARO
Organism Batch No.:	23-0213-LP	Date Received:	<del>2-23-23</del> (U)
Age Class:	3-5 mm Hatch date 2/2023	No. Organisms/Rep:	20
Aeration:	Aerate water in each chamber overnight before start of test, and throughout test, at rate that maintains ≥40% saturation of dissolved oxygen concentration	Control Sediment:	control sediment from supplier
Feeding Schedule:	None	Food Type:	N/A
Water Type:	25 ppt Synthetic seawater ± 2 ppt	Water Volume:	800 mL
Renewal Schedule:	Project specific	Sediment Volume:	~175 - 200 mL (2cm depth)

Comments: OTC ml → [2-24-23]

Initiation Date:	2-24-23	Termination Date:	3-6-23
Initiation Time:	1200	Termination Time:	1200
Initials:	ML / AOS	Initials:	ML
Initial Review Initials:	ML / ML	Final Review Initials:	ML

<b>Leptocheirus plumulosus - Survival</b>														
Treatment	Rep	Day 0	Day 10		Treatment	Rep	Day 0	Day 10		Treatment	Rep	Day 0	Day 10	
			1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count
CONT	A	20	20	20	HI-DMMU-4	A	20	18	18	CDP-6	A	20	18	18
	B	20	19	19		B	20	18	18		B	20	17	12
	C	20	18	18		C	20	17	12		C	20	18	18
	D	20	17	12		D	20	18	15		D	20	19	19
	E	20	20	20		E	20	19	15		E	20	17	12
REF	A	20	18	18	HI-DMMU-5	A	20	16	16	CDP-7	A	20	18	18
	B	20	17	12		B	20	17	12		B	20	17	12
	C	20	18	18		C	20	18	18		C	20	17	12
	D	20	19	19		D	20	18	18		D	20	19	19
	E	20	19	19		E	20	19	19		E	20	18	18
HI-DMMU-1	A	20	18	18	HI-DMMU-6	A	20	19	15		A			
	B	20	18	18		B	20	18	18		B			
	C	20	19	15		C	20	16	16		C			
	D	20	19	19		D	20	17	12		D			
	E	20	18	18		E	20	17	12		E			
HI-DMMU-2	A	20	16	16	HI-DMMU-7	A	20	17	17		A			
	B	20	18	18		B	20	18	18		B			
	C	20	17	12		C	20	19	19		C			
	D	20	20	20		D	20	19	19		D			
	E	20	18	18		E	20	17	12		E			
HI-DMMU-3	A	20	17	12	HI-DMMU-8	A	20	17	12		A			
	B	20	18	18		B	20	18	18		B			
	C	20	19	19		C	20	19	19		C			
	D	20	19	19		D	20	18	18		D			
	E	20	18	18		E	20	19	19		E			

Client/Project Name:

PCCA HI & CDP Resampling 2023

WO #:

23A1459

**Daily Observations** Key: E = Emergent D = Dead ✓ = All organisms burrowed

Treatment / Site	Rep.	Day											
		0	1	2	3	4	5	6	7	8	9	10	
CONTROL	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B	✓							1E				
	C	✓							✓				
	D	✓							✓				
	E	✓							✓				
REF	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B	✓							✓				
	C	✓							1E				
	D	✓							✓				
	E	✓							✓				
HI-DMMU-1	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B												
	C												
	D												
	E												
HI-DMMU-2	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B												
	C												
	D												
	E												1E
HI-DMMU-3	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B						✓						
	C						1E						
	D						✓						
	E						✓						
HI-DMMU-4	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B									1E			
	C									✓			
	D									✓			
	E									✓			
Technician Initials:		TR			TR	TR	TR	TR	TR	TR			TR

**Daily Observations** Key: E = Emergent D = Dead ✓ = All organisms burrowed

Treatment / Site	Rep.	Day										
		0	1	2	3	4	5	6	7	8	9	10
HI-DMMU-5	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B						✓					
	C						✓					
	D						1E					
	E						✓					
HI-DMMU-6	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B											
	C											
	D											
	E											
HI-DMMU-7	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B						2E					
	C						✓					
	D						✓					
	E						✓					
HI-DMMU-8	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B								✓			
	C								1E			
	D								✓			
	E								✓			
CDP-6	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B						✓					
	C						✓					
	D						1E					
	E						✓					
CDP-7	A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B											
	C											
	D											
	E											
Technician Initials:		RL			M	M	M	M	M	M	M	



## WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-23-23	CONTROL - NEW Day -1	20.2	8.1	8.5	19.9	.001	ML
2-24-23	CONTROL - NEW Day 0	20.2	8.1	8.5	20.0	.001	ML
	CONTROL - OLD Day 0	20.1	8.1	8.6	20.1	.006	
	REF Day 0	20.1	8.1	8.7	20.0	.007	
	HI-DMMU-1 Day 0	20.1	8.2	8.7	19.9	.006	
	HI-DMMU-2 Day 0	20.1	8.2	8.7	19.5	.008	
	HI-DMMU-3 Day 0	20.1	8.2	8.7	19.8	.006	
	HI-DMMU-4 Day 0	20.1	8.2	8.7	19.8	.006	
	HI-DMMU-5 Day 0	20.1	8.2	8.8	19.9	.036	
	HI-DMMU-6 Day 0	20.1	8.2	8.8	20.1	.026	
	HI-DMMU-7 Day 0	20.1	8.2	8.8	20.1	.025	
	HI-DMMU-8 Day 0	20.1	8.2	8.8	20.0	.025	
	CDP-6 Day 0	20.2	8.3	8.8	20.1	.025	
	CDP-7 Day 0	20.2	8.3	8.8	20.1	.025	
2-25-23	CONTROL Day 1	19.8	8.0	8.6	20.1	.004	KRE/WIS
	REF Day 1	19.9	8.0	8.6	20.1	.003	
	HI-DMMU-1 Day 1	19.9	8.0	8.6	20.1	.004	
	HI-DMMU-2 Day 1	19.9	8.1	8.7	20.2	.009	
	HI-DMMU-3 Day 1	19.7	8.1	8.7	20.2	.004	
	HI-DMMU-4 Day 1	19.8	8.1	8.7	20.1	.004	
	HI-DMMU-5 Day 1	19.8	8.1	8.7	20.2	.026	
	HI-DMMU-6 Day 1	19.9	8.0	8.7	20.2	.019	
	HI-DMMU-7 Day 1	19.9	8.1	8.7	20.2	.022	
	HI-DMMU-8 Day 1	19.8	8.1	8.7	20.2	.003	
	CDP-6 Day 1	19.9	8.0	8.7	20.3	.003	
	CDP-7 Day 1	19.8	8.1	8.7	20.3	.003	

Comments:

Thermometer #: 732Sal meter #: 945Ammonia meter #: 566D.O. meter #: 9516pH meter #: 732

### WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-26-23	CONTROL - NEW Day 2	20.2	8.0	8.6	20.3	.001	DPD / KLR
	CONTROL - OLD Day 2	20.1	8.1	8.6	20.3	.002	
	REF Day 2	20.1	8.1	8.6	20.1	.002	
	HI-DMMU-1 Day 2	20.1	8.1	8.7	20.1	.006	
	HI-DMMU-2 Day 2	20.2	8.2	8.7	20.2	.004	
	HI-DMMU-3 Day 2	20.2	8.1	8.8	20.4	.003	
	HI-DMMU-4 Day 2	20.2	8.3	8.8	20.4	.007	
	HI-DMMU-5 Day 2	20.3	8.1	8.7	20.4	.002	
	HI-DMMU-6 Day 2	20.2	8.1	8.7	20.4	.018	
	HI-DMMU-7 Day 2	20.2	8.2	8.7	20.4	.002	
	HI-DMMU-8 Day 2	20.2	8.2	8.7	20.3	.007	
	CDP-6 Day 2	20.2	8.2	8.7	20.7	.003	
	CDP-7 Day 2	20.2	8.2	8.7	20.3	.004	

2-27-23	CONTROL Day 3	19.9	8.1	8.5	20.3	.001	ML
	REF Day 3	19.9	8.1	8.5	20.4	.001	
	HI-DMMU-1 Day 3	19.8	8.2	8.4	20.3	.001	
	HI-DMMU-2 Day 3	19.8	8.2	8.6	20.3	.003	
	HI-DMMU-3 Day 3	19.9	8.2	8.6	20.4	.002	
	HI-DMMU-4 Day 3	19.7	8.2	8.5	20.5	.002	
	HI-DMMU-5 Day 3	19.8	8.2	8.6	20.5	.016	
	HI-DMMU-6 Day 3	19.8	8.2	8.5	20.2	.010	
	HI-DMMU-7 Day 3	19.7	8.2	8.5	20.3	.001	
	HI-DMMU-8 Day 3	19.8	8.2	8.5	20.1	.001	
	CDP-6 Day 3	19.8	8.2	8.5	20.7	.001	
	CDP-7 Day 3	19.8	8.2	8.5	20.3	.002	

Comments:

Thermometer #: 737 Sal meter #: 948 Ammonia meter #: 566  
 D.O. meter#: 4506 pH meter #: 737

## WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-28-23	CONTROL - NEW Day 4	19.9	8.2	8.4	20.2	.001	TR
	CONTROL - OLD Day 4	19.9	8.1	8.5	20.4	.002	
	REF Day 4	20.1	8.1	8.6	20.4	.002	
	HI-DMMU-1 Day 4	20.1	8.2	8.5	20.5	.003	
	HI-DMMU-2 Day 4	20.2	8.2	8.6	20.6	.003	
	HI-DMMU-3 Day 4	20.7	8.2	8.6	20.4	.003	
	HI-DMMU-4 Day 4	20.2	8.2	8.7	20.4	.003	
	HI-DMMU-5 Day 4	20.2	8.2	8.7	20.4	.019	
	HI-DMMU-6 Day 4	20.7	8.2	8.7	20.7	.011	
	HI-DMMU-7 Day 4	20.2	8.2	8.7	20.2	.002	
	HI-DMMU-8 Day 4	20.2	8.2	8.7	20.4	.002	
	CDP-6 Day 4	20.2	8.2	8.2	20.5	.002	
	CDP-7 Day 4	20.2	8.2	8.7	20.5	.002	
3-1-23	CONTROL Day 5	20.7	8.1	8.5	20.4	.001	TR
	REF Day 5	20.1	8.1	8.5	20.4	.001	
	HI-DMMU-1 Day 5	20.1	8.1	8.5	20.4	.001	
	HI-DMMU-2 Day 5	19.9	8.1	8.5	20.6	.001	
	HI-DMMU-3 Day 5	19.9	8.1	8.5	20.6	.001	
	HI-DMMU-4 Day 5	20.0	8.1	8.5	20.5	.001	
	HI-DMMU-5 Day 5	20.1	8.1	8.5	20.4	.012	
	HI-DMMU-6 Day 5	20.2	8.1	8.5	20.4	.007	
	HI-DMMU-7 Day 5	20.2	8.1	8.5	20.5	.001	
	HI-DMMU-8 Day 5	20.3	8.1	8.5	20.3	.001	
	CDP-6 Day 5	20.3	8.1	8.5	20.3	.001	
	CDP-7 Day 5	20.2	8.1	8.5	20.2	.001	

## Comments:

Thermometer #: 732 Sal meter #: 945 Ammonia meter #: 562D.O. meter#: 4526 pH meter #: 732

### WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
3-2-23	CONTROL - NEW Day 6	19.8	8.2	8.4	20.3	.001	PL
	CONTROL - OLD Day 6	19.8	8.1	8.5	20.4	.001	
	REF Day 6	19.8	8.1	8.5	20.4	.001	
	HI-DMMU-1 Day 6	19.8	8.0	8.5	20.3	.002	
	HI-DMMU-2 Day 6	19.9	8.0	8.5	20.4	.001	
	HI-DMMU-3 Day 6	19.9	8.1	8.5	20.4	.001	
	HI-DMMU-4 Day 6	19.8	8.1	8.5	20.4	.001	
	HI-DMMU-5 Day 6	19.9	8.1	8.5	20.5	.009	
	HI-DMMU-6 Day 6	19.8	8.0	8.5	20.4	.006	
	HI-DMMU-7 Day 6	19.8	8.1	8.5	20.4	.002	
	HI-DMMU-8 Day 6	19.9	8.1	8.5	20.4	.002	
	CDP-6 Day 6	20.1	8.1	8.5	20.4	.002	
	CDP-7 Day 6	20.0	8.1	8.5	20.5	.002	

3-3-23	CONTROL Day 7	19.8	8.1	8.6	20.7	.001	PL
	REF Day 7	19.8	8.1	8.6	20.5	.001	
	HI-DMMU-1 Day 7	19.9	8.1	8.6	20.4	.001	
	HI-DMMU-2 Day 7	19.9	8.1	8.7	20.5	.001	
	HI-DMMU-3 Day 7	19.8	8.1	8.7	20.4	.001	
	HI-DMMU-4 Day 7	19.9	8.1	8.7	20.4	.001	
	HI-DMMU-5 Day 7	19.8	8.1	8.7	20.3	.004	
	HI-DMMU-6 Day 7	19.9	8.1	8.7	20.4	.002	
	HI-DMMU-7 Day 7	19.8	8.1	8.6	20.4	.001	
	HI-DMMU-8 Day 7	19.9	8.2	8.7	20.4	.001	
	CDP-6 Day 7	20.1	8.2	8.7	20.5	.001	
	CDP-7 Day 7	20.1	8.2	8.7	20.5	.001	

Comments:

Thermometer #: 732      Sal meter #: 945      Ammonia meter #: 566

D.O. meter#: 4526      pH meter #: 732

### WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
3-4-23	CONTROL - NEW Day 8	20.2	8.0	8.6	19.6	.001	BMR / BPR
	CONTROL - OLD Day 8	20.1	8.1	8.6	20.6	.001	
	REF Day 8	20.0	8.1	8.7	20.6	.001	
	HI-DMMU-1 Day 8	20.0	8.1	8.7	20.6	.001	
	HI-DMMU-2 Day 8	20.0	8.1	8.6	20.6	.002	
	HI-DMMU-3 Day 8	20.0	8.1	8.6	20.5	.002	
	HI-DMMU-4 Day 8	19.8	8.1	8.6	20.5	.002	
	HI-DMMU-5 Day 8	19.8	8.1	8.6	20.5	.008	
	HI-DMMU-6 Day 8	19.5	8.1	8.6	20.6	.003	
	HI-DMMU-7 Day 8	19.8	8.1	8.6	20.6	.001	
	HI-DMMU-8 Day 8	20.1	8.1	8.6	20.4	.002	
	CDP-6 Day 8	20.1	8.1	8.7	20.7	.001	
	CDP-7 Day 8	20.1	8.1	8.8	20.7	.002	

3-5-23	CONTROL - NEW Day 9	20.1	7.9	8.6	20.1	.001	BPR / BMR
	REF Day 9	20.1	7.9	8.6	20.1	.001	
	HI-DMMU-1 Day 9	20.1	8.0	8.5	20.1	.001	
	HI-DMMU-2 Day 9	20.1	8.0	8.5	20.2	.001	
	HI-DMMU-3 Day 9	20.1	8.0	8.6	20.0	.001	
	HI-DMMU-4 Day 9	20.1	8.0	8.7	20.1	.001	
	HI-DMMU-5 Day 9	20.1	8.0	8.8	20.1	.004	
	HI-DMMU-6 Day 9	20.0	8.0	8.7	20.1	.002	
	HI-DMMU-7 Day 9	20.1	8.0	8.7	20.1	.001	
	HI-DMMU-8 Day 9	20.1	8.0	8.7	20.1	.001	
	CDP-6 Day 9	20.2	8.0	8.7	20.2	.001	
	CDP-7 Day 9	20.2	8.0	8.7	20.2	.001	

Comments:

Thermometer #: 772 Sal meter #: 945 Ammonia meter #: 505

D.O. meter#: 9756 pH meter #: 772

### WET CHEMISTRY LOG- 10D L. Plumulosus

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
3-6-23	CONTROL - OLD Day 10	20.1	8.0	8.8	20.2	.001	M4
	REF Day 10	20.2	8.0	8.8	20.2	.001	
	HI-DMMU-1 Day 10	20.1	8.1	8.8	20.2	.001	
	HI-DMMU-2 Day 10	20.2	8.1	8.8	20.2	.001	
	HI-DMMU-3 Day 10	20.1	8.1	8.7	20.1	.001	
	HI-DMMU-4 Day 10	20.1	8.1	8.7	20.1	.001	
	HI-DMMU-5 Day 10	20.2	8.1	8.7	20.1	.001	
	HI-DMMU-6 Day 10	20.2	8.1	8.7	20.3	.001	
	HI-DMMU-7 Day 10	20.2	8.1	8.7	20.2	.001	
	HI-DMMU-8 Day 10	20.1	8.1	8.7	20.2	.001	
	CDP-6 Day 10	20.1	8.1	8.7	20.2	.001	
	CDP-7 Day 10	20.1	8.1	8.7	20.2	.001	

Comments:

Thermometer #: 772 Sal meter #: 948 Ammonia meter #: 566

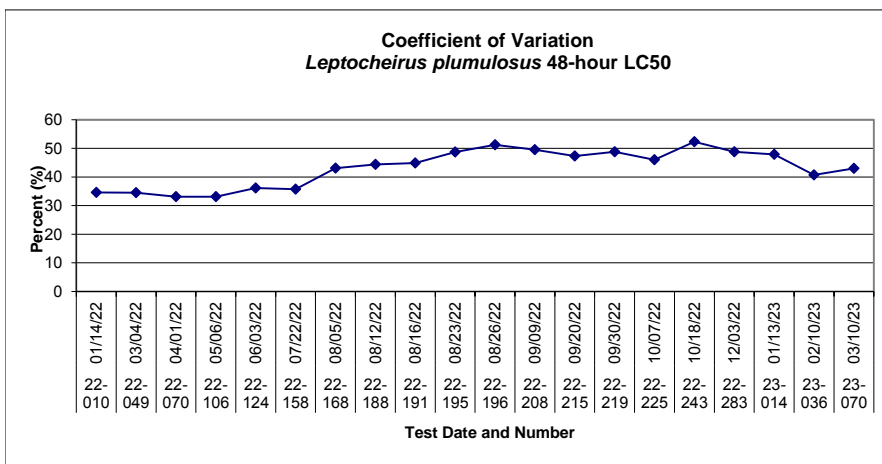
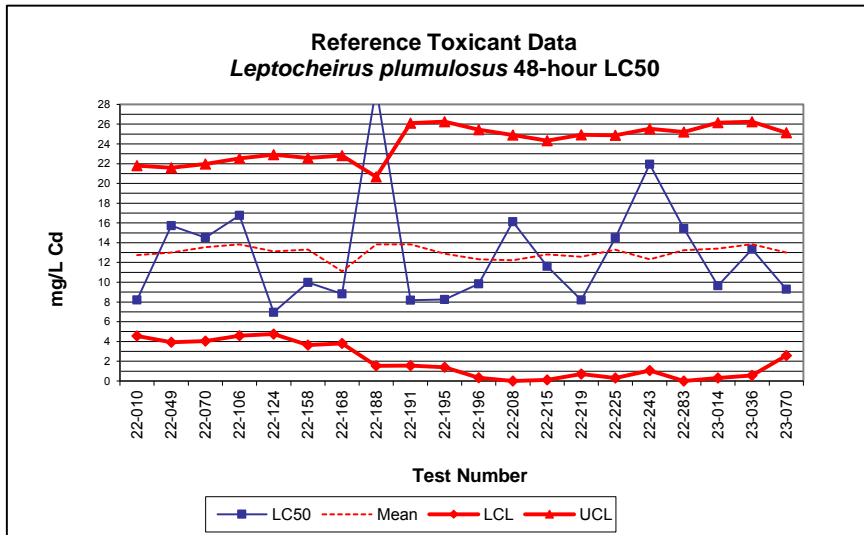
D.O. meter#: YSI6 pH meter #: 732

Reference Toxicant Data - Cadmium chloride (CdCl<sub>2</sub>)

*Leptocheirus plumulosus* (amphipod)

48-hour LC50 (mg/L Cd)

Test #	Test Date	LC50	Mean	Std. Dev.	LCL	UCL	CV
22-010	01/14/22	8.2	12.750	4.414	4.559	21.810	34.6
22-049	03/04/22	15.7	13.004	4.481	3.921	21.578	34.5
22-070	04/01/22	14.5	13.555	4.485	4.042	21.965	33.1
22-106	05/06/22	16.8	13.837	4.540	4.586	22.524	33.1
22-124	06/03/22	7.0	13.110	4.732	4.756	22.918	36.1
22-158	07/22/22	10.0	13.304	4.755	3.646	22.573	35.7
22-168	08/05/22	8.8	11.098	4.783	3.794	22.813	43.1
22-188	08/12/22	29.7	13.832	6.139	1.531	20.664	44.4
22-191	08/16/22	8.2	13.827	6.215	1.553	26.110	44.9
22-195	08/23/22	8.3	12.894	6.279	1.397	26.257	48.7
22-196	08/26/22	9.8	12.310	6.299	0.336	25.452	51.2
22-208	09/09/22	16.1	12.230	6.052	0.000	24.908	49.5
22-215	09/20/22	11.6	12.810	6.053	0.125	24.334	47.3
22-219	09/30/22	8.2	12.587	6.140	0.704	24.916	48.8
22-225	10/07/22	14.5	13.297	6.123	0.307	24.867	46
22-243	10/18/22	21.9	12.327	6.445	1.051	25.542	52.3
22-283	12/03/22	15.4	13.237	6.463	0.000	25.217	48.8
23-014	01/13/23	9.6	13.410	6.419	0.312	26.162	47.9
23-036	02/10/23	13.3	13.847	5.641	0.571	26.249	40.7
23-070	03/10/23	9.3	12.995	5.582	2.564	25.129	43





# Aquatic Research Organisms

## DATA SHEET

### I. Organism History

Species Leptocheirus plumulosus  
 Source: Lab reared  Hatchery reared \_\_\_\_\_ Field collected \_\_\_\_\_  
 Hatch date 2/2023 Receipt date \_\_\_\_\_  
 Lot number 02 23 23 LP Strain A20  
 Brood origination Chesapeake Bay, VA

### II. Water Quality

Temperature 24 °C Salinity 220 ppt D.O. 5.5 ppm  
 pH 8.0 su Hardness — ppm Alkalinity — ppm

### III. Culture Conditions

Freshwater \_\_\_\_\_ Saltwater  Other \_\_\_\_\_  
 Recirculating \_\_\_\_\_ Flow through \_\_\_\_\_ Static renewal   
 DIET: Flake food  Phytoplankton \_\_\_\_\_ Trout chow   
 Artemia \_\_\_\_\_ Rotifers \_\_\_\_\_ YCT \_\_\_\_\_ Other "GORP"

Prophylactic treatments: \_\_\_\_\_

Comments: 2-4 mm long

### IV. Shipping Information

Client: NWDLS # of Organisms 1250  
 Carrier: FedEx Date shipped 2/23/23  
 Biologist: ~~\_\_\_\_\_~~



**SP – Mysid Shrimp 10 day (*Americamysis bahia*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Americamysis bahia</i>	Test Type	SP 10 day
Number of Replicates	5	Number of Organisms/ Replicate	20
Test Organism Batch Number	23-0180-MB	Organism Date of Birth or Date Received	02/12/2023
Organism Source	NWDLS	Organism Age at Test Initiation	5 days
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L	Reference Toxicant	Potassium Chloride – see graph
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Sample ID	REF	Field Sampling Date/Time	01/27/2023 09:20
Test Initiation Date/Time	02/17/2023 10:30	Test Termination Date/Time	02/27/2023 10:30
Renewal of Test Solution	See SP Summary	Feeding	Twice daily (AM and PM)

Sample ID	Total # of Organisms	Survival (%)	Significant Effect (>10% effect)	Effect (%)
CONTROL	100	91	---	0.00
REFERENCE	100	91	No	0.00
HI-DMMU-1	100	93	No	-2.20
HI-DMMU-2	100	90	No	1.10
HI-DMMU-3	100	89	No	2.20
HI-DMMU-4	100	90	No	1.10
HI-DMMU-5	100	89	No	2.20
HI-DMMU-6	100	87	No	4.40
HI-DMMU-7	100	88	No	3.30
HI-DMMU-8	100	90	No	1.10



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 07:22 (p 1 of 6)  
**Test Code/ID:** 23A1459 / 21-0493-7934

<b>Mysidopsis 10-d Survival and Growth Sediment</b>			<b>NWDLS Environ. Toxicol. Lab</b>		
<b>Analysis ID:</b> 19-1098-0718	<b>Endpoint:</b> Mean Dry Biomass-mg	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 27 Mar-23 7:19	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1			
<b>Batch ID:</b> 20-4632-7685	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay			
<b>Start Date:</b> 17 Feb-23 10:30	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater			
<b>Ending Date:</b> 27 Feb-23 10:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5			
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA			
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI			
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 31d 20h	<b>Client:</b> Terracon Consultants, Inc.				

**Comments:**  
 9.6=CDP-6 site and 9.7=CDP 7 site

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	Control Sed passed mean dry biomass-mg	6.99%

**Equal Variance t Two-Sample Test**

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		Control Sed	0.6172	1.86	0.022	8	CDF	0.2771	Non-Significant Effect

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	1.378	2.29	1.0000	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	1.378		0.2269	Non-Significant Trend in Controls

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0001332	0.0001332	1	0.3809	0.5543	Non-Significant Effect
Error	0.002798	0.0003498	8			
Total	0.0029312		9			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F Test	3.123	23.15	0.2959	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9099	0.7411	0.2806	Normal Distribution

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	0.3074	0.2912	0.3236	0.3	0.2955	0.326	0.005825	4.24%	0.00%
0	RS	5	0.3147	0.2861	0.3433	0.3095	0.2905	0.339	0.01029	7.31%	-2.37%

**Mean Dry Biomass-mg Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	0.3	0.326	0.2995	0.2955	0.316
0	RS	0.3095	0.339	0.3385	0.296	0.2905

Mysidopsis 10-d Survival and Growth Sediment

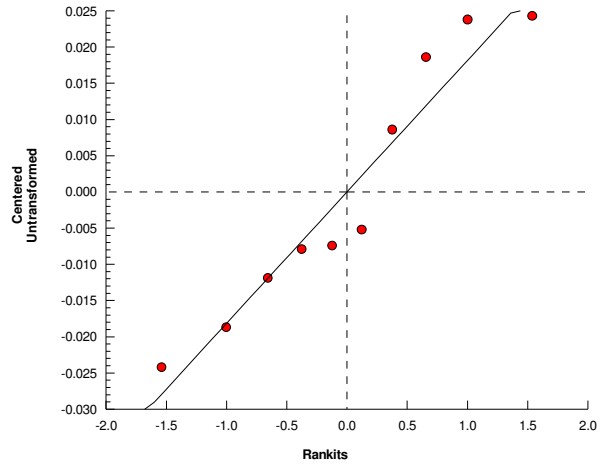
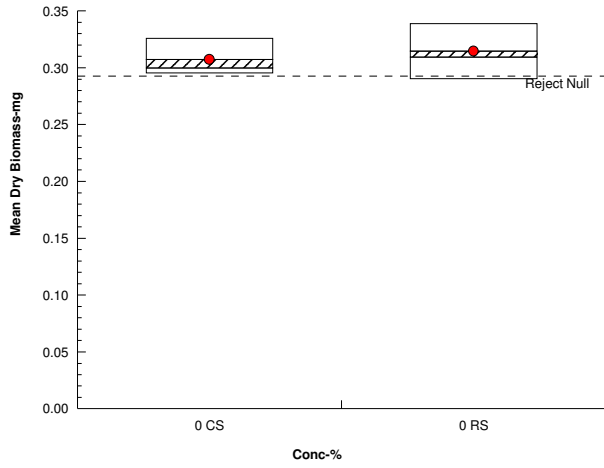
NWDLS Environ. Toxicol. Lab

Analysis ID: 19-1098-0718  
Analyzed: 27 Mar-23 7:19

Endpoint: Mean Dry Biomass-mg  
Analysis: Parametric-Two Sample

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



**CETIS Analytical Report**

**Report Date:** 27 Mar-23 07:22 (p 3 of 6)  
**Test Code/ID:** 23A1459 / 21-0493-7934

Mysidopsis 10-d Survival and Growth Sediment			NWDLS Environ. Toxicol. Lab		
<b>Analysis ID:</b> 10-4602-1208	<b>Endpoint:</b> Mean Dry Weight-mg	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 27 Mar-23 7:19	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1			
<b>Batch ID:</b> 20-4632-7685	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay			
<b>Start Date:</b> 17 Feb-23 10:30	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater			
<b>Ending Date:</b> 27 Feb-23 10:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS	<b>Age:</b> 5		
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA			
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI			
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 31d 20h	<b>Client:</b> Terracon Consultants, Inc.				

**Comments:**  
 9.6=CDP-6 site and 9.7=CDP 7 site

Data Transform	Alt Hyp	Comparison Result	PMSD
Untransformed	C > T	Control Sed passed mean dry weight-mg	4.42%

**Equal Variance t Two-Sample Test**

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		Control Sed	0.9059	1.86	0.015	8	CDF	0.1957	Non-Significant Effect

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	1.821	2.29	0.4629	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	1.821		0.4790	Non-Significant Trend in Controls

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0001385	0.0001385	1	0.8207	0.3914	Non-Significant Effect
Error	0.0013502	0.0001688	8			
Total	0.0014887		9			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F Test	1.509	23.15	0.6998	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8977	0.7411	0.2069	Normal Distribution

**Mean Dry Weight-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	0.3381	0.3204	0.3558	0.3432	0.3158	0.3511	0.006372	4.21%	0.00%
0	RS	5	0.3455	0.3311	0.3599	0.3439	0.3289	0.3568	0.005187	3.36%	-2.20%

**Mean Dry Weight-mg Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	0.3158	0.3432	0.3328	0.3476	0.3511
0	RS	0.3439	0.3568	0.3563	0.3289	0.3418

Mysidopsis 10-d Survival and Growth Sediment

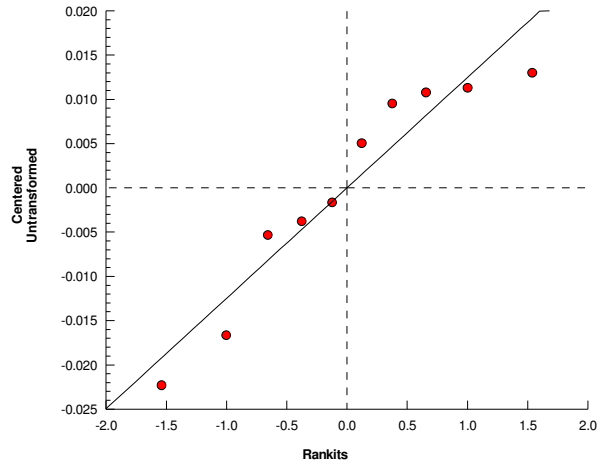
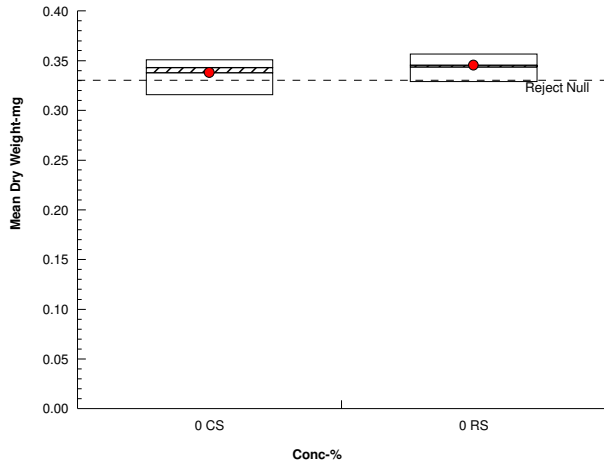
NWDLS Environ. Toxicol. Lab

Analysis ID: 10-4602-1208  
Analyzed: 27 Mar-23 7:19

Endpoint: Mean Dry Weight-mg  
Analysis: Parametric-Two Sample

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



# CETIS Analytical Report

Report Date: 27 Mar-23 07:22 (p 5 of 6)  
 Test Code/ID: 23A1459 / 21-0493-7934

## Mysidopsis 10-d Survival and Growth Sediment

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 13-0637-0925	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 27 Mar-23 7:18	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-4632-7685	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 17 Feb-23 10:30	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 27 Feb-23 10:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 31d 20h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

9.6=CDP-6 site and 9.7=CDP 7 site

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Control Sed passed survival rate	5.60%

### Equal Variance t Two-Sample Test

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		Control Sed	0	1.86	0.086	8	CDF	0.5000	Non-Significant Effect

### Auxiliary Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	1.433	2.29	1.0000	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	1.433		0.2605	Non-Significant Trend in Controls

### ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.0431515	0.0053939	8			
Total	0.0431515		9			

### Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F Test	1	23.15	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.818	0.7411	0.0240	Normal Distribution

### Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	0.00%
0	RS	5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	0.00%

### Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	0.00%
0	RS	5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	0.00%

### Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	0.9500	0.9500	0.9000	0.8500	0.9000
0	RS	0.9000	0.9500	0.9500	0.9000	0.8500

### Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	1.345	1.345	1.249	1.173	1.249
0	RS	1.249	1.345	1.345	1.249	1.173

Mysidopsis 10-d Survival and Growth Sediment

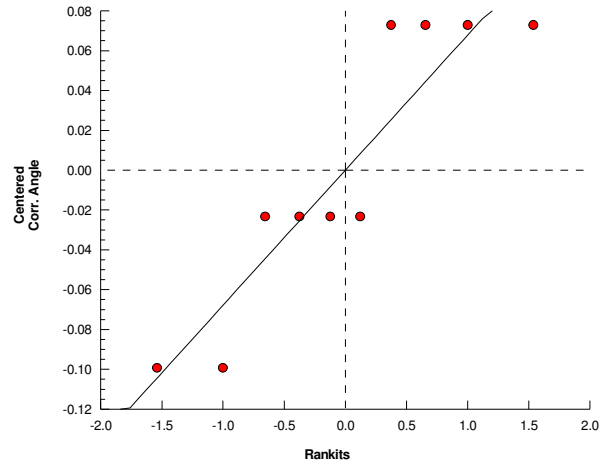
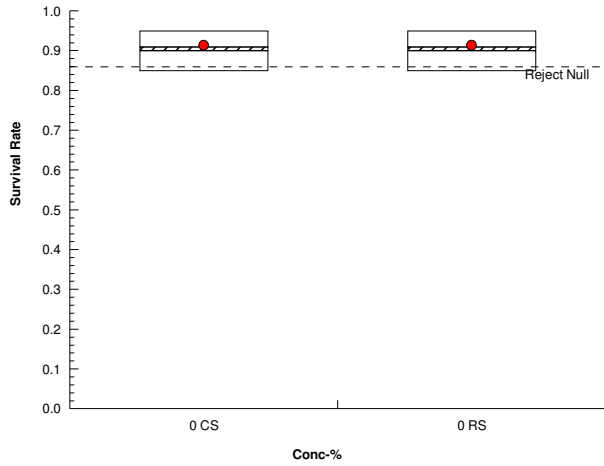
NWDLS Environ. Toxicol. Lab

Analysis ID: 13-0637-0925  
Analyzed: 27 Mar-23 7:18

Endpoint: Survival Rate  
Analysis: Parametric-Two Sample

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics





**CETIS Analytical Report**

**Report Date:** 24 Mar-23 08:26 (p 1 of 2)  
**Test Code/ID:** 23A1459 / 21-0493-7934

**Mysidopsis 10-d Survival and Growth Sediment**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 15-8531-9496	<b>Endpoint:</b> Mean Dry Biomass-mg	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 24 Mar-23 8:11	<b>Analysis:</b> No Statistical Comparisons Run	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-4632-7685	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 17 Feb-23 10:30	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 27 Feb-23 10:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 31d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

9.6=CDP-6 site and 9.7=CDP 7 site

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	2.622	3.166	0.3813	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	2.622		0.2269	Non-Significant Trend in Controls

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0036760	0.0003676	10	1.156	0.3452	Non-Significant Effect
Error	0.0139919	0.000318	44			
Total	0.0176679		54			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	17.01	23.21	0.0741	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9866	0.9417	0.7971	Normal Distribution

**Mean Dry Biomass-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	0.3147	0.2861	0.3433	0.3095	0.2905	0.339	0.01029	7.31%	0.00%
1		5	0.3176	0.2892	0.346	0.323	0.282	0.341	0.01022	7.19%	-0.92%
2		5	0.3097	0.2691	0.3503	0.304	0.2675	0.35	0.01461	10.55%	1.59%
3		5	0.3163	0.3	0.3326	0.3125	0.2995	0.333	0.005866	4.15%	-0.51%
4		5	0.3193	0.3141	0.3245	0.3175	0.3145	0.325	0.001861	1.30%	-1.46%
5		5	0.3162	0.3005	0.3319	0.311	0.306	0.3375	0.005649	4.00%	-0.48%
6		5	0.3209	0.2978	0.344	0.322	0.3015	0.3455	0.008309	5.79%	-1.97%
7		5	0.3017	0.2845	0.3189	0.309	0.284	0.3135	0.00621	4.60%	4.13%
8		5	0.3196	0.2998	0.3394	0.317	0.3	0.339	0.007118	4.98%	-1.56%
9.6		5	0.3057	0.2908	0.3206	0.3065	0.293	0.3225	0.005368	3.93%	2.86%
9.7		5	0.2941	0.282	0.3062	0.2895	0.2845	0.3065	0.004366	3.32%	6.55%

**Mean Dry Biomass-mg Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	0.3095	0.339	0.3385	0.296	0.2905
1		0.341	0.3105	0.3315	0.323	0.282
2		0.2675	0.304	0.2935	0.3335	0.35
3		0.311	0.2995	0.333	0.3125	0.3255
4		0.3175	0.3175	0.322	0.325	0.3145
5		0.3375	0.311	0.306	0.309	0.3175
6		0.3455	0.3315	0.322	0.3015	0.304
7		0.309	0.3135	0.284	0.3125	0.2895
8		0.3	0.31	0.317	0.332	0.339
9.6		0.3065	0.2955	0.293	0.311	0.3225
9.7		0.3065	0.2845	0.2875	0.2895	0.3025

Mysidopsis 10-d Survival and Growth Sediment

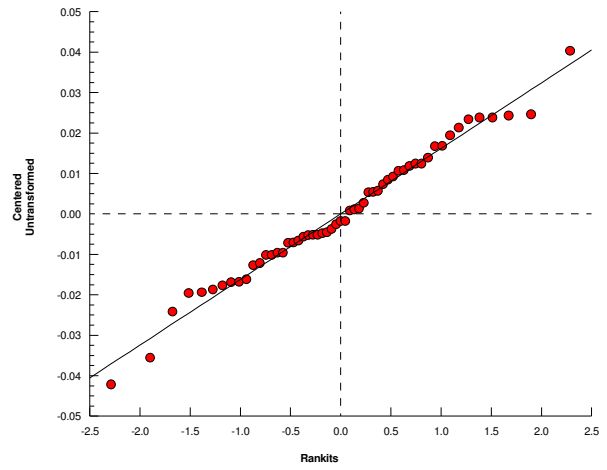
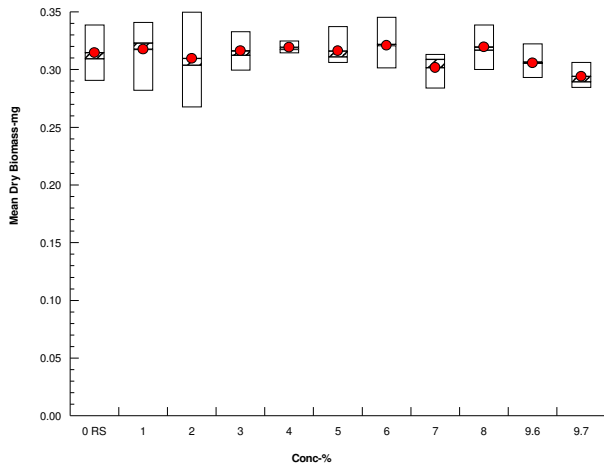
NWDLS Environ. Toxicol. Lab

Analysis ID: 15-8531-9496  
Analyzed: 24 Mar-23 8:11

Endpoint: Mean Dry Biomass-mg  
Analysis: No Statistical Comparisons Run

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



**CETIS Analytical Report**

**Report Date:** 24 Mar-23 08:27 (p 1 of 2)  
**Test Code/ID:** 23A1459 / 21-0493-7934

**Mysidopsis 10-d Survival and Growth Sediment**

**NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 07-1315-2970	<b>Endpoint:</b> Mean Dry Weight-mg	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 24 Mar-23 8:11	<b>Analysis:</b> No Statistical Comparisons Run	<b>Status Level:</b> 1
<b>Batch ID:</b> 20-4632-7685	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 17 Feb-23 10:30	<b>Protocol:</b> EPA/600/R-94/025 (1994)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 27 Feb-23 10:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 10d 0h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 5
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 31d 20h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**

9.6=CDP-6 site and 9.7=CDP 7 site

**Auxiliary Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:5%)
Extreme Value	Grubbs Extreme Value Test	2.936	3.166	0.1248	No Outliers Detected
Control Trend	Mann-Kendall Trend Test	2.936		0.4790	Non-Significant Trend in Controls

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0044513	0.0004451	10	1.554	0.1529	Non-Significant Effect
Error	0.0126024	0.0002864	44			
Total	0.0170537		54			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	9.509	23.21	0.4846	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9858	0.9417	0.7600	Normal Distribution

**Mean Dry Weight-mg Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	0.3455	0.3311	0.3599	0.3439	0.3289	0.3568	0.005187	3.36%	0.00%
1		5	0.3415	0.3239	0.3592	0.345	0.323	0.3589	0.006361	4.16%	1.16%
2		5	0.344	0.3099	0.3782	0.3378	0.3147	0.3889	0.0123	7.99%	0.44%
3		5	0.3555	0.3445	0.3666	0.3524	0.3456	0.3676	0.003994	2.51%	-2.90%
4		5	0.3556	0.3321	0.3791	0.3578	0.3311	0.3735	0.008463	5.32%	-2.91%
5		5	0.3555	0.345	0.3659	0.3553	0.3433	0.3659	0.003765	2.37%	-2.87%
6		5	0.3693	0.3492	0.3893	0.3788	0.3489	0.3839	0.007229	4.38%	-6.87%
7		5	0.3431	0.3263	0.3599	0.3406	0.3289	0.3635	0.00605	3.94%	0.71%
8		5	0.3552	0.338	0.3724	0.3568	0.3333	0.3689	0.006195	3.90%	-2.80%
9.6		5	0.3523	0.3254	0.3792	0.3476	0.3226	0.3794	0.009688	6.15%	-1.96%
9.7		5	0.3351	0.309	0.3613	0.3217	0.3184	0.3606	0.00942	6.28%	3.01%

**Mean Dry Weight-mg Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	0.3439	0.3568	0.3563	0.3289	0.3418
1		0.3589	0.345	0.3489	0.323	0.3318
2		0.3147	0.3378	0.3453	0.3335	0.3889
3		0.3456	0.3524	0.3505	0.3676	0.3617
4		0.3735	0.3735	0.3578	0.3421	0.3311
5		0.3553	0.3659	0.36	0.3433	0.3528
6		0.3839	0.3489	0.3788	0.3547	0.38
7		0.3635	0.3483	0.3341	0.3289	0.3406
8		0.3333	0.3647	0.3522	0.3689	0.3568
9.6		0.3226	0.3476	0.3662	0.3456	0.3794
9.7		0.3606	0.3556	0.3194	0.3217	0.3184

Mysidopsis 10-d Survival and Growth Sediment

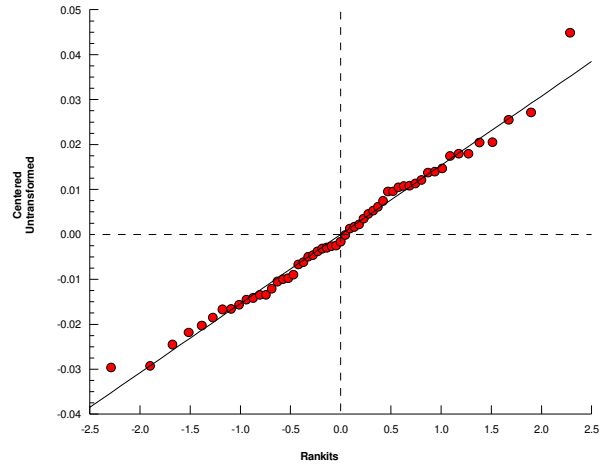
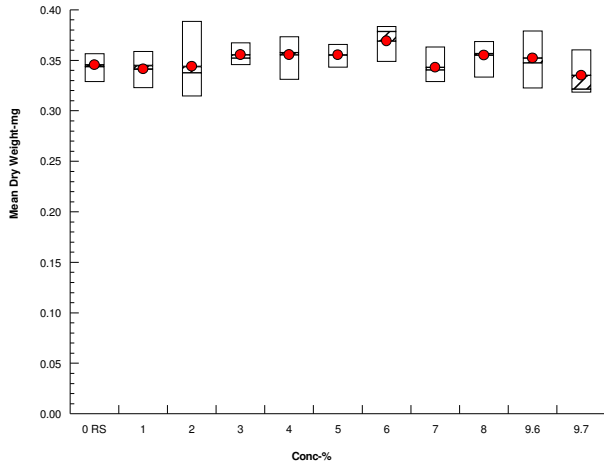
NWDLS Environ. Toxicol. Lab

Analysis ID: 07-1315-2970  
Analyzed: 24 Mar-23 8:11

Endpoint: Mean Dry Weight-mg  
Analysis: No Statistical Comparisons Run

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



Client/Project Name:	PCCA HI & CDP Resampling 2023	WO #:	23A1459
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**Mysidopsis bahia 10d Test Condition Summary - EPA 832 B-98.004 ; NWDLS SOP No. 4026**

Test Material:	Sediment	Test Type:	10d Whole Sediment
Temperature:	20 ± 2 °C	Photoperiod:	16L:8D
Test Chamber:	1L glass beaker	No. Replicates:	5
Test Organism:	<i>Mysidopsis bahia</i>	Organism Source:	- AKO 0
Organism Batch No.:	23-0180-MB	DOB/Age:	5 @ 15 Days
Age Class:	1-5 days old	No. Organisms/Rep:	20
Aeration:	Aerate water in each chamber overnight before start of test, and throughout test, at rate that maintains ≥40% saturation of dissolved oxygen concentration	Control Sediment:	Clean beach sand
Feeding Schedule:	Twice daily (AM and PM)	Food Type:	2 drops of Artemia nauplii per feeding
Water Type:	30 ppt ± 2 ppt Synthetic seawater	Water Volume:	800 mL
Renewal Schedule:	Project specific	Sediment Volume:	~175 (2cm depth)

Comments: ① IE ml → [NWDLS]  
 ② IE ml → [2-12-23]

**Daily Feeds**

Day	0		1		2		3		4		5		6		7		8		9		10
Hour	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	
Date	4/2	2-15-23		2-14-23		2-20-23		2-21-23		2-22-23		2-23-23		2-24-23		2-25-23		2-26-23		2/22	
Time	1630	0810	1610	0734	1533	0754	1511	0758	1534	0744	1540	0804	1514	0752	1529	0715	1524	0741	1511	0758	
Initials	JLV	MMB	MMB	BB	BB	JLV	JLV	JLV	JLV	ML	ML	JLV	BB	ML	ML	JLV	JLV	ML	BB	ML	

**Water Renewals**

Day	0	2	4	6	8
Date	2-17-23	2-19-23	2-21-23	2-23-23	2-25-23
Time	0915	1316	0915	0910	0930
Initials	ML	PPP	ML	ML	ML

Client/Project Name:	PCCA HI & CDP Resampling 2023	WO #:	23A1459
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Initiation Date:	2-17-23	Termination Date:	2-27-23
Initiation Time:	1:30	Termination Time:	1:30
Initials:	MLL / RL	Initials:	MLL / RL

Mysidopsis bahia - Survival											
Treatment	Rep	Day 0	Day 10	Treatment	Rep	Day 0	Day 10	Treatment	Rep	Day 0	Day 10
CONTROL	A	20	19	HI-DMMU-4	A	20	17	CDP-6	A	20	19
	B	20	19		B	20	17		B	20	17
	C	20	18		C	20	18		C	20	16
	D	20	17		D	20	19		D	20	18
	E	20	18		E	20	19		E	20	17
REF	A	20	18	HI-DMMU-5	A	20	19	CDP-7	A	20	17
	B	20	19		B	20	17		B	20	<del>17</del> 16
	C	20	19		C	20	17		C	20	18
	D	20	18		D	20	18		D	20	18
	E	20	17		E	20	18		E	20	19
HI-DMMU-1	A	20	19	HI-DMMU-6	A	20	18		A		
	B	20	18		B	20	19		B		
	C	20	19		C	20	17		C		
	D	20	20		D	20	17		D		
	E	20	17		E	20	16		E		
HI-DMMU-2	A	20	17	HI-DMMU-7	A	20	17		A		
	B	20	18		B	20	18		B		
	C	20	17		C	20	17		C		
	D	20	20		D	20	19		D		
	E	20	18		E	20	17		E		
HI-DMMU-3	A	20	18	HI-DMMU-8	A	20	18		A		
	B	20	17		B	20	17		B		
	C	20	19		C	20	18		C		
	D	20	17		D	20	18		D		
	E	20	18		E	20	19		E		
Technician Initials								Technician Initials			

① EE ML 2-27-23 [16]

Dry Tissue Weight - *Mysidopsis bahia*

CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)	CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)
CONT.	A	1	.00642	.01242	HI-DMMU-4	A	26	.00624	.01259
	B	2	.00611	.01263		B	27	.00629	.01264
	C	3	.00598	.01197		C	28	.00633	.01277
	D	4	.00623	.01214		D	29	.00644	.01294
	E	5	.00636	.01268		E	30	.00639	.01268
REF	A	6	.00604	.01273	QA/QC (pans)				
	B	7	.00610	.01288					
	C	8	.00615	.01292					
	D	9	.00642	.01234					
	E	10	.00634	.01215					
					BALANCE ID#				
					<u>852</u>				
HI-DMMU-1	A	11	.00614	.01296	BALANCE VERIFICATION INITIALS <u>ML</u>				
	B	12	.00587	.01208	DATE /TARE WEIGHT INITIALS <u>2-16-22 / ML</u>				
	C	13	.00623	.01286	DATE DRYING INITIATED <u>2-27-22</u>				
	D	14	.00653	.01299	TIME DRYING INITIATED <u>1230</u>				
	E	15	.00678	.01242	OVEN TEMPERATURE (°C) <u>105/105</u>				
HI-DMMU-2	A	16	.00698	.01233	INITIALS <u>ML</u>				
	B	17	.00626	.01234	DATE/ TIME DRYING TERMINATED <u>2-28-22 / 0915</u>				
	C	18	.00637	.01274	OVEN TEMPERATURE (°C) <u>105/105</u>				
	D	19	.00619	.01286	BALANCE VERIFICATION INITIALS <u>ML</u>				
	E	20	.00587	.01287	TOTAL WEIGHT DATE/ INITIALS <u>2-28-22 / ML</u>				
HI-DMMU-3	A	21	.00656	.01278	CONT = Control    CONC = Concentration    REP = Replicate				
	B	22	.00665	.01264	Wt. = Weight    ORG. = Organism				
	C	23	.00623	.01285					
	D	24	.00621	.01246					
	E	25	.00633	.01284					

CONC. (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)	CONC. (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)
HI-DMMU-5	A	31	.00596	.01271	CDP-7	A	54	.00621	.01234
	B	32	.00614	.01236		B	57	.00629	.01198
	C	33	.00632	.01244		C	58	.00637	.01212
	D	34	.00654	.01272		D	59	.00654	.01233
	E	35	.00634	.01269		E	60	.00662	.01267
HI-DMMU-6	A	36	.00587	.01278	QA/QC (pans)				
	B	37	.00625	.01288					
	C	38	.00636	.01280					
	D	39	.00664	.01267					
	E	40	.00674	.01232					
					BALANCE ID# <u>852</u>				
HI-DMMU-7	A	41	.00629	.01247	BALANCE VERIFICATION INITIALS <u>ML</u>				
	B	42	.00638	.01265	DATE /TARE WEIGHT INITIALS <u>2-16-23 / ML</u>				
	C	43	.00677	.01245	DATE DRYING INITIATED <u>2-27-23</u>				
	D	44	.00658	.01283	TIME DRYING INITIATED <u>1230</u>				
	E	45	.00665	.01244	OVEN TEMPERATURE (°C) <u>105/105</u>				
HI-DMMU-8	A	46	.00659	.01259	INITIALS <u>ML</u>				
	B	47	.00644	.01264	DATE DRYING TERMINATED <u>2-28-23/0900</u>				
	C	48	.00637	.01271	OVEN TEMPERATURE (°C) <u>105/105</u>				
	D	49	.00618	.01282	BALANCE VERIFICATION INITIALS <u>ML</u>				
	E	50	.00598	.01276	TOTAL WEIGHT DATE/ INITIALS <u>2-28-23 / ML</u>				
CDP-6	A	51	.00674	.01287	CONT = Control    CONC = Concentration    REP = Replicate Wt. = Weight        ORG. = Organism				
	B	52	.00645	.01236					
	C	53	.00638	.01224					
	D	54	.00644	.01266					
	E	55	.00609	.01254					



## WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-16-23	CONTROL - NEW Day -1	20.4	7.9	8.8	29.9	.001	M6
2-17-23	CONTROL - NEW Day 0	20.7	8.0	8.4	29.1	.001	M6
	CONTROL - OLD Day 0	20.3	8.0	8.4	29.1	.003	
	REF Day 0	20.3	8.1	8.4	29.2	.003	
	HI-DMMU-1 Day 0	20.3	8.0	8.5	29.1	.003	
	HI-DMMU-2 Day 0	20.3	8.0	8.5	29.1	.004	
	HI-DMMU-3 Day 0	20.3	8.0	8.7	29.1	.005	
	HI-DMMU-4 Day 0	20.3	8.0	8.8	29.1	.005	
	HI-DMMU-5 Day 0	20.2	8.0	8.8	29.2	0.020	
	HI-DMMU-6 Day 0	20.2	8.0	8.8	29.1	.014	
	HI-DMMU-7 Day 0	20.2	8.0	8.8	29.1	.005	
	HI-DMMU-8 Day 0	20.2	8.0	8.7	29.1	.004	
	CDP-6 Day 0	20.2	8.0	8.7	29.1	.004	
	CDP-7 Day 0	20.2	8.0	8.7	29.1	.004	
2-18-23	CONTROL Day 1	20.1	7.9	8.6	29.3	.001	SMR/OPS
	REF Day 1	20.1	7.9	8.6	29.3	.001	
	HI-DMMU-1 Day 1	20.1	7.9	8.6	29.3	.001	
	HI-DMMU-2 Day 1	20.1	7.9	8.6	29.3	.001	
	HI-DMMU-3 Day 1	20.0	7.9	8.6	29.3	.002	
	HI-DMMU-4 Day 1	20.1	7.9	8.6	29.2	.002	
	HI-DMMU-5 Day 1	20.1	8.0	8.6	29.2	.016	
	HI-DMMU-6 Day 1	20.2	8.0	8.6	29.2	.008	
	HI-DMMU-7 Day 1	20.2	8.0	8.6	29.2	.003	
	HI-DMMU-8 Day 1	20.2	8.0	8.6	29.2	.002	
	CDP-6 Day 1	20.2	8.0	8.6	29.2	.002	
	CDP-7 Day 1	20.2	8.0	8.6	29.2	.002	

## Comments:

Thermometer #:

732

pH meter #:

732

Sal meter #:

948

D.O. meter#:

456

Ammonia meter #:

562

Client/Project Name:

PCCA HI &amp; CDP Resampling 2023

WO #:

23A1459

## WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-19-23	CONTROL - NEW Day 2	19.9	7.8	8.7	29.2	.001	MSD/am
	CONTROL - OLD Day 2	19.9	7.9	8.7	29.1	.002	
	REF Day 2	19.8	7.9	8.7	29.1	.002	
	HI-DMMU-1 Day 2	19.9	7.9	8.8	29.1	.004	
	HI-DMMU-2 Day 2	19.9	8.0	8.8	29.2	.003	
	HI-DMMU-3 Day 2	19.9	7.9	8.8	29.2	.003	
	HI-DMMU-4 Day 2	19.9	7.9	8.8	29.2	.003	
	HI-DMMU-5 Day 2	19.9	8.0	8.8	29.2	.015	
	HI-DMMU-6 Day 2	20.1	8.0	8.8	29.2	.007	
	HI-DMMU-7 Day 2	20.1	8.1	8.8	29.2	.003	
	HI-DMMU-8 Day 2	20.1	8.1	8.8	29.2	.003	
	CDP-6 Day 2	20.1	8.1	8.8	29.2	.004	
	CDP-7 Day 2	20.1	8.1	8.8	29.2	.004	
2-20-23	CONTROL Day 3	20.2	7.9	8.6	29.4	.001	ML
	REF Day 3	20.2	7.9	8.6	29.4	.001	
	HI-DMMU-1 Day 3	20.2	7.9	8.8	29.3	.001	
	HI-DMMU-2 Day 3	20.2	8.0	8.8	29.4	.002	
	HI-DMMU-3 Day 3	20.2	8.0	8.8	29.4	.002	
	HI-DMMU-4 Day 3	20.2	8.0	8.8	29.4	.002	
	HI-DMMU-5 Day 3	20.1	8.0	8.8	29.4	.004	
	HI-DMMU-6 Day 3	20.1	8.0	8.7	29.4	.003	
	HI-DMMU-7 Day 3	20.4	8.1	8.7	29.4	.002	
	HI-DMMU-8 Day 3	20.3	8.1	8.7	29.4	.002	
	CDP-6 Day 3	20.3	8.1	8.7	29.4	.002	
	CDP-7 Day 3	20.4	8.1	8.6	29.0	.002	
Comments:	DIE 203 2-19-23 → [29.2]						
Thermometer #:	737	pH meter #:	737	Sal meter #:	948		
D.O. meter#:	4556	Ammonia meter #:	76				

### WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-21-23	CONTROL - NEW Day 4	19.8	8.0	8.5	29.7	.001	tbl
	CONTROL - OLD Day 4	19.9	8.1	8.7	29.6	.001	
	REF Day 4	19.5	8.1	8.2	29.5	.001	
	HI-DMMU-1 Day 4	19.9	8.1	8.7	29.5	.002	
	HI-DMMU-2 Day 4	19.9	8.1	8.7	29.4	.002	
	HI-DMMU-3 Day 4	19.7	8.1	8.6	29.5	.002	
	HI-DMMU-4 Day 4	19.8	8.0	8.6	29.5	.002	
	HI-DMMU-5 Day 4	19.7	8.0	8.6	29.5	.009	
	HI-DMMU-6 Day 4	19.7	8.1	8.6	29.5	.005	
	HI-DMMU-7 Day 4	19.7	8.1	8.6	29.6	.002	
	HI-DMMU-8 Day 4	19.8	8.0	8.6	29.4	.002	
	CDP-6 Day 4	19.9	8.1	8.6	29.6	.002	
	CDP-7 Day 4	19.4	8.0	8.6	29.6	.002	

2-22-23	CONTROL Day 5	20.1	8.1	8.6	29.7	.001	tbl
	REF Day 5	20.1	8.1	8.6	29.6	.001	
	HI-DMMU-1 Day 5	20.1	8.1	8.5	29.6	.001	
	HI-DMMU-2 Day 5	20.0	8.2	8.5	29.6	.002	
	HI-DMMU-3 Day 5	20.0	8.2	8.5	29.6	.001	
	HI-DMMU-4 Day 5	20.1	8.1	8.5	29.7	.002	
	HI-DMMU-5 Day 5	19.9	8.1	8.5	29.7	.006	
	HI-DMMU-6 Day 6	19.8	8.1	8.6	29.7	.002	
	HI-DMMU-7 Day 6	19.7	8.1	8.6	29.2	.001	
	HI-DMMU-8 Day 6	20.1	8.1	8.6	29.7	.001	
	CDP-6 Day 6	20.2	8.1	8.6	29.7	.001	
	CDP-7 Day 6	20.2	8.1	8.6	29.7	.001	

Comments:

Thermometer #: 737      pH meter #: 732      Sal meter #: 948  
 D.O. meter#: 4516      Ammonia meter #: 566

Client/Project Name:

PCCA HI &amp; CDP Resampling 2023

WO #:

23A1459

## WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-23-23	CONTROL - NEW Day 6	19.9	8.0	8.6	29.8	.001	TKL
	CONTROL - OLD Day 6	20.1	8.1	8.5	29.2	.001	
	REF Day 6	20.0	8.1	8.5	29.2	.001	
	HI-DMMU-1 Day 6	20.0	8.1	8.5	29.2	.002	
	HI-DMMU-2 Day 6	20.0	8.1	8.5	29.1	.001	
	HI-DMMU-3 Day 6	20.1	8.1	8.6	29.2	.001	
	HI-DMMU-4 Day 6	20.2	8.1	8.6	29.2	.002	
	HI-DMMU-5 Day 6	20.2	8.1	8.6	29.2	.008	
	HI-DMMU-6 Day 6	20.1	8.1	8.6	29.2	.004	
	HI-DMMU-7 Day 6	20.1	8.1	8.6	29.2	.002	
	HI-DMMU-8 Day 6	20.1	8.1	8.6	29.8	.002	
	CDP-6 Day 6	20.1	8.1	8.6	29.2	.002	
	CDP-7 Day 6	20.1	8.1	8.6	29.2	.002	
2-24-23	CONTROL Day 7	20.2	8.0	8.5	29.6	.001	TKL
	REF Day 7	20.1	8.1	8.5	29.6	.001	
	HI-DMMU-1 Day 7	20.1	8.1	8.5	29.2	.001	
	HI-DMMU-2 Day 7	20.1	8.1	8.5	29.2	.001	
	HI-DMMU-3 Day 7	20.1	8.1	8.5	29.6	.001	
	HI-DMMU-4 Day 7	20.1	8.1	8.5	29.6	.003	
	HI-DMMU-5 Day 7	20.1	8.0	8.5	29.2	.001	
	HI-DMMU-6 Day 7	20.1	8.1	8.5	29.6	.001	
	HI-DMMU-7 Day 7	20.1	8.1	8.5	29.5	.001	
	HI-DMMU-8 Day 7	20.1	8.2	8.5	29.5	.001	
	CDP-6 Day 7	20.1	8.1	8.5	29.2	.001	
	CDP-7 Day 7	20.1	8.1	8.5	29.9	.001	

Comments:

Thermometer #:

732

pH meter #:

772

Sal meter #:

948

D.O. meter#:

4526

Ammonia meter #:

566

### WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-25-23	CONTROL - NEW Day 8	20.0	7.9	8.6	29.9	.001	BMR KAT
	CONTROL - OLD Day 8	20.1	7.9	8.6	29.8	.001	
	REF Day 8	20.0	8.1	8.6	29.5	.002	
	HI-DMMU-1 Day 8	20.2	8.1	8.6	29.8	.002	
	HI-DMMU-2 Day 8	20.2	8.1	8.6	29.7	.001	
	HI-DMMU-3 Day 8	20.2	8.1	8.5	29.6	.001	
	HI-DMMU-4 Day 8	20.1	8.1	8.6	29.8	.001	
	HI-DMMU-5 Day 8	20.1	8.1	8.6	29.8	.002	
	HI-DMMU-6 Day 8	20.1	8.1	8.6	29.5	.003	
	HI-DMMU-7 Day 8	20.1	8.1	8.6	29.5	.001	
	HI-DMMU-8 Day 8	20.1	8.1	8.4	29.8	.001	
	CDP-6 Day 8	20.1	8.1	8.4	29.8	.001	
	CDP-7 Day 8	20.4	8.1	8.6	29.8	.001	
2-26-23	CONTROL Day 9	20.1	8.1	8.8	29.9	.001	BMR KAT
	REF Day 9	20.1	8.1	8.8	29.9	.002	
	HI-DMMU-1 Day 9	20.1	8.1	8.7	29.5	.001	
	HI-DMMU-2 Day 9	20.4	8.0	8.7	29.5	.001	
	HI-DMMU-3 Day 9	20.4	7.5	8.6	29.9	.001	
	HI-DMMU-4 Day 9	20.4	7.5	8.6	29.9	.001	
	HI-DMMU-5 Day 9	20.4	8.0	8.6	29.9	.002	
	HI-DMMU-6 Day 9	20.4	8.0	8.6	29.5	.001	
	HI-DMMU-7 Day 9	20.4	8.0	8.6	29.5	.001	
	HI-DMMU-8 Day 9	20.4	8.0	8.6	29.5	.001	
	CDP-6 Day 9	20.4	8.0	8.6	29.5	.002	
	CDP-7 Day 9	20.4	8.0	8.6	29.9	.001	

Comments:

Thermometer #: 732      pH meter #: 732      Sal meter #: 941  
 D.O. meter#: 4516      Ammonia meter #: 566

### WET CHEMISTRY LOG- 10D M. bahia

Date	Client/ Sample No./Sample Date	Temp	pH	D.O. mg/L	Salinity ppt	NH <sub>3</sub> N ppm*	Init.
2-27-23	CONTROL - Day 10	20.1	7.7	8.4	29.5	.001	RL
	REF Day 10	20.1	7.9	8.5	29.4	.001	
	HI-DMMU-1 Day 10	20.2	8.0	8.5	29.5	.001	
	HI-DMMU-2 Day 10	20.2	8.1	8.5	29.6	.001	
	HI-DMMU-3 Day 10	20.2	8.1	8.5	29.8	.001	
	HI-DMMU-4 Day 10	20.2	8.0	8.5	29.7	.001	
	HI-DMMU-5 Day 10	20.2	8.0	8.5	29.7	.004	
	HI-DMMU-6 Day 10	20.2	8.0	8.5	29.6	.000	
	HI-DMMU-7 Day 10	20.2	8.1	8.5	29.5	.001	
	HI-DMMU-8 Day 10	20.2	8.1	8.5	29.5	.001	
	CDP-6 Day 10	20.2	8.1	8.5	29.5	.001	
	CDP-7 Day 10	20.2	8.1	8.8	29.7	.002	

Comments:

Thermometer #: 737      pH meter #: 737      Sal meter #: 948

D.O. meter#: 4556      Ammonia meter #: 566

Mysidopsis 7-d Survival, Growth and Fecundity Test

All Matching Labs

Test Type: Growth-Survival-Fec (7d)

Organism: Mysidopsis bahia (Atlantic Mysid)

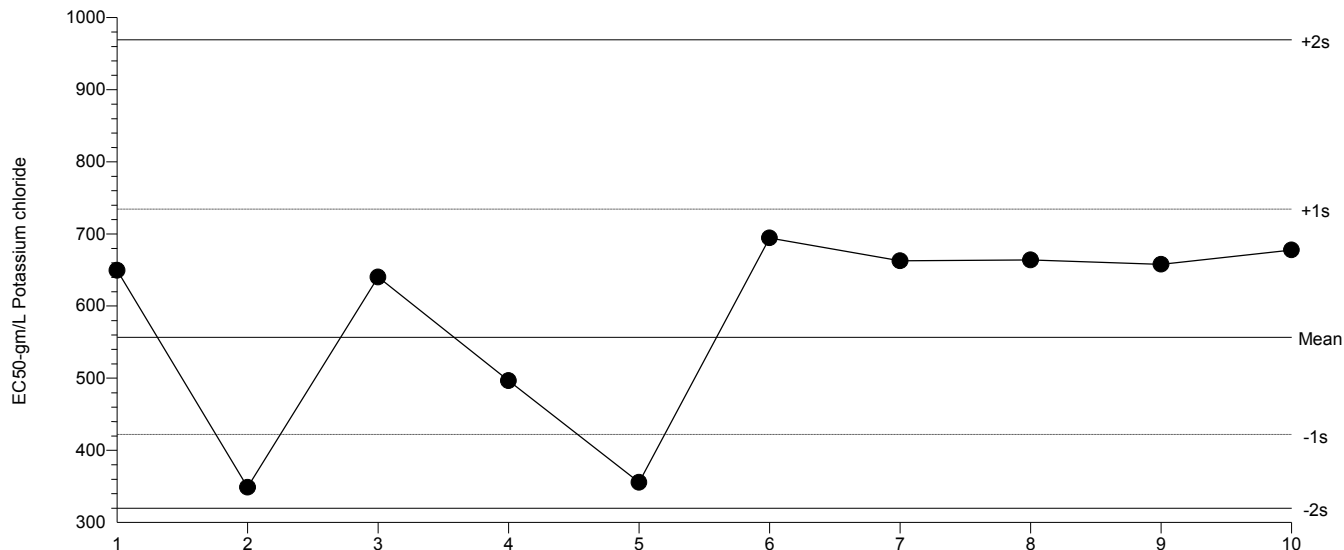
Material: Potassium chloride

Protocol: EPA/821/R-02-014 (2002)

Endpoint: 7d Survival Rate

Source: Reference Toxicant-REF

Mysidopsis 7-d Survival, Growth and Fecundity Test



Mean: 556.7      Count: 9      -1s Warning Limit: 421.9      -2s Action Limit: 319.8  
 Sigma: n/a      CV: 28.30%      +1s Warning Limit: 734.5      +2s Action Limit: 969.1

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	13:15	649.6	92.88	0.5567			01-6211-0221	11-5901-8122	NWDLS Environ. Toxicol.
2			22	16:00	348.7	-208	-1.688	(-)		09-3616-1421	00-9150-0822	NWDLS Environ. Toxicol.
3		Jul	20	14:40	640.2	83.48	0.5041			11-8307-1033	20-9270-2210	NWDLS Environ. Toxicol.
4		Aug	31	10:45	496.5	-60.21	-0.4129			18-6777-7018	18-1763-7164	NWDLS Environ. Toxicol.
5		Sep	21	13:15	355.5	-201.2	-1.618	(-)		13-6667-4200	15-5979-0136	NWDLS Environ. Toxicol.
6		Oct	19	12:00	694.4	137.7	0.7976			09-3115-0814	15-7275-3360	NWDLS Environ. Toxicol.
7		Nov	3	13:45	662.7	106	0.629			19-3160-7260	04-3340-0504	NWDLS Environ. Toxicol.
8		Dec	12	13:00	663.9	107.2	0.6353			06-4905-6652	20-1321-0134	NWDLS Environ. Toxicol.
9	2023	Jan	3	10:30	657.9	101.2	0.6024			05-5770-2114	18-8602-2070	NWDLS Environ. Toxicol.
10		Feb	2	10:30	677.7	121	0.7098			08-8071-4725	11-7916-4212	NWDLS Environ. Toxicol.

Mysidopsis 7-d Survival, Growth and Fecundity Test

All Matching Labs

Test Type: Growth-Survival-Fec (7d)

Organism: Mysidopsis bahia (Atlantic Mysid)

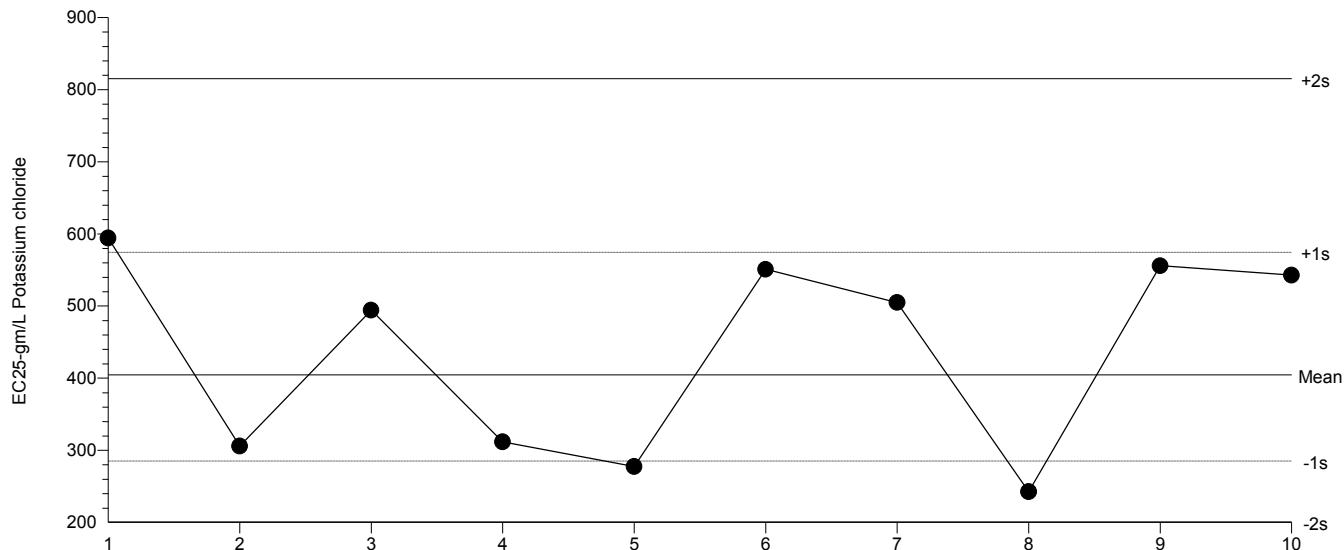
Material: Potassium chloride

Protocol: EPA/821/R-02-014 (2002)

Endpoint: Mean Dry Biomass-mg

Source: Reference Toxicant-REF

Mysidopsis 7-d Survival, Growth and Fecundity Test



Mean: 404.6      Count: 9      -1s Warning Limit: 285      -2s Action Limit: 200.8  
 Sigma: n/a      CV: 36.10%      +1s Warning Limit: 574.4      +2s Action Limit: 815.5

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Jun	3	13:15	594.3	189.6	1.097	(+)		01-6211-0221	06-7581-2449	NWDLS Environ. Toxicol.
2			22	16:00	305.9	-98.73	-0.7983			09-3616-1421	03-4116-2000	NWDLS Environ. Toxicol.
3		Jul	20	14:40	494.2	89.56	0.5706			11-8307-1033	07-3382-9498	NWDLS Environ. Toxicol.
4		Aug	31	10:45	311.8	-92.88	-0.7442			18-6777-7018	09-8654-5792	NWDLS Environ. Toxicol.
5		Sep	21	13:15	277.5	-127.1	-1.076	(-)		13-6667-4200	10-8885-9716	NWDLS Environ. Toxicol.
6		Oct	19	12:00	550.9	146.2	0.8805			09-3115-0814	01-6337-8754	NWDLS Environ. Toxicol.
7		Nov	3	13:45	504.9	100.2	0.6317			19-3160-7260	19-5328-5189	NWDLS Environ. Toxicol.
8		Dec	12	13:00	242.7	-161.9	-1.459	(-)		06-4905-6652	20-7921-9787	NWDLS Environ. Toxicol.
9	2023	Jan	3	10:30	555.9	151.2	0.9062			05-5770-2114	18-4604-0045	NWDLS Environ. Toxicol.
10		Feb	2	10:30	542.8	138.2	0.8385			08-8071-4725	02-7679-2403	NWDLS Environ. Toxicol.



# CETIS Analytical Report

Report Date: 16 Feb-23 09:21 (p 1 of 1)  
 Test Code/ID: 23-0038g / 08-8071-4725

## Mysidopsis 7-d Survival, Growth and Fecundity Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 11-7916-4212	<b>Endpoint:</b> 7d Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 16 Feb-23 9:21	<b>Analysis:</b> Untrimmed Spearman-Kärber	<b>Status Level:</b> 1
<b>Batch ID:</b> 00-6254-9483	<b>Test Type:</b> Growth-Survival-Fec (7d)	<b>Analyst:</b> Dane DeGuzman
<b>Start Date:</b> 02 Feb-23 10:30	<b>Protocol:</b> EPA/821/R-02-014 (2002)	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 09 Feb-23 11:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 7d 1h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS <b>Age:</b> 7d
<b>Sample ID:</b> 05-6268-9237	<b>Code:</b> 2189F4D5	<b>Project:</b> 047000100 0400.X
<b>Sample Date:</b> 02 Feb-23 09:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant
<b>Receipt Date:</b> 02 Feb-23 09:00	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 90m	<b>Client:</b> North Water District Laboratory Services, In	

### Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0.06	0.00%	2.831	0.01021	677.7	646.6	710.3

### Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control CV	0.1028	<<	0.4	Yes	Passes Criteria
Control Resp	0.94	0.8	>>	Yes	Passes Criteria

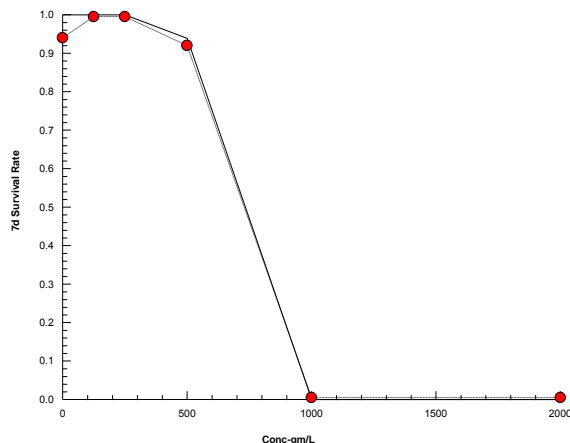
### 7d Survival Rate Summary

Conc-gm/L	Code	Count	Calculated Variate(A/B)						Isotonic Variate		
			Mean	Min	Max	Std Dev	CV%	%Effect	A/B	Mean	%Effect
0	L	10	0.9400	0.8000	1.0000	0.0966	10.28%	0.0%	47/50	0.98	0.0%
125		10	1.0000	1.0000	1.0000	0.0000	0.00%	-6.38%	50/50	0.98	0.0%
250		10	1.0000	1.0000	1.0000	0.0000	0.00%	-6.38%	50/50	0.98	0.0%
500		10	0.9200	0.6000	1.0000	0.1398	15.20%	2.13%	46/50	0.92	6.12%
1000		10	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%
2000		10	0.0000	0.0000	0.0000	0.0000		100.0%	0/50	0	100.0%

### 7d Survival Rate Detail

Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	1.0000	0.8000	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000	0.8000	1.0000
125		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
250		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
500		0.8000	0.8000	1.0000	1.0000	1.0000	1.0000	1.0000	0.6000	1.0000	1.0000
1000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### Graphics



**CETIS Analytical Report**

**Report Date:** 16 Feb-23 09:34 (p 1 of 2)  
**Test Code/ID:** 23-0038g / 08-8071-4725

Mysidopsis 7-d Survival, Growth and Fecundity Test			NWDLS Environ. Toxicol. Lab		
<b>Analysis ID:</b> 02-7679-2403	<b>Endpoint:</b> Mean Dry Biomass-mg	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 16 Feb-23 9:33	<b>Analysis:</b> Linear Interpolation (ICPIN)	<b>Status Level:</b> 1			
<b>Batch ID:</b> 00-6254-9483	<b>Test Type:</b> Growth-Survival-Fec (7d)	<b>Analyst:</b> Dane DeGuzman			
<b>Start Date:</b> 02 Feb-23 10:30	<b>Protocol:</b> EPA/821/R-02-014 (2002)	<b>Diluent:</b> Laboratory Seawater			
<b>Ending Date:</b> 09 Feb-23 11:30	<b>Species:</b> Mysidopsis bahia	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 7d 1h	<b>Taxon:</b> Malacostraca	<b>Source:</b> NWDLS	<b>Age:</b> 7d		
<b>Sample ID:</b> 05-6268-9237	<b>Code:</b> 2189F4D5	<b>Project:</b> 047000100 0400.X			
<b>Sample Date:</b> 02 Feb-23 09:00	<b>Material:</b> Potassium chloride	<b>Source:</b> Reference Toxicant			
<b>Receipt Date:</b> 02 Feb-23 09:00	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 90m	<b>Client:</b> North Water District Laboratory Services, In				

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	660708	200	Yes	Two-Point Interpolation

Test Acceptability Criteria		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control CV	0.1363	<<	0.4	Yes	Passes Criteria
Control Resp	0.413	0.2	>>	Yes	Passes Criteria

Point Estimates			
Level	gm/L	95% LCL	95% UCL
IC25	542.8	441	572.2

Mean Dry Biomass-mg Summary			Calculated Variate						Isotonic Variate	
Conc-gm/L	Code	Count	Mean	Min	Max	Std Dev	CV%	%Effect	Mean	%Effect
0	L	10	0.413	0.312	0.512	0.05629	13.63%	0.0%	0.4162	0.0%
125		10	0.4194	0.34	0.498	0.05996	14.30%	-1.55%	0.4162	0.0%
250		10	0.3484	0.294	0.426	0.03531	10.14%	15.64%	0.3484	16.29%
500		10	0.3414	0.276	0.41	0.04498	13.18%	17.34%	0.3414	17.97%
1000		10	0	0	0	0		100.0%	0	100.0%
2000		10	0	0	0	0		100.0%	0	100.0%

Mean Dry Biomass-mg Detail											
Conc-gm/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	L	0.436	0.424	0.402	0.38	0.512	0.444	0.442	0.432	0.312	0.346
125		0.494	0.464	0.34	0.498	0.406	0.486	0.374	0.39	0.364	0.378
250		0.338	0.294	0.336	0.382	0.338	0.33	0.332	0.348	0.36	0.426
500		0.32	0.288	0.39	0.306	0.334	0.41	0.384	0.276	0.344	0.362
1000		0	0	0	0	0	0	0	0	0	0
2000		0	0	0	0	0	0	0	0	0	0

# CETIS Analytical Report

Report Date: 16 Feb-23 09:34 (p 2 of 2)  
Test Code/ID: 23-0038g / 08-8071-4725

## Mysidopsis 7-d Survival, Growth and Fecundity Test

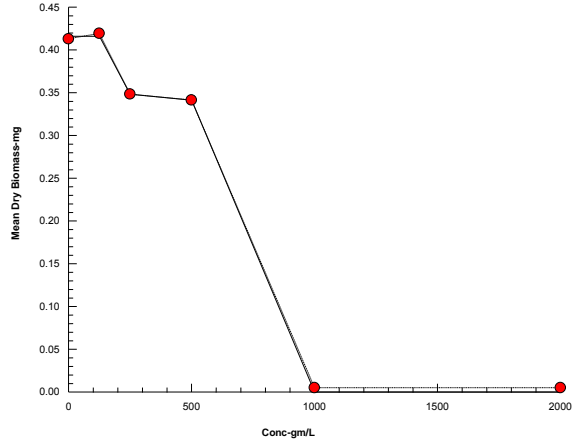
NWDLS Environ. Toxicol. Lab

Analysis ID: 02-7679-2403  
Analyzed: 16 Feb-23 9:33

Endpoint: Mean Dry Biomass-mg  
Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.9.4  
Status Level: 1

### Graphics



Chronic <i>Mysidopsis bahia</i> Test Condition Summary - EPA-821-R-02-014 Test Method 1007.0 - NWDLS SOP No. 4020			
Test Organism:	<i>Mysidopsis bahia</i>	Age Class:	7 d old
Test Type:	Static-renewal	Test Duration:	7 d
Temperature:	26 ± 1	Photoperiod:	16:8 h; ambient light; 50-100 ft-c
Test Chamber Size:	12 oz plastic disposable cups	Cleaning:	daily during test renewal
No. of Replicates:	10	No. Organisms per Replicate:	5
Test Solution Volume:	250 mL	Dilution Water:	LAB W
Renewal of Test Solution:	Daily	Aeration:	None, unless DO < 4.0 mg/L
Feeding:	One drop; twice daily	Food Type:	<i>Artemia nauplii</i>
Acceptability Criteria:	≥80% survival in control; ≥.20 mg average dry weight in control	Sample Holding Time Requirements:	36 h maximum for first use; 72 h maximum for subsequent use.

Test Concentrations (mg/L):	Control, 125, 250, 500, 1000, 2000	DECHLOR:	N/A	Critical Dilution (mg/L):	N/A
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STOX 1 Prep Date/Time/Initials:	2-2-23	0900	DPD	Analytical Standard Record Number:	2302028
STOX 2 Prep Date/Time/Initials:	—	—	—	Analytical Standard Record Number:	—

Sample Use									
Day #	Date	Sample ID	Diluent ID	Initials	Day #	Date	Sample ID	Diluent ID	Initials
Day 0	2-2-23	23-0038 -1	2301333	DPD	Day 4	2-6-23	23-0038 -1	2301333	DPD
Day 1	2-3-23	23-0038 -1	2301333	DPD	Day 5	2-7-23	23-0038 -1	2301333	KFI
Day 2	2-4-23	23-0038 -1	2301333	DPD	Day 6	2-8-23	23-0038 -1	2301333	CBR
Day 3	2-5-23	23-0038 -1	2301333	BRM	Day 7	—	23-0038	—	—

♦♦

This test was conducted in accordance with the method standard or according to the exception(s) as noted:

Comments:

TDS entry: A03 2-15-23

Data Sheet Preparation: Initials: BDP/DPD Date: 1-25-23

End of Test Review: Initials: DPD Date: 2-9-23

Final Review (signature): Arturo Ornelas

Codes: IE-incorrec entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

### Water Quality Parameters

DATE	2/2/23	2/3/23	2/4/23	2/5/23	2/6/23	2/7/23	2/8/23	2/9/23						
TIME	1030	0800	0800	0800	0800	0740	0740	0810	0810	0840	0840	0845	0845	0830
INITIALS	Mmm (BU)	DPD KRE	DPD KRE	DPD KRE	DPD KRE	Bmm KRE	Bmm KRE	DPD KRE	DPD KRE	A03 KRE	A03 KRE	A03 KRE	A03 KRE	A03 KRE
DAY	0	1	2	3	4	5	6	7						
Solution	New	Old	New	Old	New	Old	New	Old						
CONC. (mg/L)	pH OLD/NEW SOLUTION													
Cont	8.1	7.8	8.2	7.9	8.2	7.9	8.2	7.3	8.3	7.7	8.0	7.8	8.2	7.9
125	8.1	7.8	8.2	7.9	8.2	7.9	8.2	7.7	8.2	7.7	8.1	7.7	8.2	7.9
250	8.1	7.9	8.2	8.0	8.2	7.9	8.2	7.8	8.2	7.8	8.1	7.7	8.2	7.9
500	8.1	7.9	8.2	7.9	8.2	7.9	8.2	7.8	8.2	7.8	8.1	7.7	8.2	8.0
1000	8.1	7.9	8.2	-	-	-	-	-	-	-	-	-	-	-
2000	8.1	7.9	8.2	-	-	-	-	-	-	-	-	-	-	-
METER No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
CONC. (mg/L)	DISSOLVED OXYGEN (mg/L) OLD/NEW SOLUTION													
Cont	8.2	7.7	8.2	7.9	8.4	8.7	8.4	6.2	8.7	7.8	9.8	7.6	8.1	7.6
125	8.3	7.7	8.3	7.9	8.4	8.1	8.6	6.4	8.6	7.7	9.3	7.2	8.1	7.6
250	8.3	7.7	8.2	8.0	8.4	8.0	8.5	7.2	8.6	7.7	9.4	7.0	8.2	7.5
500	8.3	7.3	8.2	8.0	8.4	8.0	8.4	7.4	8.6	7.7	9.4	7.1	8.0	7.3
1000	8.3	7.5	8.2	-	-	-	-	-	-	-	-	-	-	-
2000	8.2	7.3	8.2	-	-	-	-	-	-	-	-	-	-	-
METER No.	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16	YS16
CONC. (mg/L)	TEMPERATURE (C) OLD/NEW SOLUTION (Actual)													
Cont	24.6	23.9	24.0	23.7	25.6	23.8	25.4	23.8	25.7	24.9	24.9	24.9	25.5	24.2
125	25.6	23.5	25.9	23.4	26.1	23.9	25.4	23.8	25.2	24.9	25.1	24.8	26.0	24.2
250	25.7	23.4	26.0	23.3	26.2	23.8	25.6	23.8	25.4	24.9	25.0	24.8	26.0	24.1
500	25.8	23.4	26.1	23.6	26.1	23.8	25.8	23.9	25.4	25.2	25.1	24.8	25.8	24.1
1000	25.8	23.3	26.1	-	-	-	-	-	-	-	-	-	-	-
2000	25.8	23.5	26.1	-	-	-	-	-	-	-	-	-	-	-
THERM No.	737	737	737	737	737	737	737	737	737	737	737	737	737	737
Offset (+°C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Comments: ① IE KRI L-3-23-7 [25.7]

### Water Quality Parameters (Cont'd.)

Salinity (‰)							
Conc (mg/L)	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Cont	26.3						
125	26.8						
250	27.0						
500	27.4						
1000	27.9						
2000	29.0						
Meter No.:	948	948	948	948	948	948	

### Biological Data

Test Organism Data			
Test Organism Batch #	23-0135	DOB	1-26-23
Source	NWDLS	Age	7d

Feeding							
Day	AM Batch #	PM Batch #	Initials	Day	AM Batch #	PM Batch #	Initials
0	////	2216115	////	4	2216106	2216106	SKW / SKW
1	2216115	2216115	MMB / SKW	5	2216106	2216106	SKW / MMB
2	2216115	2216115	MMB / MMB	6	2216106	2216106	MMB / MMB
3	2216115	2216106	MMB / MMB	7	2216105	////	SKW / ////

Comments:

Test Organisms

Conc (mg/L)	Rep	NUMBER OF SURVIVING ORGANISMS (DAY)								Conc (mg/L)	Rep	NUMBER OF SURVIVING ORGANISMS (DAY)							
		0	1	2	3	4	5	6	7			0	1	2	3	4	5	6	7
Cont	A	5	5	5	5	5	5	5	5	1000	A	5	0	0	0	0	0	0	0
	B	5	5	5	5	4	4	4	4		B	5	0	0	0	0	0	0	0
	C	5	5	5	5	5	5	5	5		C	5	0	0	0	0	0	0	0
	D	5	5	5	5	4	4	4	4		D	5	0	0	0	0	0	0	0
	E	5	5	5	5	5	5	5	5		E	5	0	0	0	0	0	0	0
	F	5	5	5	5	5	5	5	5		F	5	0	0	0	0	0	0	0
	G	5	5	5	5	5	5	5	5		G	5	0	0	0	0	0	0	0
	H	5	5	5	5	5	5	5	5		H	5	0	0	0	0	0	0	0
	I	5	5	5	5	4	4	4	4		I	5	0	0	0	0	0	0	0
	J	5	5	5	5	5	5	5	5		J	5	0	0	0	0	0	0	0
125	A	5	5	5	5	5	5	5	5	2000	A	5	0	0	0	0	0	0	0
	B	5	5	5	5	5	5	5	5		B	5	0	0	0	0	0	0	0
	C	5	5	5	5	5	5	5	5		C	5	0	0	0	0	0	0	0
	D	5	5	5	5	5	5	5	5		D	5	0	0	0	0	0	0	0
	E	5	5	5	5	5	5	5	5		E	5	0	0	0	0	0	0	0
	F	5	5	5	5	5	5	5	5		F	5	0	0	0	0	0	0	0
	G	5	5	5	5	5	5	5	5		G	5	0	0	0	0	0	0	0
	H	5	5	5	5	5	5	5	5		H	5	0	0	0	0	0	0	0
	I	5	5	5	5	5	5	5	5		I	5	0	0	0	0	0	0	0
	J	5	5	5	5	5	5	5	5		J	5	0	0	0	0	0	0	0
250	A	5	5	5	5	5	5	5	5		A								
	B	5	5	5	5	5	5	5	5		B								
	C	5	5	5	5	5	5	5	5		C								
	D	5	5	5	5	5	5	5	5		D								
	E	5	5	5	5	5	5	5	5		E								
	F	5	5	5	5	5	5	5	5		F								
	G	5	5	5	5	5	5	5	5		G								
	H	5	5	5	5	5	5	5	5		H								
	I	5	5	5	5	5	5	5	5		I								
	J	5	5	5	5	5	5	5	5		J								
500	A	5	5	5	4	4	4	4	4		A								
	B	5	4	4	4	4	4	4	4		B								
	C	5	5	5	5	5	5	5	5		C								
	D	5	5	5	5	5	5	5	5		D								
	E	5	5	5	5	5	5	5	5		E								
	F	5	5	5	5	5	5	5	5		F								
	G	5	5	5	5	5	5	5	5		G								
	H	5	4	3	3	3	3	3	3		H								
	I	5	5	5	5	5	5	5	5		I								
	J	5	5	5	5	5	5	5	5		J								
Date	2/2/23 4/3/23 2/4/23 2/6/23 2/6/23 2/7/23 2/8/23 2/9/23								Comments: ① IL A03 2-8-23-P [3]										
Time	1030 0900 1000 1040 0825 0930 0930 1130																		
Init	DRO DRO DRO DRO KRI KRI A03 DRO																		

Codes: IE-incorrect entry; IL-illegible; ONV-organism not visible; SC-spilled cup; PB-pathogenic bacteria

### Dry Tissue Weight

CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)	CONC (%)	REP	PAN NO.	TARE WT (g)	TOTAL WT (g)
Cont	A	1	.00465	.00683	500	A	31	.00473	.00635
	B	2	.00467	.00679		B	32	.00464	.00608
	C	3	.00457	.00658		C	33	.00453	.00648
	D	4	.00454	.00644		D	34	.00462	.00615
	E	5	.00449	.00705		E	35	.00468	.00635
	F	6	.00448	.00670		F	36	.00472	.00677
	G	7	.00468	.00689		G	37	.00471	.00663
	H	8 *	.00454	.00670		H	38 *	.00468	.00606
	I	9	.00476	.00632		I	39	.00473	.00645
	J	10	.00442	.00615		J	40	.00455	.00636
125	A	11	.00470	.00717	1000	A	41	.00473	—
	B	12	.00449	.00681		B	42	.00461	—
	C	13	.00474	.00644		C	43	.00464	—
	D	14	.00431	.00680		D	44	.00459	—
	E	15	.00470	.00673		E	45	.00462	—
	F	16	.00456	.00699		F	46	.00464	—
	G	17	.00445	.00632		G	47	.00451	—
	H	18 *	.00439	.00634		H	48 *	.00463	—
	I	19	.00452	.00634		I	49	.00470	—
	J	20	.00441	.00630		J	50	.00455	—
250	A	21	.00450	.00619	2000	A	51	.00489	—
	B	22	.00436	.00583		B	52	.00471	—
	C	23	.00446	.00614		C	53	.00458	—
	D	24	.00424	.00615		D	54	.00466	—
	E	25	.00429	.00598		E	55	.00475	—
	F	26	.00444	.00609		F	56	.00467	—
	G	27	.00440	.00606		G	57	.00455	—
	H	28 *	.00455	.00629		H	58 *	.00459	—
	I	29	.00427	.00607		I	59	.00452	—
	J	30	.00475	.00688		J	60	.00494	—

Comments:



**Dry Tissue Weight (cont'd)**

CONC (%)	REP	PAN NO.	TARE WT. (g)	TOTAL WT. (g)	BALANCE ID#	
	A	61				852
	B	62			OVEN ID#	SW-1
	C	63			BALANCE VERIFICATION INITIALS	CBR
	D	64			DATE/ TARE WEIGHT INITIALS	1-30-23 , CBR
	E	65			DATE DRYING INITIATED	2-9-23
	F	66			TIME DRYING INITIATED	1200
	G	67			OVEN TEMP (Act/Corr) (°C)	105 , 105
	H	68			INITIALS	DPO
	I	69				
	J	70				
	A	71			DATE/TIME DRYING TERMINATED	2-10-23 / 1200
	B	72			OVEN TEMP (Act/Corr) (°C)	105 , 105
	C	73			BALANCE VERIFICATION INITIALS	DPO
	D	74			TOTAL WEIGHT DATE/ INITIALS	2-10-23 , DPO
	E	75				
	F	76			COMMENTS:	
	G	77				
	H	78				
	I	79				
	J	80				
QA/QC (pans)		8	.00454	.00669		
		18	.00442	.00634		
		28	.00452	.00628		
		38	.00469	.00608		
		48	.00464	_____		
		58	.00459	_____		

TREAT = Treatment    REP = Replicate    CONT = Control    No. = Number    ORG. = Organism

Test Notes

Comments	Date	Time	Initials

# Analytical Standard Record

**2302028**

Description: Mysid STOX Work Soln (KCI) Expires: 02/09/2023  
Standard Type: Analyte Spike Prepared: 02/02/2023  
Solvent: - Prepared By: Dane De Guzman  
Final Volume (mls): 30000 Department: Toxicology  
Vials: 1 Last Edit: 02/02/2023 09:40 by DPD  
Comments: Measured 60.0g of KCI standard into 1-L volumetric flask and bring to volume with 25ppt saltwater. Add additional 29L to bring final solution to 30L. See attached PDF-file for dilution scheme.

Analyte	Parent	CAS Number	Concentration	Units
---------	--------	------------	---------------	-------

mg/L

### Parent Standards used:

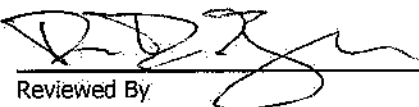
Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2201575	Potassium chloride	02/10/2022	Thermo Fisher Scientific	T02H024	02/10/2025	07/19/2022 09:43 by TRG	60
2301333	Lab Saltwater	01/19/2023	-	-	06/06/2023	01/23/2023 11:25 by AOJ	30000

**Mysid STOX Work Soln (KCI)**

**2302028**

**Expires 02/09/2023**



  
Reviewed By

2-2-23  
Date  
NWDLS Report Package Page 153 of 200

Nwds KCL  
STX

Mb -23-0038

1	59
2	28
3	39
4	30
5	14
6	8
7	11
8	52
9	18
10	54
11	19
12	58
13	10
14	49
15	12
16	33
17	50
18	36
19	34
20	40
21	42
22	43
23	2
24	1
25	35
26	45
27	15
28	7
29	51
30	53
31	56
32	9
33	24
34	29
35	41
36	17
37	6
38	21
39	48
40	38
41	44
42	37
43	27
44	20
45	5
46	32
47	46
48	47
49	60
50	55
51	31
52	23
53	25
54	16
55	3
56	26
57	4
58	57
59	22
60	13

## Bioaccumulation Toxicology Analysis Summary

Bioaccumulation tests were conducted as specified in section 12.0 of the Green Book. Procedures for performing these tests can be found in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA,1991) and Appendix E of the Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S.– Testing Manual (EPA/USACE, 1998). Bioaccumulation was measured on sediments from each channel station, the reference station, and the true control. Sediment for the true control was clean beach sand.

The NWDLS Toxicology Laboratory has separate areas for water and sediment storage, culture of test organisms, and testing to minimize cross-contamination between areas.

Testing was performed in 20°C ± 2°C test chambers for the sand worm bioaccumulation study, and the clam bioaccumulation study was conducted at 14°C ± 2°C. Lighting was arranged for each test phase so that light intensity was approximately 1200 microwatt (μw)/square centimeters (cm<sup>2</sup>) using cool-white fluorescent bulbs with a 16-hour light and 8-hour dark cycle.

Two field-collected organisms, the sand worm, *Alitta virens*, and the quahog clam, *Mercenaria mercenaria*, were analyzed for bioaccumulation. Both organisms were purchased from a commercial dealer, Aquatic Research Organisms, Inc. (ARO), Hampton, New Hampshire.

The sand worms were shipped dry in seaweed and allowed to come to test temperature in the shipping containers, from which they were introduced into the test vessels. The clams were shipped in bags of seawater, which, upon receipt, were aerated and allowed to come to test temperature and salinity. Both organisms were then introduced into the test, reference, or control sediments randomly, based on a computer-generated distribution pattern. Any of the organisms that did not burrow and any organisms that exhibited abnormal behavior, in the first 4 hours after being put into the test vessels, were replaced by healthy organisms. No organisms were held for more than 3 days. The sediment used for the bioaccumulation was sieved.

Ten-gallon aquaria were used in the bioaccumulation study for both sand worms and clams. A loading factor of no more than 1/2 gram of test organism tissue per liter of medium was maintained.

Twenty-four hours after the addition of the sediment, or the end of the acclimation period for the new-work material, the water was changed, and organisms were placed in the test vessels for the bioaccumulation study (20 for the clams and 20 for the sand worms).

- Once prepared, the sediment pore water was tested for ammonia. No samples contained total ammonia > 60 mg/L.
- No test sediment presented the odor of hydrogen sulfide.

Temperature, DO, pH, salinity, and ammonia were recorded daily. Seventy-five percent of the water was siphoned off and replaced 1 hour before and 48 hours after test initiation and at 48-hour intervals thereafter. Aeration was supplied to the sand worms and clams to keep the DO level above 40% of saturation.

The bioaccumulation study was conducted for 28 days following the same procedures as the SP bioassay. After 28 days, the bioaccumulation study was terminated and the sand worms and clams were purged for 24 hours, by replicate, in clean aquaria filled with artificial seawater/ clean sand. After the purge period,

the organisms were sacrificed, the clams were removed from their shells (after initial freezing), and all animals were frozen and distributed for tissue chemistry analysis.

**Bioaccumulation – Clams 28 day (*Mercenaria mercenaria*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Mercenaria mercenaria</i>	Test Type	Bioaccumulation Static Renewal 28 day
Number of Replicates	5	Number of Organisms/ Replicate	20
Test Organism Batch Number	03-0123-MM	Organism Date of Birth or Date Received	03/02/2023
Organism Source	ARO	Organism Age at Test Initiation	Mixed days
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L		
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Sample ID	REF	Field Sampling Date/Time	01/27/2023 09:20
Test Initiation Date/Time	03/03/2023 10:15	Test Termination Date/Time	03/31/2023 09:30
Renewal of Test Solution	48 hr intervals	Feeding	None

Sample ID	Total # of Organisms	Survival (%)	Significant Effect (>10% effect)	Effect (%)
REFERENCE	100	99	No	0.00
HI-DMMU-1	100	98	No	1.01
HI-DMMU-2	100	99	No	0.00
HI-DMMU-3	100	100	No	-1.01
HI-DMMU-4	100	97	No	2.02
HI-DMMU-5	100	99	No	0.00
HI-DMMU-6	100	99	No	0.00
HI-DMMU-7	100	91	No	8.08
HI-DMMU-8	100	96	No	3.03



**CETIS Analytical Report**

**Report Date:** 06 Apr-23 12:04 (p 1 of 2)  
**Test Code/ID:** 23A1459 / 12-6872-3467

<b>Mollusk 28d-Survival and Growth Sediment</b>			<b>NWDLS Environ. Toxicol. Lab</b>		
<b>Analysis ID:</b> 20-8872-6326	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 05 Apr-23 8:49	<b>Analysis:</b> No Statistical Comparisons Run	<b>Status Level:</b> 1			
<b>Batch ID:</b> 13-6734-0432	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay			
<b>Start Date:</b> 03 Mar-23 10:15	<b>Protocol:</b> ASTM E1688-96 (1996)	<b>Diluent:</b> Laboratory Seawater			
<b>Ending Date:</b> 31 Mar-23 09:30	<b>Species:</b> Mercenaria mercenaria	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 27d 23h	<b>Taxon:</b> Bivalvia	<b>Source:</b> Aquatic Research Organism <b>Age:</b>			
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA			
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI			
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 45d 20h	<b>Client:</b> Terracon Consultants, Inc.				

**Comments:**  
 9.6=CDP-6 site and 9.7=CDP 7 site

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.138746	0.0138746	10	3.252	0.0032	Significant Effect
Error	0.187697	0.0042658	44			
Total	0.326442		54			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	2.472	2.754	0.0191	Equal Variances
Variances	Mod Levene Equality of Variance Test	0.8948	2.913	0.5481	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9097	0.9417	5.5E-04	Non-Normal Distribution

**Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
1		5	0.9800	0.9460	1.0000	1.0000	0.9500	1.0000	0.0123	2.79%	1.01%
2		5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
3		5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-1.01%
4		5	0.9700	0.9145	1.0000	1.0000	0.9000	1.0000	0.0200	4.61%	2.02%
5		5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
6		5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
7		5	0.9100	0.8581	0.9619	0.9000	0.8500	0.9500	0.0187	4.60%	8.08%
8		5	0.9600	0.9081	1.0000	0.9500	0.9000	1.0000	0.0187	4.36%	3.03%
9.6		5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
9.7		5	0.9600	0.9081	1.0000	0.9500	0.9000	1.0000	0.0187	4.36%	3.03%

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
1		5	1.413	1.336	1.491	1.459	1.345	1.459	0.0278	4.40%	1.58%
2		5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
3		5	1.459	1.458	1.459	1.459	1.459	1.459	0	0.00%	-1.58%
4		5	1.394	1.276	1.512	1.459	1.249	1.459	0.04241	6.80%	2.92%
5		5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
6		5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
7		5	1.272	1.181	1.364	1.249	1.173	1.345	0.03284	5.77%	11.40%
8		5	1.371	1.261	1.482	1.345	1.249	1.459	0.03975	6.48%	4.50%
9.6		5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
9.7		5	1.371	1.261	1.482	1.345	1.249	1.459	0.03975	6.48%	4.50%

Mollusk 28d-Survival and Growth Sediment

NWDLS Environ. Toxicol. Lab

Analysis ID: 20-8872-6326  
 Analyzed: 05 Apr-23 8:49

Endpoint: Survival Rate  
 Analysis: No Statistical Comparisons Run

CETIS Version: CETISv1.9.4  
 Status Level: 1

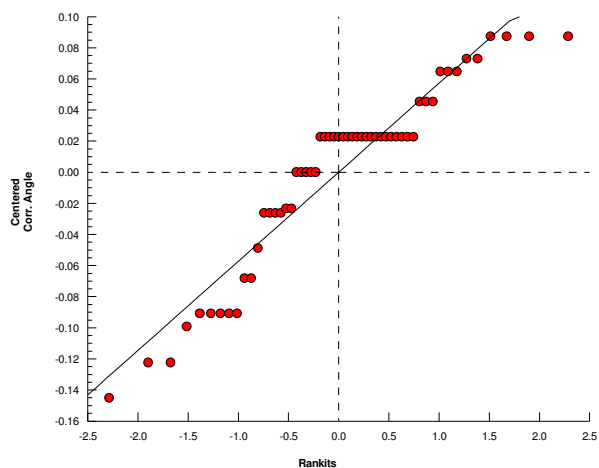
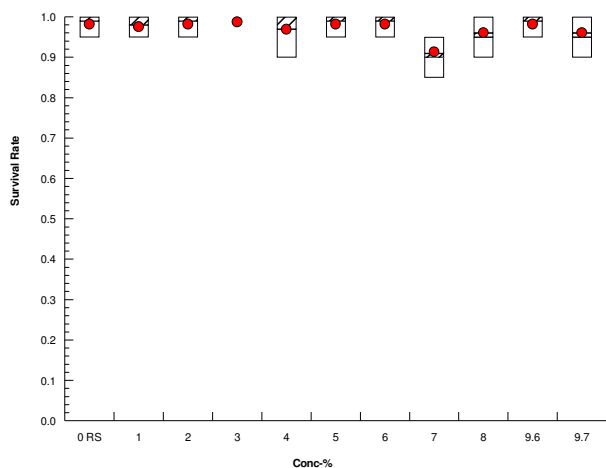
Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	1.0000	0.9500	1.0000	1.0000	1.0000
1		1.0000	0.9500	0.9500	1.0000	1.0000
2		0.9500	1.0000	1.0000	1.0000	1.0000
3		1.0000	1.0000	1.0000	1.0000	1.0000
4		0.9000	0.9500	1.0000	1.0000	1.0000
5		1.0000	1.0000	1.0000	0.9500	1.0000
6		1.0000	0.9500	1.0000	1.0000	1.0000
7		0.9000	0.9000	0.8500	0.9500	0.9500
8		1.0000	1.0000	0.9500	0.9000	0.9500
9.6		0.9500	1.0000	1.0000	1.0000	1.0000
9.7		1.0000	0.9000	1.0000	0.9500	0.9500

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	1.459	1.345	1.459	1.459	1.459
1		1.459	1.345	1.345	1.459	1.459
2		1.345	1.459	1.459	1.459	1.459
3		1.459	1.459	1.459	1.459	1.459
4		1.249	1.345	1.459	1.459	1.459
5		1.459	1.459	1.459	1.345	1.459
6		1.459	1.345	1.459	1.459	1.459
7		1.249	1.249	1.173	1.345	1.345
8		1.459	1.459	1.345	1.249	1.345
9.6		1.345	1.459	1.459	1.459	1.459
9.7		1.459	1.249	1.459	1.345	1.345

Graphics



**CETIS Analytical Report**

**Report Date:** 06 Apr-23 12:05 (p 1 of 2)  
**Test Code/ID:** 23A1459 / 12-6872-3467

<b>Mollusk 28d-Survival and Growth Sediment</b>			<b>NWDLS Environ. Toxicol. Lab</b>		
<b>Analysis ID:</b> 06-4057-0391	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4			
<b>Analyzed:</b> 05 Apr-23 8:51	<b>Analysis:</b> Nonparametric-Two Sample	<b>Status Level:</b> 1			
<b>Batch ID:</b> 13-6734-0432	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay			
<b>Start Date:</b> 03 Mar-23 10:15	<b>Protocol:</b> ASTM E1688-96 (1996)	<b>Diluent:</b> Laboratory Seawater			
<b>Ending Date:</b> 31 Mar-23 09:30	<b>Species:</b> Mercenaria mercenaria	<b>Brine:</b> Instant Ocean			
<b>Test Length:</b> 27d 23h	<b>Taxon:</b> Bivalvia	<b>Source:</b> Aquatic Research Organism <b>Age:</b>			
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA			
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI			
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>			
<b>Sample Age:</b> 45d 20h	<b>Client:</b> Terracon Consultants, Inc.				

**Comments:**

9.6=CDP-6 site and 9.7=CDP 7 site

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Control Sed passed survival rate	2.76%

**Wilcoxon Rank Sum Two-Sample Test**

Control	vs	Control II	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		Control Sed	27.5	n/a	2	8	Exact	0.7778	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.0206028	0.0025754	8			
Total	0.0206028		9			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F Test	1	23.15	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.5093	0.7411	4.7E-06	Non-Normal Distribution

**Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%
0	RS	5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	0.00%

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%
0	RS	5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	0.00%

**Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	1.0000	0.9500	1.0000	1.0000	1.0000
0	RS	1.0000	0.9500	1.0000	1.0000	1.0000

**Angular (Corrected) Transformed Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	1.459	1.345	1.459	1.459	1.459
0	RS	1.459	1.345	1.459	1.459	1.459

Mollusk 28d-Survival and Growth Sediment

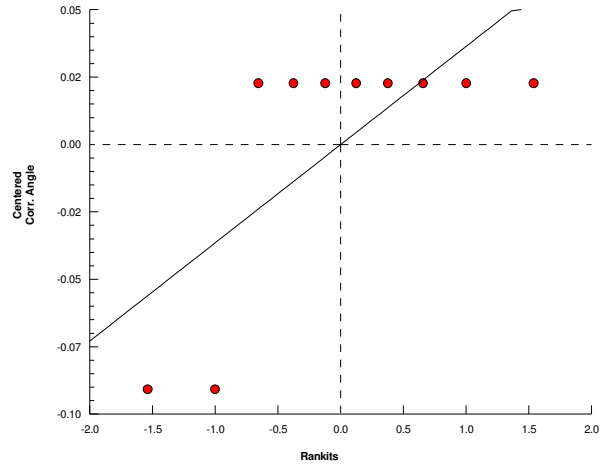
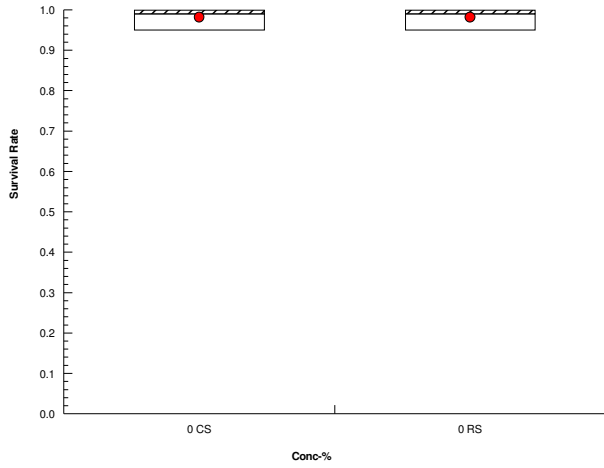
NWDLS Environ. Toxicol. Lab

Analysis ID: 06-4057-0391  
Analyzed: 05 Apr-23 8:51

Endpoint: Survival Rate  
Analysis: Nonparametric-Two Sample

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



Client/Project Name:	PCCA HI & CDP Resampling 2023	WO #:	23A1459
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**Mercenaria mercenaria 28d Test Condition Summary - ASTM E 1688; NWDLS SOP No. 4CDP-83**

Test Material:	Sediment	Test Type:	28d Bioaccumulation Static Renewal
Temperature:	12 - 16 °C	Photoperiod:	16L:8D
Test Chamber:	10 gal glass aquaria	No. Replicates:	5
Test Organism:	<i>Mercenaria mercenaria</i>	Organism Source:	ARO
Organism Batch No.:	030123 MM	Date Received:	3-2-23
Age Class:	mixed ages	No. Organisms/Rep:	25-20
Aeration:	Moderate, overnight before start of test and throughout duration of test; maintain ≥ 90% saturation of dissolved oxygen concentration	Control Sediment:	Clean Beach Sand or sediment from which the test organisms are collected
Feeding Schedule:	None	Food Type:	N/A
Water Type:	≥ 30 ppt Synthetic Seawater ± 2 ppt	Water Volume:	8-9 gal
Renewal Schedule:	48 h intervals, beginning on day 0 (min 3x per week)	Sediment Volume:	1 gal (2 gal for control sediment)

Comments:

Water Changes							
Day	0	2	4	6	8	10	12
Date	3-3-23	3-5-23	3-7-23	3-9-23	3-11-23	3-13-23	3-15-23
Time	0850	1300	0800	0900	0845	0850	0950
Initials	TRG	DPP	TRG	TRG	TRG	TRG	AOS
Day	14	16	18	20	22	24	26
Date	3-17-23	3-19-23	<del>3-21-23</del> <sup>u</sup>	3-23-23	3-25-23	3-27-23	3-29-23
Time	1045	0945	0915	1100	1030	1000	1010
Initials	AOS	AOS	TRG	AOS	AOS/VSC	AOS/VSC	AOS

Initiation Date:	3-3-23	Termination Date:	3-31-23
Initiation Time:	1015	Termination Time:	0930
Initials:	ARM / VSC	Initials:	ARM / DPP / KRE

DEL TRG 3-21-23 → [3-21-23]

**Mercenaria mercenaria - Survival**

Treatment	Rep	Day 0	Day 28		Treatment	Rep	Day 0	Day 28		Treatment	Rep	Day 0	Day 28	
			1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count
CONT	A	20	20	20	HI-DMMU-4		20	18	18	CDP-6	A	20	19	19
	B	20	19	19			20	19	19		B	20	20	20
	C	20	20	20			20	20	20		C	20	20	20
	D	20	20	20			20	20	20		D	20	20	20
	E	20	20	20			20	20	20		E	20	20	20
REF	A	20	20	20	HI-DMMU-5		20	20	20	CDP-7	A	20	20	20
	B	20	19	19			20	20	20		B	20	18	18
	C	20	20	20			20	20	20		C	20	20	20
	D	20	20	20			20	19	19		D	20	19	19
	E	20	20	20			20	20	20		E	20	19	19
HI-DMMU-1	A	20	20	20	HI-DMMU-6		20	20	20		A			
	B	20	19	19			20	19	19		B			
	C	20	19	19			20	20	20		C			
	D	20	20	20			20	20	20		D			
	E	20	20	20			20	20	20		E			
HI-DMMU-2	A	20	19	19	HI-DMMU-7		20	18	18		A			
	B	20	20	20			20	18	18		B			
	C	20	20	20			20	17	17		C			
	D	20	20	20			20	19	19		D			
	E	20	20	20			20	19	19		E			
HI-DMMU-3	A	20	20	20	HI-DMMU-8		20	20	20		A			
	B	20	20	20			20	20	20		B			
	C	20	20	20			20	19	19		C			
	D	20	20	20			20	18	18		D			
	E	20	20	20			20	19	19		E			

Tech Initials	ASH/KRE	ASH/KRE	VJC/KRE		ASH/KRE	KNE/ASH	VJC/KRE		Tech Initials:	KAT/ASH	DAB/VJC	VJC/KRE
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pH OLD/NEW															Meter # 737
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	8.1	8.0	8.1	8.0	7.9	7.9	8.0	7.9	8.0	7.9	8.0	8.0	8.0	8.1	8.1
REF		8.0		8.0	8.0		8.0	8.0		7.9	8.0		8.0	8.0	
HI-DMMU-1		8.1		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.1	
HI-DMMU-2		8.1		8.0	8.0		8.0	8.0		8.1	8.1		8.0	8.1	
HI-DMMU-3		8.1		8.0	8.0		8.0	8.0		8.0	8.1		8.1	8.0	
HI-DMMU-4		8.1		8.0	8.0		8.1	8.0		8.1	8.1		8.1	8.0	
HI-DMMU-5		8.1		8.0	8.0		8.1	8.0		8.0	8.1		8.1	8.1	
HI-DMMU-6		8.1		8.1	8.0		8.0	8.0		8.0	8.1		8.2	8.1	
HI-DMMU-7		8.1		8.1	8.1		8.0	8.1		8.1	8.1		8.2	8.2	
HI-DMMU-8		8.1		8.1	8.1		8.0	8.1		8.0	8.1		8.1	8.1	
CDP-6		8.1		8.1	8.1		8.0	8.1		8.0	8.1		8.1	8.1	
CDP-7		8.0		8.1	8.1		8.0	8.1		8.0	8.1		8.1	8.1	

DISSOLVED OXYGEN (mg/L) OLD/NEW															Meter # 4526
Control	9.1	9.3	9.1	9.1	9.4	9.2	9.5	9.6	9.4	9.6	9.7	9.3	9.6	9.5	9.2
REF		9.3		9.1	9.4		9.5	9.6		9.5	9.7		9.7	9.6	
HI-DMMU-1		9.3		9.1	9.4		9.6	9.2		9.6	9.7		9.7	9.5	
HI-DMMU-2		9.3		9.1	9.4		9.6	9.7		9.7	9.7		9.6	9.7	
HI-DMMU-3		9.4		9.1	9.4		9.6	9.7		9.7	9.7		9.6	9.7	
HI-DMMU-4		9.4		9.7	9.4		9.6	9.7		9.6	9.7		9.6	9.7	
HI-DMMU-5		9.4		9.7	9.4		9.6	9.7		9.6	9.7		9.7	9.5	
HI-DMMU-6		9.4		9.1	9.4		9.6	9.7		9.6	9.7		9.7	9.5	
HI-DMMU-7		9.4		9.1	9.4		9.6	9.7		9.7	9.7		9.7	9.5	
HI-DMMU-8		9.4		9.1	9.4		9.6	9.5		9.7	9.7		9.7	9.5	
CDP-6		9.4		9.1	9.4		9.6	9.7		9.7	9.7		9.7	9.5	
CDP-7		9.4		9.1	9.4		9.6	9.7		9.7	9.7		9.7	9.5	

Salinity (ppt)															Meter # 948
Control	29.8	29.9	29.8	29.7	29.6	29.6	29.9	29.9	28.2	29.1	29.7	28.4	28.7	28.5	28.6
REF		29.9		29.7	29.8		29.9	30.0		29.2	29.7		28.7	28.5	
HI-DMMU-1		29.9		29.8	29.9		30.1	30.1		29.2	29.3		28.6	28.6	
HI-DMMU-2		29.8		29.9	29.9		30.0	30.1		29.2	29.7		28.6	28.5	
HI-DMMU-3		29.8		29.8	29.9		30.1	30.1		29.3	29.4		28.5	28.5	
HI-DMMU-4		29.8		29.8	29.8		29.9	30.1		29.2	29.3		28.6	28.5	
HI-DMMU-5		29.8		30.1	29.8		29.9	30.1		29.7	29.2		28.7	28.6	
HI-DMMU-6		29.8		30.1	29.8		29.7	29.9		29.1	29.2		28.6	28.5	
HI-DMMU-7		29.8		30.1	29.8		29.8	30.1		29.2	29.3		28.6	28.5	
HI-DMMU-8		29.8		30.0	29.8		29.8	30.0		29.3	29.2		28.6	28.5	
CDP-6		29.9		30.0	29.8		29.8	29.8		29.3	29.2		28.6	28.4	
CDP-7		29.8		30.0	29.8		29.9	29.9		29.2	29.2		28.4	28.4	

TEMPERATURE (°C) OLD/NEW (Actual / Corrected) Therm# 737 Offset# 0															
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	14.6	14.8	14.7	14.8	14.9	15.0	15.1	15.0	15.0	15.0	14.9	14.8	14.7	14.8	14.8
REF		14.7		14.6	14.9		15.2	15.1		15.0	14.9		14.7	14.8	
HI-DMMU-1		14.8		14.7	14.9		15.2	15.0		15.0	15.1		14.8	14.8	
HI-DMMU-2		14.8		14.7	14.9		15.2	15.1		15.1	14.9		14.6	14.8	
HI-DMMU-3		14.7		14.6	14.9		15.2	15.1		15.0	15.2		14.9	14.8	
HI-DMMU-4		14.7		14.7	14.9		15.1	15.0		15.0	14.9		14.8	14.8	
HI-DMMU-5		14.7		14.8	14.9		15.1	15.0		15.1	14.9		14.7	14.7	
HI-DMMU-6		14.7		14.8	14.9		15.0	14.9		15.1	14.9		14.6	14.7	
HI-DMMU-7		14.6		14.8	14.9		15.0	14.9		15.0	15.0		14.7	14.8	
HI-DMMU-8		14.6		14.8	14.9		14.9	15.0		15.1	15.0		14.8	14.8	
CDP-6		14.6		14.8	14.9		14.9	15.0		15.1	14.9		14.8	14.9	
CDP-7		14.6		14.8	14.9		14.9	14.9		15.0	14.9		14.8	14.9	
Initials	me	me	me	BRM/DOA	BRM/DOA		me	me	me	me	me	me	me	me	me



pH OLD/NEW Meter # 737															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	8.0	8.1	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.9	8.0	8.0	8.1	8.0	8.0
REF	8.2	8.1		8.1	8.0		8.0	8.1		8.1	8.0		8.1	8.1	
HI-DMMU-1	8.1	8.1		8.1	8.1		8.0	8.1		8.1	8.1		8.2	8.1	
HI-DMMU-2	8.1	8.2		8.1	8.1		8.0	8.1		8.2	8.1		8.1	8.1	
HI-DMMU-3	8.1	8.2		8.1	8.1		8.1	8.1		8.2	8.1		8.1	8.1	
HI-DMMU-4	8.1	8.1		8.1	8.1		8.1	8.1		8.2	8.1		8.2	8.1	
HI-DMMU-5	8.1	8.1		8.1	8.1		8.1	8.1		8.2	8.1		8.2	8.1	
HI-DMMU-6	8.1	8.2		8.1	8.1		8.1	8.1		8.1	8.1		8.2	8.1	
HI-DMMU-7	8.1	8.2		8.1	8.1		8.1	8.1		8.1	8.1		8.1	8.1	
HI-DMMU-8	8.1	8.2		8.1	8.1		8.1	8.1		8.1	8.1		8.2	8.1	
CDP-6	8.1	8.1		8.1	8.1		8.1	8.1		8.1	8.1		8.1	8.1	
CDP-7	8.1	8.1		8.1	8.1		8.1	8.1		8.1	8.1		8.2	8.1	

DISSOLVED OXYGEN (mg/L) OLD/NEW Meter # 4516															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	9.7	9.8	9.3	9.7	9.6	9.2	9.8	9.9	9.4	9.7	9.6	9.1	9.5	9.6	9.4
REF	9.7	9.9		9.8	9.6		9.8	9.9		9.7	9.7		9.6	9.6	
HI-DMMU-1	9.7	9.8		9.8	9.6		9.8	9.9		9.7	9.7		9.6	9.7	
HI-DMMU-2	9.7	9.8		9.8	9.7		9.8	9.9		9.7	9.8		9.6	9.7	
HI-DMMU-3	9.7	9.7		9.8	9.7		9.8	9.9		9.8	9.8		9.7	9.7	
HI-DMMU-4	9.7	9.7		9.8	9.7		9.9	9.9		9.8	9.8		9.7	9.7	
HI-DMMU-5	9.7	9.7		9.8	9.8		9.9	9.9		9.9	9.9		9.7	9.7	
HI-DMMU-6	9.7	9.6		9.8	9.8		9.9	9.9		9.8	9.9		9.8	9.7	
HI-DMMU-7	9.7	9.8		9.7	9.9		9.9	9.9		9.9	10.1		9.9	9.7	
HI-DMMU-8	9.7	9.8		9.7	9.9		9.9	10.0		9.9	10.1		9.9	9.8	
CDP-6	9.7	9.7		9.7	9.9		9.9	10.1		10.0	10.0		9.8	9.8	
CDP-7	9.6	9.2		9.8	9.9		9.9	10.1		10.0	10.1		9.9	9.7	

Salinity (ppt) Meter # 948															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	28.6	28.7	28.6	28.5	28.8		28.8	28.7	29.1	29.0	29.1	29.7	29.1	29.2	28.6
REF	28.6	28.6		28.7	28.8		28.8	28.7		28.9	29.1		29.1	29.0	
HI-DMMU-1	28.5	28.6		28.7	28.9		28.7	28.7		28.9	29.2		29.0	29.0	
HI-DMMU-2	28.6	28.7		28.7	28.9		28.7	28.7		28.9	29.1		29.2	29.1	
HI-DMMU-3	28.6	28.7		28.6	28.9		28.7	28.7		28.9	29.1		29.3	29.1	
HI-DMMU-4	28.6	28.8		28.6	28.9		28.7	28.7		28.9	29.1		29.4	29.2	
HI-DMMU-5	28.7	28.9		28.7	28.9		28.7	28.8		28.9	29.1		29.3	29.2	
HI-DMMU-6	28.7	28.9		28.8	28.9		28.8	28.8		28.9	29.0		29.4	29.4	
HI-DMMU-7	28.7	28.8		28.7	28.9		28.8	28.8		28.9	29.0		29.3	29.1	
HI-DMMU-8	28.7	28.8		28.7	29.0		28.8	28.8		28.9	29.0		29.3	29.3	
CDP-6	28.7	28.8		28.8	29.0		28.8	28.9		28.9	29.0		29.4	29.4	
CDP-7	28.7	28.9		28.7	29.0		28.8	28.9		28.9	29.1		29.3	29.4	

TEMPERATURE (°C) OLD/NEW (Actual / Corrected)														Therm# 737	Offset# 0
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	14.9	15.2	15.0	14.8	14.7	14.9	15.0	14.7	14.9	14.7	14.9	14.9	14.4	14.5	14.8
REF	14.8	15.1		14.8	14.7		14.9	14.7		14.7	14.4		14.3	14.5	
HI-DMMU-1	14.6	14.9		14.8	14.7		14.9	14.6		14.8	14.5		14.4	14.5	
HI-DMMU-2	14.8	14.8		14.8	14.7		14.9	14.6		14.8	14.5		14.5	14.5	
HI-DMMU-3	14.7	14.6		14.8	14.7		14.8	14.6		14.7	14.5		14.6	14.5	
HI-DMMU-4	14.7	14.8		14.8	14.9		14.8	14.6		14.8	14.6		14.6	14.6	
HI-DMMU-5	14.7	14.9		14.6	14.9		14.9	14.7		14.8	14.6		14.5	14.6	
HI-DMMU-6	14.7	14.9		14.6	14.7		14.8	14.7		14.8	14.6		14.6	14.6	
HI-DMMU-7	14.7	14.9		14.7	14.9		14.8	14.7		14.7	14.6		14.7	14.6	
HI-DMMU-8	14.6	14.8		14.8	14.9		14.8	14.7		14.7	14.6		14.7	14.5	
CDP-6	14.7	14.8		14.7	14.8		14.7	14.7		14.7	14.6		14.7	14.5	
CDP-7	14.7	14.8		14.7	14.9		15.0	14.8		14.7	14.7		14.7	14.6	
Initials	ML	ML	ML	ML	ML		ML	ML		ML/ML	ML/ML		ML	ML	ML

pH OLD/NEW Meter # 737															
Day	19-O	20-O	20-N	21-O	22-O	22-N	23-O	24-O	24-N	25-O	26-O	26-N	27-O	28-O	28-N
Control	8.0	8.0	8.0	8.0	8.1	8.0	8.1	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.1
REF	8.0	8.1		8.0	8.1		8.1	8.1		8.1	8.1		8.1	8.1	
HI-DMMU-1	8.0	8.1		8.0	8.1		8.1	8.1		8.1	8.1		8.1	8.1	
HI-DMMU-2	8.1	8.1		8.1	8.1		8.1	8.1		8.0	8.0		8.2	8.1	
HI-DMMU-3	8.1	8.1		8.0	8.2		8.1	8.1		8.0	8.0		8.2	8.1	
HI-DMMU-4	8.1	8.1		8.0	8.2		8.1	8.1		8.1	8.1		8.2	8.1	
HI-DMMU-5	8.1	8.1		8.1	8.2		8.1	8.1		8.0	8.1		8.2	8.1	
HI-DMMU-6	8.1	8.1		8.0	8.3		8.2	8.1		8.1	8.1		8.2	8.2	
HI-DMMU-7	8.1	8.1		8.1	8.2		8.2	8.2		8.1	8.1		8.2	8.2	
HI-DMMU-8	8.2	8.2		8.1	8.2		8.2	8.2		8.1	8.1		8.2	8.2	
CDP-6	8.2	8.2		8.1	8.2		8.2	8.2		8.2	8.2		8.2	8.2	
CDP-7	8.1	8.2		8.1	8.2		8.3	8.1		8.1	8.2		8.2	8.2	

DISSOLVED OXYGEN (mg/L) OLD/NEW Meter # YTE6															
Control	REF	HI-DMMU-1	HI-DMMU-2	HI-DMMU-3	HI-DMMU-4	HI-DMMU-5	HI-DMMU-6	HI-DMMU-7	HI-DMMU-8	CDP-6	CDP-7				
Control	9.8	9.8	9.4	9.7	9.7	8.7	9.6	9.8	9.2	9.5	9.6	9.1	9.4	9.5	9.1
REF	9.9	9.8		9.7	9.7		9.6	9.8		9.6	9.6		9.5	9.6	
HI-DMMU-1	9.9	9.8		9.5	9.8		9.6	9.7		9.6	9.6		9.5	9.6	
HI-DMMU-2	9.9	9.8		9.8	9.8		9.6	9.8		9.8	9.7		9.5	9.6	
HI-DMMU-3	9.9	9.8		9.8	9.8		9.6	9.8		9.8	9.7		9.6	9.6	
HI-DMMU-4	9.9	9.8		9.8	9.8		9.6	9.8		9.9	9.7		9.6	9.7	
HI-DMMU-5	9.9	9.8		9.8	9.8		9.6	9.8		9.8	9.7		9.6	9.7	
HI-DMMU-6	9.8	9.9		9.7	9.8		9.6	9.7		9.8	9.6		9.6	9.6	
HI-DMMU-7	9.7	9.8		9.8	9.8		9.6	9.7		9.9	9.7		9.7	9.6	
HI-DMMU-8	9.7	9.8		9.8	9.7		9.6	9.7		9.9	9.7		9.7	9.6	
CDP-6	9.8	9.8		9.8	9.7		9.6	9.7		9.8	9.7		9.8	9.6	
CDP-7	9.8	9.4		9.8	9.7		9.6	9.7		9.8	9.7		9.7	9.6	

Salinity (ppt) Meter # 948															
Control	REF	HI-DMMU-1	HI-DMMU-2	HI-DMMU-3	HI-DMMU-4	HI-DMMU-5	HI-DMMU-6	HI-DMMU-7	HI-DMMU-8	CDP-6	CDP-7				
Control	28.7	28.8	28.8	28.7	28.9	28.9	29.0	29.3	28.4	28.9	28.6	29.0	28.8	28.9	29.0
REF	28.6	28.7		28.5	28.8		29.1	29.4		28.8	28.7		28.9	29.0	
HI-DMMU-1	28.5	28.6		28.7	28.8		29.1	29.4		28.8	28.7		28.7	28.8	
HI-DMMU-2	28.6	28.7		28.5	28.9		29.1	29.4		28.7	28.5		28.8	29.1	
HI-DMMU-3	28.5	28.6		28.7	28.8		29.1	29.3		28.7	28.6		28.8	29.0	
HI-DMMU-4	28.6	28.7		28.5	28.9		29.1	29.2		28.7	28.6		28.8	29.0	
HI-DMMU-5	28.5	28.7		29.0	29.1		29.1	29.2		28.8	28.6		28.8	28.9	
HI-DMMU-6	28.5	28.6		29.0	29.1		29.1	29.1		28.7	28.7		28.9	29.0	
HI-DMMU-7	28.6	28.6		29.1	29.0		29.1	29.1		28.7	28.6		28.8	29.0	
HI-DMMU-8	28.7	28.7		28.7	28.9		29.1	29.1		28.6	28.7		28.6	28.9	
CDP-6	28.6	28.7		28.8	28.9		29.1	29.1		28.6	28.6		28.7	28.9	
CDP-7	28.6	28.7		28.8	28.8		29.1	29.0		28.7	28.7		28.7	29.0	

TEMPERATURE (°C) OLD/NEW (Actual / Corrected)														Therm#	Offset#
Day	19-O	20-O	20-N	21-O	22-O	22-N	23-O	24-O	24-N	25-O	26-O	26-N	27-O	28-O	28-N
Control	14.6	14.7	15.4	15.2	14.7	14.9	14.6	14.7	15.5	15.0	15.0	15.0	14.9	14.8	14.8
REF	14.8	14.5		15.1	14.7		14.6	14.6		15.1	14.5		14.9	14.7	
HI-DMMU-1	14.7	14.7		15.1	14.7		14.7	14.8		15.1	14.5		14.5	14.7	
HI-DMMU-2	14.9	14.5		15.1	14.8		14.7	14.7		15.1	14.5		14.7	14.6	
HI-DMMU-3	14.7	14.5		15.1	14.8		14.8	14.7		15.1	14.5		14.2	14.6	
HI-DMMU-4	14.5	14.5		15.1	14.8		14.8	14.5		15.0	14.8		14.9	14.7	
HI-DMMU-5	14.6	14.8		15.2	14.8		14.9	14.6		14.5	14.7		14.8	14.5	
HI-DMMU-6	14.5	14.9		15.2	14.9		14.9	14.6		14.5	14.7		14.8	14.2	
HI-DMMU-7	14.5	14.9		15.2	14.9		14.7	14.7		15.1	14.5		14.9	14.8	
HI-DMMU-8	14.5	14.5		15.1	14.8		14.7	14.7		15.2	14.5		15.0	14.5	
CDP-6	14.5	14.5		15.1	14.8		14.7	14.2		15.1	14.5		14.4	14.8	
CDP-7	14.7	14.5		15.1	14.8		14.7	14.2		15.1	14.5		14.6	14.5	
Initials	ML	ML	ML	ML	ML		ML	ML	ML	ML	ML	ML	ML	ML	ML

Daily Water Quality Characteristics

Ammonia - Old/New

Day	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Cont-O	.001	.007													
REF		.003													
HI-DMMU-1		.006													
HI-DMMU-2		.005													
HI-DMMU-3		.005													
HI-DMMU-4		.005													
HI-DMMU-5		.009													
HI-DMMU-6		.004													
HI-DMMU-7		.008													
HI-DMMU-8		.006													
CDP-6		.009													
CDP-7		.008													
Cont-N		.001													
Date															
Time															
Initials	NL	NL													
Meter #	566	566													
Day	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Cont-O															
REF															
HI-DMMU-1															
HI-DMMU-2															
HI-DMMU-3															
HI-DMMU-4															
HI-DMMU-5															
HI-DMMU-6															
HI-DMMU-7															
HI-DMMU-8															
CDP-6															
CDP-7															
Cont-N															
Date															
Time															
Initials															
Meter #															

Tissue Weight - *M. mercenaria*

Treatment/Site (%)	REP	TOTAL WT (g)	Treatment/Site (%)	REP	TOTAL WT (g)	Treatment/Site (%)	REP	TOTAL WT (g)
ARCHIVES	A	241.6	HI-DMMU-5	A	235.7	CONTROL	A	236.9
	B	254.9		B	219.1		B	224.1
	C	212.9		C	233.3		C	254.2
	D	260.0		D	194.0		D	237.0
	E	232.4		E	263.8		E	242.6
REF	A	217.6	HI-DMMU-6	A	207.3		A	
	B	275.7		B	235.6		B	
	C	267.7		C	259.7		C	
	D	276.5		D	247.9		D	
	E	276.5 ①		E	259.4		E	
HI-DMMU-1	A	215.5	HI-DMMU-7	A	260.5		A	
	B	244.6		B	208.5		B	
	C	240.0		C	238.0		C	
	D	234.9		D	242.7		D	
	E	224.2		E	262.1		E	
HI-DMMU-2	A	245.7	HI-DMMU-8	A	206.9		A	
	B	257.7		B	211.8		B	
	C	278.3		C	240.7		C	
	D	243.2		D	256.5		D	
	E	223.8		E	260.5		E	
HI-DMMU-3	A	269.3	CDP-6	A	215.7		A	
	B	204.6		B	240.6		B	
	C	278.5		C	257.2		C	
	D	259.4		D	255.4		D	
	E	236.4		E	291.5		E	
HI-DMMU-4	A	252.4	CDP-7	A	261.2		A	
	B	264.8		B	207.4		B	
	C	280.4		C	251.0		C	
	D	225.2		D	245.4		D	
	E	292.5		E	235.6		E	

DATE 4-5-23 TIME 1 BALANCE ID 296 INITIALS LBU

CONT = Control CONC = Concentration REP = Replicate  
Wt. = Weight ORG. = Organism

① IFLBU 4-5-23 → [239.3]



# Aquatic Research Organisms

## DATA SHEET

### I. Organism History

Species Mercenaria mercenaria

Source: Lab reared \_\_\_\_\_ Hatchery reared \_\_\_\_\_ Field collected \_\_\_\_\_

Hatch date mixed ages Receipt date 03/01/23

Lot number 030/23MM Strain WILD

Brood origination ME

### II. Water Quality

Temperature 6 °C Salinity 30 ppt D.O. sat ppm

pH 8.4 su Hardness — ppm Alkalinity — ppm

### III. Culture Conditions

Freshwater \_\_\_\_\_ Saltwater  Other \_\_\_\_\_

Recirculating \_\_\_\_\_ Flow through  Static renewal \_\_\_\_\_

DIET: Flake food \_\_\_\_\_ Phytoplankton  Trout chow \_\_\_\_\_

Artemia \_\_\_\_\_ Rotifers \_\_\_\_\_ YCT \_\_\_\_\_ Other \_\_\_\_\_

Prophylactic treatments: \_\_\_\_\_

Comments: \_\_\_\_\_

### IV. Shipping Information

Client: NWDL5 # of Organisms 1400+

Carrier: FED EX Date shipped 03/01/23

Biologist: Stan Dunlop

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 [AROFISH@AOL.COM](mailto:AROFISH@AOL.COM)

**Bioaccumulation – Sand worms 28 day (*Alitta virens*)**

<b>PCCA HI &amp; CDP Resampling 2023</b>			
Test Organism	<i>Alitta virens</i>	Test Type	Bioaccumulation Static Renewal 28 day
Number of Replicates	5	Number of Organisms/ Replicate	20
Test Organism Batch Number	03-0123-NV	Organism Date of Birth or Date Received	03/02/2023
Organism Source	ARO	Organism Age at Test Initiation	3-15 g adults
Dissolved Oxygen	≥ 4.0 mg/L	Temperature	20 ± 2 °C
Salinity	30 ± 2‰	pH	6.0 – 9.0 S.U.
Ammonia	< 5 mg/L		
Sample ID	HI-DMMU-1	Field Sampling Date/Time	01/16/2023 14:20
Sample ID	HI-DMMU-2	Field Sampling Date/Time	01/16/2023 17:20
Sample ID	HI-DMMU-3	Field Sampling Date/Time	01/19/2023 15:20
Sample ID	HI-DMMU-4	Field Sampling Date/Time	01/19/2023 17:00
Sample ID	HI-DMMU-5	Field Sampling Date/Time	01/18/2023 09:40
Sample ID	HI-DMMU-6	Field Sampling Date/Time	01/18/2023 11:15
Sample ID	HI-DMMU-7	Field Sampling Date/Time	01/16/2023 16:37
Sample ID	HI-DMMU-8	Field Sampling Date/Time	01/18/2023 14:10
Sample ID	REF	Field Sampling Date/Time	01/27/2023 09:20
Test Initiation Date/Time	03/03/2023 11:10	Test Termination Date/Time	03/31/2023 10:20
Renewal of Test Solution	48 hr intervals	Feeding	None



Sample ID	Total # of Organisms	Survival (%)	Significant Effect (>10% effect)	Effect (%)
REFERENCE	100	96	No	0.00
HI-DMMU-1	100	100	No	-4.17
HI-DMMU-2	100	99	No	-3.13
HI-DMMU-3	100	95	No	1.04
HI-DMMU-4	100	97	No	-1.04
HI-DMMU-5	100	100	No	-4.17
HI-DMMU-6	100	93	No	3.12
HI-DMMU-7	100	89	No	7.29
HI-DMMU-8	100	95	No	1.04

# CETIS Analytical Report

Report Date: 06 Apr-23 12:06 (p 1 of 2)  
 Test Code/ID: 23A1459 / 02-7830-1917

## Polychaete Survival and Growth Test

NWDLS Environ. Toxicol. Lab

<b>Analysis ID:</b> 16-7251-0148	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 05 Apr-23 8:40	<b>Analysis:</b> No Statistical Comparisons Run	<b>Status Level:</b> 1
<b>Batch ID:</b> 09-0451-6552	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 03 Mar-23 11:10	<b>Protocol:</b> EC/EPS 1/RM/41	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 31 Mar-23 10:20	<b>Species:</b> Neanthes arenaceodentata	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 27d 23h	<b>Taxon:</b> Polychaeta	<b>Source:</b> Aquatic Research Organisms <b>Age:</b>
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 45d 21h	<b>Client:</b> Terracon Consultants, Inc.	

### Comments:

9.6=CDP-6 site and 9.7=CDP 7 site

### ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.273878	0.0273878	10	3.008	0.0056	Significant Effect
Error	0.40059	0.0091043	44			
Total	0.674468		54			

### Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	3.059	2.754	0.0050	Unequal Variances
Variances	Mod Levene Equality of Variance Test	1.228	2.913	0.3099	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9504	0.9417	0.0240	Normal Distribution

### Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	0.9600	0.9081	1.0000	0.9500	0.9000	1.0000	0.0187	4.36%	0.00%
1		5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-4.17%
2		5	0.9900	0.9622	1.0000	1.0000	0.9500	1.0000	0.0100	2.26%	-3.13%
3		5	0.9500	0.9061	0.9939	0.9500	0.9000	1.0000	0.0158	3.72%	1.04%
4		5	0.9700	0.9145	1.0000	1.0000	0.9000	1.0000	0.0200	4.61%	-1.04%
5		5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-4.17%
6		5	0.9300	0.8358	1.0000	0.9500	0.8000	1.0000	0.0339	8.15%	3.12%
7		5	0.8900	0.7979	0.9821	0.9000	0.8000	1.0000	0.0332	8.33%	7.29%
8		5	0.9500	0.9061	0.9939	0.9500	0.9000	1.0000	0.0158	3.72%	1.04%
9.6		5	0.9400	0.8380	1.0000	1.0000	0.8500	1.0000	0.0367	8.74%	2.08%
9.7		5	0.8900	0.8091	0.9709	0.9000	0.8000	0.9500	0.0292	7.32%	7.29%

### Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	RS	5	1.371	1.261	1.482	1.345	1.249	1.459	0.03975	6.48%	0.00%
1		5	1.459	1.458	1.459	1.459	1.459	1.459	0	0.00%	-6.37%
2		5	1.436	1.373	1.499	1.459	1.345	1.459	0.02269	3.53%	-4.71%
3		5	1.349	1.256	1.441	1.345	1.249	1.459	0.03323	5.51%	1.65%
4		5	1.394	1.276	1.512	1.459	1.249	1.459	0.04241	6.80%	-1.65%
5		5	1.459	1.458	1.459	1.459	1.459	1.459	0	0.00%	-6.37%
6		5	1.32	1.16	1.48	1.345	1.107	1.459	0.05765	9.76%	3.72%
7		5	1.247	1.083	1.412	1.249	1.107	1.459	0.05911	10.59%	9.04%
8		5	1.349	1.256	1.441	1.345	1.249	1.459	0.03323	5.51%	1.65%
9.6		5	1.344	1.15	1.539	1.459	1.173	1.459	0.06997	11.64%	1.96%
9.7		5	1.244	1.113	1.375	1.249	1.107	1.345	0.04706	8.46%	9.29%

Polychaete Survival and Growth Test

NWDLS Environ. Toxicol. Lab

Analysis ID: 16-7251-0148  
 Analyzed: 05 Apr-23 8:40

Endpoint: Survival Rate  
 Analysis: No Statistical Comparisons Run

CETIS Version: CETISv1.9.4  
 Status Level: 1

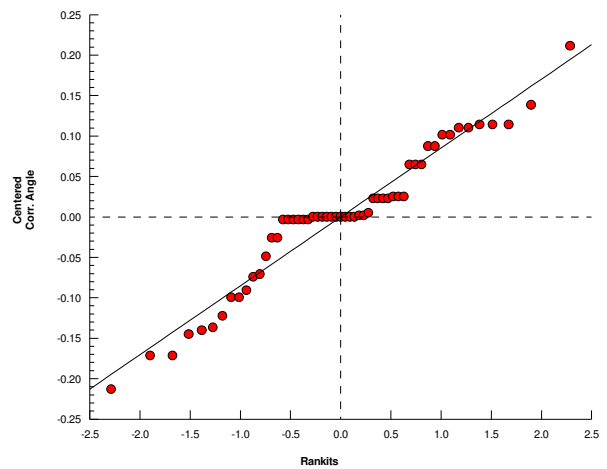
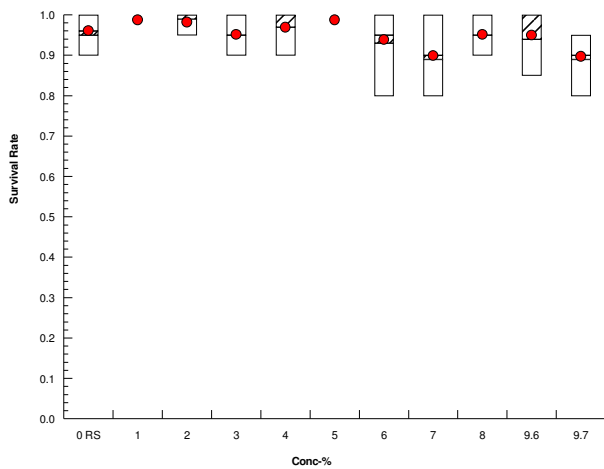
Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	0.9000	0.9500	1.0000	0.9500	1.0000
1		1.0000	1.0000	1.0000	1.0000	1.0000
2		0.9500	1.0000	1.0000	1.0000	1.0000
3		0.9500	1.0000	0.9000	0.9500	0.9500
4		0.9500	1.0000	1.0000	1.0000	0.9000
5		1.0000	1.0000	1.0000	1.0000	1.0000
6		0.9500	0.8000	0.9500	1.0000	0.9500
7		0.9000	1.0000	0.8500	0.9000	0.8000
8		0.9500	0.9000	0.9500	0.9500	1.0000
9.6		1.0000	1.0000	0.8500	0.8500	1.0000
9.7		0.8000	0.9500	0.8500	0.9000	0.9500

Angular (Corrected) Transformed Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	RS	1.249	1.345	1.459	1.345	1.459
1		1.459	1.459	1.459	1.459	1.459
2		1.345	1.459	1.459	1.459	1.459
3		1.345	1.459	1.249	1.345	1.345
4		1.345	1.459	1.459	1.459	1.249
5		1.459	1.459	1.459	1.459	1.459
6		1.345	1.107	1.345	1.459	1.345
7		1.249	1.459	1.173	1.249	1.107
8		1.345	1.249	1.345	1.345	1.459
9.6		1.459	1.459	1.173	1.173	1.459
9.7		1.107	1.345	1.173	1.249	1.345

Graphics



**CETIS Analytical Report**

**Report Date:** 05 Apr-23 08:53 (p 1 of 2)  
**Test Code/ID:** 23A1459 / 02-7830-1917

**Polychaete Survival and Growth Test** **NWDLS Environ. Toxicol. Lab**

<b>Analysis ID:</b> 09-3773-8075	<b>Endpoint:</b> Survival Rate	<b>CETIS Version:</b> CETISv1.9.4
<b>Analyzed:</b> 05 Apr-23 8:43	<b>Analysis:</b> Parametric-Two Sample	<b>Status Level:</b> 1
<b>Batch ID:</b> 09-0451-6552	<b>Test Type:</b> Survival-Growth	<b>Analyst:</b> Theran Gay
<b>Start Date:</b> 03 Mar-23 11:10	<b>Protocol:</b> EC/EPS 1/RM/41	<b>Diluent:</b> Laboratory Seawater
<b>Ending Date:</b> 31 Mar-23 10:20	<b>Species:</b> Neanthes arenaceodentata	<b>Brine:</b> Instant Ocean
<b>Test Length:</b> 27d 23h	<b>Taxon:</b> Polychaeta	<b>Source:</b> Aquatic Research Organisms <b>Age:</b>
<b>Sample ID:</b> 00-2847-2144	<b>Code:</b> 1B27350	<b>Project:</b> PCCA
<b>Sample Date:</b> 16 Jan-23 14:20	<b>Material:</b> SPP	<b>Source:</b> PCCA-HI
<b>Receipt Date:</b> 19 Jan-23 17:30	<b>CAS (PC):</b>	<b>Station:</b>
<b>Sample Age:</b> 45d 21h	<b>Client:</b> Terracon Consultants, Inc.	

**Comments:**  
 9.6=CDP-6 site and 9.7=CDP 7 site

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Control Sed passed survival rate	8.75%

**Equal Variance t Two-Sample Test**

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Reference Sed		Control Sed	1.682	1.86	0.160	8	CDF	0.0655	Non-Significant Effect

**ANOVA Table**

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.052656	0.052656	1	2.829	0.1311	Non-Significant Effect
Error	0.148897	0.0186121	8			
Total	0.201553		9			

**Distributional Tests**

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F Test	3.712	23.15	0.2320	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9547	0.7411	0.7245	Normal Distribution

**Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	0.8700	0.7413	0.9987	0.8500	0.7500	1.0000	0.0464	11.92%	0.00%
0	RS	5	0.9600	0.9081	1.0000	0.9500	0.9000	1.0000	0.0187	4.36%	-10.34%

**Angular (Corrected) Transformed Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	CS	5	1.226	1.014	1.439	1.173	1.047	1.459	0.07658	13.96%	0.00%
0	RS	5	1.371	1.261	1.482	1.345	1.249	1.459	0.03975	6.48%	-11.83%

**Survival Rate Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	1.0000	0.8500	0.9500	0.8000	0.7500
0	RS	0.9000	0.9500	1.0000	0.9500	1.0000

**Angular (Corrected) Transformed Detail**

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	CS	1.459	1.173	1.345	1.107	1.047
0	RS	1.249	1.345	1.459	1.345	1.459

Polychaete Survival and Growth Test

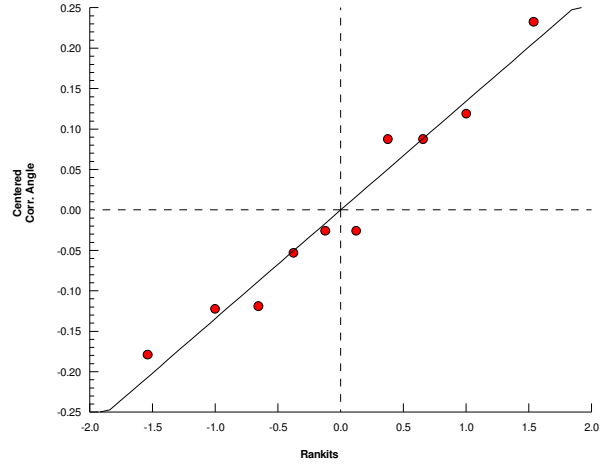
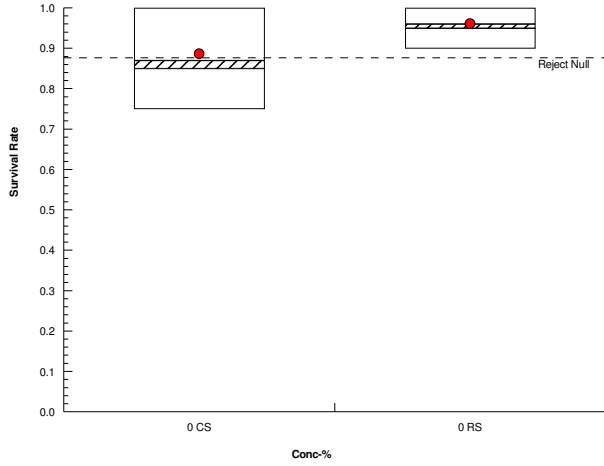
NWDLS Environ. Toxicol. Lab

Analysis ID: 09-3773-8075  
Analyzed: 05 Apr-23 8:43

Endpoint: Survival Rate  
Analysis: Parametric-Two Sample

CETIS Version: CETISv1.9.4  
Status Level: 1

Graphics



Client/Project Name:	PCCA HI & CDP Resampling 2023	WO #:	23A1459
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**Nereis virens 28d Test Condition Summary - ASTM E 1688; NWDLS SOP No. 4FP2-12**

Test Material:	Sediment	Test Type:	28d Bioaccumulation Static Renewal
Temperature:	20 °C ± 2 °C	Photoperiod:	16L:8D
Test Chamber:	10 gal glass aquaria	No. Replicates:	5
Test Organism:	<i>Nereis virens</i>	Organism Source:	ARO
Organism Batch No.:	030123NV	Date Received:	3-2-23
Age Class:	3-15 g adults	No. Organisms/Rep:	20
Aeration:	Moderate, overnight before start of test and throughout duration of test; maintain ≥ 90% saturation of dissolved oxygen concentration	Control Sediment:	Clean Beach Sand or sediment from which the test organisms are collected
Feeding Schedule:	None	Food Type:	N/A
Water Type:	≥ 30 ppt Synthetic Seawater ± 2 ppt	Water Volume:	8-9 gal
Renewal Schedule:	48 h intervals, beginning on day 0 (min 3x per week)	Sediment Volume:	1 gal (2 gal for control sediment)

Comments:

Water Changes							
Day	0	2	4	6	8	10	12
Date	3-3-23	3-5-23	3-7-23	3-9-23	3-11-23	3-13-23	3-15-23
Time	1000	1400	0900	1000	1015	1010	1100
Initials	TRL	DPD	TRL	TRG	TRG	TRG	AOS
Day	14	16	18	20	22	24	26
Date	3-17-23	3-19-23	3-21-23	3-23-23	3-25-23	3-27-23	3-29-23
Time	1200	1100	0800	1215	1150	1100	1140
Initials	AOS	AOS	TRG	AOS	AOS/VJC	AOS/VJC	AOS

Initiation Date:	3-3-23	Termination Date:	3-31-23
Initiation Time:	1110	Termination Time:	1020
Initials:	TRL / AOS	Initials:	TRL/AOS / DPD

Nereis virens - Survival														
Treatment	Rep	Day 0	Day 28		Treatment	Rep	Day 0	Day 28		Treatment	Rep	Day 0	Day28	
			1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count				1 <sup>st</sup> Count	2 <sup>nd</sup> Count
CONT	A	20	20	20	HI-DMMU-4	A	20	19	19	CDP-6	A	20	20	20
	B	20	17	17		B	20	20	20		B	20	20	20
	C	20	19	19		C	20	20	20		C	20	17	17
	D	20	16	16		D	20	20	20		D	20	17	17
	E	20	15	15		E	20	18	18		E	20	20	20
REF	A	20	18	18	HI-DMMU-5	A	20	20	20	CDP-7	A	20	16	16
	B	20	19	19		B	20	20	20		B	20	14	14
	C	20	20	20		C	20	20	20		C	20	17	17
	D	20	19	19		D	20	20	20		D	20	18	18
	E	20	20	20		E	20	20	20		E	20	19	19
HI-DMMU-1	A	20	20	20	HI-DMMU-6	A	20	19	19		A			
	B	20	20	20		B	20	16	16		B			
	C	20	20	20		C	20	19	19		C			
	D	20	20	20		D	20	20	20		D			
	E	20	20	20		E	20	19	19		E			
HI-DMMU-2	A	20	19	19	HI-DMMU-7	A	20	18	18		A			
	B	20	20	20		B	20	20	20		B			
	C	20	20	20		C	20	17	17		C			
	D	20	20	20		D	20	18	18		D			
	E	20	20	20		E	20	16	16		E			
HI-DMMU-3	A	20	19	19	HI-DMMU-8	A	20	19	19		A			
	B	20	20	20		B	20	18	18		B			
	C	20	18	18		C	20	14	14		C			
	D	20	19	19		D	20	19	19		D			
	E	20	19	19		E	20	20	20		E			
Tech Initials	PLK/ADF	MLL/OPS	ADT	DBS/KAC			MLL/OPS	DBS/KAC		Tech Initials:	MLL/OPS	MLL/OPS	DBS/KAC	DBS/KAC

Daily Water Quality Characteristics

pH OLD/NEW Meter # 737															
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	8.1	8.1	8.0	7.9	8.0	8.0	8.1	8.0	8.0	7.9	8.0	8.1	8.0	8.1	8.1
REF		8.1		7.9	8.0		8.1	8.0		7.9	8.1		8.0	8.1	
HI-DMMU-1		8.1		7.9	8.0		8.2	8.0		8.1	8.1		8.1	8.1	
HI-DMMU-2		8.1		7.9	8.0		8.2	8.0		8.1	8.1		8.1	8.1	
HI-DMMU-3		8.0		7.9	8.1		8.1	7.9		8.0	8.1		8.0	8.1	
HI-DMMU-4		8.1		8.0	8.1		8.2	8.0		8.1	8.1		8.1	8.1	
HI-DMMU-5		8.1		8.0	8.1		8.2	8.0		8.1	8.1		8.2	8.1	
HI-DMMU-6		8.1		8.0	8.1		8.2	8.0		8.1	8.2		8.2	8.1	
HI-DMMU-7		8.2		8.0	8.1		8.2	8.1		8.2	8.2		8.1	8.1	
HI-DMMU-8		8.2		8.0	8.1		8.2	8.1		8.1	8.2		8.1	8.1	
CDP-6		8.2		8.0	8.1		8.1	8.0		8.1	8.2		8.1	8.1	
CDP-7		8.1		8.0	8.1		8.1	8.0		8.1	8.2		8.1	8.1	
DISSOLVED OXYGEN (mg/L) OLD/NEW Meter # 4516															
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	8.7	8.9	8.7	9.2	9.1	8.8	8.9	9.0	8.7	8.9	9.0	8.6	8.8	8.5	8.7
REF		9.0		9.2	9.1		8.9	9.0		9.0	9.1		8.8	8.5	
HI-DMMU-1		9.0		9.2	9.1		8.8	8.9		9.0	9.0		8.5	9.0	
HI-DMMU-2		9.0		9.2	9.1		8.9	9.0		9.1	9.1		9.0	9.0	
HI-DMMU-3		9.0		9.2	9.1		9.0	9.1		9.1	9.1		8.9	9.0	
HI-DMMU-4		9.0		9.2	9.1		9.0	9.0		9.0	9.1		9.0	9.0	
HI-DMMU-5		9.0		9.2	9.1		8.9	9.0		9.1	9.0		8.9	9.0	
HI-DMMU-6		9.1		9.2	9.1		9.0	9.0		9.1	9.1		8.9	9.1	
HI-DMMU-7		9.1		9.2	9.1		9.0	9.0		9.0	9.1		9.0	9.1	
HI-DMMU-8		9.1		9.3	9.1		9.0	8.9		9.0	9.1		9.0	9.1	
CDP-6		9.1		9.3	9.1		9.0	8.9		9.0	9.1		9.0	9.1	
CDP-7		9.1		9.2	9.1		8.8	8.5		9.1	9.1		9.0	9.1	
Salinity (ppt) Meter # 948															
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	29.6	29.7	29.6	29.6	29.4	28.4	29.2	29.3	28.6	29.1	29.0	29.1	29.2	29.2	29.2
REF		29.6		29.6	29.8		29.1	29.2		29.0	28.9		29.0	29.2	
HI-DMMU-1		29.6		29.6	29.8		29.3	29.4		29.1	28.9		29.1	29.3	
HI-DMMU-2		29.7		29.7	29.7		29.4	29.4		29.2	29.0		29.1	29.3	
HI-DMMU-3		29.7		29.7	29.7		29.3	29.3		29.1	28.9		29.1	29.3	
HI-DMMU-4		29.7		29.7	29.7		29.3	29.6		29.2	29.1		29.2	29.3	
HI-DMMU-5		29.8		29.6	29.7		29.2	29.4		29.2	29.2		29.2	29.3	
HI-DMMU-6		29.7		29.6	29.7		29.1	29.3		29.1	29.0		29.1	29.3	
HI-DMMU-7		29.7		29.6	29.7		29.3	29.3		29.1	28.9		29.1	29.2	
HI-DMMU-8		29.7		29.8	29.7		29.3	29.4		29.2	29.0		29.1	29.2	
CDP-6		29.7		29.8	29.7		29.4	29.5		29.2	29.1		29.1	29.2	
CDP-7		29.2		29.1	29.8		29.4	29.4		29.2	29.1		29.2	29.2	



TEMPERATURE (°C) OLD/NEW (Actual / Corrected)														Therm# 737	Offset# 0
Day	-1	0-Old	0-New	1-Old	2-Old	2-New	3-Old	4-Old	4-New	5-Old	6-Old	6-New	7-Old	8-Old	8-New
Control	19.6	19.6	19.6	19.6	19.4	19.4	19.6	19.6	19.5	19.6	19.4	19.7	19.6	19.5	19.6
REF		19.6		19.6	19.5		19.7	19.6		19.7	19.5		19.7	19.5	
HI-DMMU-1		19.7		19.7	19.5		19.6	19.6		19.6	19.5		19.4	19.4	
HI-DMMU-2		19.5		19.7	19.5		19.5	19.4		19.5	19.5		19.7	19.5	
HI-DMMU-3		19.4		19.6	19.6		19.6	19.3		19.5	19.4		19.7	19.5	
HI-DMMU-4		19.6		19.6	19.6		19.4	19.4		19.6	19.4		19.6	19.6	
HI-DMMU-5		19.6		19.4	19.7		19.4	19.5		19.7	19.4		19.6	19.7	
HI-DMMU-6		19.4		19.4	19.6		19.3	19.4		19.4	19.3		19.5	19.7	
HI-DMMU-7		19.6		19.4	19.5		19.4	19.5		19.4	19.4		19.6	19.6	
HI-DMMU-8		19.6		19.5	19.4		19.4	19.5		19.4	19.4		19.6	19.7	
CDP-6		19.6		19.5	19.4		19.5	19.6		19.5	19.4		19.6	19.5	
CDP-7		19.6		19.6	19.5		19.6	19.6		19.6	19.4		19.7	19.7	
Initials	TEL	TEL		BRM/DM	BRM/DM		TEL	TEL	TEL	TEL	TEL	TEL	TEL	TEL	TEL

Daily Water Quality Characteristics

pH OLD/NEW Meter # 737															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	8.0	8.1	8.0	8.0	7.9	8.0	8.1	8.0	8.0	7.9	8.1	8.0	8.1	8.1	8.0
REF	8.0	8.0		8.1	7.9		8.1	8.0		7.9	8.0		8.1	8.1	
HI-DMMU-1	8.0	8.0		8.1	7.9		8.1	8.0		7.9	8.0		8.1	8.2	
HI-DMMU-2	8.0	8.0		8.0	7.9		8.1	8.0		7.9	8.0		8.1	8.2	
HI-DMMU-3	8.0	8.0		8.1	7.9		8.1	8.1		7.9	8.0		8.1	8.2	
HI-DMMU-4	8.0	8.1		8.0	7.9		8.2	8.2		7.9	8.0		8.0	8.2	
HI-DMMU-5	8.0	8.0		8.1	7.9		8.2	8.2		7.9	8.0		8.2	8.2	
HI-DMMU-6	8.0	7.9		8.0	7.9		8.1	8.2		8.0	8.0		8.0	8.2	
HI-DMMU-7	8.0	8.0		8.0	7.9		8.1	8.1		8.0	8.0		8.0	8.2	
HI-DMMU-8	8.0	8.0		8.1	7.9		8.1	8.1		8.0	8.0		8.2	8.2	
CDP-6	8.0	7.9		8.0	7.9		8.1	8.1		8.0	8.0		8.2	8.2	
CDP-7	8.0	8.0		8.1	7.9		8.1	8.1		8.0	8.0		8.1	8.2	

DISSOLVED OXYGEN (mg/L) OLD/NEW Meter # 4516															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	9.0	8.9	8.6	8.8	8.8	8.8	9.1	9.1	8.8	8.9	9.0	8.4	9.0	9.1	8.8
REF	9.0	8.9		8.5	8.8		9.1	9.1		8.9	9.1		9.1	9.1	
HI-DMMU-1	9.0	9.0		8.4	8.8		9.1	9.1		8.9	9.1		9.1	9.0	
HI-DMMU-2	9.0	9.0		9.0	9.1		9.2	9.1		9.0	9.1		9.1	9.1	
HI-DMMU-3	9.1	9.0		9.1	9.1		9.1	9.2		9.0	9.1		9.1	9.1	
HI-DMMU-4	9.1	9.0		9.1	9.2		9.1	9.2		9.0	9.1		9.0	9.1	
HI-DMMU-5	9.1	9.0		9.0	9.2		9.1	9.3		9.0	9.1		9.0	9.1	
HI-DMMU-6	9.1	9.1		9.1	9.2		9.2	9.4		9.0	9.1		9.0	9.2	
HI-DMMU-7	9.1	9.0		9.1	9.2		9.2	9.4		9.0	9.1		9.0	9.0	
HI-DMMU-8	9.1	9.1		9.1	9.2		9.3	9.4		9.0	9.1		9.0	9.1	
CDP-6	9.0	9.1		9.0	9.2		9.3	9.4		9.0	9.1		9.0	9.1	
CDP-7	9.1	9.1		9.2	9.2		9.3	9.4		9.0	9.1		9.0	9.1	

Salinity (ppt) Meter # 948															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	29.6	29.5	29.3	29.4	29.7	29.1	29.1	29.2	29.2	29.4	29.7	29.5	29.6	29.6	29.8
REF	29.5	29.6		29.5	29.1		29.1	29.2		29.4	29.7		29.7	29.5	
HI-DMMU-1	29.6	29.4		29.5	29.2		29.2	29.3		29.4	29.7		29.5	29.5	
HI-DMMU-2	29.5	29.4		29.5	29.4		29.1	29.3		29.2	29.7		30.0	29.9	
HI-DMMU-3	29.5	29.4		29.4	29.4		29.1	29.3		29.4	29.7		29.7	29.1	
HI-DMMU-4	29.6	29.4		29.4	29.4		29.4	29.4		29.6	29.7		29.9	29.0	
HI-DMMU-5	29.5	29.6		29.5	29.4		29.4	29.4		29.6	29.7		29.5	29.1	
HI-DMMU-6	29.6	29.6		29.5	29.4		29.3	29.5		29.6	29.8		30.1	30.7	
HI-DMMU-7	29.6	29.7		29.6	29.4		29.2	29.4		29.6	29.7		30.1	30.7	
HI-DMMU-8	29.6	29.6		29.5	29.4		29.4	29.4		29.6	29.7		30.2	30.7	
CDP-6	29.6	29.6		29.5	29.4		29.4	29.4		29.6	29.8		29.9	30.1	
CDP-7	29.6	29.6		29.5	29.4		29.4	29.4		29.6	29.6		30.1	30.1	

TEMPERATURE (°C) OLD/NEW (Actual / Corrected) Therm# 737 Offset# 0															
Day	9-O	10-O	10-N	11-O	12-O	12-N	13-O	14-O	14-N	15-O	16-O	16-N	17-O	18-O	18-N
Control	19.6	19.7	20.1	19.9	19.6	19.8	19.7	19.7	19.6	20.4	19.6	19.6	19.8	19.6	19.8
REF	19.6	19.6		19.9	19.6		19.7	19.7		20.1	19.6		19.6	19.8	
HI-DMMU-1	19.5	19.6		19.5	19.6		19.7	19.9		19.9	19.6		19.5	19.8	
HI-DMMU-2	19.5	19.6		19.5	19.7		19.9	19.9		19.9	19.6		19.5	19.8	
HI-DMMU-3	19.5	19.7		19.8	19.7		19.7	19.7		20.1	19.6		19.6	19.8	
HI-DMMU-4	19.5	19.5		19.7	19.6		19.7	19.6		20.1	19.6		19.7	19.8	
HI-DMMU-5	19.5	19.7		19.6	19.6		19.8	19.6		20.1	19.7		19.5	19.7	
HI-DMMU-6	19.5	19.7		19.8	19.6		19.6	19.6		20.2	19.7		19.5	19.6	
HI-DMMU-7	19.5	19.6		19.5	19.6		19.5	19.6		20.2	19.6		19.7	19.5	
HI-DMMU-8	19.5	19.6		19.5	19.6		19.5	19.6		20.1	19.8		19.6	19.5	
CDP-6	19.5	19.6		19.7	19.7		19.5	19.6		20.1	19.9		19.6	19.7	
CDP-7	19.6	19.7		19.7	19.7		19.6	19.6		20.1	19.5		19.6	19.7	
Initials	DDM	TRC	TRC	ML	TRC	TRC	TRC	TRC	TRC	AOS/USE	AOS/USE		TRC	TRC	ML

Daily Water Quality Characteristics

pH OLD/NEW Meter # 737															
Day	19-O	20-O	20-N	21-O	22-O	22-N	23-O	24-O	24-N	25-O	26-O	26-N	27-O	28-O	28-N
Control	8.1	8.1	8.0	8.1	8.1	8.0	8.0	8.1	7.9	8.0	8.1	7.9	8.0	8.0	7.9
REF	8.1	8.1		8.1	8.1		8.0	8.1		8.0	8.1		8.0	7.9	
HI-DMMU-1	8.1	8.1		8.1	8.1		8.0	8.1		8.0	8.1		8.0	7.9	
HI-DMMU-2	8.1	8.0		8.0	8.1		8.1	8.0		8.1	8.1		8.1	8.0	
HI-DMMU-3	8.1	8.1		8.1	8.1		8.0	8.1		8.1	8.1		8.0	8.0	
HI-DMMU-4	8.2	8.1		8.0	8.1		8.1	8.1		8.2	8.1		8.0	7.9	
HI-DMMU-5	8.2	8.1		8.1	8.1		8.1	8.2		8.1	8.2		8.1	8.1	
HI-DMMU-6	8.2	8.1		8.1	8.1		8.1	8.2		8.2	8.2		8.1	8.1	
HI-DMMU-7	8.2	8.1		8.1	8.1		8.1	8.1		8.2	8.2		8.1	8.1	
HI-DMMU-8	8.2	8.1		8.1	8.1		8.1	8.1		8.2	8.2		8.1	8.1	
CDP-6	8.2	8.1		8.1	8.1		8.1	8.1		8.2	8.2		8.1	8.1	
CDP-7	8.2	8.1		8.1	8.1		8.0	8.2		8.1	8.2		8.1	8.1	
DISSOLVED OXYGEN (mg/L) OLD/NEW Meter # 4716															
Control	9.1	9.1	8.7	9.0	9.1	8.6	9.1	9.2	8.8	9.2	9.2	8.7	8.9	8.9	8.7
REF	9.2	9.1		9.0	9.1		9.1	9.2		9.2	9.2		9.0	8.9	
HI-DMMU-1	9.2	9.1		9.0	9.1		9.1	9.3		9.1	9.2		9.0	9.1	
HI-DMMU-2	9.2	9.0		8.9	9.1		9.1	9.2		9.1	9.1		9.0	9.1	
HI-DMMU-3	9.2	9.1		8.9	9.1		9.1	9.2		9.1	9.3		9.0	9.1	
HI-DMMU-4	9.2	9.0		9.0	9.1		9.1	9.2		9.1	9.1		9.1	9.1	
HI-DMMU-5	9.2	9.1		9.0	9.1		9.1	9.2		9.2	9.2		9.4	9.1	
HI-DMMU-6	9.2	9.1		8.9	9.1		9.1	9.2		9.3	9.1		9.3	9.1	
HI-DMMU-7	9.2	9.1		8.9	9.0		9.1	9.2		9.2	9.1		9.1	9.1	
HI-DMMU-8	9.2	9.1		9.0	9.1		9.1	9.2		9.2	9.1		9.1	9.2	
CDP-6	9.2	9.1		9.0	9.2		9.1	9.2		9.2	9.1		9.1	9.2	
CDP-7	9.2	9.1		9.0	9.1		9.1	9.2		9.2	9.1		9.1	9.1	
Salinity (ppt)															
Control	30.1	30.0	29.4	30.1	29.9	29.6	29.9	29.9	29.3	29.4	29.7	29.7	29.5	29.7	29.5
REF	30.1	30.1		29.8	29.9		29.9	29.8		29.5	29.5		29.6	29.7	
HI-DMMU-1	30.1	30.2		29.7	30.1		29.9	29.7		29.5	29.6		29.5	29.8	
HI-DMMU-2	30.0	30.3		29.6	30.1		30.0	29.7		29.5	29.6		29.5	29.5	
HI-DMMU-3	30.1	30.2		29.8	30.1		30.0	29.8		29.6	29.6		29.5	29.7	
HI-DMMU-4	30.2	30.4		29.8	30.1		29.8	29.8		29.6	29.6		29.6	29.4	
HI-DMMU-5	30.2	30.4		29.9	30.1		30.0	29.7		29.4	29.5		29.6	29.4	
HI-DMMU-6	30.1	30.2		29.9	30.2		30.0	29.6		29.4	29.5		29.6	29.6	
HI-DMMU-7	30.2	30.7		29.8	30.1		30.1	29.6		29.5	29.5		29.5	29.2	
CDP-6	30.2	30.4		29.7	30.1		30.1	29.7		29.5	29.4		29.5	29.2	
CDP-7	30.2	30.4		29.2	30.1		30.1	29.2		29.5	29.5		29.5	29.2	
Meter #	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948

TEMPERATURE (°C) OLD/NEW (Actual / Corrected)															Therm#	Offset#
Day	19-O	20-O	20-N	21-O	22-O	22-N	23-O	24-O	24-N	25-O	26-O	26-N	27-O	28-O	28-N	
Control	19.8	19.6	19.5	19.8	19.6	19.4	19.6	19.6	19.4	19.5	19.7	19.5	19.5	19.6	19.6	
REF	19.5	19.6		19.7	19.6		19.6	19.5		19.5	19.6		19.6	19.7		
HI-DMMU-1	19.8	19.6		19.2	19.6		19.6	19.5		19.4	19.5		19.6	19.5		
HI-DMMU-2	19.8	19.6		19.2	19.6		19.6	19.6		19.6	19.6		19.2	19.5		
HI-DMMU-3	19.7	19.5		19.2	19.6		19.6	19.5		19.5	19.4		19.5	19.8		
HI-DMMU-4	19.2	19.6		19.5	19.7		19.6	19.4		19.5	19.5		19.6	19.5		
HI-DMMU-5	19.8	19.6		19.2	19.7		19.6	19.4		19.5	19.5		19.4	19.5		
HI-DMMU-6	19.2	19.4		19.2	19.7		19.7	19.4		19.6	19.5		19.5	19.6		
HI-DMMU-7	19.2	19.5		19.8	19.6		19.7	19.5		19.2	19.6		19.5	19.2		
HI-DMMU-8	19.6	19.4		19.5	19.6		19.7	19.5		19.6	19.5		19.6	19.5		
CDP-6	19.2	19.5		19.5	19.5		19.7	19.5		19.6	19.4		19.6	19.5		
CDP-7	19.6	19.5		19.5	19.6		19.6	19.5		19.6	19.4		19.6	19.7		
Initials	TRC	TRC	TRC	TRC	TRC		TRC	TRC		TRC	TRC		TRC	TRC		

Daily Water Quality Characteristics

Ammonia - Old/New

Day	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Cont-O	.001	.002													
REF		.003													
HI-DMMU-1		.004													
HI-DMMU-2		.007													
HI-DMMU-3		.005													
HI-DMMU-4		.008													
HI-DMMU-5		.008													
HI-DMMU-6		.004													
HI-DMMU-7		.008													
HI-DMMU-8		.007													
CDP-6		.006													
CDP-7		.005													
Cont-N		.001													
Date															
Time															
Initials	ML	ML													
Meter #	566	566													
Day	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Cont-O															
REF															
HI-DMMU-1															
HI-DMMU-2															
HI-DMMU-3															
HI-DMMU-4															
HI-DMMU-5															
HI-DMMU-6															
HI-DMMU-7															
HI-DMMU-8															
CDP-6															
CDP-7															
Cont-N															
Date															
Time															
Initials															
Meter #		56													

**Tissue Weight - *N. virens***

Treatment/Site (%)	REP	TOTAL WT (g)	Treatment/Site (%)	REP	TOTAL WT (g)	Treatment/Site (%)	REP	TOTAL WT (g)
ARCHIVES	A	104.4	HI-DMMU-5	A	82.0	CONTROL	A	65.7
	B	92.2		B	82.0		B	62.9
	C	86.6		C	64.3		C	67.8
	D	97.7		D	62.4		D	57.3
	E	114.9		E	72.8		E	58.0
REF	A	94.1	HI-DMMU-6	A	64.7		A	
	B	77.4		B	61.0		B	
	C	85.9		C	57.6		C	
	D	96.5		D	59.1		D	
	E	63.9		E	43.6		E	
HI-DMMU-1	A	94.9	HI-DMMU-7	A	74.7		A	
	B	77.2		B	106.4		B	
	C	70.6		C	50.4		C	
	D	59.7		D	58.1		D	
	E	62.4		E	41.4		E	
HI-DMMU-2	A	75.7	HI-DMMU-8	A	99.2		A	
	B	75.6		B	86.3		B	
	C	82.1		C	86.5		C	
	D	61.2		D	95.3		D	
	E	55.2		E	67.5		E	
HI-DMMU-3	A	64.3	CDP-6	A	101.2		A	
	B	55.6		B	82.7		B	
	C	79.0		C	58.8		C	
	D	74.3		D	77.1		D	
	E	69.1		E	92.5		E	
HI-DMMU-4	A	96.0	CDP-7	A	69.1		A	
	B	92.4		B	71.5		B	
	C	71.9		C	59.7		C	
	D	77.4		D	80.7		D	
	E	48.7		E	90.1		E	

Date 4-5-23 Time 1321 Balance ID 296 Initials A05

CONT = Control    CONC = Concentration    REP =  
 Replicate  
 Wt = Weight    ORG = Organism



# Aquatic Research Organisms

## DATA SHEET/ CUSTODY CHAIN

### I. Organism History

Species Alitta virens formerly (Neanthes) and (Neries) virens

Source: Lab reared \_\_\_\_\_ Hatchery reared \_\_\_\_\_ Field collected X

Hatch date Mixed aged adults Collection date 03 01 23 NV

Lot number 03 01 23 NV Strain \_\_\_\_\_ Wild \_\_\_\_\_

Brood origination: Damariscotta River, Boothbay Harbor, Maine

### II. Water Quality

Temperature \_\_\_\_\_ °C Salinity 28-32 ppt D.O. Saturated ppm

pH 8.0-8.4 su Hardness N.A. ppm Alkalinity N.A. ppm

### III. Culture Conditions

Freshwater \_\_\_\_\_ Saltwater X Other \_\_\_\_\_

Recirculating \_\_\_\_\_ Flow through \_\_\_\_\_ Static \_\_\_\_\_

DIET: Flake food \_\_\_\_\_ Phytoplankton \_\_\_\_\_ Trout chow \_\_\_\_\_

Artemia \_\_\_\_\_ Rotifers \_\_\_\_\_ YCT \_\_\_\_\_ Other Not fed

Prophylactic treatments: \_\_\_\_\_

Comments: Held at 4C on moist seaweed. Shipped with gel ice packs to keep cool

### IV. Shipping Information

Client: NWDLs # of Organisms 1600+

Carrier: FedEx Date shipped 3/1/23

Tracking # 602588408768 # of boxes 12

Released by: Stan Smith Date: 3/1/23 Time: 1630

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

PO BOX 1271 HAMPTON NH 03843-1271 (603) 926-1650 [AROFISH@AOL.COM](mailto:AROFISH@AOL.COM)



# Analytical Standard Record

2302417

Description: Lab Saltwater Expires: 08/08/2023  
Standard Type: Other Prepared: 02/08/2023  
Solvent: - Prepared By: Arturo Orozco Jr  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 02/14/2023 14:35 by JKW  
Comments: Chems Added: AOJ/VJC 2-8-23  
Approved: AOJ 2-13-23  
pH: 8.1  
Salinity: 25.8  
Transferred to Circ Tank: JKW 2/13/23  
Used 12 bags (1 per 50gal of DI) of Instant Ocean

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43 by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56 by AOJ	1

# Analytical Standard Record

2302748

Description: Lab Saltwater Expires: 08/14/2023  
Standard Type: Other Prepared: 02/14/2023  
Solvent: - Prepared By: Justin Wood  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 02/14/2023 14:34 by JKW  
Comments: Chems Added: JKW 2/14/23  
Approved:  
pH:  
Salinity:  
Transferred to Circ Tank:  
Used 12 bags (1 per 50gal of DI) of Instant Ocean

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43 by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56 by AOJ	1

# Analytical Standard Record

2303061

Description: Lab Saltwater Expires: 06/06/2023  
Standard Type: Other Prepared: 02/18/2023  
Solvent: - Prepared By: Vynna Chitolie  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 02/22/2023 15:19 by JKW  
Comments: Chems Added: VJC/BMR 2-18-23  
Approved: JKW 2/22/23  
pH: 8.0  
Salinity:25.1  
Transferred to Circ Tank: JKW 2/22/23  
Used 12 bags (1 per 50gal of DI) of Instant Ocean

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43 by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56 by AOJ	1

# Analytical Standard Record

2303586

Description: Lab Saltwater Expires: 03/24/2023  
Standard Type: Other Prepared: 02/24/2023  
Solvent: - Prepared By: Theran Gay  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 03/01/2023 15:49 by JKW  
Comments: Chems Added: TRG 2-24-23  
Approved: JKW 2/27/23  
pH: 8.0  
Salinity:23.8  
Total Residual Chlorine: 0  
Transferred to Circ Tank: JKW 2/27/23  
Used 12 bags (1 per 50gal of DI) of Instant Ocean

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43	by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56	by AOJ	1

# Analytical Standard Record

**2303823**

Description:	Lab Saltwater	Expires:	08/28/2023
Standard Type:	Other	Prepared:	02/28/2023
Solvent:	-	Prepared By:	Arturo Orozco Jr
Final Volume (mls):	3410000	Department:	Toxicology
Vials:	1	Last Edit:	03/01/2023 10:17 by TRG
Comments:	Chems Added: AOJ 2-28-23 Approved: TRG 3-1-23 pH: 8.15 Salinity: 26.4 Total Residual Chlorine: 0.0 Transferred to Circ Tank: 3-1-23 Used 12 bags (1 per 50gal of DI) of Instant Ocean		

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

**Parent Standards used:**

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43	by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56	by AOJ	1

# Analytical Standard Record

2303885

Description: Lab Saltwater Expires: 06/06/2023  
Standard Type: Other Prepared: 03/01/2023  
Solvent: - Prepared By: Theran Gay  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 03/03/2023 08:30 by AOJ  
Comments: Chems Added: TRG 3-1-23  
Approved: AOJ 3-2-23  
pH: 8.1  
Salinity: 25.2  
Transferred to Circ Tank: AOJ 3-2-23  
Used 12 bags (1 per 50gal of DI) of Instant Ocean

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit	(mls)
2214326	Instant Ocean Sea Salt (6.8kg/bag)	11/22/2022	-	S06262022	11/22/2026	11/22/2022 15:43 by AOJ	12
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56 by AOJ	1

# Analytical Standard Record

**2304086**

Description: Lab Saltwater Expires: 06/06/2023  
Standard Type: Other Prepared: 03/03/2023  
Solvent: - Prepared By: Arturo Orozco Jr  
Final Volume (mls): 3410000 Department: Toxicology  
Vials: 1 Last Edit: 03/03/2023 15:49 by AOJ  
Comments: Chems Added: AOJ 3-3-23  
Approved:  
pH:  
Salinity:  
Transferred to Circ Tank:  
Used 4 buckets (21.7Kg) of Instant Ocean Aquarium Salt

Analyte	Parent	CAS Number	Concentration	Units
				ug/mL

## Parent Standards used:

Standard	Description	Prepared	Prepared By	Lot Nbr	Expires	Last Edit		(mls)
2215260	DI Water	12/08/2022	Suez	101222	06/06/2023	12/08/2022 14:56	by AOJ	1
2304026	Instant Ocean Sea Salt ( 21.7kg/bucket)	03/03/2023	-	22228 / 22229	01/01/2025	03/03/2023 08:37	by AOJ	4



Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI & CDP Resampling 2023  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
05/18/2023 14:53

### Sample Condition Checklist

**Work Order: 23A1459**

**Check Points**

- Yes Custody Seals
- Yes Containers Intact
- Yes COC/Labels Agree
- Yes Received On Ice
- Yes Appropriate Containers
- Yes Appropriate Sample Volume
- Yes Coolers Intact
- Yes Samples Accepted





Terracon\_Houston  
11555 Clay Road  
Houston, TX 77043

Project: PCCA HI & CDP Resampling 2023  
Project Number:  
Project Manager: Gregg Pawlak

**Reported:**  
05/18/2023 14:53

## Term and Qualifier Definitions

<b>Item</b>	<b>Definition</b>
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated
*	A = Accredited, N = Not Accredited or Accreditation not available
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
MDL	Method Detection Limit - The minimum concentration of a substance (or analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. Based on standard deviation of replicate spiked samples take through all steps of the analytical procedure following 40 CFR Part 136 Appendix B.
SDL	Sample Detection Limit - The minimum concentration of a substance (analyte) that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The SDL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MDL = SDL.
MRL	Method Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The MRL is at or above the lowest calibration standard.
LRL	Laboratory Reporting Limit - Analyte concentration that corresponds to the lowest level lab reports with confidence in accuracy of quantitation and without qualification (i.e. J-flagged). The LRL is an adjusted limit thus sample specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments. If there are no sample specific parameters, the MRL = LRL.

Chain of custody on file.

**APPENDIX H**  
**ADDAMS MODEL**



Particle size Distribution & Percent Moisture of Sediments

Sample Zone: **DMMU 7**

% Grain Size

Gravel	0.0
Sand	51.7
Silt	40.6
Clay	7.7

% Moisture	28.1
% Solids	71.9

w(%) (water content)	39
----------------------	----

specific gravity	2.65
------------------	------

Liquid limit	0
--------------	---

Sediment		Project
<b>ID Number</b>	<b>Characteristics:</b>	<b>DMMU 7</b>
% Coarse	Enter	51.7
%Silt	Enter	40.6
%Clay	Enter	7.7
Sum		100
Bucket Entrained	% by vol in dump vessel	
Free Water	Enter	70
%Sediment by vol		30
Specific Gravity coarse	Enter	2.65
SG silt	Enter	2.65
SG clay	Enter	2.65
$\rho_w$ , g/cc (density of water)	Enter	1.025
LL, %	Enter, if known	0
Enter only one of these in blue		
w, % (water content)		54.799
%S by weight		
$\rho_{sed}$ , g/cc or kg/L wet density		
<b>Calculations:</b>		
SG eff		2.650
%W by vol		58.622
%Coarse by vol		21.392
%Silt by vol		16.799
%Clay by vol		3.186
		100.000
water content		54.799
%Saturataion		64.600
$\rho_{sed}$		1.697
	If LL is not known,	
%Clumps	0	0.00
<b>Concentrations</b>		
C solids, kg/L		1.0965
C barge, kg/L		0.3290
C clumps, kg/L		0.0000
C coarse, kg/L		0.1701
C silt, kg/L		0.1336
C clay, kg/L		0.0253
		0.3290
<b>Volumetric Fractions (vf)</b>		
vf clumps		0.00000
vf coarse		0.06418
vf silt		0.05040
vf clay		0.00956
vf water		0.87587
		1
SG clumps		1.697
Bulk Density, g/cc		1.227

		Project
<b>ID Number Characteristics:</b>		<b>DMMU 7</b>
% Coarse	Enter	51.7
%Silt	Enter	40.6
%Clay	Enter	7.7
Sum		100
Bucket Entrained	% by vol in dump vessel	
Free Water	Enter	20
%Sediment by vol		80
Specific Gravity coarse	Enter	2.65
SG silt	Enter	2.65
SG clay	Enter	2.65
$\rho_w$ , g/cc (density of water)	Enter	1.025
LL, %	Enter, if known	0
Enter only one of these in blue		
w, % (water content)		39.082
%S by weight		
$\rho_{sed}$ , g/cc or kg/L wet density		
<b>Calculations:</b>		2.723
SG eff		2.650
%W by vol		50.259
%Coarse by vol		25.716
%Silt by vol		20.195
%Clay by vol		3.830
		100.000
water content		39.082
%Saturataion		71.900
$\rho_{sed}$		1.833
%Clumps	If LL is not known,	0
<b>Concentrations</b>		
C solids, kg/L		1.3181
C barge, kg/L		1.0545
C clumps, kg/L		0.0000
C coarse, kg/L		0.5452
C silt, kg/L		0.4281
C clay, kg/L		0.0812
		1.0545
<b>Volumetric Fractions (vf)</b>		
vf clumps		0.00000
vf coarse		0.20573
vf silt		0.16156
vf clay		0.03064
vf water		0.60207
		1
SG clumps		1.833
Bulk Density, g/cc		1.672

Values below based on Bray (2001) for mechanically dredged sediments.

<b><u>Sediment Type</u></b>	<b><u>Bulking Factor (min.)</u></b>	<b><u>Bulking Factor (max)</u></b>	<b><u>Bulking Factor (mean)</u></b>	<b><u>Free Water</u></b>
Hard Rock (blasted)	1.50	2.00	1.75	0.43
Medium rock (blasted)	1.40	1.80	1.60	0.38
Soft rock (blasted)	1.25	1.40	1.33	0.25
Gravel, hardpacked	not given	not given	1.35	0.26
Gravel, loose	not given	not given	1.10	0.09
Sand, hardpacked	1.25	1.35	1.30	0.23
Sand, medium soft to hard	1.15	1.25	1.20	0.17
Sand, soft	1.05	1.15	1.10	0.09
Silts, freshly deposited	1.00	1.10	1.05	0.05
Silts, consolidated	1.10	1.40	1.25	0.20
Clay, vary hard	1.15	1.25	1.20	0.17
Clay, medium soft to hard	1.10	1.15	1.13	0.11
Clay, soft	1.00	1.10	1.05	0.05
Sand/gravel/clay mixtures	1.15	1.35	1.25	0.20



**APPENDIX I**

**PHOTOS OF SAMPLES AND FIELD OPERATIONS**



**Photo 1** Clearing of boring location DMMU-1-1A / DMMU-2-1A with posthole digger to 5 feet bgs.



**Photo 2** View of sediment collected from DMMU-1-1A.



**Photo 3** View of sediment collected from DMMU-2-1A.



**Photo 4** Advancement of boring at DMMU-1-1C / DMMU-2-1C, facing southeast.



**Photo 5** View of sediment collected from DMMU-2-1C.



**Photo 6** Advancement of boring at DMMU-5-3B / DMMU-6-3B, facing southeast.



**Photo 7** View of sediment collected from DMMU-6-3C.



**Photo 8** View of sediment collected from DMMU-3-2A DUP.



**Photo 9** Advancement of boring at DMMU-3-2B / DMMU-4-2B, facing southwest.



**Photo 10** View of sediment collected from DMMU-4-2B.



**Photo 11** View of typical land-based boring following grouting with cuttings and bentonite slurry.



**Photo 12** View of sediment samples stored in refrigerated unit at Martin Energy facility at or below 4°C.



**Photo 13** Typical set-up used for collection of marine water from DMMUs specified in SAP.



**Photo 14** View of marine water collected in 5-gallon food grade buckets DMMU-7-4B prior to preservation in refrigerated unit.



**Photo 15** View of refrigerated unit at Martin Energy facility used to store samples at or below 4°C following collection.



**Photo 16** View of sediment collected from DMMU-7-4A.



**Photo 17** View of boring location DMMU-7-4B prior to advancement of boring, facing southeast.



**Photo 18** View of sediment collected from DMMU-7-4D.



**Photo 19** View of sediment collected from DMMU-8-5A.



**Photo 20** View of lift boat moonpool where sediment samples obtained utilizing sonic drill rig.



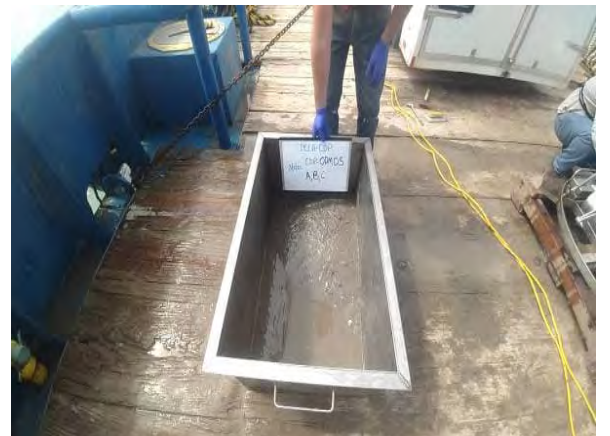
**Photo 21** View of sediment collected from DMMU-8-5C.



**Photo 22** View of sediment collected from DMMU-8-5D.



**Photo 23** Collection of sediment from Reference area utilizing double van Veen sampler.



**Photo 24** View of sediment collected from New Work ODMS substations A, B and C.

**APPENDIX J**  
**PERTINENT CORRESPONDENCE**

## Michael Madonna

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**From:** Pawlak, Gregg A. <Gregg.Pawlak@terracon.com>  
**Sent:** Friday, February 3, 2023 9:47 AM  
**To:** Monica Martin; Paul Berman; Michael Madonna; Michelle Rau  
**Cc:** Rajulu, Prasad  
**Subject:** FW: Clams Species for 28D Bio

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

The EPA and USACE concur with the referenced clam substitution.

*Gregg*

**Gregg Pawlak**  
Senior Scientist | Environmental Department



11555 Clay Road | Houston, Texas 77043  
P (713) 329-2537 (Direct) | P (713) 690-8989 (Main) | F (713) 690-8787 | M (281) 467-2158  
[gregg.pawlak@terracon.com](mailto:gregg.pawlak@terracon.com) | [terracon.com](http://terracon.com)



---

**From:** Hudson, Jayson M CIV USARMY CESWG (USA) <Jayson.M.Hudson@usace.army.mil>  
**Sent:** Friday, February 3, 2023 8:35 AM  
**To:** Pawlak, Gregg A. <Gregg.Pawlak@terracon.com>; Garza, Sarah <Sarah@pocca.com>; Schulz, Robert <rschulz@pocca.com>; McNeil, Harrison <hmcneil@pocca.com>  
**Cc:** Rajulu, Prasad <Prasad.Rajulu@terracon.com>; Barker, Tom <Tom.Barker@terracon.com>  
**Subject:** RE: Clams Species for 28D Bio

I wanted to verify for you that Corps and EPA concur with the substitution.

Jayson M Hudson  
Regulatory Project Manager  
409.766.3108

Please tell me how I am doing by completing the survey found at:  
<https://regulatory.ops.usace.army.mil/customer-service-survey/>

---

**From:** Pawlak, Gregg A. <[Gregg.Pawlak@terracon.com](mailto:Gregg.Pawlak@terracon.com)>  
**Sent:** Thursday, February 2, 2023 11:01 AM  
**To:** Garza, Sarah <[Sarah@pocca.com](mailto:Sarah@pocca.com)>; Hudson, Jayson M CIV USARMY CESWG (USA) <[Jayson.M.Hudson@usace.army.mil](mailto:Jayson.M.Hudson@usace.army.mil)>; Schulz, Robert <[rschulz@pocca.com](mailto:rschulz@pocca.com)>; McNeil, Harrison <[hmcneil@pocca.com](mailto:hmcneil@pocca.com)>  
**Cc:** Rajulu, Prasad <[Prasad.Rajulu@terracon.com](mailto:Prasad.Rajulu@terracon.com)>; Barker, Tom <[Tom.Barker@terracon.com](mailto:Tom.Barker@terracon.com)>

**Subject:** [URL Verdict: Neutral][Non-DoD Source] FW: Clams Species for 28D Bio

**Importance:** High

Jayson,

Please see the email from NWDLS below regarding the clams that are available for the upcoming bioassay testing due to the very poor weather that has impacted the west coast recently.

*Gregg*

**Gregg Pawlak**  
Senior Scientist | Environmental Department



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---

**From:** Monica Martin <[monica@nwdls.com](mailto:monica@nwdls.com)>

**Sent:** Thursday, February 2, 2023 10:40 AM

**To:** Pawlak, Gregg A. <[Gregg.Pawlak@terracon.com](mailto:Gregg.Pawlak@terracon.com)>; Rajulu, Prasad <[Prasad.Rajulu@terracon.com](mailto:Prasad.Rajulu@terracon.com)>

**Cc:** Paul Berman <[PBerman@anamarinc.com](mailto:PBerman@anamarinc.com)>; Michelle Rau <[MRau@anamarinc.com](mailto:MRau@anamarinc.com)>; Michael Madonna <[mmadonna@anamarinc.com](mailto:mmadonna@anamarinc.com)>; Theran Gay <[theran.gay@nwdls.com](mailto:theran.gay@nwdls.com)>

**Subject:** Clams Species for 28D Bio

**Importance:** High

Good Morning,

Regarding the status of the bent-nose clams (*Macoma nasuta*), there has been very poor weather on the west coast which has affected the tides. Therefore, our supplier is having a very tough time obtaining them and NWDLS will be utilizing the alternate, *Mercenaria mercenaria*. These are readily available thus will allow us to adhere to the project schedule.

Let me know if you have any questions.

Regards,



Monica O. Martin  
Chief Administrative Officer

130 South Trade Center Parkway • Conroe, TX 77385



936.321.6060, Direct x204



832.482.8975



[monica@nwdls.com](mailto:monica@nwdls.com)







## MEMORANDUM

TO: United States Army Corps of Engineers and United States Environmental Protection Agency

DATE: April 5, 2023

REF: Harbor Island Tissue Chemistry Recommendations

Based on the analysis of sediment samples from Harbor Island, the following recommendations for tissue chemistry analysis are proposed. As stated in Section 10.2.2 of the RIA,

*Ordinarily, only those compounds detected in the sediment need be analyzed for in the tissue. In some cases, however, it may be desirable to analyze tissues for compounds not detected in the sediments. The target detection limits listed in Appendix B (Appendix C has the actual TDLS) will be used when conducting evaluations of tissues from bioaccumulation tests.*

For this project, since the sediment chemistry was analyzed on the subsamples while the bioaccumulation was performed on the composites of the subsamples, the determination to run tissue chemistry is based on the detection of the contaminants in any of the subsamples.

### Non-Metals

Sediment analysis for cyanide showed no results greater than MRL in any sample. All results were below the MDL (U-qualified). Analysis of tissue samples for cyanide is **not recommended**.

### Total Petroleum Hydrocarbons (TPH)

In accordance with EPA approval email June 21, 2022, TPH analysis is required on all Harbor Island tissue samples. Therefore, analysis of all tissue samples (DMMU-1 through DMMU-8) is **recommended** for TPH.

### Trace Metals

All sediment samples contained detectable levels of the trace metals analyzed. Although several metals were reported below the MRL, the analytical method used for testing will provide results for all metals. Therefore, analysis of all tissue samples for all metals is **recommended**.

### Hexavalent Chromium

Sediment subsamples for hexavalent chromium showed no results with concentrations greater than the MRL in samples from DMMU-1 through DMMU-8. Analysis of tissue samples for hexavalent chromium is **not recommended**.

### Organotins

Sediment analysis for organotins showed no results greater than the MRL in any subsample with the exception of monobutyltin in DMMU-1-1C. Analysis of tissue samples for monobutyltin only in DMMU-1 is **recommended**. Analysis of tissue samples for organotins in DMMU-2 through DMMU-8 is **not recommended**.

### Pesticides

Results for pesticides are all below the MRL. Analysis of tissue samples for pesticides is **not recommended**.

### PCBs

PCB Aroclors were analyzed for total PCB content using Aroclors. The total PCBs in all samples are reported as non-detects (U-qualified). All project sediment samples were reported with an MDL greater than the target detection limit in the SAP, but this was due to low total solids content in the sediment. Analysis of tissue for total PCBs is **not recommended**.

### PAHs

Project subsamples from DMMUs 1, 3, 4, 5, 7, and 8 had detectable concentrations of PAH compounds above the MRL in at least one subsamples each. All sample results for all PAH compounds in DMMU 2 and DMMU 6 were below the MDL (U-qualified). Analysis of tissue samples from DMMUs 1, 3, 4, 5, 7, and 8 for PAHs is **recommended**. Analysis of tissue samples from DMMU 2 and DMMU 6 for PAHs is **not recommended**.

### Semi-Volatile Organic Compounds (SVOCs)

All eight of the DMMUs had at least one subsample with detectable concentrations greater than the MRL for one SVOC compound di-n-butyl phthalate. Analysis of all tissue samples for di-n-butyl phthalate detected in the sediment is **recommended**.

DMMU-3 had at least one subsample (including Duplicate) with detectable concentrations greater than the MRL for two additional SVOC compounds 2,4-dichlorophenol and 2,6-dinitrotoluene (2,6-DNT), as well as the highest reported concentration among all DMMUs for bis (2-ethylhexyl) phthalate at 18.8 µg/kg (J-qualified). In addition to di-n-butyl phthalate, analysis of all tissue

samples from DMMU-3 for 2,4-dichlorophenol, 2,6 DNT, and bis (2-ethylhexyl) phthalate detected in the sediment is **recommended**.

DMMU-5 had at least one subsample with detectable concentrations greater than the MRL for two additional SVOC compounds including diethyl phthalate and hexachlorocyclopentadiene. In addition to di-n-butyl phthalate, analysis of all tissue samples from DMMU-5 for diethyl phthalate and hexachlorocyclopentadiene detected in the sediment is **recommended**.

DMMU-8 had at least one subsample with detectable concentrations greater than the MRL for one additional SVOC compound bis (2-ethylhexyl) phthalate. In addition to di-n-butyl phthalate, analysis of all tissue samples from DMMU-8 for bis (2-ethylhexyl) phthalate detected in the sediment is **recommended**.

Tissue analysis for the remaining SVOC compounds is **not recommended**.

In addition, the reference and pre-exposure tissue samples will be run for background levels for all recommended analyses shown above. The table below summarizes the tissue recommendations based on sample and analysis. Upon completion, the tissue samples will be compared to the reference tissue samples to determine statistical differences and the risk assessment as part of the final report.

**Summary of Harbor Island Tissue Recommendations**

<b>Analyte</b>	<b>DMMU 1</b>	<b>DMMU 2</b>	<b>DMMU 3</b>	<b>DMMU 4</b>	<b>DMMU 5</b>	<b>DMMU 6</b>	<b>DMMU 7</b>	<b>DMMU 8</b>	<b>HI-REF and Pre-exposure</b>
Total cyanide	No	No	No	No	No	No	No	No	No
TPH	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
Metals	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
Hex. Chromium	No	No	No	No	No	No	No	No	No
Organotins	<b>Yes Monobutyltin only</b>	No	No	No	No	No	No	No	<b>Yes Monobutyltin only</b>
Pesticides	No	No	No	No	No	No	No	No	No
PCBs	No	No	No	No	No	No	No	No	No
PAHs	<b>Yes</b>	No	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	No	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
SVOCs	<b>Yes di-n-butyl phthalate</b>	<b>Yes di-n- butyl phthalate</b>	<b>Yes di-n-butyl phthalate, 2,4- dichlorophenol, 2,6-DNT, and bis (2-ethylhexyl) phthalate</b>	<b>Yes di-n-butyl phthalate</b>	<b>Yes di-n-butyl phthalate, diethyl phthalate, and hexachlorocyclopentadiene</b>	<b>Yes di-n-butyl phthalate</b>	<b>Yes di-n-butyl phthalate</b>	<b>Yes di-n-butyl phthalate and bis(2- ethylhexyl) phthalate</b>	<b>Yes di-n-butyl phthalate, 2,4-dichlorophenol, 2,6-DNT, bis (2-ethylhexyl) phthalate, diethyl phthalate, and hexachlorocyclopentadiene</b>
All other SVOC compounds	No	No	No	No	No	No	No	No	No

**Bold = Yes -Tissue Analysis is Recommended**

**TABLE 3**  
Results of Physical Analyses for Sediment Samples

DMMU Location: Sample ID:		DMMU-1 0 ft. to -30 ft. MLLW (Surficial Terrestrial)			DMMU-2 -30 ft. to -60 ft. MLLW (Subsurface Terrestrial)			DMMU-3 0 ft. to -30 ft. MLLW (Surficial Terrestrial)		
		DMMU-1-1A	DMMU-1-1B	DMMU-1-1C	DMMU-2-1A	DMMU-2-1B	DMMU-2-1C	DMMU-3-2A	DMMU-3-2A (Duplicate)	DMMU-3-2B
<b>Sediment Description</b>		Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, tan	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, some silt, trace clay, tan	Sand, silty, mostly fine-grained sand-sized quartz, some silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, some silt, few clay, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray
% Gravel (Particles ≥4.750 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Coarse Sand		0.1	0.5	0.6	0.0	0.6	0.8	0.2	0.1	0.4
% Medium Sand		0.5	0.9	3.4	1.2	1.9	3.0	0.6	0.8	0.8
% Fine Sand		79.6	81.0	67.8	65.3	67.1	55.7	83.7	83.1	80.9
% Sand (total) (Particles 0.075-4.749 mm)		80.2	82.4	71.8	66.5	69.6	59.5	84.5	84.0	82.1
% Silt (Particles 0.005-0.074 mm)		19.4	17.2	27.3	32.2	29.7	33.4	15.0	15.6	17.1
% Clay (Particles <0.005 mm)		0.4	0.4	0.9	1.3	0.7	7.1	0.5	0.4	0.8
% Silt & Clay (combined)		19.8	17.6	28.2	33.5	30.4	40.5	15.5	16.0	17.9
USCS Classification		SM	SM	SM	SM	SM	SM	SM	SM	SM
% Passing Sieve Size	Metric Equivalent (mm)									
#4	4.75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
#10	2.00	99.9	99.5	99.4	100.0	99.4	99.2	99.8	99.9	99.6
#20	0.85	99.6	98.9	97.5	99.5	98.4	97.5	99.5	99.4	99.2
#40	0.425	99.4	98.6	96.0	98.8	97.5	96.2	99.2	99.1	98.8
#50	0.297	99.1	98.2	95.3	98.5	96.9	95.7	98.9	98.8	98.6
#70	0.210	96.8	95.6	93.0	97.7	94.1	94.5	96.8	96.5	96.1
#100	0.149	69.8	71.9	73.2	88.0	76.1	84.1	69.1	71.8	73.8
#140	0.105	38.0	31.3	45.1	61.3	53.3	60.6	33.5	32.8	31.5
#200	0.075	19.8	17.6	28.2	33.5	30.4	40.5	15.5	16.0	17.9
<b>Hydrometer Readings</b> (% less than the following sizes)		5.1 @ 0.0511 mm.	4.7 @ 0.0513 mm.	13.1 @ 0.0499 mm.	10.0 @ 0.0509 mm.	17.8 @ 0.0475 mm.	28.4 @ 0.0448 mm.	3.3 @ 0.0515 mm.	1.3 @ 0.0521 mm.	3.3 @ 0.0515 mm.
		2.0 @ 0.0365 mm.	2.0 @ 0.0366 mm.	8.4 @ 0.0359 mm.	7.1 @ 0.0363 mm.	15.8 @ 0.0339 mm.	26.2 @ 0.0321 mm.	1.8 @ 0.0366 mm.	1.0 @ 0.0369 mm.	1.5 @ 0.0367 mm.
		1.2 @ 0.0259 mm.	1.6 @ 0.0259 mm.	5.5 @ 0.0256 mm.	5.3 @ 0.0258 mm.	15.2 @ 0.0240 mm.	24.6 @ 0.0229 mm.	1.1 @ 0.0260 mm.	0.6 @ 0.0261 mm.	1.0 @ 0.0260 mm.
		0.4 @ 0.0134 mm.	1.2 @ 0.0134 mm.	2.5 @ 0.0134 mm.	2.4 @ 0.0134 mm.	8.6 @ 0.0128 mm.	23.3 @ 0.0119 mm.	0.7 @ 0.0134 mm.	0.3 @ 0.0135 mm.	1.0 @ 0.0134 mm.
		0.4 @ 0.0095 mm.	0.8 @ 0.0095 mm.	1.3 @ 0.0095 mm.	1.9 @ 0.0095 mm.	4.2 @ 0.0093 mm.	20.7 @ 0.0085 mm.	0.4 @ 0.0095 mm.	0.3 @ 0.0095 mm.	0.8 @ 0.0095 mm.
		0.5 @ 0.0067 mm.	0.5 @ 0.0067 mm.	1.0 @ 0.0067 mm.	1.3 @ 0.0067 mm.	0.9 @ 0.0066 mm.	10.0 @ 0.0064 mm.	0.5 @ 0.0067 mm.	0.4 @ 0.0067 mm.	0.8 @ 0.0067 mm.
		0.3 @ 0.0033 mm.	0.3 @ 0.0033 mm.	0.8 @ 0.0033 mm.	1.2 @ 0.0033 mm.	0.6 @ 0.0033 mm.	3.7 @ 0.0033 mm.	0.4 @ 0.0033 mm.	0.5 @ 0.0033 mm.	0.7 @ 0.0033 mm.
		0.1 @ 0.0014 mm.	0.1 @ 0.0014 mm.	0.5 @ 0.0014 mm.	0.1 @ 0.0014 mm.	0.7 @ 0.0014 mm.	3.8 @ 0.0013 mm.	0.1 @ 0.0014 mm.	0.4 @ 0.0014 mm.	0.4 @ 0.0014 mm.

**TABLE 3 (continued)**

Results of Physical Analyses for Sediment Samples

DMMU Location:		DMMU-4 -30 ft. to -60 ft. MLLW (Subsurface Terrestrial)		DMMU-5 0 ft. to -30 ft. MLLW (Surficial Terrestrial)			DMMU-6 -30 ft. to -60 ft. MLLW (Subsurface Terrestrial)		
Sample ID:		DMMU-4-2A	DMMU-4-2B	DMMU-5-3A	DMMU-5-3B	DMMU-5-3C	DMMU-6-3A	DMMU-6-3B	DMMU-6-3C
<b>Sediment Description</b>		Sand, silty, mostly fine-grained sand-sized quartz, some silt, trace clay, tan	Sand, silty, mostly fine-grained sand-sized quartz, some silt, trace clay, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, some silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, gray	Sand, silty, mostly fine-grained sand-sized quartz, some silt, trace clay, gray	Sand, silty, mostly fine-grained sand-sized quartz, some silt, trace clay, gray	Sand, silty, mostly fine-grained sand-sized quartz, little silt, trace clay, gray
% Gravel (Particles ≥4.750 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Coarse Sand		0.0	0.6	0.1	0.1	0.0	0.0	0.0	0.0
% Medium Sand		1.8	0.9	0.9	0.9	0.3	0.6	0.6	0.4
% Fine Sand		61.8	65.2	82.1	69.3	74.0	65.4	66.5	72.2
% Sand (total) (Particles 0.075-4.749 mm)		63.6	66.7	83.1	70.3	74.3	66.0	67.1	72.6
% Silt (Particles 0.005-0.074 mm)		34.2	30.3	16.4	29.1	24.8	32.3	31.5	26.4
% Clay (Particles <0.005 mm)		2.2	3.0	0.5	0.6	0.9	1.7	1.4	1.0
% Silt & Clay (combined)		36.4	33.3	16.9	29.7	25.7	34.0	32.9	27.4
USCS Classification		SM	SM	SM	SM	SM	SM	SM	SM
<b>% Passing Sieve Size</b>	<b>Metric Equivalent (mm)</b>								
#4	4.75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
#10	2.00	100.0	99.4	99.9	99.9	100.0	100.0	100.0	100.0
#20	0.85	99.4	98.9	99.4	99.5	99.9	99.8	99.7	99.8
#40	0.425	98.2	98.5	99.0	99.0	99.7	99.4	99.4	99.6
#50	0.297	97.6	98.3	98.7	98.8	99.5	99.3	99.2	99.5
#70	0.210	96.3	96.7	96.6	97.5	98.1	98.3	98.4	98.8
#100	0.149	80.8	79.7	75.0	82.4	82.8	87.1	86.6	87.2
#140	0.105	55.4	51.0	34.8	45.5	49.0	57.7	60.5	47.0
#200	0.075	36.4	33.3	16.9	29.7	25.7	34.0	32.9	27.4
<b>Hydrometer Readings (% less than the following sizes)</b>		21.3 @ 0.0486 mm.	19.6 @ 0.0472 mm.	7.1 @ 0.0508 mm.	8.0 @ 0.0508 mm.	4.0 @ 0.0513 mm.	12.3 @ 0.0504 mm.	12.7 @ 0.0502 mm.	5.7 @ 0.0507 mm.
		18.6 @ 0.0347 mm.	18.0 @ 0.0336 mm.	3.8 @ 0.0363 mm.	3.3 @ 0.0364 mm.	2.0 @ 0.0365 mm.	9.1 @ 0.0359 mm.	10.2 @ 0.0357 mm.	3.3 @ 0.0361 mm.
		16.7 @ 0.0247 mm.	16.0 @ 0.0240 mm.	1.3 @ 0.0259 mm.	1.5 @ 0.0259 mm.	1.6 @ 0.0259 mm.	7.0 @ 0.0255 mm.	9.3 @ 0.0253 mm.	2.8 @ 0.0256 mm.
		14.9 @ 0.0128 mm.	13.3 @ 0.0125 mm.	0.9 @ 0.0134 mm.	1.0 @ 0.0134 mm.	1.6 @ 0.0134 mm.	4.9 @ 0.0133 mm.	8.3 @ 0.0131 mm.	2.3 @ 0.0132 mm.
		13.2 @ 0.0091 mm.	8.5 @ 0.0091 mm.	0.9 @ 0.0094 mm.	0.6 @ 0.0095 mm.	1.3 @ 0.0094 mm.	2.8 @ 0.0094 mm.	5.5 @ 0.0093 mm.	1.8 @ 0.0094 mm.
		3.3 @ 0.0066 mm.	3.9 @ 0.0066 mm.	0.6 @ 0.0067 mm.	0.6 @ 0.0067 mm.	0.9 @ 0.0067 mm.	1.8 @ 0.0067 mm.	2.6 @ 0.0066 mm.	1.2 @ 0.0066 mm.
		0.9 @ 0.0033 mm.	2.2 @ 0.0033 mm.	0.4 @ 0.0033 mm.	0.5 @ 0.0033 mm.	0.8 @ 0.0033 mm.	1.6 @ 0.0033 mm.	1.0 @ 0.0033 mm.	0.9 @ 0.0033 mm.
		0.1 @ 0.0014 mm.	2.4 @ 0.0013 mm.	0.1 @ 0.0014 mm.	0.1 @ 0.0014 mm.	0.5 @ 0.0014 mm.	0.6 @ 0.0014 mm.	0.6 @ 0.0014 mm.	0.6 @ 0.0014 mm.

**TABLE 4**

Analytical Results for Dry Weight Metals, Ammonia, Total Cyanide, TPHs, Total Solids, TOCs, Organotins, and pH in Sediment Samples

Analyte	DMMU:			DMMU-1 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-2 -30 to -60 ft. MLLW (Subsurface Terrestrial)											
	Sample ID:			DMMU-1-1A				DMMU-1-1B				DMMU-1-1C				DMMU-2-1A				DMMU-2-1B				DMMU-2-1C			
	Maximum Conc. mg/kg	TEL mg/kg	ERL mg/kg	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL
<b>Metals</b>																											
Antimony	<0.0375	x	x	<0.0277	U	0.0277	0.0556	<0.0276	U	0.0276	0.0554	<0.0279	U	0.0279	0.0560	<0.0298	U	0.0298	0.0598	<0.0302	U	0.0302	0.0606	<0.0350	U	0.0350	0.0703
Arsenic	6.20	7.24	8.2	0.891	--	0.00277	0.0277	0.666	--	0.00276	0.0276	1.05	--	0.00279	0.0279	3.07	--	0.00298	0.0298	1.69	--	0.00302	0.0302	2.40	--	0.00350	0.0350
Beryllium	0.521	x	x	0.0436	--	0.000556	0.0111	0.0394	--	0.000554	0.0110	0.0692	--	0.000560	0.0112	0.167	--	0.000598	0.0119	0.151	--	0.000606	0.0121	0.211	--	0.000703	0.0140
Cadmium	0.133	0.676	1.2	0.0132	J	0.00277	0.0556	0.0105	J	0.00276	0.0554	0.0443	J	0.00279	0.0560	0.0607	--	0.00298	0.0598	0.057	J	0.00302	0.0606	0.0585	J	0.00350	0.0703
Chromium	7.36	52.3	81	1.10	--	0.00833	0.167	0.886	--	0.00830	0.166	1.52	--	0.00838	0.168	3.85	--	0.00895	0.179	3.74	--	0.00908	0.182	4.63	--	0.0105	0.210
Chromium (III)	6.55	x	x	0.953	J	0.142	5.17	<0.139	U	0.139	5.17	1.19	J	0.142	5.17	3.61	J	0.153	5.18	3.74	J	0.153	5.18	3.72	J	0.178	5.21
Chromium (VI)	1.78	x	x	0.150	J	0.133	5.00	1.50	J	0.131	5.00	0.334	J	0.134	5.00	0.248	J	0.144	5.00	<0.144	U	0.144	5.00	0.909	J	0.168	5.00
Copper	5.90	18.7	34	0.568	V	0.0111	0.0556	0.502	V	0.0110	0.0554	1.39	V	0.0112	0.0560	3.22	V	0.0119	0.0598	2.64	V	0.0121	0.0606	2.91	V	0.0140	0.0703
Lead	9.37	30.24	46.7	1.23	--	0.00277	0.0277	1.19	--	0.00276	0.0276	1.36	--	0.00279	0.0279	3.11	--	0.00298	0.0298	2.46	--	0.00302	0.0302	2.80	--	0.00350	0.0350
Mercury	0.029	0.13	0.15	0.00962	J	0.00916	0.0183	<0.00966	U	0.00966	0.0193	<0.00902	U	0.00902	0.0180	<0.00940	U	0.00940	0.0188	<0.00947	U	0.00947	0.0189	<0.00936	U	0.00936	0.0187
Nickel	6.82	15.9	20.9	0.998	--	0.0556	0.0556	0.818	--	0.0554	0.0554	1.57	--	0.0560	0.0560	3.40	--	0.0598	0.0598	2.54	--	0.0606	0.0606	3.59	--	0.0703	0.0703
Selenium	1.41	x	x	0.312	--	0.0556	0.111	0.266	--	0.0554	0.110	0.375	--	0.0560	0.112	0.703	--	0.0598	0.119	0.755	--	0.0606	0.121	0.612	--	0.0703	0.140
Silver	0.039	0.73	1	0.00472	J	0.00139	0.0277	0.00415	J	0.00138	0.0276	0.00844	J	0.00140	0.0279	0.0125	J	0.00149	0.0298	0.00847	J	0.00151	0.0302	0.0113	J	0.00175	0.0350
Thallium	0.079	x	x	0.0241	J	0.00139	0.0277	0.0220	J	0.00138	0.0276	0.0404	--	0.00140	0.0279	0.0499	--	0.00149	0.0298	0.0382	--	0.00151	0.0302	0.0515	--	0.00175	0.0350
Zinc	27.9	124	150	3.48	--	0.0556	0.111	2.69	--	0.0554	0.110	3.34	--	0.0560	0.112	8.13	--	0.0598	0.119	5.43	--	0.0606	0.121	7.30	--	0.0703	0.140
<b>Others</b>																											
Ammonia (as nitrogen)	261	x	x	8.26	J	6.70	13.4	6.74	J	6.69	13.4	12.8	J	6.70	13.4	8.71	J	7.40	14.8	15.1	--	7.31	14.6	17.3	--	8.58	17.2
Cyanide, Total	<0.0439	x	x	<0.0320	U	0.0320	0.0640	<0.0325	U	0.0325	0.0651	<0.0323	U	0.0323	0.0646	<0.0363	U	0.0363	0.0727	<0.0358	U	0.0358	0.0716	<0.0423	U	0.0423	0.0846
Petroleum Hydrocarbons, Total	2068	x	x	78.4	--	6.2	25	71.8	--	6.20	25	75.5	--	6.20	25	74.5	--	6.20	25	76.6	--	6.20	25	78.4	--	6.20	25
Analyte	Maximum Conc. %	TEL %	ERL %	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL
Solids, Total	85.5	x	x	74.4	V	0.100	0.100	74.6	V	0.100	0.100	74.4	V	0.100	0.100	67.5	V	0.100	0.100	67.8	V	0.100	0.100	58.0	V	0.100	0.100
Carbon, Total Organic		x	x																								
Analyte	Maximum Conc. µg/kg	TEL µg/kg	ERL µg/kg	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Monobutyltin	1.6	x	x	0.39	J, *	0.35	1.3	0.63	J, *	0.35	1.3	1.6	*	0.37	1.4	<0.52	U, I, *	0.52	1.5	0.39	J, *	0.38	1.4	1.1	J, *	0.44	1.7
Dibutyltin	1.4	x	x	<0.26	U, *	0.26	1.3	<0.26	U, *	0.26	1.3	1.4	J, P, *	0.27	1.4	<0.29	U, *	0.29	1.5	<0.28	U, *	0.28	1.4	<0.32	U, *	0.32	1.7
Tributyltin	1.3	x	x	<0.58	U, *	0.58	1.3	<0.58	U, *	0.58	1.3	<0.62	U, *	0.62	1.4	<0.65	U, *	0.65	1.5	<0.63	U, *	0.63	1.4	<0.72	U, *	0.72	1.7
Analyte	pH Range	TEL pH units	ERL pH units	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL
pH	7.88 - 9.04	x	x	8.16	H		0.100	8.84	H		0.100	8.27	H		0.100	8.19	H		0.100	8.03	H		0.100	8.23	H		0.100



**TABLE 4 (continued)**

Analytical Results for Dry Weight Metals, Ammonia, Total Cyanide, TPHs, Total Solids, TOCs, Organotins, and pH in Sediment Samples

DMMU: Sample ID:	DMMU-3 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-4 -30 to -60 ft. MLLW (Subsurface Terrestrial)								DMMU-5 0 to -30 ft. MLLW (Surficial Terrestrial)											
	DMMU-3-2A				DMMU-3-2A (Duplicate)				DMMU-3-2B				DMMU-4-2A				DMMU-4-2B				DMMU-5-3A				DMMU-5-3B				DMMU-5-3C			
	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL
<b>Metals</b>																																
Antimony	<0.0285	U	0.0285	0.0571	<0.0279	U	0.0279	0.0560	<0.0276	U	0.0276	0.0554	<0.0313	U	0.0313	0.0627	<0.0285	U	0.0285	0.0572	<0.0268	U	0.0268	0.0537	<0.0277	U	0.0277	0.0554	<0.0285	U	0.0285	0.0572
Arsenic	0.741	--	0.00285	0.0285	0.269	--	0.00279	0.0279	0.793	--	0.00276	0.0276	2.78	--	0.00313	0.0313	1.17	--	0.00285	0.0285	0.867	--	0.00268	0.0268	0.790	--	0.00277	0.0277	0.744	--	0.00285	0.0285
Beryllium	0.0341	--	0.000571	0.0114	0.0189	--	0.000560	0.0112	0.0373	--	0.000554	0.0110	0.131	--	0.000627	0.0125	0.117	--	0.000572	0.0114	0.0412	--	0.000537	0.0107	0.0626	--	0.000554	0.0111	0.041	--	0.000572	0.0114
Cadmium	0.0141	J	0.00285	0.0571	0.0108	J	0.00279	0.0560	0.022	J	0.00276	0.0554	0.100	--	0.00313	0.0627	0.0312	J	0.00285	0.0572	0.0319	J	0.00268	0.0537	0.022	J	0.00277	0.0554	0.0131	J	0.00285	0.0572
Chromium	0.748	--	0.00855	0.171	0.402	V	0.00838	0.168	0.939	--	0.00829	0.166	2.73	--	0.00938	0.188	2.63	--	0.00856	0.171	1.10	--	0.00804	0.161	1.12	--	0.00830	0.166	0.868	--	0.00856	0.171
Chromium (III)	0.228	J	0.144	5.17	0.402	J	0.140	5.17	<0.141	U	0.141	5.17	2.50	J	0.162	5.19	2.39	J	0.151	5.17	1.10	J	0.142	5.16	0.612	J	0.143	5.17	0.868	J	0.141	5.17
Chromium (VI)	0.520	J	0.135	5.00	<0.132	U	0.132	5.00	0.966	J	0.132	5.00	0.230	J	0.153	5.00	0.249	J	0.143	5.00	<0.134	U	0.134	5.00	0.510	J	0.135	5.00	<0.133	U	0.133	5.00
Copper	0.459	V	0.0114	0.0571	0.326	V	0.0112	0.0560	0.633	V	0.0110	0.0554	2.00	V	0.0125	0.0627	2.06	V	0.0114	0.0572	0.652	V	0.0107	0.0537	0.812	V	0.0111	0.0554	0.437	V	0.0114	0.0572
Lead	1.32	--	0.00285	0.0285	0.438	--	0.00279	0.0279	0.983	--	0.00276	0.0276	2.36	--	0.00313	0.0313	2.17	--	0.00285	0.0285	1.06	--	0.00268	0.0268	1.18	--	0.00277	0.0277	0.866	--	0.00285	0.0285
Mercury	<0.00929	U	0.00929	0.0186	<0.00994	U	0.00994	0.0199	<0.00964	U	0.00964	0.0193	<0.00979	U	0.00979	0.0196	<0.00991	U	0.00991	0.0198	<0.00926	U	0.00926	0.0185	<0.00945	U	0.00945	0.0189	<0.00913	U	0.00913	0.0183
Nickel	0.679	--	0.0571	0.0571	0.418	--	0.0560	0.0560	0.819	--	0.0554	0.0554	3.64	--	0.0627	0.0627	2.03	--	0.0572	0.0572	0.918	--	0.0537	0.0537	1.18	--	0.0554	0.0554	0.768	--	0.0572	0.0572
Selenium	0.269	--	0.0571	0.114	0.0829	J	0.0560	0.112	0.288	--	0.0554	0.110	0.550	--	0.0627	0.125	0.422	--	0.0572	0.114	0.320	--	0.0537	0.107	0.302	--	0.0554	0.111	0.286	--	0.0572	0.114
Silver	0.0073	J	0.00143	0.0285	0.00229	J	0.00140	0.0279	0.0063	J	0.00138	0.0276	0.0121	J	0.00156	0.0313	0.0105	J	0.00143	0.0285	0.0082	J	0.00134	0.0268	0.00697	J	0.00138	0.0277	0.00479	J	0.00143	0.0285
Thallium	0.0235	J	0.00143	0.0285	0.00916	J	0.00140	0.0279	0.0285	--	0.00138	0.0276	0.057	--	0.00156	0.0313	0.0328	--	0.00143	0.0285	0.0311	--	0.00134	0.0268	0.0298	--	0.00138	0.0277	0.0241	J	0.00143	0.0285
Zinc	2.28	--	0.0571	0.114	0.955	--	0.0560	0.112	2.20	--	0.0554	0.110	5.61	--	0.0627	0.125	4.51	--	0.0572	0.114	2.52	--	0.0537	0.107	3.15	--	0.0554	0.111	2.68	--	0.0572	0.114
<b>Others</b>																																
Ammonia (as nitrogen)	<6.91	U	6.91	13.8	<6.71	U	6.71	13.4	6.78	J	6.73	13.5	9.86	J	7.66	15.3	8.01	J	7.15	14.3	<6.71	U	6.71	13.4	9.91	J	6.81	13.6	7.26	J	6.83	13.7
Cyanide, Total	<0.0333	U	0.0333	0.0666	<0.0330	U	0.0330	0.0660	<0.0334	U	0.0334	0.0667	<0.0384	U	0.0384	0.0768	<0.0355	U	0.0355	0.0711	<0.0331	U	0.0331	0.0662	<0.0336	U	0.0336	0.0673	<0.0341	U	0.0341	0.0683
Petroleum Hydrocarbons, Total	2068	--	62	250	144.1	--	6.20	25	77.9	--	6.20	25	83.1	--	6.20	25	74.6	--	6.20	25	79.5	--	6.20	25	292.4	--	6.20	25	71.5	--	6.20	25
<b>Organotins</b>																																
Analyte	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL
Solids, Total	72.2	V	0.100	0.100	74.3	V	0.100	0.100	74.2	V	0.100	0.100	65.1	V	0.100	0.100	69.7	V	0.100	0.100	74.0	V	0.100	0.100	72.9	V	0.100	0.100	73.2	V	0.100	0.100
Carbon, Total Organic																																
<b>Organotin Compounds</b>																																
Analyte	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Monobutyltin	0.70	J	0.35	1.3	<0.37	U	0.37	1.4	0.67	J	0.36	1.4	0.41	J	0.41	1.6	0.40	J, P	0.37	1.4	0.63	J, *	0.35	1.3	0.51	J, *	0.38	1.4	0.53	J	0.32	1.2
Dibutyltin	<0.26	U	0.26	1.3	<0.27	U	0.27	1.4	<0.26	U	0.26	1.4	<0.30	U	0.30	1.6	<0.27	U	0.27	1.4	<0.26	U, *	0.26	1.3	<0.28	U, *	0.28	1.4	<0.24	U	0.24	1.2
Tributyltin	<0.57	U	0.57	1.3	<0.61	U	0.61	1.4	<0.59	U	0.59	1.4	<0.68	U	0.68	1.6	<0.61	U	0.61	1.4	<0.58	U, *	0.58	1.3	<0.63	U, *	0.63	1.4	<0.53	U	0.53	1.2
<b>pH</b>																																
Analyte	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL
pH	8.47	H		0.100	8.83	H		0.100	9.04	H		0.100	8.09	H		0.100	8.43	H		0.100	8.81	H		0.100	8.92	H		0.100	8.70	H		0.100

**TABLE 4 (continued)**

Analytical Results for Dry Weight Metals, Ammonia, Total Cyanide, TPHs, Total Solids, TOCs, Organotins, and pH in Sediment Samples

DMMU: Sample ID: Analyte	DMMU-6 -30 to -60 ft. MLLW (Subsurface Terrestrial)												DMMU-7 Existing Depth to -60 ft. MLLW (Shallow Marine Area)															
	DMMU-6-3A				DMMU-6-3B				DMMU-6-3C				DMMU-7-4A				DMMU-7-4B				DMMU-7-4C				DMMU-7-4D			
	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL
<b>Metals</b>																												
Antimony	<0.0273	U	0.0273	0.0548	<0.0276	U	0.0276	0.0553	<0.0274	U	0.0274	0.0550	<0.0265	U	0.0265	0.0531	<0.0375	U	0.0375	0.0752	<0.0277	U	0.0277	0.0554	<0.0241	U	0.0241	0.0483
Arsenic	0.740	--	0.00273	0.0273	1.10	--	0.00276	0.0276	1.16	--	0.00274	0.0274	2.53	--	0.00265	0.0265	3.96	--	0.00375	0.0375	2.13	--	0.00277	0.0277	0.657	--	0.00241	0.0241
Beryllium	0.0698	--	0.000548	0.0109	0.127	--	0.000553	0.0110	0.121	--	0.000550	0.0110	0.240	--	0.000531	0.0106	0.521	--	0.000752	0.0150	0.105	--	0.000554	0.0111	0.191	--	0.000483	0.00964
Cadmium	0.0212	J	0.00273	0.0548	0.09	--	0.00276	0.0553	0.0227	J	0.00274	0.0550	0.0518	J	0.00265	0.0531	0.133	--	0.00375	0.0752	0.00902	J	0.00277	0.0554	0.0104	J	0.00241	0.0483
Chromium	1.37	--	0.00820	0.164	2.18	--	0.00828	0.166	2.79	--	0.00824	0.165	3.60	--	0.00796	0.159	7.36	--	0.0113	0.225	1.29	--	0.00830	0.166	1.65	--	0.00724	0.145
Chromium (III)	1.04	J	0.138	5.16	0.948	J	0.143	5.17	1.01	J	0.140	5.16	2.19	J	0.140	5.16	6.55	--	0.194	5.23	1.08	J	0.140	5.17	1.42	J	0.124	5.14
Chromium (VI)	0.326	J	0.130	5.00	1.23	J	0.135	5.00	1.78	J	0.132	5.00	1.41	J	0.132	5.00	0.810	J	0.183	5.00	0.209	J	0.131	5.00	0.229	J	0.117	5.00
Copper	1.04	V	0.0109	0.0548	2.56	V	0.0110	0.0553	1.60	V	0.0110	0.0550	2.71	V	0.0106	0.0531	5.90	V	0.0150	0.0752	1.11	V	0.0111	0.0554	1.11	V	0.00964	0.0483
Lead	1.20	--	0.00273	0.0273	2.94	--	0.00276	0.0276	2.15	--	0.00274	0.0274	4.41	--	0.00265	0.0265	9.37	--	0.0187	0.187	1.42	--	0.00277	0.0277	1.82	--	0.00241	0.0241
Mercury	<0.00891	U	0.00891	0.0178	<0.00977	U	0.00977	0.0195	<0.00932	U	0.00932	0.0186	<0.00924	U	0.00924	0.0185	0.0296	--	0.0130	0.0259	0.0158	--	0.00696	0.0139	<0.00839	U	0.00839	0.0168
Nickel	1.35	--	0.0548	0.0548	2.24	--	0.0553	0.0553	1.81	--	0.0550	0.0550	4.18	--	0.0531	0.0531	6.82	--	0.0752	0.0752	1.26	--	0.0554	0.0554	1.19	--	0.0483	0.0483
Selenium	0.285	--	0.0548	0.109	0.422	--	0.0553	0.110	0.466	--	0.0550	0.110	0.832	--	0.0531	0.106	1.41	--	0.0752	0.150	0.303	--	0.0554	0.111	0.805	--	0.0483	0.0964
Silver	0.00459	J	0.00137	0.0273	0.0169	J	0.00138	0.0276	0.00747	J	0.00137	0.0274	0.0163	J	0.00133	0.0265	0.0394	--	0.00188	0.0375	0.00249	J	0.00138	0.0277	0.00463	J	0.00121	0.0241
Thallium	0.0178	J	0.00137	0.0273	0.0576	--	0.00138	0.0276	0.0302	--	0.00137	0.0274	0.0467	--	0.00133	0.0265	0.079	--	0.00188	0.0375	0.0128	J	0.00138	0.0277	0.0277	--	0.00121	0.0241
Zinc	2.41	--	0.0548	0.109	7.78	--	0.0553	0.110	5.56	--	0.0550	0.110	12.9	--	0.0531	0.106	27.9	--	0.0752	0.150	3.27	--	0.0554	0.111	4.27	--	0.0483	0.0964
<b>Others</b>																												
Ammonia (as nitrogen)	6.99	J	6.57	13.1	7.28	J	6.84	13.7	<6.76	U	6.76	13.5	124	--	6.66	13.3	261	--	9.17	18.3	14.1	--	6.61	13.2	50.3	--	5.98	12.0
Cyanide, Total	<0.0314	U	0.0314	0.0628	<0.0342	U	0.0342	0.0684	<0.0322	U	0.0322	0.0645	<0.0321	U	0.0321	0.0643	<0.0439	U	0.0439	0.0878	<0.0319	U	0.0319	0.0639	<0.0289	U	0.0289	0.0578
Petroleum Hydrocarbons, Total	73.1	--	6.20	25	79.3	--	6.20	25	71.8	--	6.20	25	80.4	--	6.20	25	69.2	--	6.20	25	78.9	--	6.20	25	75.0	--	6.20	25
Analyte	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL	Result %	Qualifier	MDL	LRL
Solids, Total	75.8	V	0.100	0.100	73.1	V	0.100	0.100	73.8	V	0.100	0.100	74.8	V	0.100	0.100	54.2	V	0.100	0.100	75.3	V	0.100	0.100	83.2	V	0.100	0.100
Carbon, Total Organic																												
Analyte	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Monobutyltin	<0.36	U, *	0.36	1.3	<0.36	U, *	0.36	1.4	<0.38	U	0.38	1.4	<0.39	U, *	0.39	1.5	1.4	J, *	0.41	1.5	0.63	J, P, *	0.32	1.2	<0.33	U, *	0.33	1.2
Dibutyltin	<0.26	U, *	0.26	1.3	<0.26	U, *	0.26	1.4	<0.28	U	0.28	1.4	<0.28	U, *	0.28	1.5	<0.30	U, *	0.30	1.5	<0.24	U, *	0.24	1.2	<0.24	U, *	0.24	1.2
Tributyltin	<0.59	U, *	0.59	1.3	<0.59	U, *	0.59	1.4	<0.63	U	0.63	1.4	<0.64	U, *	0.64	1.5	1.3	J, *	0.67	1.5	<0.53	U, *	0.53	1.2	<0.54	U, *	0.54	1.2
Analyte	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL	Result pH units	Qualifier	MDL	LRL
pH	8.48	H		0.100	8.47	H		0.100	8.58	H		0.100	8.47	H		0.100	8.43	H		0.100	7.88	H		0.100	8.54	H		0.100

**TABLE 4 (continued)**

Analytical Results for Dry Weight Metals, Ammonia, Total Cyanide, TPHs, Total Solids, TOCs, Organotins, and pH in Sediment Samples

DMMU:  Sample ID:	DMMU-8 Existing Depth to -60 ft. MLLW (Marine Area)																Reference (Reference Area)				ODMDS (Corpus Christi New Work ODMDS)			
	DMMU-8-5A				DMMU-8-5B				DMMU-8-5C				DMMU-8-5D				HI-REF				HI-ODMDS			
	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL	Result mg/kg	Qualifier	MDL	LRL
<b>Analyte</b>																								
<b>Metals</b>																								
Antimony	<0.0242	U	0.0242	0.0485	<0.0246	U	0.0246	0.0493	<0.0279	U	0.0279	0.0559	<0.0286	U	0.0286	0.0572	<0.0297	U	0.0297	0.0596	<0.0270	U	0.0270	0.0542
Arsenic	0.295	--	0.00242	0.0242	1.23	--	0.00246	0.0246	6.20	--	0.0139	0.139	1.71	--	0.00286	0.0286	1.71	--	0.00297	0.0297	1.39	--	0.0135	0.135
Beryllium	0.217	--	0.000485	0.00967	0.145	--	0.000493	0.00982	0.130	--	0.000559	0.0111	0.224	--	0.00286	0.0571	0.176	--	0.00298	0.0594	0.0655	--	0.00271	0.0541
Cadmium	0.00315	J	0.00242	0.0485	0.0214	J	0.00246	0.0493	0.0353	J	0.00279	0.0559	0.0336	J	0.00286	0.0572	0.0152	J	0.00297	0.0596	0.00909	J	0.00270	0.0542
Chromium	2.32	V	0.00726	0.145	2.24	V	0.00738	0.148	1.52	V	0.00837	0.167	4.16	--	0.00857	0.171	2.91	--	0.00893	0.179	1.27	--	0.00812	0.162
Chromium (III)	2.13	J	0.121	5.15	1.86	J	0.122	5.15	1.19	J	0.138	5.17	4.16	J	0.147	5.17	2.32	J	0.153	5.18	1.13	J	0.137	5.16
Chromium (VI)	0.187	J	0.114	5.00	0.379	J	0.115	5.00	0.326	J	0.130	5.00	<0.138	U	0.138	5.00	0.587	J	0.144	5.00	0.144	J	0.129	5.00
Copper	0.962	V	0.00967	0.0485	1.28	V	0.00982	0.0493	1.45	V	0.0111	0.0559	4.44	V	0.0114	0.0572	1.68	V	0.0119	0.0596	0.435	V	0.0108	0.0542
Lead	2.27	--	0.00242	0.0242	2.62	--	0.00246	0.0246	2.33	--	0.00279	0.0279	2.94	--	0.00286	0.0286	2.73	--	0.00297	0.0297	1.70	--	0.00270	0.0270
Mercury	0.0141	J	0.00994	0.0199	0.0139	J	0.0100	0.0200	<0.00995	U	0.00995	0.0199	<0.00987	U	0.00987	0.0197	0.0121	J	0.00991	0.0198	<0.00999	U	0.00999	0.0200
Nickel	1.64	--	0.0485	0.0485	2.22	--	0.0493	0.0493	1.74	--	0.0559	0.0559	5.00	--	0.0572	0.0572	3.03	--	0.0596	0.0596	1.17	--	0.0542	0.0542
Selenium	0.377	--	0.0485	0.0967	0.699	--	0.0493	0.0982	0.449	--	0.0559	0.111	0.626	--	0.0572	0.114	0.458	--	0.0596	0.119	0.363	--	0.0542	0.108
Silver	<0.00121	U	0.00121	0.0242	0.00403	J	0.00123	0.0246	<0.00140	U	0.00140	0.0279	0.008	J	0.00143	0.0286	0.00851	J	0.00149	0.0297	0.00411	J	0.00135	0.0270
Thallium	0.0223	J	0.00121	0.0242	0.0212	J	0.00123	0.0246	0.024	J	0.00140	0.0279	0.0397	--	0.00143	0.0286	0.0295	J	0.00149	0.0297	0.0218	J	0.00135	0.0270
Zinc	3.41	--	0.0485	0.0967	4.49	--	0.0493	0.0982	4.83	--	0.0559	0.111	10.2	--	0.0572	0.114	11.3	--	0.0596	0.119	5.47	--	0.0542	0.108
<b>Others</b>																								
Ammonia (as nitrogen)	6.53	J	5.83	11.7	6.65	J	5.93	11.9	<6.71	U	6.71	13.4	15.9	--	6.93	13.9	13.4	J	7.23	14.5	<6.60	U	6.60	13.2
Cyanide, Total	<0.0290	U	0.0290	0.0579	<0.0294	U	0.0294	0.0588	<0.0331	U	0.0331	0.0661	<0.0349	U	0.0349	0.0697	<0.0362	U	0.0362	0.0724	<0.0331	U	0.0331	0.0662
Petroleum Hydrocarbons, Total	76.3	--	6.20	25	75.2	--	6.20	25	73.2	--	6.20	25	71.74	U	6.20	25	81.66	U	6.20	25	<1.86	U	1.86	25
<b>Analyte</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result %</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>
Solids, Total	85.5	V	0.100	0.100	84.2	V	0.100	0.100	74.1	V	0.100	0.100	71.7	H, V	0.100	0.100	69.0	H, V	0.100	0.100	75.6	H, V	0.100	0.100
Carbon, Total Organic																								
<b>Analyte</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result µg/kg</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>
Monobutyltin	0.59	J, *	0.31	1.2	<0.30	U	0.30	1.2	<0.37	U	0.37	1.4	<0.39	U	0.39	1.5	<0.40	U	0.40	1.5	<0.34	U, *	0.34	1.3
Dibutyltin	<0.23	U, *	0.23	1.2	<0.22	U	0.22	1.2	<0.27	U	0.27	1.4	<0.28	U	0.28	1.5	<0.29	U	0.29	1.5	<0.25	U, *	0.25	1.3
Tributyltin	<0.50	U, *	0.50	1.2	<0.50	U	0.50	1.2	<0.61	U	0.61	1.4	<0.63	U	0.63	1.5	<0.66	U	0.66	1.5	<0.56	U, *	0.56	1.3
<b>Analyte</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>	<b>Result pH units</b>	<b>Qualifier</b>	<b>MDL</b>	<b>LRL</b>
pH	8.19	H		0.100	8.05	H		0.100	8.91	H		0.100	8.75	H		0.100	8.53	H		0.100	8.41	H		0.100

< #.## = The analyte was not detected (ND) at or above the MDL. The value indicates the MDL.

Qualifiers: H = The parameter was analyzed outside the method specified holding time. I = The MRL/MDL or LOQ/LOD is elevated due to matrix interference. J = Estimated value - The reported value is between the detection limit and reporting limit.

P = The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. U = Indicates that the compound was analyzed for but not detected. V = Analyte was detected in both sample and method blank.

\* = The result is an outlier.

Sources: All results from NWDLS with the exception of the organotins, cyanide, and TOC results which came from ALS; TEL and ERL values from Buchman (2008).

Compiled by: ANAMAR Environmental Consulting, Inc.

**TABLE 5**  
Analytical Results for Dry Weight Pesticides and Total PCBs in Sediment Samples

Analyte	DMMU:			DMMU-1 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-2 -30 to -60 ft. MLLW (Subsurface Terrestrial)											
	Maximum Conc. µg/kg	Sample ID:		DMMU-1-1A				DMMU-1-1B				DMMU-1-1C				DMMU-2-1A				DMMU-2-1B				DMMU-2-1C			
		TEL µg/kg	ERL µg/kg	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Aldrin	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Chlordane (technical)	<0.553	2.26	0.5	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
α (cis)-Chlordane	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
γ (trans)-Chlordane	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
p,p' (4,4')-DDD	<0.553	1.22	2	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
p,p' (4,4')-DDE	<0.553	2.07	2.2	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
p,p' (4,4')-DDT	<0.553	1.19	1	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Dieldrin	<0.553	0.72	0.02	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endosulfan I	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endosulfan II	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endosulfan Sulfate	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endrin	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endrin Aldehyde	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Endrin Ketone	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Heptachlor	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Heptachlor Epoxide	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
α-BHC	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
β-BHC	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
δ-BHC	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
γ-BHC (Lindane)	<0.553	0.32	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Methoxychlor	<0.553	x	x	<0.390	U	0.390	1.30	<0.398	U	0.398	1.33	<0.401	U	0.401	1.34	<0.445	U	0.445	1.48	<0.443	U	0.443	1.48	<0.518	U	0.518	1.73
Toxaphene	<27.7	0.1	x	<19.5	U	19.5	19.5	<19.9	U	19.9	19.9	<20.1	U	20.1	20.1	<22.2	U	22.2	22.2	<22.1	U	22.1	22.1	<25.9	U	25.9	25.9
PCBs, Total	<1.84	21.6	22.7	<1.34	C+, U	1.34	2.69	<1.34	C+, U	1.34	2.68	<1.34	C+, U	1.34	2.69	<1.48	C+, U	1.48	2.96	<1.48	C+, U	1.48	2.95	<1.73	C+, U	1.73	3.45

**TABLE 5 (continued)**

Analytical Results for Dry Weight Pesticides and Total PCBs in Sediment Samples

DMMU:  Sample ID:  Analyte	DMMU-3 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-4 -30 to -60 ft. MLLW (Subsurface Terrestrial)								DMMU-5 0 to -30 ft. MLLW (Surficial Terrestrial)											
	DMMU-3-2A				DMMU-3-2A (Duplicate)				DMMU-3-2B				DMMU-4-2A				DMMU-4-2B				DMMU-5-3A				DMMU-5-3B				DMMU-5-3C			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Aldrin	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Chlordane (technical)	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
α (cis)-Chlordane	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
γ (trans)-Chlordane	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
p,p' (4,4')-DDD	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
p,p' (4,4')-DDE	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
p,p' (4,4')-DDT	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Dieldrin	<b>&lt;0.409</b>	U	0.409	1.36	<b>&lt;0.395</b>	U	0.395	1.32	<b>&lt;0.397</b>	U	0.397	1.32	<b>&lt;0.453</b>	U	0.453	1.51	<b>&lt;0.425</b>	U	0.425	1.42	<b>&lt;0.405</b>	U	0.405	1.35	<b>&lt;0.412</b>	U	0.412	1.37	<b>&lt;0.410</b>	U	0.410	1.37
Endosulfan I	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Endosulfan II	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Endosulfan Sulfate	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Endrin	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Endrin Aldehyde	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Endrin Ketone	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Heptachlor	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Heptachlor Epoxide	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
α-BHC	<0.409	C+, U	0.409	1.36	<0.395	C+, U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	C+, U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
β-BHC	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
δ-BHC	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
γ-BHC (Lindane)	<b>&lt;0.409</b>	U	0.409	1.36	<b>&lt;0.395</b>	U	0.395	1.32	<b>&lt;0.397</b>	U	0.397	1.32	<b>&lt;0.453</b>	U	0.453	1.51	<b>&lt;0.425</b>	U	0.425	1.42	<b>&lt;0.405</b>	U	0.405	1.35	<b>&lt;0.412</b>	U	0.412	1.37	<b>&lt;0.410</b>	U	0.410	1.37
Methoxychlor	<0.409	U	0.409	1.36	<0.395	U	0.395	1.32	<0.397	U	0.397	1.32	<0.453	U	0.453	1.51	<0.425	U	0.425	1.42	<0.405	U	0.405	1.35	<0.412	U	0.412	1.37	<0.410	U	0.410	1.37
Toxaphene	<b>&lt;20.4</b>	U	20.4	20.4	<b>&lt;19.8</b>	C+, U	19.8	19.8	<b>&lt;19.8</b>	C+, U	19.8	19.8	<b>&lt;22.7</b>	C+, U	22.7	22.7	<b>&lt;21.2</b>	C+, U	21.2	21.2	<b>&lt;20.3</b>	U	20.3	20.3	<b>&lt;20.6</b>	U	20.6	20.6	<b>&lt;20.5</b>	U	20.5	20.5
PCBs, Total	<1.32	U	1.32	2.64	<1.25	U	1.25	2.50	<1.31	U	1.31	2.63	<1.50	U	1.50	3.00	<1.35	U	1.35	2.71	<1.35	C+, U	1.35	2.70	<1.37	C+, U	1.37	2.74	<1.37	C+, U	1.37	2.73

**TABLE 5 (continued)**

Analytical Results for Dry Weight Pesticides and Total PCBs in Sediment Samples

DMMU:  Sample ID:  Analyte	DMMU-6 -30 to -60 ft. MLLW (Subsurface Terrestrial)												DMMU-7 Existing Depth to -60 ft. MLLW (Shallow Marine Area)															
	DMMU-6-3A				DMMU-6-3B				DMMU-6-3C				DMMU-7-4A				DMMU-7-4B				DMMU-7-4C				DMMU-7-4D			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Aldrin	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Chlordane (technical)	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
α (cis)-Chlordane	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
γ (trans)-Chlordane	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
p,p' (4,4')-DDD	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
p,p' (4,4')-DDE	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
p,p' (4,4')-DDT	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Dieldrin	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endosulfan I	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endosulfan II	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endosulfan Sulfate	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endrin	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endrin Aldehyde	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Endrin Ketone	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Heptachlor	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Heptachlor Epoxide	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
α-BHC	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
β-BHC	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
δ-BHC	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
γ-BHC (Lindane)	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Methoxychlor	<0.396	U	0.396	1.32	<0.410	U	0.410	1.37	<0.406	U	0.406	1.35	<0.401	U	0.401	1.34	<0.553	U	0.553	1.84	<0.398	U	0.398	1.33	<0.350	U	0.350	1.17
Toxaphene	<19.8	U	19.8	19.8	<20.5	U	20.5	20.5	<20.3	U	20.3	20.3	<20.0	U	20.0	20.0	<27.7	U	27.7	27.7	<19.9	U	19.9	19.9	<17.5	U	17.5	17.5
PCBs, Total	<1.32	C+, U	1.32	2.64	<1.37	C+, U	1.37	2.74	<1.35	C+, U	1.35	2.71	<1.34	C+, U	1.34	2.67	<1.84	C+, U	1.84	3.69	<1.33	C+, U	1.33	2.66	<1.20	C+, U	1.20	2.40

**TABLE 5 (continued)**

Analytical Results for Dry Weight Pesticides and Total PCBs in Sediment Samples

Analyte	DMMU:		DMMU-8 Existing Depth to -60 ft. MLLW (Marine Area)																Reference (Reference Area)				ODMDS (Corpus Christi New Work ODMDS)			
	Sample ID:		DMMU-8-5A				DMMU-8-5B				DMMU-8-5C				DMMU-8-5D				HI-REF				HI-ODMDS			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL		
Aldrin	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Chlordane (technical)	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
α (cis)-Chlordane	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
γ (trans)-Chlordane	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
p,p' (4,4')-DDD	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
p,p' (4,4')-DDE	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
p,p' (4,4')-DDT	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Dieldrin	<b>&lt;0.345</b>	U	0.345	1.15	<b>&lt;0.348</b>	U	0.348	1.16	<b>&lt;0.377</b>	U	0.377	1.26	<b>&lt;0.418</b>	U	0.418	1.39	<b>&lt;0.434</b>	U	0.434	1.45	<b>&lt;0.395</b>	U	0.395	1.32		
Endosulfan I	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Endosulfan II	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Endosulfan Sulfate	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Endrin	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Endrin Aldehyde	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Endrin Ketone	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Heptachlor	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Heptachlor Epoxide	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
α-BHC	<0.345	U	0.345	1.15	<0.348	C+, U	0.348	1.16	<0.377	C+, U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	C+, U	0.395	1.32		
β-BHC	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
δ-BHC	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
γ-BHC (Lindane)	<b>&lt;0.345</b>	U	0.345	1.15	<b>&lt;0.348</b>	U	0.348	1.16	<b>&lt;0.377</b>	U	0.377	1.26	<b>&lt;0.418</b>	U	0.418	1.39	<b>&lt;0.434</b>	U	0.434	1.45	<b>&lt;0.395</b>	U	0.395	1.32		
Methoxychlor	<0.345	U	0.345	1.15	<0.348	U	0.348	1.16	<0.377	U	0.377	1.26	<0.418	U	0.418	1.39	<0.434	U	0.434	1.45	<0.395	U	0.395	1.32		
Toxaphene	<b>&lt;17.3</b>	U	17.3	17.3	<b>&lt;17.4</b>	C+, U	17.4	17.4	<b>&lt;18.9</b>	C+, U	18.9	18.9	<b>&lt;20.9</b>	C+, U	20.9	20.9	<b>&lt;21.7</b>	C+, U	21.7	21.7	<b>&lt;19.7</b>	U	19.7	19.7		
PCBs, Total	<1.17	U	1.17	2.34	<1.15	U	1.15	2.30	<1.26	U	1.26	2.52	<1.39	C+, U	1.39	2.79	<1.45	C+, U	1.45	2.90	<1.31	C+, U	1.31	2.62		

**Bolded values** meet or exceed the TEL and (or) ERL.

< ### = The analyte was not detected (ND) at or above the MDL. The value indicates the MDL.

Qualifier definitions: C+ = The associated calibration QC is higher than the established quality control criteria for accuracy - no hit in sample; data not affected and acceptable to report. U = Non-detected compound.

Sources: Results from NWDLS; TEL and ERL values from Buchman (2008).

Compiled by: ANAMAR Environmental Consulting, Inc.

**TABLE 6**  
Analytical Results for Dry Weight PAHs in Sediment Samples

Analyte	DMMU:			DMMU-1 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-2 -30 to -60 ft. MLLW (Subsurface Terrestrial)											
	Sample ID:			DMMU-1-1A				DMMU-1-1B				DMMU-1-1C				DMMU-2-1A				DMMU-2-1B				DMMU-2-1C			
	Maximum Conc. µg/kg	TEL µg/kg	ERL µg/kg	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Acenaphthene <sup>LPAH</sup>	416	6.71	16	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Acenaphthylene <sup>LPAH</sup>	323	5.87	44	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Anthracene <sup>LPAH</sup>	276	46.9	85.3	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Benzo(a)anthracene <sup>HPAH</sup>	31.3	74.8	261	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Benzo(a)pyrene <sup>HPAH</sup>	7.37	88.8	430	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Benzo(b&k)fluoranthene <sup>HPAH</sup>	13.2	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.36	<3.62	U	3.62	7.22	<3.66	U	3.66	7.30	<4.18	U	4.18	8.38
Benzo(g,h,i)perylene <sup>HPAH</sup>	22.3	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Chrysene <sup>HPAH</sup>	36.7	108	384	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Dibenzo(a,h)anthracene <sup>HPAH</sup>	<16.8	6.22	63.4	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Fluoranthene <sup>HPAH</sup>	81.3	113	600	5.04	--	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Fluorene <sup>LPAH</sup>	1190	21.2	19	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Indeno(1,2,3-cd)pyrene <sup>HPAH</sup>	2.53	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Naphthalene <sup>LPAH</sup>	5.83	34.6	160	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Phenanthrene <sup>LPAH</sup>	522	86.7	240	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Pyrene <sup>HPAH</sup>	90.3	153	665	3.75	--	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
<b>Total LPAHs</b>	<b>2485</b>	312	552	9.84				9.36				9.54				10.9				11.0				12.5			
<b>Total HPAHs</b>	329	655	1700	21.9				15.6				15.9				18.1				18.3				20.9			
<b>Total PAHs</b>	<b>2814</b>	1684	4022	31.8				25.0				25.4				29.0				29.3				33.4			



**TABLE 6 (continued)**

Analytical Results for Dry Weight PAHs in Sediment Samples

DMMU: Sample ID: Analyte	DMMU-3 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-4 -30 to -60 ft. MLLW (Subsurface Terrestrial)								DMMU-5 0 to -30 ft. MLLW (Surficial Terrestrial)											
	DMMU-3-2A				DMMU-3-2A (Duplicate)				DMMU-3-2B				DMMU-4-2A				DMMU-4-2B				DMMU-5-3A				DMMU-5-3B				DMMU-5-3C			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Acenaphthene <sup>LPAH</sup>	416	A, H	16.8	33.7	3.71	--	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	12.6	--	1.64	3.27	<1.56	U	1.56	3.12
Acenaphthylene <sup>LPAH</sup>	323	A, H	16.8	33.7	5.87	--	1.56	3.12	<1.64	U	1.64	3.28	2.03	J	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	4.35	--	1.64	3.27	<1.56	U	1.56	3.12
Anthracene <sup>LPAH</sup>	<16.8	A, H, U	16.8	33.7	3.65	--	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	23.1	--	1.64	3.27	<1.56	U	1.56	3.12
Benzo(a)anthracene <sup>HPAH</sup>	31.3	A, H, J	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	17.2	--	1.64	3.27	<1.56	U	1.56	3.12
Benzo(a)pyrene <sup>HPAH</sup>	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	2.94	J	1.64	3.27	<1.56	U	1.56	3.12
Benzo(b&k)fluoranthene <sup>HPAH</sup>	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<3.24	U	3.24	6.48	5.1	--	3.28	6.54	<3.12	U	3.12	6.24
Benzo(g,h,i)perylene <sup>HPAH</sup>	22.3	A, H, J	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	1.78	J	1.64	3.27	<1.56	U	1.56	3.12
Chrysene <sup>HPAH</sup>	36.7	A, H	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	7.95	--	1.64	3.27	<1.56	U	1.56	3.12
Dibenzo(a,h)anthracene <sup>HPAH</sup>	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Fluoranthene <sup>HPAH</sup>	81.3	A, H	16.8	33.7	2.52	J	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	3.80	--	1.64	3.27	<1.56	U	1.56	3.12
Fluorene <sup>LPAH</sup>	1190	H	42.1	84.1	11.1	--	1.56	3.12	<1.64	U	1.64	3.28	4.00	--	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	5.38	--	1.64	3.27	<1.56	U	1.56	3.12
Indeno(1,2,3-cd)pyrene <sup>HPAH</sup>	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Naphthalene <sup>LPAH</sup>	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Phenanthrene <sup>LPAH</sup>	522	A, H	16.8	33.7	4.39	--	1.56	3.12	<1.64	U	1.64	3.28	2.74	J	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	20.1	--	1.64	3.27	<1.56	U	1.56	3.12
Pyrene <sup>HPAH</sup>	90.3	A, H	16.8	33.7	3.22	--	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	11.1	--	1.64	3.27	<1.56	U	1.56	3.12
<b>Total LPAHs</b>	<b>2485</b>				30.3				9.8				14.2				10.4				9.7				67.2				9.36			
<b>Total HPAHs</b>	<b>329</b>				16.7				14.8				16.2				15.7				16.2				53.2				15.6			
<b>Total PAHs</b>	<b>2814</b>				46.9				24.6				30.4				26.1				25.9				120				25.0			

**TABLE 6 (continued)**  
Analytical Results for Dry Weight PAHs in Sediment Samples

Analyte	DMMU: Sample ID:		DMMU-6 -30 to -60 ft. MLLW (Subsurface Terrestrial)												DMMU-7 Existing Depth to -60 ft. MLLW (Shallow Marine Area)															
			DMMU-6-3A				DMMU-6-3B				DMMU-6-3C				DMMU-7-4A				DMMU-7-4B				DMMU-7-4C				DMMU-7-4D			
			Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL	Resul t µg/kg	Qualifier	MDL	LRL
Acenaphthene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	21.3	--	1.59	3.18	5.31	--	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Acenaphthylene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	3.66	--	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	1.86	J	1.48	2.96		
Anthracene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	276	--	15.9	31.8	2.19	J	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Benzo(a)anthracene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	12.8	--	1.59	3.18	2.17	J	2.16	4.33	<1.53	U	1.53	3.06	2.23	J	1.48	2.96		
Benzo(a)pyrene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	7.37	--	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	2.85	J	1.48	2.96		
Benzo(b&k)fluoranthene <sup>HPAH</sup>	<3.08	U	3.08	6.16	<3.32	U	3.32	6.64	<3.20	U	3.20	6.40	13.2	--	3.18	6.36	5.29	J	4.32	8.66	<3.06	U	3.06	6.12	5.04	J	2.96	5.92		
Benzo(g,h,i)perylene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	3.22	--	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	2.97	--	1.48	2.96		
Chrysene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	14.8	--	1.59	3.18	2.30	J	2.16	4.33	<1.53	U	1.53	3.06	2.52	J	1.48	2.96		
Dibenzo(a,h)anthracene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Fluoranthene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	78.9	--	4.77	9.55	10.3	--	2.16	4.33	<1.53	U	1.53	3.06	6.37	--	1.48	2.96		
Fluorene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	28.5	--	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Indeno(1,2,3-cd)pyrene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	2.53	J	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	2.22	J	1.48	2.96		
Naphthalene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	1.63	J	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Phenanthrene <sup>LPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	129	--	4.77	9.55	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96		
Pyrene <sup>HPAH</sup>	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	59.1	--	4.77	9.55	9.39	--	2.16	4.33	<1.53	U	1.53	3.06	5.39	--	1.48	2.96		
<b>Total LPAHs</b>	9.24				9.96				9.60				460				16.1				9.18				9.26					
<b>Total HPAHs</b>	15.4				16.6				16.0				194				38.1				15.3				31.1					
<b>Total PAHs</b>	24.6				26.6				25.6				654				54.2				24.5				40.3					

**TABLE 6 (continued)**

Analytical Results for Dry Weight PAHs in Sediment Samples

Analyte	DMMU: Sample ID:	DMMU-8 Existing Depth to -60 ft. MLLW (Marine Area)																Reference (Reference Area)				ODMDS (Corpus Christi New Work ODMDS)			
		DMMU-8-5A				DMMU-8-5B				DMMU-8-5C				DMMU-8-5D				HI-REF				HI-ODMDS			
		Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
Acenaphthene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	2.24	J	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Acenaphthylene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Anthracene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Benzo(a)anthracene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Benzo(a)pyrene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Benzo(b&k)fluoranthene <sup>HPAH</sup>		<2.92	U	2.92	5.84	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<3.48	U	3.48	6.98	<3.62	U	3.62	7.24	<3.10	U	3.10	6.22
Benzo(g,h,i)perylene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Chrysene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Dibenzo(a,h)anthracene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Fluoranthene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Fluorene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Indeno(1,2,3-cd)pyrene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Naphthalene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	5.83	--	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Phenanthrene <sup>LPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	3.79	--	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Pyrene <sup>HPAH</sup>		<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
<b>Total LPAHs</b>		8.76				8.34				16.7				10.4				10.9				9.30			
<b>Total HPAHs</b>		14.6				12.5				14.6				17.4				18.1				15.5			
<b>Total PAHs</b>		23.4				20.9				31.3				27.8				29.0				24.8			

**Bolded values** meet or exceed the TEL and (or) ERL.

**LPAH** = Low molecular weight PAH as defined in the *Regional Implementation Agreement* by USEPA/USACE (2003).

**HPAH** = High molecular weight PAH as defined in the *Regional Implementation Agreement* by USEPA/USACE (2003).

< #.## = The analyte was not detected (ND) at or above the MDL. The value indicates the MDL.

For calculating total PAHs, U-qualified results use the MDL and J-qualified results use the value reported by the laboratory.

Qualifiers: A = Detection limit elevated due to abundance of non-target analyte. H = The parameter was analyzed outside the method specified holding time. J = Estimated value - The reported value is between the detection limit and reporting limit. U = Indicates that the compound was analyzed for but not detected.

Sources: Results from NWDLS; TEL and ERL values from Buchman (2008).

Compiled by: ANAMAR Environmental Consulting, Inc.

**TABLE 7**  
Analytical Results for Dry Weight SVOCs in Sediment Samples

Analyte	DMMU:			DMMU-1 0 to -30 ft. MLLW (Surficial Terrestrial)									DMMU-2 -30 to -60 ft. MLLW (Subsurface Terrestrial)														
	Sample ID:			DMMU-1-1A			DMMU-1-1B			DMMU-1-1C			DMMU-2-1A			DMMU-2-1B			DMMU-2-1C								
	Maximum Conc. µg/kg	TEL µg/kg	ERL µg/kg	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
1,2,4-Trichlorobenzene	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
1,2-Dichlorobenzene	<16.9	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
1,2-Diphenylhydrazine	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
1,3-Dichlorobenzene	<16.9	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
1,4-Dichlorobenzene	<16.9	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
2,4,6-Trichlorophenol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
2,4-Dichlorophenol	8.75	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
2,4-Dimethylphenol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
2,4-Dinitrophenol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
2,4-Dinitrotoluene (2,4-DNT)	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
2,6-Dinitrotoluene (2,6-DNT)	18.5	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
2-Chloronaphthalene	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
2-Chlorophenol	<33.8	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
2-Nitrophenol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
3,3'-Dichlorobenzidine	<2.16	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
4,6-Dinitro-o-Cresol	<135	x	x	<13.1	U	13.1	26.2	<12.5	U	12.5	24.9	<12.7	U	12.7	25.5	<14.4	U	14.4	28.9	<14.6	U	14.6	29.2	<16.7	U	16.7	33.5
4-Bromophenyl phenyl ether (BDE-3)	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
4-Chlorophenyl phenyl ether	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
4-Nitrophenol	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Benzidine	<2.16	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Bis(2-Chloroethoxy) methane	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Bis(2-Chloroethyl) ether	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Bis(2-chloroisopropyl) ether	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Bis(2-ethylhexyl) phthalate	18.8	182	x	2.32	V, J	1.64	3.28	2.26	V, J	1.56	3.12	2.06	V, J	1.59	3.18	1.89	V, J	1.81	3.61	2.00	V, J	1.83	3.65	2.42	V, J	2.09	4.19
Butyl benzyl phthalate	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Diethyl phthalate	4.64	x	x	2.75	V, J	1.64	3.28	1.73	V, J	1.56	3.12	2.32	V, J	1.59	3.18	2.10	V, J	1.81	3.61	2.17	V, J	1.83	3.65	3.57	V, J	2.09	4.19
Dimethyl phthalate	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Di-n-butyl phthalate	120	x	x	5.75	V	1.64	3.28	5.03	V	1.56	3.12	4.39	V	1.59	3.18	6.35	V	1.81	3.61	8.89	V	1.83	3.65	11.4	V	2.09	4.19
Di-n-octyl phthalate	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Hexachlorobenzene	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Hexachlorobutadiene	<16.9	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Hexachlorocyclopentadiene	3.96	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Hexachloroethane	<16.9	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Isophorone	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
Nitrobenzene	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
N-Nitrosodimethylamine	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
N-Nitrosodi-n-propylamine	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
N-Nitrosodiphenylamine	<16.8	x	x	<1.64	U	1.64	3.28	<1.56	U	1.56	3.12	<1.59	U	1.59	3.18	<1.81	U	1.81	3.61	<1.83	U	1.83	3.65	<2.09	U	2.09	4.19
P-Chloro-m-Cresol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
Pentachlorophenol	<33.7	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37
Phenol, Total	11.3	x	x	<3.28	U	3.28	6.56	<3.12	U	3.12	6.24	<3.18	U	3.18	6.37	<3.61	U	3.61	7.22	<3.65	U	3.65	7.31	<4.19	U	4.19	8.37

**TABLE 7 (continued)**

Analytical Results for Dry Weight SVOCs in Sediment Samples

DMMU:  Sample ID:  Analyte	DMMU-3 0 to -30 ft. MLLW (Surficial Terrestrial)												DMMU-4 -30 to -60 ft. MLLW (Subsurface Terrestrial)								DMMU-5 0 to -30 ft. MLLW (Surficial Terrestrial)											
	DMMU-3-2A				DMMU-3-2A (Duplicate)				DMMU-3-2B				DMMU-4-2A				DMMU-4-2B				DMMU-5-3A				DMMU-5-3B				DMMU-5-3C			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
1,2,4-Trichlorobenzene	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
1,2-Dichlorobenzene	<16.9	A, U	16.9	33.8	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
1,2-Diphenylhydrazine	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
1,3-Dichlorobenzene	<16.9	A, U	16.9	33.8	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
1,4-Dichlorobenzene	<16.9	A, U	16.9	33.8	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
2,4,6-Trichlorophenol	<33.7	A, H, U	33.7	67.3	<3.12	U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
2,4-Dichlorophenol	<33.7	A, H, U	33.7	67.3	8.75	--	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
2,4-Dimethylphenol	<33.7	A, H, U	33.7	67.3	<3.12	U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
2,4-Dinitrophenol	<33.7	A, H, U	33.7	67.3	<3.12	C+, U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
2,4-Dinitrotoluene (2,4-DNT)	<16.8	A, H, U	16.8	33.7	<1.56	C+, U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
2,6-Dinitrotoluene (2,6-DNT)	<16.8	A, H, U	16.8	33.7	18.5	--	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
2-Chloronaphthalene	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
2-Chlorophenol	<33.8	A, U	33.8	67.5	<3.12	U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
2-Nitrophenol	<33.7	A, H, U	33.7	67.3	<3.12	U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.23
3,3'-Dichlorobenzidine	<1.69	CQ, U	1.69	3.38	<1.56	CQ, U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
4,6-Dinitro-o-Cresol	<135	A, H, U	135	269	<12.5	U	12.5	25.0	<13.1	U	13.1	26.2	<14.4	U	14.4	28.8	<13.9	U	13.9	27.8	<13.0	U	13.0	25.9	<13.1	U	13.1	26.2	<12.5	U	12.5	24.9
4-Bromophenyl phenyl ether (BDE-3)	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
4-Chlorophenyl phenyl ether	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
4-Nitrophenol	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Benzidine	<1.69	CQ, U	1.69	3.38	<1.56	CQ, U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Bis(2-Chloroethoxy) methane	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Bis(2-Chloroethyl) ether	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Bis(2-chloroisopropyl) ether	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Bis(2-ethylhexyl) phthalate	18.8	A, H, J, V	16.8	33.7	2.15	V, J	1.56	3.12	2.57	V, J	1.64	3.28	2.51	V, J	1.80	3.60	2.26	V, J	1.74	3.47	<1.62	B, U	1.62	3.24	2.36	V, J	1.64	3.27	1.60	V, J	1.56	3.12
Butyl benzyl phthalate	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Diethyl phthalate	<16.8	A, H, U	16.8	33.7	2.86	V, J	1.56	3.12	2.86	V, J	1.64	3.28	2.97	V, J	1.80	3.60	2.48	V, J	1.74	3.47	2.13	V, J	1.62	3.24	4.64	V	1.64	3.27	1.80	V, J	1.56	3.12
Dimethyl phthalate	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Di-n-butyl phthalate	120	A, H	16.8	33.7	13.6	V	1.56	3.12	14.1	V	1.64	3.28	13.7	V	1.80	3.60	14.2	V	1.74	3.47	6.45	V	1.62	3.24	7.08	V	1.64	3.27	6.49	V	1.56	3.12
Di-n-octyl phthalate	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Hexachlorobenzene	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Hexachlorobutadiene	<16.9	A, U	16.9	33.8	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Hexachlorocyclopentadiene	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	3.96	--	1.64	3.27	<1.56	U	1.56	3.12
Hexachloroethane	<16.9	A, U	16.9	33.8	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Isophorone	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
Nitrobenzene	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
N-Nitrosodimethylamine	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
N-Nitrosodi-n-propylamine	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
N-Nitrosodiphenylamine	<16.8	A, H, U	16.8	33.7	<1.56	U	1.56	3.12	<1.64	U	1.64	3.28	<1.80	U	1.80	3.60	<1.74	U	1.74	3.47	<1.62	U	1.62	3.24	<1.64	U	1.64	3.27	<1.56	U	1.56	3.12
P-Chloro-m-Cresol	<33.7	A, H, U	33.7	67.3	<3.12	U	3.12	6.24	<3.28	U	3.28	6.56	<3.60	U	3.60	7.19	<3.47	U	3.47	6.94	<3.24	U	3.24	6.49	<3.27	U	3.27	6.54	<3.12	U	3.12	6.2

**TABLE 7 (continued)**

Analytical Results for Dry Weight SVOCs in Sediment Samples

DMMU:  Sample ID:  Analyte	DMMU-6 -30 to -60 ft. MLLW (Subsurface Terrestrial)												DMMU-7 Existing Depth to -60 ft. MLLW (Shallow Marine Area)															
	DMMU-6-3A				DMMU-6-3B				DMMU-6-3C				DMMU-7-4A				DMMU-7-4B				DMMU-7-4C				DMMU-7-4D			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
1,2,4-Trichlorobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
1,2-Dichlorobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
1,2-Diphenylhydrazine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	C+, U	1.53	3.06	<1.48	C+, U	1.48	2.96
1,3-Dichlorobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
1,4-Dichlorobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
2,4,6-Trichlorophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
2,4-Dichlorophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
2,4-Dimethylphenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
2,4-Dinitrophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
2,4-Dinitrotoluene (2,4-DNT)	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
2,6-Dinitrotoluene (2,6-DNT)	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
2-Chloronaphthalene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
2-Chlorophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
2-Nitrophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
3,3'-Dichlorobenzidine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
4,6-Dinitro-o-Cresol	<12.3	U	12.3	24.7	<13.3	U	13.3	26.5	<12.8	U	12.8	25.6	<12.7	U	12.7	25.5	<17.3	U	17.3	34.6	<12.2	U	12.2	24.5	<11.8	U	11.8	23.7
4-Bromophenyl phenyl ether (BDE-3)	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
4-Chlorophenyl phenyl ether	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
4-Nitrophenol	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Benzidine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Bis(2-Chloroethoxy) methane	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Bis(2-Chloroethyl) ether	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Bis(2-chloroisopropyl) ether	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Bis(2-ethylhexyl) phthalate	1.66	V, J	1.54	3.08	<1.66	B, U	1.66	3.32	<1.60	B, U	1.60	3.20	<1.59	B, U	1.59	3.18	<2.16	B, U	2.16	4.33	2.48	V, J	1.53	3.06	<1.48	B, U	1.48	2.96
Butyl benzyl phthalate	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Diethyl phthalate	<1.54	B, U	1.54	3.08	<1.66	B, U	1.66	3.32	<1.60	B, U	1.60	3.20	<1.59	B, U	1.59	3.18	<2.16	B, U	2.16	4.33	<1.53	B, U	1.53	3.06	<1.48	B, U	1.48	2.96
Dimethyl phthalate	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Di-n-butyl phthalate	3.32	V	1.54	3.08	5.64	V	1.66	3.32	3.03	V, J	1.60	3.20	3.77	V	1.59	3.18	4.12	V, J	2.16	4.33	6.86	V	1.53	3.06	4.65	V	1.48	2.96
Di-n-octyl phthalate	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Hexachlorobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Hexachlorobutadiene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Hexachlorocyclopentadiene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Hexachloroethane	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Isophorone	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
Nitrobenzene	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
N-Nitrosodimethylamine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
N-Nitrosodi-n-propylamine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
N-Nitrosodiphenylamine	<1.54	U	1.54	3.08	<1.66	U	1.66	3.32	<1.60	U	1.60	3.20	<1.59	U	1.59	3.18	<2.16	U	2.16	4.33	<1.53	U	1.53	3.06	<1.48	U	1.48	2.96
P-Chloro-m-Cresol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
Pentachlorophenol	<3.08	U	3.08	6.17	<3.32	U	3.32	6.63	<3.20	U	3.20	6.39	<3.18	U	3.18	6.36	<4.33	U	4.33	8.66	<3.06	U	3.06	6.12	<2.96	U	2.96	5.92
Phenol, Total	<3.08	U	3.08	6.17	3.61	J	3.32	6.63	3.37	J	3.20	6.39	<3.18	U	3.18	6.36	4.77	J	4.33	8.66	4.72	J	3.06	6.12	3.39	J	2.96	5.92

**TABLE 7 (continued)**

Analytical Results for Dry Weight SVOCs in Sediment Samples

DMMU:  Sample ID:  Analyte	DMMU-8 Existing Depth to -60 ft. MLLW (Marine Area)																Reference (Reference Area)				ODMDS (Corpus Christi New Work ODMDS)			
	DMMU-8-5A				DMMU-8-5B				DMMU-8-5C				DMMU-8-5D				HI-REF				HI-ODMDS			
	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL	Result µg/kg	Qualifier	MDL	LRL
1,2,4-Trichlorobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
1,2-Dichlorobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
1,2-Diphenylhydrazine	<1.46	C+, U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
1,3-Dichlorobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
1,4-Dichlorobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
2,4,6-Trichlorophenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
2,4-Dichlorophenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
2,4-Dimethylphenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
2,4-Dinitrophenol	<2.92	U	2.92	5.84	<2.78	C+, U	2.78	5.57	<3.25	C+, U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
2,4-Dinitrotoluene (2,4-DNT)	<1.46	U	1.46	2.92	<1.39	C+, U	1.39	2.78	<1.62	C+, U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
2,6-Dinitrotoluene (2,6-DNT)	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	1.66	J	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
2-Chloronaphthalene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
2-Chlorophenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
2-Nitrophenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
3,3'-Dichlorobenzidine	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
4,6-Dinitro-o-Cresol	<11.7	U	11.7	23.4	<11.1	U	11.1	22.3	<13.0	U	13.0	26.0	<13.9	U	13.9	27.9	<14.5	U	14.5	29.0	<12.4	U	12.4	24.9
4-Bromophenyl phenyl ether (BDE-3)	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
4-Chlorophenyl phenyl ether	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
4-Nitrophenol	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Benzidine	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Bis(2-Chloroethoxy) methane	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Bis(2-Chloroethyl) ether	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Bis(2-chloroisopropyl) ether	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Bis(2-ethylhexyl) phthalate	2.02	V, J	1.46	2.92	2.12	V, J	1.39	2.78	3.37	V	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	B, U	1.55	3.11
Butyl benzyl phthalate	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Diethyl phthalate	<1.46	B, U	1.46	2.92	1.95	V, J	1.39	2.78	2.43	V, J	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Dimethyl phthalate	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Di-n-butyl phthalate	2.18	V, J	1.46	2.92	11.0	V	1.39	2.78	13.1	V	1.62	3.25	<1.74	B, U	1.74	3.49	3.54	V, J	1.81	3.62	<1.55	U	1.55	3.11
Di-n-octyl phthalate	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Hexachlorobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Hexachlorobutadiene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Hexachlorocyclopentadiene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Hexachloroethane	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Isophorone	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
Nitrobenzene	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
N-Nitrosodimethylamine	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	C+, U	1.55	31.1
N-Nitrosodi-n-propylamine	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	U	1.74	3.49	<1.81	U	1.81	3.62	<1.55	U	1.55	3.11
N-Nitrosodiphenylamine	<1.46	U	1.46	2.92	<1.39	U	1.39	2.78	<1.62	U	1.62	3.25	<1.74	C+, U	1.74	3.49	<1.81	C+, U	1.81	3.62	<1.55	U	1.55	3.11
P-Chloro-m-Cresol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
Pentachlorophenol	<2.92	U	2.92	5.84	<2.78	U	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	<3.11	U	3.11	6.22
Phenol, Total	3.84	J	2.92	5.84	3.68	J	2.78	5.57	<3.25	U	3.25	6.49	<3.49	U	3.49	6.97	<3.62	U	3.62	7.24	11.3	V	3.11	6.22

< #.## = The analyte was not detected (ND) at or above the MDL. The value indicates the MDL.

Qualifiers: A = Detection limit elevated due to abundance of non-target analyte. B = Analyte was found in the associated method blank. C+ = The associated calibration QC is higher than the established quality control criteria for accuracy - no hit in sample; data not affected and acceptable to report. CQ = Internal Standard response less than 50% calibration response. J = Estimated value - The reported value is between the detection limit and reporting limit. U = Indicates that the compound was analyzed for but not detected.

V = Analyte was detected in both sample and method blank.

Sources: Results from NWDLS; TEL and ERL values from Buchman (2008).

Compiled by: ANAMAR Environmental Consulting, Inc.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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April 24, 2023

Robert Heinly  
Chief, Policy Analysis Branch  
Galveston District  
United States Army Corps of Engineers  
Post Office Box 1229  
Galveston, Texas 77533

Re: Proposals for Tissue Chemistry Analyses- Harbor Island Inner Harbor

Dear Mr. Heinly:

This letter is written in response to your April 5, 2023, request for concurrence on the Harbor Island Inner Harbor Tissue Chemistry Recommendations. The Environmental Protection Agency received the letter and included support documents via email on April 6, 2023.

As stated in Section 10.2.2 of the Regional Implementation Agreement: Tissues of appropriate benthic organisms exposed to the dredged material shall be analyzed for classes of Contaminants of Concern detected in the sediments. Ordinarily, only those compounds detected in the sediment need be analyzed for in the tissue. In some cases, however, it may be desirable to analyze tissues for compounds not detected in the sediments.

Your recommendation includes analysis of all tissue samples from all DMMUs for TPH, all trace metals, and one SVOC [di-nbutyl phthalate]. Your recommendation includes analysis of all tissue samples from DMMU-3 for 2,4-dichlorophenol, 2,6 DNT, and bis (2-ethylhexyl) phthalate, all tissue samples from DMMU-5 for diethyl phthalate and hexachlorocyclopentadiene, all tissue samples from DMMU-8 for bis (2-ethylhexyl) phthalate, all tissue samples from DMMUs 1, 3, 4, 5, 7, and 8 for PAHs, and all tissue samples from DMMU-1 for the organotin monobutyltin. Your recommendation is based on the results from sediment analysis conducted by Terracon Consultants Inc. Based on the information provided to the EPA, we concur with your analysis recommendations.

Should you have any questions regarding this determination or management of the Corpus Christi New Work ODMDs, please feel free to contact Wendy Jacques, Region 6 Ocean Dumping Coordinator at 214-665-7395 or by email at [jacques.wendy@epa.gov](mailto:jacques.wendy@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Charles W. Maguire", is positioned above the typed name.

Charles W. Maguire  
Director  
Water Division

ecc: Jayson Hudson, Regulatory Project Manager



PCCA Harbor Island  
Sect 103 Sediment  
Rpt\_Final  
Part 3

**Conclusion of Report**