New England Bioassay Inc.

Aquatic Toxicity Testing Services

77 Batson Drive
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ACUTE AQUATIC TOXICITY TEST REPORT

Permitee:	Dover WWTP	NPDES #	NH0101311
Report submitted to:	484 Middle Road		
	Dover, NH 03820		
Sample ID:	Effluent		
Test Month/Year:	July 2021		
NEB Proj #	44894		

Test Type / Method: *Mysidopsis bahia* Acute Static Non-Renewal Saltwater Test Method 2007.0; EPA 821-R-02-012
Menidia beryllina Acute Static Non-Renewal Saltwater Test Method 2006.0; EPA 821-R-02-012

Effluent Sample Date (s):	7/7-8/21	Time (s):	0955-0946
Receiving Water Sample Date:	7/8/21	Time:	1118

Test Start Date: 7/8/21

Results Summary

Your results were as follows:

Passed all permit limits

Acute Test Results

Species	LC50	A-NOEC	Permit Limit	Pass / Fail
Mysidopsis bahia	>100%	100%	≥ 100%	Pass
Menidia beryllina	>100%	100%	≥ 100%	Pass

Data Qualifiers affecting this test:

Certifications & Approvals: NH ELAP (2071), NJ DEP (CT405)

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TEST REPORT CERTIFICATION

Permittee name:	Dover WWTP	Permit number:	NH0101311
Client sample ID:	Effluent	Test Start Date:	7/8/21

Whole Effluent Toxicity Test Report Certification (Permittee)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: _____ (Date)

_____ Authorized Signature

_____ Print or Type Name and Title

_____ Print or Type the Permittee's Name

NH0101311
Print or Type the NPDES Permit Number

Whole Effluent Toxicity Test Report Certification (Bioassay Laboratory)

The results reported relate only to the samples submitted as received

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: 7/26/21 (Date)

Kimberly Wills
Kimberly Wills
Laboratory Director
New England Bioassay Inc.

GENERAL TEST CONDITIONS

Permittee name Dover WWTP Permit number: NH0101311

Client sample ID Effluent Test Start Date: 7/8/21

Sample Collection Information

Effluent Sample Date(s 7/7-8/21 @ 0955-0946 Receiving Water Sample Dat 7/8/21 @ 1118

Were samples used within the first 36 hours of collection? Yes ☑ No ☐ * (see note below)

*sample collection note:

Test Conditions

Permittee's Receiving Water: Piscataqua River

Mysidopsis bahia

- Dilution water: Receiving water collected at a point immediately upstream of or away from the discharge
- Control water: Laboratory artificial saltwater (salinity 25 ± 2 ppt)

Aeration: Did Dissolved Oxygen levels fall below 40% saturation?

☑ No ☐ Yes, test Aerated at <100 bubbles/minute as of: N/A ☐ Yes, only at 48 hrs (no aeration)

Menidia beryllina

- Dilution water: Receiving water collected at a point immediately upstream of or away from the disch
- Control water: Laboratory artificial saltwater (salinity 25 ± 2 ppt)

Aeration: Did Dissolved Oxygen levels fall below 40% saturation?

☑ No ☐ Yes, test Aerated at <100 bubbles/minute as of: N/A ☐ Yes, only at 48 hrs (no aeration)

Effluent concentrations teste 0%, 6.25%, 12.5%, 25%, 50%, 100%

Was effluent salinity adjusted? No ☐ Yes ☑ with Instant Ocean sea salts to 25 ppt

Dechlorination procedures: Chlorine is measured using 4500 CL-G DPD Colorimetric Method

- Dechlorination was not required

TRC results and further information about aeration of samples can be found attached in "sample receipt chemistry"

Reference Toxicant Data

Mysidopsis bahia		***Menidia beryllina***	
Date:	7/13/21	Date:	7/6/21
Toxicant:	Sodium Dodecyl Sulfate	Toxicant:	Sodium Dodecyl Sulfate
Dilution Water:	Artificial Saltwater	Dilution Water:	Artificial Saltwater
Organism Source:	NEB	Organism Source:	Aquatic Indicators
Survival 48-h LC50:	20.3 mg/L	urvival 48-h LC50:	8.11 mg/L
Results within range	Yes ☑ No ☐	Results within range	Yes ☑ No ☐

TEST RESULTS

Permittee name: Dover WWTP Permit number: NH0101311

Client sample ID: Effluent Test Start Date: 7/8/21

Test Acceptability Criteria

Mysidopsis bahia			*Menidia beryllina*		
Lab Control Survival:	100	%	Lab Control Survival:	92.5	%
Diluent Control Survival:	100	%	Diluent Control Survival:	90	%
Thiosulfate Control Survival:	N/A	%	Thiosulfate Control Survival:	N/A	%

Presence of an asterisk (*) indicates EPA criteria was not met, see explanation in the "Results Discussion" section at the bottom of the following page.

Test Results

	Mysidopsis bahia			*Menidia beryllina*		
	Results	Permit Limit	Pass/Fail	Results	Permit Limit	Pass/Fail
48 hr LC50	>100%	≥ 100%	Pass	>100%	≥ 100%	Pass
Upper Confidence Limit	±∞			±∞		
Lower Confidence Limit	100%			100%		
Method Used	Graphical			Graphical		
48 hr A-NOEC	100%			100%		

Presence of an asterisk (*) indicates qualified data, see explanation in the "Results Discussion" section at the bottom of the following page.

Concentration - Response Evaluation

Mysids: #11 No concentration-response curve: no mortality observed at any concentration.

Menidia: #13 No significant effects at any test concentration with a "peak and valley" concentration-response curve. Test concentrations mortalities did not follow a linear pattern, however they were not found to be statistically significantly lower than control survival.

The concentration - response relationship was reviewed and the following determination was made:

Mysids	Menidia	
X	X	Results are reliable and reportable
		Results are anomalous (see explanation below)
		Results are inconclusive - retest (see explanation below)

TEST METHODS

Mysidopsis bahia

Test type:	Acute Static Non-Renewal Saltwater Test
Test Reference Manual:	EPA-821-R-02-012 "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater Organisms and Marine Organisms"
Test Method:	*Mysidopsis bahia* Survival Acute Toxicity Test - EPA 2007.0
Temperature:	25 ˚C ± 1˚C (Temperatures should not deviate by more than 3˚C during the test) (required)
Light Quality:	Ambient Laboratory Illumination (recommended)
Light Intensity:	10-20 µE/m2/s, or 50-100 ft-c (recommended)
Photoperiod:	16 hours light, 8 hours dark (recommended)
Test chamber size:	250-500 mL (recommended minimum)
Test solution volume:	200 mL (recommended minimum)
Age of Test Organisms:	1-5 days; less than or equal to 24-h range in age (required)
Number of Organisms Per Test Chamber:	10 (required minimum)
Number of Replicate Test Chambers Per Treatment:	4 (required minimum)
Number of Organisms Per Test Concentration:	40 (required minimum)
Feeding Regime:	*Artemia* nauplii are made available while holding prior to the test; feed 0.1 ml of concentrated suspension of nauplii ≤ 24-h old, 3 times daily
Aeration:	None, unless DO concentration falls below 4.0 mg/L, at which point the rate should not exceed 100 bubbles/minute. (recommended)
Test Duration:	48 hours (required)
Endpoints:	Survival - 48 hour LC50 and NOAEL
Test Acceptability:	≥ 90% survival of test organisms in controls
Sampling Requirements:	Maximum holding time of 36 hours before first use
Sample volume required:	1 L Effluent, 2 L Recieving (recommended)

Menidia beryllina

Test type:	Acute Static Non-Renewal Saltwater Test
Test Reference Manual:	EPA-821-R-02-012 "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater Organisms and Marine Organisms"
Test Method:	*Menidia beryllina* Survival Acute Toxicity Test - EPA 2006.0
Temperature:	25 ˚C ± 1˚C (Temperatures should not deviate by more than 3˚C during the test) (required)
Light Quality:	Ambient Laboratory Illumination (recommended)
Light Intensity:	10-20 µE/m2/s, or 50-100 ft-c (recommended)
Photoperiod:	16 hours light, 8 hours dark (recommended)
Test chamber size:	1 L (250 mL is the recommended minimum)
Test solution volume:	700 mL (200 mL is the recommended minimum)
Age of Test Organisms:	9-14 days; less than or equal to 24-h range in age (required)
Number of Organisms Per Test Chamber:	10 (recommended)
Number of Replicate Test Chambers Per Treatment:	4 (required minimum)
Number of Organisms Per Test Concentration:	40 (required minimum)
Feeding Regime:	*Artemia* nauplii are made available while holding prior to the test
Aeration:	None, unless DO concentration falls below 4.0 mg/L, at which point the rate should not exceed 100 bubbles/minute. (recommended)
Test Duration:	48 hours (required)
Endpoints:	Survival - 48 hour LC50 and NOAEL
Test Acceptability:	≥ 90% survival of test organisms in controls (required)
Sampling Requirements:	Maximum holding time of 36 hours before first use
Sample volume required:	2 L (recommended)

DATASHEETS & STATISTICAL ANALYSIS

NEW ENGLAND BIOASSAY
ACUTE TOXICITY DATA FORM

CLIENT:	City of Dover Wastewater	*M.bahia* TEST ID #	21-948a
ADDRESS:	484 Middle Road	*M.beryllina* TEST ID #	21-948b
	Dover, NH 03820	CHAIN OF CUSTODY #	C41-2789/90
PERMITTEE:	Dover WWTP	NEB PROJECT #	44894
PERMIT NUMBER:	NH0101311	SAMPLE ID:	Effluent
DILUTION WATER:	Piscataqua River		

INVERTEBRATES		**VERTEBRATES**	
TEST SET-UP TECHNICIAN:	KO	TEST SET-UP TECHNICIAN:	VT
TEST SPECIES:	*Mysidopsis bahia*	TEST SPECIES:	*Menidia beryllina*
NEB LOT #	Mb21(7-4)	NEB LOT #	Ss21A1(7-1)B
AGE:	4 days	AGE:	14 days
TEST SOLUTION VOLUME (mls):	200	TEST SOLUTION VOLUME (mls):	700
ORGANISMS PER TEST CHAMBER:	10	ORGANISMS PER TEST CHAMBER:	10
ORGANISMS PER CONCENTRATION:	40	ORGANISMS PER CONCENTRATION:	40

	DATE	TIME
TEST START:	7/8/21	1607
TEST END:	7/10/21	1513

	DATE	TIME
TEST START:	7/8/21	1609
TEST END:	7/10/21	1519

LABORATORY CONTROL WATER (ASW 25 ± 2 ppt)

Lot Number	Salinity (ppt)	Alkalinity mg/L CaCO3
CRIO41-021	24	125

COMMENTS:

REVIEWED BY: Kimberly Wills DATE: 7/26/21

NEW ENGLAND BIOASSAY
Mysidopsis bahia TEST DATASHEET

Facility Name: Dover WWTP NEB Test ID: 21-948a
NEB Project # 44894 Test Start Date: 7/8/21

Effluent Conc. (%)	Number of Surviving			Dissolved Oxygen (mg/L)			Temperature (°C)			pH (s.u.)			Salinity (ppt)		
hour	0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
Control A	10	10	10	7.2	6.4	6.0	25.4	24.9	24.5	7.9	8.0	7.9	25	25	26
Control B	10	10	10		6.3	5.9		25.1	24.9		8.0	7.9		25	25
Control C	10	10	10		6.3	5.7		25.1	24.9		8.0	7.9		25	25
Control D	10	10	10		6.4	5.4		25.0	24.9		8.0	7.9		25	25
Diluent A	10	10	10	7.2	6.3	5.2	24.9	25.2	25.1	7.9	7.8	7.7	25	25	25
Diluent B	10	10	10		6.3	5.2		25.2	25.1		7.9	7.7		25	25
Diluent C	10	10	10		6.3	5.1		25.1	25.1		7.9	7.6		25	25
Diluent D	10	10	10		6.4	5.0		24.8	24.8		7.9	7.7		25	26
6.25 A	10	10	10	7.3	6.3	5.2	24.9	25.2	24.9	7.9	7.9	7.7	25	25	26
6.25 B	10	10	10		6.2	5.0		25.2	24.9		7.9	7.7		25	25
6.25 C	10	10	10		6.2	5.0		25.1	25.1		7.9	7.7		25	25
6.25 D	10	10	10		6.3	5.0		25.0	25.1		7.9	7.7		25	25
12.5 A	10	10	10	7.3	6.4	5.1	24.9	25.1	24.9	7.9	7.9	7.8	25	25	25
12.5 B	10	10	10		6.3	5.4		25.1	24.8		7.9	7.8		25	26
12.5 C	10	10	10		6.3	5.5		25.0	24.9		7.9	7.8		25	26
12.5 D	10	10	10		6.4	5.6		24.9	24.7		7.9	7.8		25	26
25 A	10	10	10	7.3	6.2	6.0	24.9	25.1	24.7	7.9	8.0	7.9	25	25	26
25 B	10	10	10		6.0	5.6		25.1	24.7		7.9	7.8		25	25
25 C	10	10	10		6.3	5.4		24.9	24.8		8.0	7.9		25	26
25 D	10	10	10		6.3	5.5		24.9	24.7		8.0	7.8		25	26
50 A	10	10	10	7.4	6.0	5.4	25.1	25.2	25.0	7.9	8.0	7.9	25	25	25
50 B	10	10	10		6.0	4.8		25.1	25.0		8.0	7.9		25	25
50 C	10	10	10		6.0	5.0		25.0	24.8		8.0	8.0		25	25
50 D	10	10	10		6.0	5.0		25.0	25.0		8.0	7.9		25	25
100 A	10	10	10	7.5	6.1	4.9	25.1	25.1	25.0	7.9	8.1	8.1	25	25	25
100 B	10	10	10		5.6	5.0		25.2	25.0		8.1	8.1		25	25
100 C	10	10	10		5.9	4.8		25.1	25.2		8.1	8.1		25	25
100 D	10	10	10		5.6	4.8		25.1	25.1		8.1	8.1		25	25
Tech Initials	KO	DB	CW	VT	DB	CW	VT	DB	CW	VT	DB	CW	VT	DB	CW

D.O. concentration fell below 4.0 mg/L N/A
All test solutions were aerated at <100 bubbles/minute starting on N/A

NEW ENGLAND BIOASSAY
Observation Data Form

Client: City of Dover Wastewater
Sample: Effluent
Species: *Mysidopsis bahia*

TEST ID # 21-948a
COC # C41-2789/90
PROJECT # 05.0044894.00
Test Date: 44385

Technician: DB Observation Date: 7/9/2021

Concentration	Number of Live Organisms	OBSERVATIONS All organisms appear health and normal unless noted
Conrtol	40	
Diluent	40	
6.25%	40	
12.5%	40	
25%	40	
50%	40	
100%	40	

NEW ENGLAND BIOASSAY
Observation Data Form

Client: City of Dover Wastewater
Sample: Effluent
Species: *Mysidopsis bahia*

TEST ID # 21-948a
COC # C41-2789/90
PROJECT # 05.0044894.00
Test Date: 44385

Technician: CW Observation Date: 7/10/2021

Concentration	Number of Live Organisms	OBSERVATIONS All organisms appear health and normal unless noted
Control	40	
Diluent	40	
6.25%	40	
12.5%	40	
25%	40	
50%	40	
100%	40	

CETIS Analytical Report

Report Date:	23 Jul-21 11:04 (p 1 of 2)
Test Code/ID:	21-948a / 03-9671-2288

Mysidopsis 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	04-7340-8953	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 10:58	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	23 Jul-21 10:57	**MD5 Hash:**	E88740A7CB88EC46B4EC0A60E4B8AEB	**Editor ID:**	001-327-526-2

Batch ID:	08-6500-3417	**Test Type:**	Survival (48h)	**Analyst:**			
Start Date:	08 Jul-21 16:07	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Receiving Water		
Ending Date:	10 Jul-21 15:13	**Species:**	Mysidopsis bahia	**Brine:**	Instant Ocean		
Test Length:	47h	**Taxon:**	Malacostraca	**Source:**	In-House Culture	**Age:**	

Sample ID:	06-1511-5742	**Code:**	24A9EBDE	**Project:**	
Sample Date:	08 Jul-21 09:46	**Material:**	WWTF Effluent	**Source:**	City of Dover (NH0101311)
Receipt Date:	08 Jul-21 14:47	**CAS (PC):**		**Station:**	
Sample Age:	6h	**Client:**	Dover		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1286851	200	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC50	>100	---	---	<1	---	---

48h Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**A/B**	**Mean**	**%Effect**
0	D	4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
12.5		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
50		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%
100		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	1.0000	0.00%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

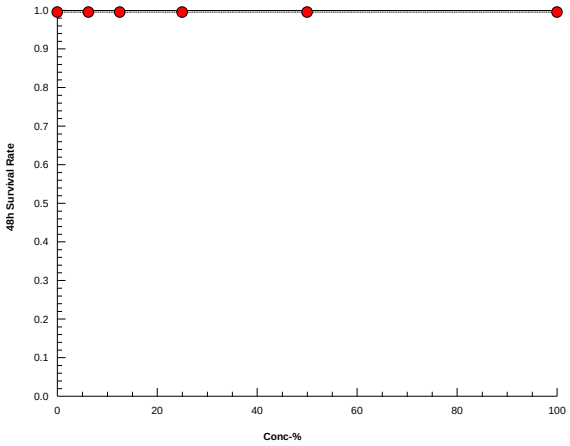
48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Mysidopsis 96-h Acute Survival Test **New England Bioassay**

Analysis ID:	04-7340-8953	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 10:58	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	23 Jul-21 10:57	**MD5 Hash:**	E88740A7CB88EC46B4EC0A60E4B8AEB	**Editor ID:**	001-327-526-2

Graphics



Mysidopsis 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	02-9809-6091	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 10:58	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	23 Jul-21 10:57	**MD5 Hash:**	E88740A7CB88EC46B4EC0A60E4B8AEB	**Editor ID:**	001-327-526-2

Batch ID:	08-6500-3417	**Test Type:**	Survival (48h)	**Analyst:**			
Start Date:	08 Jul-21 16:07	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Receiving Water		
Ending Date:	10 Jul-21 15:13	**Species:**	Mysidopsis bahia	**Brine:**	Instant Ocean		
Test Length:	47h	**Taxon:**	Malacostraca	**Source:**	In-House Culture	**Age:**	

Sample ID:	06-1511-5742	**Code:**	24A9EBDE	**Project:**	
Sample Date:	08 Jul-21 09:46	**Material:**	WWTF Effluent	**Source:**	City of Dover (NH0101311)
Receipt Date:	08 Jul-21 14:47	**CAS (PC):**		**Station:**	
Sample Age:	6h	**Client:**	Dover		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Angular (Corrected)	C > T	100	>100	---	1

Steel Many-One Rank Sum Test

Control	vs	Conc-%	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	18	10	1	6	CDF	0.8333	Non-Significant Effect
		12.5	18	10	1	6	CDF	0.8333	Non-Significant Effect
		25	18	10	1	6	CDF	0.8333	Non-Significant Effect
		50	18	10	1	6	CDF	0.8333	Non-Significant Effect
		100	18	10	1	6	CDF	0.8333	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	5			Indeterminate
Error	0	0	18			
Total	0		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
12.5		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
6.25		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
12.5		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
25		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
50		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
100		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%

Mysidopsis 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	02-9809-6091	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 10:58	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	23 Jul-21 10:57	**MD5 Hash:**	E88740A7CB88EC46B4EC0A60E4B8AEB	**Editor ID:**	001-327-526-2

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

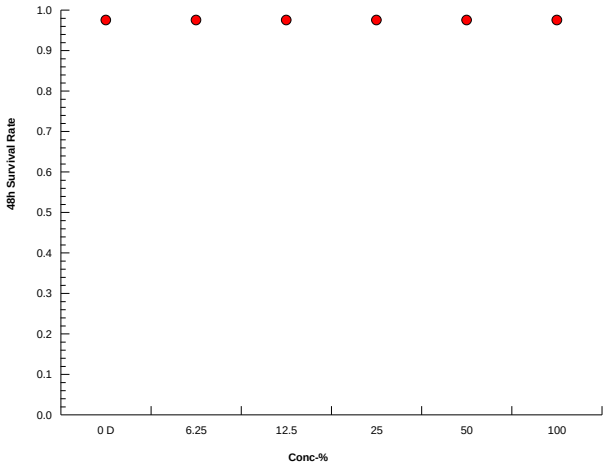
Angular (Corrected) Transformed Detail

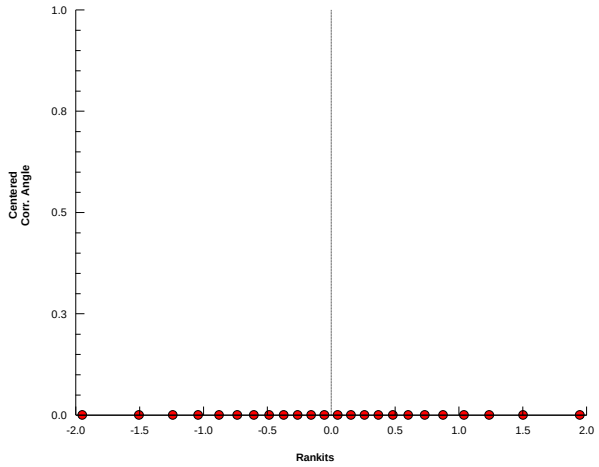
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
6.25		1.4120	1.4120	1.4120	1.4120
12.5		1.4120	1.4120	1.4120	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.4120	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics





NEW ENGLAND BIOASSAY
Menidia beryllina TEST DATASHEET

Facility Name: Dover WWTP NEB Test ID: 21-948b
NEB Project # 44894 Test Start Date: 7/8/21

Effluent Conc. (%)	Number of Surviving			Dissolved Oxygen (mg/L)			Temperature (°C)			pH (s.u.)			Salinity (ppt)		
hour	0	24	48	0	24	48	0	24	25	0	24	48	0	24	48
Control A	10	10	10	7.2	6.3	6.5	25.4	24.7	24.4	7.9	8.1	8.0	25	25	25
Control B	10	10	8		6.4	6.4		24.9	24.4		8.1	8.0		25	25
Control C	10	10	9		6.3	6.5		25.0	24.5		8.1	8.1		25	25
Control D	10	10	10		6.3	6.4		25.0	24.5		8.1	8.0		25	25
Diluent A	10	10	10	7.2	6.2	6.4	24.9	24.9	24.6	7.9	7.9	7.9	25	25	25
Diluent B	10	10	10		6.3	6.3		25.0	24.7		7.9	7.9		25	25
Diluent C	10	10	8		6.4	6.5		25.0	24.7		7.9	7.9		25	25
Diluent D	10	8	8		6.3	6.4		25.1	24.7		7.9	7.9		25	25
6.25 A	10	10	10	7.3	6.4	6.5	24.9	25.1	24.7	7.9	7.9	7.9	25	25	25
6.25 B	10	10	10		6.3	6.5		25.1	24.8		7.9	7.9		25	25
6.25 C	10	10	9		6.4	6.4		25.1	25.0		7.9	7.9		25	25
6.25 D	10	10	9		6.3	6.3		25.1	24.9		7.9	7.9		25	25
12.5 A	10	10	7	7.3	6.3	6.2	24.9	25.0	24.9	7.9	8.0	7.9	25	25	25
12.5 B	10	10	10		6.3	6.2		25.0	24.9		8.0	7.9		25	25
12.5 C	10	9	8		6.2	6.3		25.0	25.1		8.0	7.9		25	25
12.5 D	10	9	8		6.2	6.2		25.1	25.0		8.0	7.9		25	25
25 A	10	10	10	7.3	6.2	6.2	24.9	24.9	24.9	7.9	8.0	8.0	25	25	25
25 B	10	9	9		6.2	6.2		25.0	25.0		8.0	8.0		25	25
25 C	10	10	9		6.3	6.2		25.0	25.0		8.0	8.0		25	25
25 D	10	9	9		6.3	6.2		25.0	25.0		8.0	8.0		25	25
50 A	10	10	9	7.4	6.1	6.3	25.1	24.9	24.8	7.9	8.0	8.1	25	25	25
50 B	10	10	8		6.2	6.4		24.9	24.8		8.0	8.1		25	25
50 C	10	10	9		6.0	6.1		25.0	25.0		8.0	8.1		25	25
50 D	10	10	9		6.1	6.1		24.9	24.9		8.0	8.1		25	25
100 A	10	9	7	7.5	6.0	6.3	25.1	24.9	24.8	7.9	8.1	8.2	25	25	25
100 B	10	9	9		5.9	6.3		24.8	24.9		8.1	8.2		25	25
100 C	10	10	7		5.9	6.2		24.8	24.9		8.1	8.2		25	25
100 D	10	10	7		6.0	6.2		24.8	24.8		8.1	8.2		25	25
Tech Initials	KO	DB	CW	VT	DB	CW	VT	DB	CW	VT	DB	CW	VT	DB	CW

D.O. concentration fell below 4.0 mg/L N/A
All test solutions were aerated at <100 bubbles/minute starting on N/A

NEW ENGLAND BIOASSAY
Observation Data Form

Client: City of Dover Wastewater
Sample: Effluent
Species: *Menidia beryllina*

TEST ID # 21-948a
COC # C41-2789/90
PROJECT # 05.0044894.00
Test Date: 44385

Technician: DB Observation Date: 7/9/2021

Concentration	Number of Live Organisms	OBSERVATIONS All organisms appear health and normal unless noted
Control	40	
Diluent	38	2 dead in rep D
6.25%	40	
12.5%	38	1 dead in reps C and D
25%	38	1 dead in reps B and D
50%	40	
100%	38	1 dead in reps A and B

NEW ENGLAND BIOASSAY
Observation Data Form

Client: City of Dover Wastewater
Sample: Effluent
Species: *Menidia beryllina*

TEST ID # 21-948a
COC # C41-2789/90
PROJECT # 05.0044894.00
Test Date: 44385

Technician: CW Observation Date: 7/10/2021

Concentration	Number of Live Organisms	OBSERVATIONS All organisms appear health and normal unless noted
Control	37	2 dead in rep B, 1 dead in rep C
Diluent	36	2 dead in rep c
6.25%	38	1 dead in reps C and D
12.5%	33	3 dead in rep A, 1 dead in reps C and D
25%	37	1 dead in rep C
50%	35	1 dead in reps A, C, and D, 2 dead in rep B
100%	30	2 dead in rep A, 3 dead in reps C and D

CETIS Analytical Report

Report Date:	23 Jul-21 11:05 (p 1 of 2)
Test Code/ID:	21-948b / 19-6264-5410

Inland Silverside 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	18-2798-7800	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 11:02	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	23 Jul-21 11:00	**MD5 Hash:**	59422138869FC6A425C0F673A8E39027	**Editor ID:**	001-327-526-2

Batch ID:	16-5038-3047	**Test Type:**	Survival (48h)	**Analyst:**			
Start Date:	08 Jul-21 16:09	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Receiving Water		
Ending Date:	10 Jul-21 15:19	**Species:**	Menidia beryllina	**Brine:**	Instant Ocean		
Test Length:	47h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**	

Sample ID:	06-5765-4291	**Code:**	27330213	**Project:**	
Sample Date:	08 Jul-21 09:46	**Material:**	WWTF Effluent	**Source:**	City of Dover (NH0101311)
Receipt Date:	08 Jul-21 14:47	**CAS (PC):**		**Station:**	
Sample Age:	6h	**Client:**	Dover		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	2012604	200	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
LC50	>100	---	---	<1	---	---

48h Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**A/B**	**Mean**	**%Effect**
0	D	4	0.9000	0.9000	0.8000	1.0000	12.83%	0.00%	36/40	0.9250	0.00%
6.25		4	0.9500	0.9500	0.9000	1.0000	6.08%	-5.56%	38/40	0.9250	0.00%
12.5		4	0.8250	0.8000	0.7000	1.0000	15.25%	8.33%	33/40	0.8750	5.41%
25		4	0.9250	0.9000	0.9000	1.0000	5.41%	-2.78%	37/40	0.8750	5.41%
50		4	0.8750	0.9000	0.8000	0.9000	5.71%	2.78%	35/40	0.8750	5.41%
100		4	0.7500	0.7000	0.7000	0.9000	13.33%	16.67%	30/40	0.7500	18.92%

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	0.8000	0.8000
6.25		1.0000	1.0000	0.9000	0.9000
12.5		0.7000	1.0000	0.8000	0.8000
25		1.0000	0.9000	0.9000	0.9000
50		0.9000	0.8000	0.9000	0.9000
100		0.7000	0.9000	0.7000	0.7000

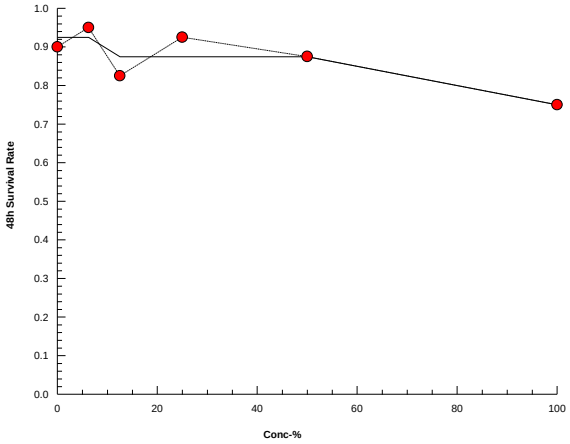
48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	8/10	8/10
6.25		10/10	10/10	9/10	9/10
12.5		7/10	10/10	8/10	8/10
25		10/10	9/10	9/10	9/10
50		9/10	8/10	9/10	9/10
100		7/10	9/10	7/10	7/10

Inland Silverside 96-h Acute Survival Test | **New England Bioassay**

Analysis ID:	18-2798-7800	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 11:02	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	23 Jul-21 11:00	**MD5 Hash:**	59422138869FC6A425C0F673A8E39027	**Editor ID:**	001-327-526-2

Graphics



Inland Silverside 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	13-5432-3522	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 11:04	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	23 Jul-21 11:00	**MD5 Hash:**	59422138869FC6A425C0F673A8E39027	**Editor ID:**	001-327-526-2

Batch ID:	16-5038-3047	**Test Type:**	Survival (48h)	**Analyst:**		
Start Date:	08 Jul-21 16:09	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Receiving Water	
Ending Date:	10 Jul-21 15:19	**Species:**	Menidia beryllina	**Brine:**	Instant Ocean	
Test Length:	47h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**

Sample ID:	06-5765-4291	**Code:**	27330213	**Project:**	
Sample Date:	08 Jul-21 09:46	**Material:**	WWTF Effluent	**Source:**	City of Dover (NH0101311)
Receipt Date:	08 Jul-21 14:47	**CAS (PC):**		**Station:**	
Sample Age:	6h	**Client:**	Dover		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.157	17.44%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	-0.7748	2.407	0.220	6	CDF	0.9689	Non-Significant Effect
		12.5	1.149	2.407	0.220	6	CDF	0.3580	Non-Significant Effect
		25	-0.3299	2.407	0.220	6	CDF	0.9122	Non-Significant Effect
		50	0.5024	2.407	0.220	6	CDF	0.6465	Non-Significant Effect
		100	2.227	2.407	0.220	6	CDF	0.0698	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.199902	0.0399804	5	2.384	0.0795	Non-Significant Effect
Error	0.301884	0.0167713	18			
Total	0.501786		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.99	15.09	0.5508	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9364	0.884	0.1355	Normal Distribution

48h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.9000	0.7163	1.0000	0.9000	0.8000	1.0000	0.0577	12.83%	0.00%
6.25		4	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	-5.56%
12.5		4	0.8250	0.6248	1.0000	0.8000	0.7000	1.0000	0.0629	15.25%	8.33%
25		4	0.9250	0.8454	1.0000	0.9000	0.9000	1.0000	0.0250	5.41%	-2.78%
50		4	0.8750	0.7954	0.9546	0.9000	0.8000	0.9000	0.0250	5.71%	2.78%
100		4	0.7500	0.5909	0.9091	0.7000	0.7000	0.9000	0.0500	13.33%	16.67%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	1.2600	0.9795	1.5400	1.2600	1.1070	1.4120	0.0880	13.97%	0.00%
6.25		4	1.3310	1.1810	1.4800	1.3310	1.2490	1.4120	0.0471	7.07%	-5.63%
12.5		4	1.1540	0.8675	1.4410	1.1070	0.9912	1.4120	0.0901	15.62%	8.35%
25		4	1.2900	1.1600	1.4190	1.2490	1.2490	1.4120	0.0407	6.32%	-2.40%
50		4	1.2140	1.1010	1.3260	1.2490	1.1070	1.2490	0.0355	5.85%	3.65%
100		4	1.0560	0.8504	1.2610	0.9912	0.9912	1.2490	0.0645	12.21%	16.19%

Inland Silverside 96-h Acute Survival Test — **New England Bioassay**

Analysis ID:	13-5432-3522	**Endpoint:**	48h Survival Rate	**CETIS Version:**	CETISv1.9.7
Analyzed:	23 Jul-21 11:04	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	23 Jul-21 11:00	**MD5 Hash:**	59422138869FC6A425C0F673A8E39027	**Editor ID:**	001-327-526-2

48h Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	0.8000	0.8000
6.25		1.0000	1.0000	0.9000	0.9000
12.5		0.7000	1.0000	0.8000	0.8000
25		1.0000	0.9000	0.9000	0.9000
50		0.9000	0.8000	0.9000	0.9000
100		0.7000	0.9000	0.7000	0.7000

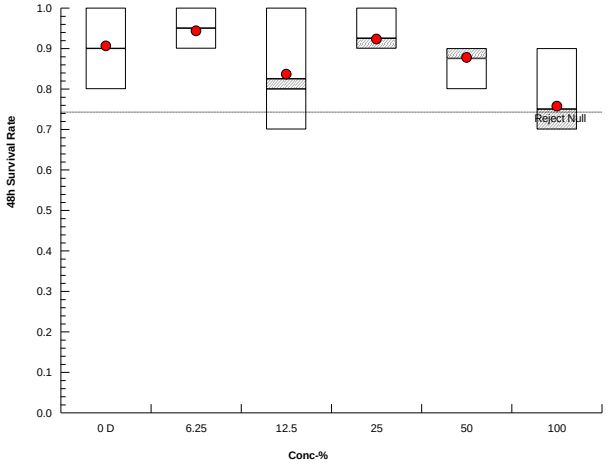
Angular (Corrected) Transformed Detail

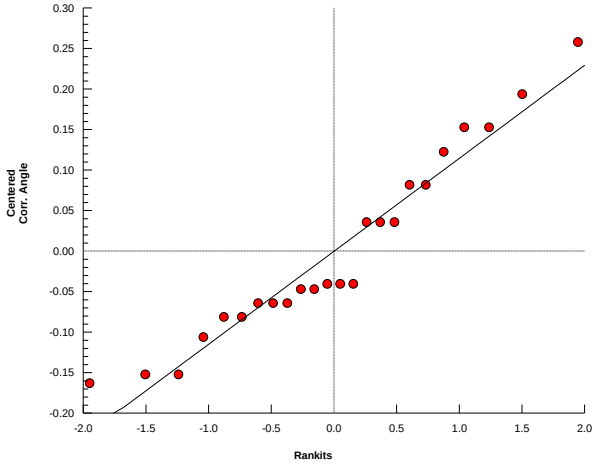
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.1070	1.1070
6.25		1.4120	1.4120	1.2490	1.2490
12.5		0.9912	1.4120	1.1070	1.1070
25		1.4120	1.2490	1.2490	1.2490
50		1.2490	1.1070	1.2490	1.2490
100		0.9912	1.2490	0.9912	0.9912

48h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	8/10	8/10
6.25		10/10	10/10	9/10	9/10
12.5		7/10	10/10	8/10	8/10
25		10/10	9/10	9/10	9/10
50		9/10	8/10	9/10	9/10
100		7/10	9/10	7/10	7/10

Graphics





CHEMICAL ANALYSIS

Please note the subcontract laboratory has its own QAQC and data review processes, and therefore New England Bioassay does not review the analytical results we receive.

PHOENIX
Environmental Laboratories, Inc.

Monday, July 19, 2021

Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Project ID: DOVER NH WWTF
SDG ID: GCI69974
Sample ID#s: CI69974 - CI69978

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone (860) 645-1102 Fax (860) 645-0823

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Sample Id Cross Reference

July 19, 2021

SDG I.D.: GCI69974

Project ID: DOVER NH WWTF

Client Id	Lab Id	Matrix
C41-2789 DSN 001 COMPOSITE	CI69974	WASTE WATER
DSN 001 GRAB	CI69975	WASTE WATER
C41-2790 PISCATAQUA RIVER	CI69976	SURFACE WATER
C41-2791 INFLUENT COMPOSITE	CI69977	WASTE WATER
INFLUENT GRAB	CI69978	WASTE WATER

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 19, 2021

FOR: Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Sample Information		Custody Information		Date	Time
Matrix:	WASTE WATER	Collected by:		07/08/21	9:46
Location Code:	NEB	Received by:	SW	07/08/21	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	22988				

Laboratory Data

SDG ID: GCI69974
Phoenix ID: CI69974

Project ID: DOVER NH WWTF
Client ID: C41-2789 DSN 001 COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.001	0.001	mg/L	1	07/14/21	EK	E200.7	
Aluminum	0.015	0.010	mg/L	1	07/14/21	EK	E200.7	
Arsenic	< 0.002	0.002	mg/L	1	07/14/21	EK	E200.7	
Cadmium	< 0.0001	0.0001	mg/L	1	07/15/21	CPP	SM3113B	
Chromium	< 0.001	0.001	mg/L	1	07/14/21	EK	E200.7	
Copper	0.0061	0.0010	mg/L	1	07/14/21	EK	E200.7	
Mercury	< 0.0002	0.0002	mg/L	1	07/09/21	MGH	E245.1	
Nickel	0.002	0.001	mg/L	1	07/14/21	EK	E200.7	
Lead	< 0.0003	0.0003	mg/L	1	07/14/21	TH	SM3113B	
Zinc	0.026	0.002	mg/L	1	07/14/21	EK	E200.7	
Ammonia as Nitrogen	1.16	0.10	mg/L	2	07/17/21	KDB	E350.1	
Salinity	< 0.5	0.5	ppt	1	07/09/21	MM	SM2520B-10	1
Tot. Org. Carbon	12.2	0.50	mg/L	1	07/09/21	ARG/BJA	SM5310B-11	
Total Suspended Solids	4.0	3.3	mg/L	0.7	07/09/21	CB/MCH/Q	SM 2540D-11	
Total Solids	480	10	mg/L	1	07/12/21	LCB/MCH	SM2540B-11	
Mercury Digestion	Completed				07/09/21	CG/AB/AB	E245.1	
Total Metals Digestion	Completed				07/08/21			

Project ID: DOVER NH WWTF

Client ID: C41-2789 DSN 001 COMPOSITE

Phoenix I.D.: CI69974

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

July 19, 2021

Reviewed and Released by: Helen Geoghegan, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 19, 2021

FOR: Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Sample Information		Custody Information		Date	Time
Matrix:	WASTE WATER	Collected by:		07/08/21	7:47
Location Code:	NEB	Received by:	SW	07/08/21	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	22988				

Laboratory Data

SDG ID: GCI69974
Phoenix ID: CI69975

Project ID: DOVER NH WWTF
Client ID: DSN 001 GRAB

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Chlorine Residual	< 0.011	0.011	mg/L	1	07/08/21 17:35	MW	SM4500CLG-97	1
pH	7.31	1.00	pH Units	1	07/09/21 01:58	AP/MW	SM4500-H B-11	1
Total Cyanide	< 0.010	0.010	mg/L	1	07/13/21	A/B/G	E335.4	

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The regulatory hold time for Chlorine is immediately. This Chlorine was performed in the laboratory and may be considered outside of hold-time.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
July 19, 2021
Reviewed and Released by: Helen Geoghegan, Project Manager

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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 19, 2021

FOR: Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Sample Information		Custody Information		Date	Time
Matrix:	SURFACE WATER	Collected by:		07/08/21	11:18
Location Code:	NEB	Received by:	SW	07/08/21	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	22988				

Laboratory Data

SDG ID: GCI69974
Phoenix ID: CI69976

Project ID: DOVER NH WWTF
Client ID: C41-2790 PISCATAQUA RIVER

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Chlorine Residual	0.019	0.011	mg/L	1	07/08/21 17:39	MW	SM4500CLG-97	1
Ammonia as Nitrogen	< 0.05	0.05	mg/L	1	07/17/21	KDB	E350.1	
pH	7.85	1.00	pH Units	1	07/09/21 02:06	AP/MW	SM4500-H B-11	1
Salinity	29.6	0.5	ppt	1	07/09/21	MM	SM2520B-10	1
Tot. Org. Carbon	2.92	0.50	mg/L	1	07/09/21	ARG/BJA	SM5310B-11	
Total Suspended Solids	19	3.3	mg/L	0.7	07/09/21	CB/MCH/Q	SM 2540D-11	
Total Solids	39000	2000	mg/L	200	07/15/21	MCH/QH	SM2540B-11	

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The regulatory hold time for Chlorine is immediately. This Chlorine was performed in the laboratory and may be considered outside of hold-time.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
July 19, 2021
Reviewed and Released by: Helen Geoghegan, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Report

July 19, 2021

FOR: Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Sample Information		Custody Information		Date	Time
Matrix:	WASTE WATER	Collected by:		07/08/21	9:17
Location Code:	NEB	Received by:	SW	07/08/21	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	22988				

Laboratory Data

SDG ID: GCI69974
Phoenix ID: CI69977

Project ID: DOVER NH WWTF
Client ID: C41-2791 INFLUENT COMPOSITE

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	07/14/21	EK	E200.7
Aluminum	0.324	0.010	mg/L	1	07/14/21	EK	E200.7
Arsenic	0.003	0.002	mg/L	1	07/14/21	EK	E200.7
Cadmium	0.0002	0.0001	mg/L	1	07/15/21	CPP	SM3113B
Chromium	0.002	0.001	mg/L	1	07/14/21	EK	E200.7
Copper	0.0948	0.0010	mg/L	1	07/14/21	EK	E200.7
Mercury	< 0.0002	0.0002	mg/L	1	07/09/21	MGH	E245.1
Nickel	0.004	0.001	mg/L	1	07/14/21	EK	E200.7
Lead	0.0042	0.0003	mg/L	1	07/14/21	TH	SM3113B
Zinc	0.230	0.002	mg/L	1	07/14/21	EK	E200.7
Mercury Digestion	Completed				07/09/21	CG/AB/AB	E245.1
Total Metals Digestion	Completed				07/08/21		

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
July 19, 2021
Reviewed and Released by: Helen Geoghegan, Project Manager

Ver 1

PHOENIX

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 19, 2021

FOR: Attn: Ms. Kim Wills
New England Bioassay
77 Batson Drive
Manchester, CT 06040

Sample Information		Custody Information		Date	Time
Matrix:	WASTE WATER	Collected by:		07/08/21	7:37
Location Code:	NEB	Received by:	SW	07/08/21	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	22988				

Laboratory Data

SDG ID: GCI69974
Phoenix ID: CI69978

Project ID: DOVER NH WWTF
Client ID: INFLUENT GRAB

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Total Cyanide	< 0.010	0.010	mg/L	1	07/13/21	A/B/G	E335.4

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
July 19, 2021
Reviewed and Released by: Helen Geoghegan, Project Manager

PHOENIX
Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

July 19, 2021

QA/QC Data

SDG I.D.: GCI69974

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 582955 (mg/L), QC Sample No: CI69029 (CI69974, CI69977)													
Cadmium - Water	BRL	0.0001	<0.0001	0.0004	NC	115			109			80 - 120	20
QA/QC Batch 582765 (mg/L), QC Sample No: CI69781 (CI69974, CI69977)													
Lead (Furnace) - Water	BRL	0.001	<0.001	<0.001	NC	99.6			96.0			80 - 120	20
QA/QC Batch 582879 (mg/L), QC Sample No: CI69781 (CI69974, CI69977)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	85.3			85.8	87.9	2.4	80 - 120	20
Comment:													
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.													
QA/QC Batch 582807 (mg/L), QC Sample No: CI69725 (CI69974, CI69977)													
ICP Metals - Aqueous													
Aluminum	BRL	0.010	3.70	3.81	2.90	93.4	92.8	0.6	NC			80 - 120	20
Arsenic	BRL	0.0020	0.015	0.0148	1.30	96.8	96.9	0.1	113			80 - 120	20
Chromium	BRL	0.0005	0.017	0.0177	4.00	98.1	97.9	0.2	88.4			80 - 120	20
Copper	BRL	0.0025	0.010	0.0106	NC	97.9	97.5	0.4	114			80 - 120	20
Nickel	BRL	0.0005	<0.001	<0.0005	NC	99.2	99.4	0.2	91.6			80 - 120	20
Silver	BRL	0.0005	<0.001	<0.0005	NC	90.0	90.5	0.6	125			80 - 120	20
Zinc	BRL	0.0020	0.209	0.216	3.30	96.5	96.4	0.1	102			80 - 120	20
Comment:													
Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

PHOENIX

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QA/QC Report

July 19, 2021

QA/QC Data

SDG I.D.: GCI69974

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 582975 (mg/L), QC Sample No: CI68487 (CI69975, CI69978)													
Total Cyanide	BRL	0.010	<0.010	<0.010	NC	93.3			89.5			90 - 110	20
Comment:													
Cyanide blank spike recovery was 90.5 %.													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 583098 (mg/L), QC Sample No: CI69079 (CI69974, CI69976)													
Total Solids	BRL	10	1300	1400	7.40	102						85 - 115	20
QA/QC Batch 583068 (mg/L), QC Sample No: CI69892 (CI69974, CI69976)													
Total Organic Carbon	BRL	1.0	1.3	1.2	NC	98.0			94.0			85 - 115	20
Comment:													
Additional criteria matrix spike acceptance range is 75-125%.													
QA/QC Batch 582909 (mg/L), QC Sample No: CI70041 (CI69974, CI69976)													
Total Suspended Solids	BRL	2.5	<3.3	<3.3	NC	91.0						85 - 115	20
QA/QC Batch 582862 (pH), QC Sample No: CI70503 (CI69975, CI69976)													
pH			8.50	8.42	0.90	97.6						85 - 115	20
QA/QC Batch 583818 (mg/L), QC Sample No: CI69873 (CI69974, CI69976)													
Ammonia as Nitrogen	BRL	0.05	<0.10	<0.10	NC	92.9			104			90 - 110	20
QA/QC Batch 582786 (mg/L), QC Sample No: CI69976 (CI69975, CI69976)													
Chlorine Residual	BRL	0.02	0.019	<0.02	NC	93.1							

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
July 19, 2021

Monday, July 19, 2021

Criteria: None

State: NH

Sample Criteria Exceedances Report

GCI69974 - NEB

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

July 19, 2021 SDG I.D.: GCI69974

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

PHOENIX Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Temp 10 °C Pg of

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: Kimberly.wills@nebio.com

Customer: NEB
Address: 77 Batson Drive
Manchester, CT 06042

Project: Dover, NH WWTF
Report to: Kim Wills
Invoice to: Kim Wills
QUOTE #

Project P.O.: 22988

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

Analysis Request

	PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	pH, TRC	Total metals	Salinity, TSS, TS	Total cyanide	TOC	Ammonia	MS/MSD*	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( )oz	GL Soil container ( )oz	40 ml VOA Vial [ ] As is [ ] HCL	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
C41-2789	69974	DSN 001 Composite	WW EFF. C	7/7-8/21	0955-0946		X	X		X	X				1						1	1	1			
	69975	DSN 001 Grab	WW EFF. G	7/8/21	0747	X			X												1			1		
C41-2790	69976	Piscataqua River	SW RIVER G	7/8/21	1118	X		X		X	X				1						1	1				
C41-2791	69977	Influent Composite	WW INF. C	7/7-8/21	0830-0917		X																1			
	69978	Influent Grab	WW INF. G	7/8/21	0737				X															1		

COMMENT - EFF. COMPOSITOR REFRIG. USED ≥ 2 DAYS BEFORE SAMPLING, RAN SAMPLE USING ICE, ICE ADDED 3 TIMES DURING RUN, TEMP. NOT MONITORED DURING SAMPLING, FINAL TEMP. 4.8°C

Relinquished By:	Accepted by:	Date:	Time:
[signature]	[signature]	7/8/21	1150
[signature]	[signature]	7/8/21	2:45
[signature]	[signature]	7/8/21	1530

Comments, Special Requirements or Regulations:
Client fills bottles + sends to NEB with courier. NEB coordinates delivery of chem bottles to Phoenix. Total metals include: aluminum, arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] (Residential) Direct Exposure
[ ] (Comm/Industrial) Direct Exposure
[ ] GA Leachability
[ ] GB Leachability
[ ] GA-GW Objectives
[ ] GB-GW Objectives

CT
[ ] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[ ] GB Mobility
[ ] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1 [ ] MWRA eSMART
[ ] GW-2 [ ] S-1 10% CALC
[ ] GW-3
[ ] S-1 GW-1 [ ] S-1 GW-2 [ ] S-1 GW-3
[ ] S-2 GW-1 [ ] S-2 GW-2 [ ] S-2 GW-3
[ ] S-3 GW-1 [ ] S-3 GW-2 [ ] S-3 GW-3
[ ] SW Protection

State where samples were collected: NH

Data Format
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] Other

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[ ] Phoenix Std Report
[ ] Other
* SURCHARGE A

PEL-1

At a minimum, annual sampling and analysis of the influent and effluent of the Wastewater Treatment Plant shall be conducted for the following pollutants:

a.) Total Cadmium
b.) Total Chromium
c.) Total Copper
d.) Total Lead
e.) Total Mercury
f.) Total Nickel
g.) Total Silver
h.) Total Zinc
i.) Total Cyanide
j.) Total Arsenic
k.) NPDES ALUMINUM

* WHAT EPA USES FOR D. ARSENAL

	NPDES PERMIT TOXICITY	NH SALT H_2O CRITERIA		40CFR 93 EDITION EPA		GOLD BOOK FED. REG. SOURCE NATIONAL RECOMMENDED	
ug/L	DET. LIMIT	ACUTE	CHRONIC	A	C	ACUTE	CHRONIC
.001 CADMIUM	1.0	42	9.3	43	9.3	40	8.8
.005 CHROMIUM	5.0	Cr^6 1,100 Cr^3 10,300	50	—	—	—	—
.0025 COPPER	2.5	4.8	3.1	2.9	2.9	4.8	3.1
.005 LEAD	5.0	210	8.1	220	8.5	210	8.1
.0002 MERCURY	—	1.8	.94	2.1	.025	1.8	.94
.004 NICKEL	4.0	74	8.2	75	8.3	74	8.2
.0019 SILVER	—	1.9	—	2.3	—	1.9	—
.0025 ZINC	2.5	90	81	95	86	90	81
.001 CYANIDE	—	1.0	1.0	1.0	1.0	1.0	1.0
.036 ARSENIC	—	69	36	69	36	69	36
.02 ALUMINUM	20	—	—	—	—	—	—

WHEN TESTING FOR PARAMETERS ABOVE — DETECTION LIMITS SHALL NOT EXCEED HIGHLIGHTED (CIRCLED) VALUES

08/08/12

* TALKED TO DAN ARSENAULT HE SAID DILUTION # FOR EFF. IS APPLIED TO ANALYTICAL RESULT NOT THE LIMIT.

SAMPLE RECEIPT CHEMISTRY
&
CHAIN OF CUSTODY DOCUMENTS

NEW ENGLAND BIOASSAY
INITIAL CHEMISTRY DATA

PERMITTEE: Dover WWTP
NEB PROJECT # 44894

DATE RECEIVED	7/8/21	
SAMPLE TYPE:	Effluent	Receiving Water
COC #	C41-2789	C41-2790
pH (SU)	7.6	7.7
Temperature (^oC)	1.7	6.4
Dissolved Oxygen (mg/L)	12.1	8.8
Conductivity (µmhos)	920	48,120
Salinity (ppt)	<1	30
TRC - DPD (mg/L)	0.021	0.003
TRC - Amperometric (mg/L)	N/A	N/A
Hardness (mg/L as CaCO3)	102	5400
Alkalinity (mg/l as CaCO3)	100	100
Tech Initials	PD	PD

NOTE: NA = NOT APPLICABLE

Salinity Adjustments							
Sample ID	**Volume**	**Init. Salinity (ppt)**	**Added: g of Instant Ocean or L of DI Water**	**Final Salinity (ppt)**	**Instant Ocean Lot # (if applicable)**	**Date**	**Tech**
Effluent	8	<1	230	25	IO21(6-22)	7/8/21	VT/PD
Receiving	13.3	30	2.7L	25	N/A	7/8/21	PD

Due to COVID-19 safety precautions Samples were received in NEB refrigerator

New England Bioassay
CHAIN-OF-CUSTODY

EFFLUENT

Sampler: ARNIE POWERS
Title: LAB SUPERVISOR
Facility: City of Dover WWTP
Address: 484 Middle Road
Dover, NH 03820

RECEIVING WATER

Sampler: ARNIE POWERS
Title: LAB SUPERVISOR
Facility: City of Dover WWTP
Address: 484 Middle Road
Dover, NH 03820

Sample Information

Collection Method: ___ Grab / X Composite
Sample ID: DOVER WWTF EFF.
Start & End Dates: 07/07 - 07/08/21
Start & End Times: 0955 - 0946
Type of Sample: X WWTF Effluent / ___ Industrial Effluent / ___ Other ___
Is the sample: ___ Prechlorinated / ___ Dechlorinated / ___ Chlorine spiked in lab / X Unchlorinated — UV
Site Description: PLANT EFF. COMPOSITOR FROM SUMP BELOW STEP AERATION PRIOR TO RIVER
Sample Collection Procedures: STANDARD

Collection Method: X Grab / ___ Composite
Sample ID: PISCATAQUA RIVER H_2O (TOXICITY DILUTION H_2O)
Date Collected: 07/08/21
Time Collected: 1118
Type of Sample: X Receiving Water / ___ Other ___
Is the sample: X Unchlorinated
HILTON LAUNCH, FLOOD TIDE
STANDARD

Sample Shipment

Method of Shipment: NEB courier

Relinquished By:	Arnold Powers	Date: 07/08/21	Time: 1150
Received By:	[illegible]	Date: 07/08/21	Time: 11:50
Relinquished By:	[illegible]	Date: 07/08/21	Time: 2:45
Received By:	[illegible]	Date: 7/8/21	Time: 1447

Optional Information

Purchase Order # to reference on invoice:

FOR NEB USE ONLY

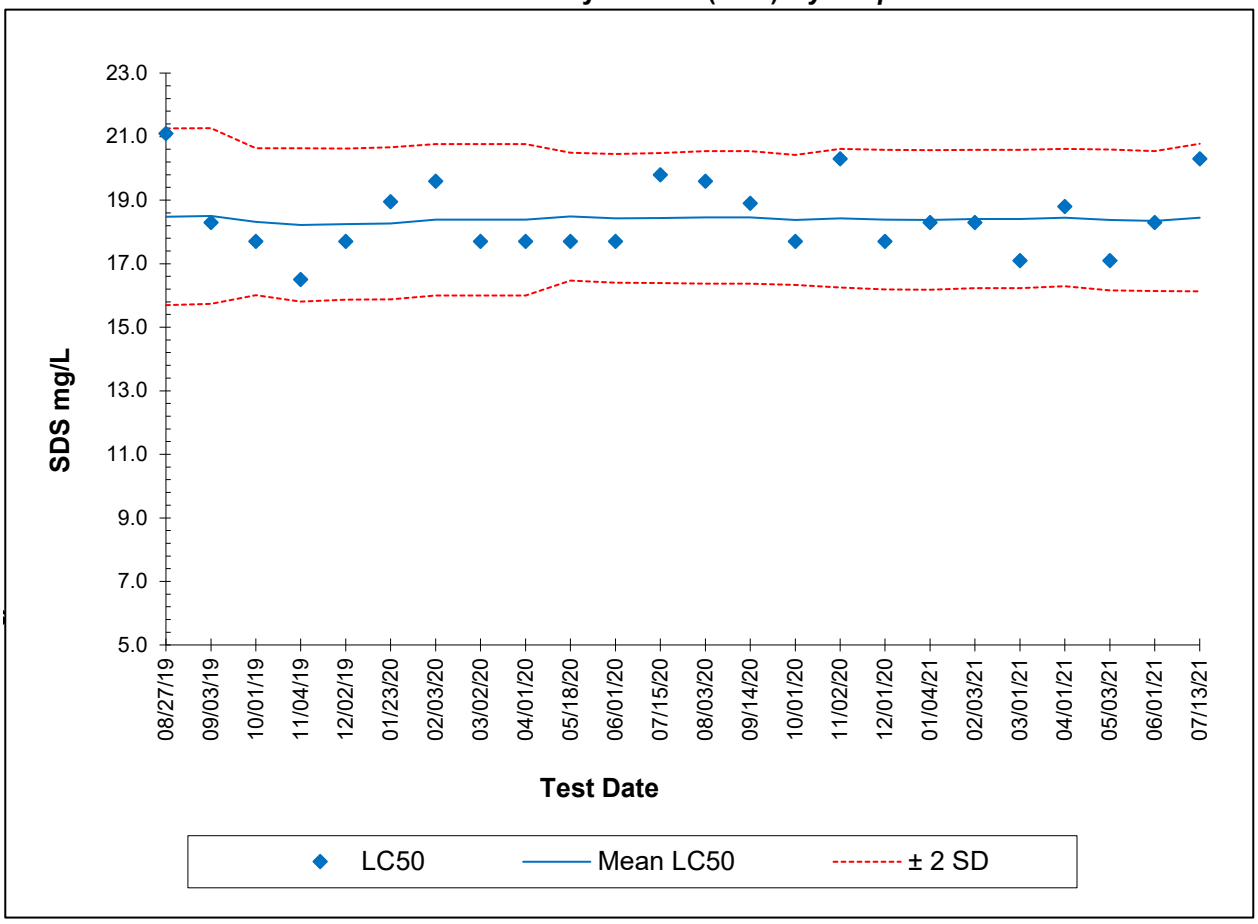
Temperature of Effluent Upon Receipt at Lab: 1.7 °C
Temperature of Receiving Water Upon Receipt at Lab: 6.4 °C
Effluent COC# C41-2789
Receiving Water COC# C41-2790

IF THIS COOLER IS MISPLACED OR THE LABEL IS LOST, PLEASE SHIP TO:
KIM WILLS, New England Bioassay, 77 Batson Drive, Manchester CT 06042

REFERENCE TOXICANT CHARTS

New England Bioassay

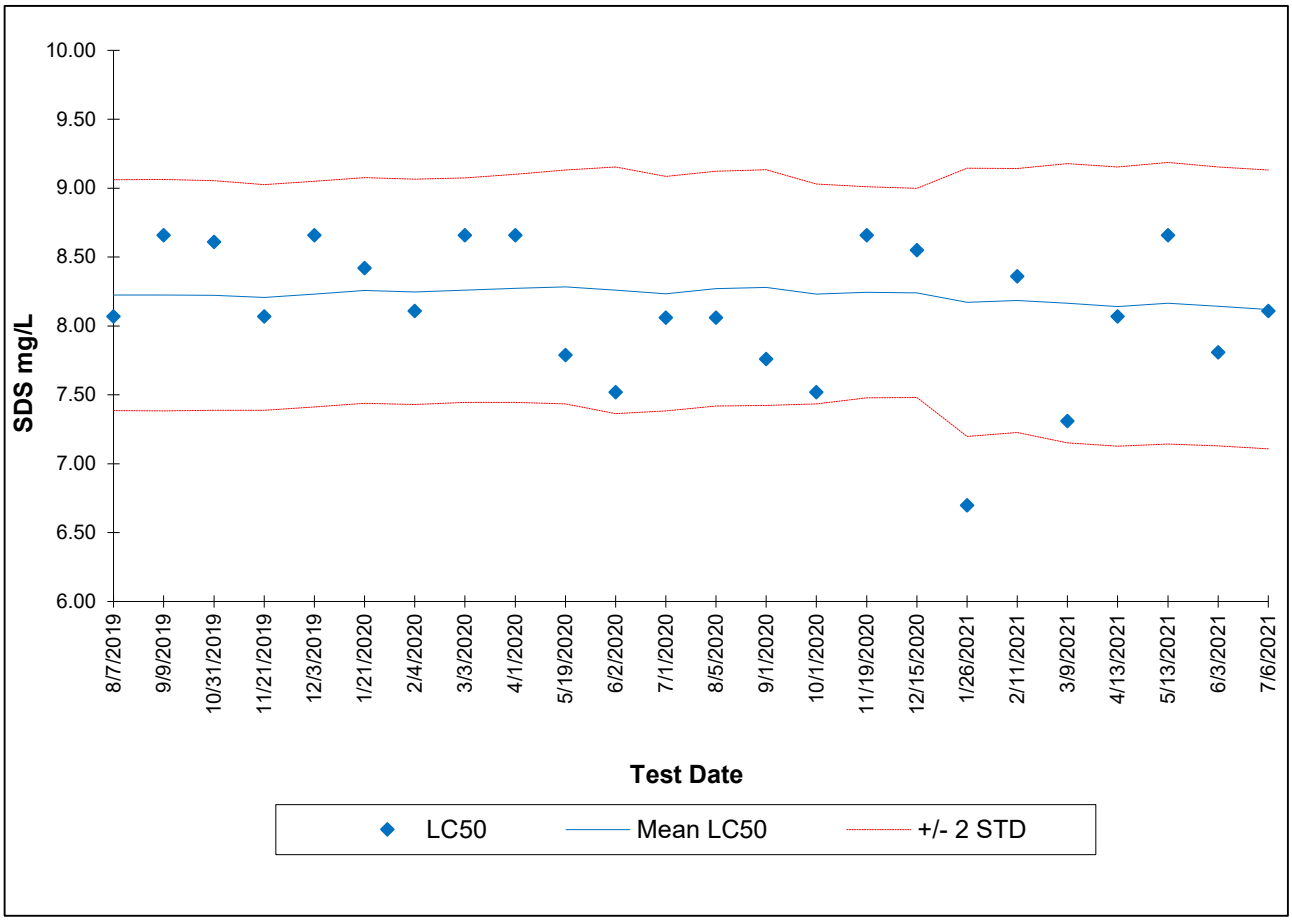
Reference Toxicant Data: Sodium Dodecyl Sulfate (SDS) *Mysidopsis bahia* 48-hour LC50



Test ID	Date	LC_{50}	Mean LC_{50}	STD	-2STD	+2STD	CV	CV National 75th & 90th%
19-1202	8/27/2019	21.1	18.5	1.4	15.7	21.3	0.07	0.26
19-1231	9/3/2019	18.3	18.5	1.4	15.7	21.3	0.07	0.26
19-1407	10/1/2019	17.7	18.3	1.2	16.0	20.6	0.08	0.26
19-1568	11/4/2019	16.5	18.2	1.2	15.8	20.6	0.07	0.26
19-1692	12/2/2019	17.7	18.2	1.2	15.9	20.6	0.07	0.26
20-109	1/23/2020	19.0	18.3	1.2	15.9	20.7	0.07	0.26
20-136	2/3/2020	19.6	18.4	1.2	16.0	20.8	0.07	0.26
20-290	3/2/2020	17.7	18.4	1.2	16.0	20.8	0.06	0.26
20-433	4/1/2020	17.7	18.4	1.2	16.0	20.8	0.06	0.26
20-658	5/18/2020	17.7	18.5	1.0	16.5	20.5	0.05	0.26
20-723	6/1/2020	17.7	18.4	1.0	16.4	20.5	0.05	0.26
20-981	7/15/2020	19.8	18.4	1.0	16.4	20.5	0.06	0.26
20-1076	8/3/2020	19.6	18.5	1.0	16.4	20.5	0.06	0.26
20-1328	9/14/2020	18.9	18.5	1.0	16.4	20.5	0.06	0.26
20-1425	10/1/2020	17.7	18.4	1.0	16.3	20.4	0.06	0.26
20-1617	11/2/2020	20.3	18.4	1.1	16.3	20.6	0.06	0.26
20-1737	12/1/2020	17.7	18.4	1.1	16.2	20.6	0.06	0.26
21-12	1/4/2021	18.3	18.4	1.1	16.2	20.6	0.06	0.26
21-141	2/3/2021	18.3	18.4	1.1	16.2	20.6	0.06	0.26
21-260	3/1/2021	17.1	18.4	1.1	16.2	20.6	0.06	0.26
21-436	4/1/2021	18.8	18.5	1.1	16.3	20.6	0.06	0.26
21-596	5/3/2021	17.1	18.4	1.1	16.2	20.6	0.06	0.26
21-742	6/1/2021	18.3	18.3	1.1	16.1	20.5	0.06	0.26
21-979	7/13/2021	20.3	18.5	1.2	16.1	20.8	0.06	0.26

New England Bioassay

Reference Toxicant Data: Sodium Dodecyl Sulfate (SDS) *Menidia beryllina* 48-hour LC50



Test ID	Date	LC_{50}	Mean LC_{50}	STD	-2STD	+2STD	CV	CV National 75th%	CV National 90th%
19-1095	8/7/2019	8.07	8.22	0.42	7.39	9.06	0.05	0.21	0.44
19-1280	9/9/2019	8.66	8.22	0.42	7.38	9.06	0.05	0.21	0.44
19-1572	10/31/2019	8.61	8.22	0.42	7.39	9.05	0.05	0.21	0.44
19-1657	11/21/2019	8.07	8.21	0.41	7.39	9.03	0.05	0.21	0.44
19-1717	12/3/2019	8.66	8.23	0.41	7.41	9.05	0.05	0.21	0.44
20-78	1/21/2020	8.42	8.26	0.41	7.44	9.08	0.05	0.21	0.44
20-137	2/4/2020	8.11	8.25	0.41	7.43	9.07	0.05	0.21	0.44
20-297	3/3/2020	8.66	8.26	0.41	7.45	9.07	0.05	0.21	0.44
20-435	4/1/2020	8.66	8.27	0.41	7.44	9.10	0.05	0.21	0.44
20-659	5/19/2020	7.79	8.28	0.42	7.43	9.13	0.05	0.21	0.44
20-726	6/2/2020	7.52	8.26	0.45	7.36	9.15	0.05	0.21	0.44
20-906	7/1/2020	8.06	8.23	0.43	7.38	9.08	0.05	0.21	0.44
20-1077	8/5/2020	8.06	8.27	0.43	7.42	9.12	0.05	0.21	0.44
20-1257	9/1/2020	7.76	8.28	0.43	7.42	9.13	0.05	0.21	0.44
20-1426	10/1/2020	7.52	8.23	0.40	7.43	9.03	0.05	0.21	0.44
20-1688	11/19/2020	8.66	8.24	0.38	7.48	9.01	0.05	0.21	0.44
20-1824	12/15/2020	8.55	8.24	0.38	7.48	9.00	0.05	0.21	0.44
21-115	1/26/2021	6.70	8.17	0.49	7.20	9.14	0.06	0.21	0.44
21-189	2/11/2021	8.36	8.18	0.48	7.23	9.14	0.06	0.21	0.44
21-308	3/9/2021	7.31	8.16	0.51	7.15	9.18	0.06	0.21	0.44
21-519	4/13/2021	8.07	8.14	0.51	7.13	9.15	0.06	0.21	0.44
21-672	5/13/2021	8.66	8.17	0.51	7.14	9.19	0.06	0.21	0.44
21-748	6/3/2021	7.81	8.14	0.51	7.13	9.15	0.06	0.21	0.44
21-924	7/6/2021	8.11	8.12	0.51	7.11	9.13	0.06	0.21	0.44

NHELAP
PRIMARY ACCREDITATION ANALYTE LIST

NEW HAMPSHIRE ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

29 Hazen Drive, PO Box 95, Concord, NH 03302 (603) 271-2998

PRIMARY ACCREDITATION ANALYTE LIST

ANALYTE LIST NUMBER: 207121-A

NEW ENGLAND BIOASSAY
77 BATSON DRIVE

MANCHESTER CT 06042
860-643-9560
Lab ID: 2071

Analyte Code	Analyte Name	Effective Date	Expiration Date	Matrix	Category	Accr. Type
Method Code: 10115818	**Method Ref: EPA 1006.0 - INLAND SILVERSIDE CHRONIC TOXICITY**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10116219	**Method Ref: EPA 1008.0 - SEA URCHIN CHRONIC TOXICITY**		**Revision:**		**Date: 2002**	
3480	IC25 REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
3458	LOEC REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
3485	NOEC REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10213602	**Method Ref: EPA 2000.0 - FATHEAD MINNOW, 48-HR ACUTE, NONRENEW**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10213646	**Method Ref: EPA 2002.0 CERIODAPHNIA DUBIA, 48-HR ACUTE, NONRENEWAL, 25°C, MHSF**		**Revision:**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10214207	**Method Ref: EPA 1000.0 - FATHEAD MINNOW, 7-DAY CHRONIC, DAILY**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10214581	**Method Ref: EPA 2002.0 - CERIODAPHNIA ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10214809	**Method Ref: EPA 2002.0 - CERIODAPHNIA DUBIA, 48-HR ACUTE, RENE**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10215404	**Method Ref: EPA 2021.0 - DAPHNIA MAGNA, 48-HR ACUTE, NONRENEWA**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10215415	**Method Ref: EPA 2021.0 - DAPHNIA MAGNA, 48-HR ACUTE, NONRENEWA**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10215426	**Method Ref: EPA 2021.0 - DAPHNIA PULEX ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10215619	**Method Ref: EPA 2021.0 - DAPHNIA PULEX, 48-HR ACUTE, NONRENEWA**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216010	**Method Ref: EPA 2007.0 - MYSID ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE

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PRIMARY ACCREDITATION ANALYTE LIST

ANALYTE LIST NUMBER: 207121-A

NEW ENGLAND BIOASSAY
77 BATSON DRIVE

MANCHESTER CT 06042
860-643-9560
Lab ID: 2071

Method Code: 10216021	**Method Ref: EPA 2007.0 MYSID (MYSIDOPSIS BAHIA, AMERICAMYSIS BAHIA), 48-HR ACUTE, NONRENEWAL, 25°C, SSW**		**Revision:**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216214	**Method Ref: EPA 1007.0 - MYSID CHRONIC TOXICITY**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216418	**Method Ref: EPA 2006.0 - MENIDIA ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216429	**Method Ref: EPA 2006.0 INLAND SILVERSIDE (MENIDIA BERYLLINA), 48-HR ACUTE, NONRENEWAL, 25°C, SSW**		**Revision:**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216601	**Method Ref: EPA 2004.0 - SHEEPSHEAD MINNOW, 48-HR ACUTE, NONRE**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216612	**Method Ref: EPA 2004.0 - SHEEPSHEAD MINNOW ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216623	**Method Ref: EPA 2004.0 - SHEEPSHEAD MINNOW, 48-HR ACUTE, NONRE**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216645	**Method Ref: EPA 2004.0 SHEEPSHEAD MINNOW (CYPRINODON VARIEGATUS), 48-HR ACUTE, NONRENEWAL, 25°C, SSW**		**Revision:**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10216827	**Method Ref: EPA 1004.0 SHEEPSHEAD MINNOW (CYPRINODON VARIEGATUS), 7-DAY CHRONIC, DAILY RENEWAL, SSW**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10252605	**Method Ref: EPA 1000.0 - FATHEAD MINNOW CHRONIC TOXICITY**		**Revision: 4TH ED**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10253006	**Method Ref: EPA 1002.0 - CERIODAPHNIA DUBIA CHRONIC TOXICITY**		**Revision: 4TH ED**		**Date: 2002**	
3480	IC25 REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
3485	NOEC REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10253040	**Method Ref: EPA 1002.0 - CERIODAPHNIA DUBIA, 3-BROOD CHRONIC,**		**Revision:**		**Date: 2002**	
3480	IC25 REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE

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NEW ENGLAND BIOASSAY
77 BATSON DRIVE

MANCHESTER CT 06042
860-643-9560

Lab ID: 2071

3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
3485	NOEC REPRODUCTION	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10253404	**Method Ref: EPA 1004.0 - SHEEPSHEAD MINNOW CHRONIC TOXICITY**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10253824	**Method Ref: EPA 1006.0 INLAND SILVERSIDE (MENIDIA BERYLLINA), 7-DAY CHRONIC, DAILY RENEWAL, SSW**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10254021	**Method Ref: EPA 1007.0 MYSID (MYSIDOPSIS BAHIA, AMERICAMYSIS BAHIA), 7-DAY CHRONIC, DAILY RENEWAL, SSW**		**Revision:**		**Date: 2002**	
3470	IC25 (ON) GROWTH	10/30/2019	05/26/2022	N	TOX	NE
3475	NOEC (GROWTH)	10/30/2019	05/26/2022	N	TOX	NE
3465	NOEC (SURVIVAL)	10/30/2019	05/26/2022	N	TOX	NE
Method Code: 10264809	**Method Ref: EPA 2000.0 - FATHEAD MINNOW ACUTE TOXICITY**		**Revision: 5TH ED**		**Date: 2002**	
3460	LC50	10/30/2019	05/26/2022	N	TOX	NE

NEW ENGLA 5/20/2021

Bill Hall
NH ELAP Program Manager
Issue Date: 05/20/2021

Matrix Legend: AE=Air; BT=Tissue; D=Drinking Water; N=Non-Potable Water; SC=Solid and Chemical Materials

Category Legend: MIC=Microbiology; MET=Metals; NMI=Non-Metal Inorganics; PRE=Preparation; VOC=Volatile Organic Compounds; SBN=SVOC-BNA; SHE=SVOC-Herbicides; SNO=SVOC-NOS; SPC=SVOC-PCB; SPE=SVOC-Pesticides; RAD=Radiochemistry; WET=Wet, PFC=Perfluorinated compound

Accreditation Legend: NE=NELAP; NH=NH State Certification; CE=State Certification; IN=Interim (NELAP); WI=Withdrawn; AP=Applied; RE=Revoked; SU=Suspended

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