

CH2MHILL • BWXT West Valley, LLC

West Valley Demonstration Project

Ms. Angela M. Cooney, Contracting Officer
U.S. Department of Energy
550 Main St., Room 7-010
Cincinnati, OH 45202

AC-PRES
WD:2023:0027
January 19, 2023

ATTENTION: Jennifer Dundas

SUBJECT: Contract No. DE-EM0001529, Section J-3, Item 127, State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR) for the Period December 1 through December 31, 2022, SPDES Permit No. NY-0000973, West Valley Demonstration Project (WVDP) and Storm Water Monitoring Results for July 1, 2022 through December 31, 2022

REFERENCES: 1) Letter WR:2011:0061, John D. Rendall to C. S. Haugh, "State Pollutant Discharge Elimination System (SPDES) Schedule of Compliance Action for the Water Treatment Chemicals, SPDES Permit No. NY-0000793, West Valley Demonstration Project (WVDP)," dated December 20, 2011

2) Letter WR:2013:0033, John Rendall to Mark Jackson, "Notification of Changes to the West Valley Demonstration Project (WVDP) Wastewater Generation Activities in Accordance with 6 NYCRR 750-2.6(c); State Pollutant Discharge Elimination System (SPDES) Permit No. NY-0000973, U.S. Department of Energy (DOE), West Valley Demonstration Project (WVDP)," dated August 13, 2013

Dear Ms. Cooney:

This letter is submitted for Contracting Officer Representative's approval to inform you that the SPDES DMR for the reporting period December 1 through December 31, 2022, including the Net Iron calculation sheet, has been submitted electronically. A copy of this submittal is attached as well as a copy of the email confirmation from the New York State Department of Environmental Conservation (NYSDEC).

Also attached are the results of the storm water monitoring for the period of July 1, 2022, through December 31, 2022, the Whole Effluent Toxicity (WET) test Report, and the Annual Review Certification of the Storm Water Pollution Prevention Plan/Best Management Practices (SWPPP/BMP).

If you have any questions, please contact William Kean at (716) 942-4865 or Elizabeth Lowes at (716) 481-0429.

Sincerely,

Approval Obtained Electronically

John D. Rendall
President & General Manager

JDR:WNK:bnj

- Attachments:
- A) SPDES DMR for December 1 through December 31, 2022 Monitoring Period
 - B) Storm Water Discharge Monitoring Results for July 1 through December 31, 2022 Monitoring Period
 - C) Whole Effluent Toxicity (WET) Testing Final Report for the October 2022 Discharge
 - D) CHBWV Environmental Certification
 - E) WVDP SPDES Permit “Special Conditions – Industry Best Management Practices,” Permittee Certification of the Annual Review
 - F) Email Confirmation from NYSDEC

cc: WET@dec.ny.gov
B. C. Bower, DOE-WVDP
J. T. DesMarais, DOE-WVDP
W. T. Frederick, DOE-WVDP
S. A. Sherry, CHBWV
C. Chun, CHBWV
L. K. Hollfelder, CHBWV
W. N. Kean, CHBWV
D. P. Klenk, CHBWV
E. A. Lowes, CHBWV
J. K. Mantione, CHBWV
D. M. Martinet, CHBWV
J. T. Pillittere, CHBWV (Public Reading Room)
R. E. Steiner, CHBWV
K. A. Wooley, CHBWV
Letter Log (B. Jeffery), CHBWV
CHBWV OITS #2230550

Attachment A

SPDES DMR for December 1 – 31, 2022

SYNOPSIS

State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR) for the Period December 1 through December 31, 2022, SPDES Permit No. NY-0000973, West Valley Demonstration Project (WVDP) and Storm Water Monitoring Results for July 1, 2022 through December 31, 2022

The SPDES DMR for the December 1 through December 31, 2022 Monitoring Period is provided as Attachment A. There were no discharges at outfalls 001-M, 007-M, 116-M, Sum-N or internal outfall 01B-M during the monitoring period of December 1, 2022, through December 31, 2022. Please also note that there were no discharges at outfall 007-V or 007-W during the 2022 calendar year as denoted on the specific Discharge Monitoring Reports (DMR).

CHBWV is also submitting the analytical results and data for the semi-annual storm water monitoring period of July 1, 2022, through December 31, 2022 as Attachment B. The storm water sampling reported for this monitoring period also contains 2 outfalls S06 and S37 that could not be sampled during the first monitoring period of January 1, 2022 through June 30, 2022. All storm water sampling results were within applicable limits specified on page 14 of 31 of the SPDES permit for oil & grease.

Storm water samples were collected on July 18, July 28, August 30, September 13, and September 19, 2022. The on-site pH measured near the site's rain gauge on each of these dates was: 8.2 SU; 8.8 SU; 7.0 SU; 8.0; and 7.9 SU respectively.

Storm water sampling at outfalls S06 and S37 was completed on July 18, 2022, although the duration between storm events was less than the normally required 72 hours. However, these two outfalls were originally scheduled to be completed during the first semi-annual period and wanted to collect them as soon as possible. S06 was above base flow conditions and S37 was not flowing prior to the start of sampling.

Storm water sampling at outfall S12 was conducted on September 13, 2022, and although the duration between storm events was less than the normally required 72 hours, there was no flow at the outfall prior to the start of sampling.

In addition, outfall S43 was sampled for the full suite of analysis in accordance with the sampling sequence, that including semi-annual lead sampling that was completed on September 19, 2022 at the Live Fire Range. The reported results for lead of 0.0020 (first flush) and 0.0050 (composite) mg/L was below the action level of 0.006 mg/L.

Please note that, in accordance with the Schedule of Compliance sampling requirements contained on page 23 of 31 of the SPDES permit for Paraquat Dichloride Herbicide (Gramoxone Extra), the site used herbicides on June 22 through June 24, 2022, and therefore storm water outfalls that would be affected were sampled for Paraquat Dichloride on July 18, 2022, during the second semi-annual monitoring period.

OUTFALL	DATE	PARAMETER	RESULT	UNITS
S04	07/18/22	Paraquat Dichloride	< 0.0003	mg/L
S06	07/18/22	Paraquat Dichloride	< 0.0003	mg/L
S09	07/18/22	Paraquat Dichloride	< 0.0003	mg/L
S12	07/18/22	Paraquat Dichloride	< 0.0003	mg/L
S28	07/18/22	Paraquat Dichloride	<0.0003	mg/L
S36	07/18/22	Paraquat Dichloride	<0.0003	mg/L
S20	07/18/22	Paraquat Dichloride	<0.0003	mg/L
S27	07/18/22	Paraquat Dichloride	<0.0003	mg/L
S35	07/18/22	Paraquat Dichloride	<0.0003	mg/L

Please also note that quarterly Whole Effluent Toxicity (WET) testing was completed at outfall 001 during the October 2022 discharge and the complete report is attached on Discharge 001-W. The report indicates that we passed testing completed on both species, the Ceriodaphnia dubia and the UV treated Pimephales promelas. Parallel testing of UV treated and non UV treated sample for Pimephales promelas was approved by the New York State Department of Environmental Conservation (NYSDEC).

As required on page 30 of 31 under General Requirements, J.3. Water Treatment Chemicals (WTCs), the WVDP has not used any water treatment chemicals during 2022 and therefore we have not included a WTC Annual Report Form for 2022.

In accordance with the Special Conditions – Industry Best Management Practices (2) Compliance Deadlines, the WVDP has completed the annual review of the BMP which is included as part of the site document “Clean Water Act/State Pollutant Discharge Elimination System Best Management Practices and Storm Water Pollution Prevention Plan for the West Valley Demonstration Project” (WVDP-206). As part of the annual review process the following minor revisions were made:

- The Activity Hazard Analysis (AHA) example form featured as Appendix A was removed, since it is managed as part of the site’s work control program via a separate WVDP document.
- With the removal of Appendix A, the former Appendix B is now Appendix A, and the former Appendix C is now Appendix B, “Management of Demolition Process Water and Storm Water Pollution Prevention During Main Plant Process Building (MPPB) Demolition.”
- A minor change was made to Appendix B Figure 9, “Storm Water Pollution Prevention Plan (SWPPP) Weekly Inspection Checklist,” and it is now also a stand-alone WVDP form (WV-5679, Rev. 0) consistent with the WVDP document control process.

No other changes were made to the document.

SPDES DISCHARGE MONITORING REPORT - DECEMBER 1 THROUGH DECEMBER 31, 2022
NET IRON EFFLUENT CONCENTRATION CALCULATION
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT NO. NY-0000973

$$\text{OUTFALL 001} = M1 = \frac{(X1 + X2) V1}{2} = 0.00 \text{ mg/month}$$

$$X1 = 0.000 \text{ mg/L}$$

$$X2 = 0.000 \text{ mg/L}$$

$$V1 = 0.000 \text{ L/month}$$

*Note: There was no discharge at outfall 001 during this monitoring period.

$$\text{OUTFALL 007} = M7 = \frac{(X1 + X2) V7}{2} = 0.00 \text{ mg/month}$$

$$X1 = 0.000 \text{ mg/L}$$

$$X2 = 0.000 \text{ mg/L}$$

$$V7 = 0.00 \text{ L/month}$$

*Note: There was no discharge at outfall 007 during this monitoring period.

$$\text{RAW WATER} = \text{MRW} = \frac{(X1 + X2 + X3 + X4) \text{VRW}}{4} = 0.00 \text{ mg/month}$$

$$X1 = 0.000 \text{ mg/L}$$

$$X2 = 0.000 \text{ mg/L}$$

$$X3 = 0.000 \text{ mg/L}$$

$$X4 = 0.000 \text{ mg/L}$$

$$\text{VRW} = 0.00 \text{ L/month}$$

$$\text{IRON DISCHARGE CONCENTRATION} = \frac{M1 + M7 - \text{MRW}}{V1 + V7} = 0.00 \text{ mg/L}$$

DMR Copy of Record

Permit					
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY	Facility:	WEST VALLEY DEMONSTRATION PROJ
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585	Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799
Permitted Feature:	001 External Outfall	Discharge:	001-A OUTFALL 001 ANNUAL		

Report Dates & Status					
Monitoring Period:	From 01/01/22 to 12/31/22	DMR Due Date:	01/28/23	Status:	NetDMR Validated

Considerations for Form Completion

Principal Executive Officer					
First Name:	Bryan C.	Title:	Director, USDOE-WVDP	Telephone:	716-942-4368
Last Name:	Bower				

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type
						Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3			
01113	Cadmium, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.00007	<	0.00007	19 - mg/L	0	01/YR - Annual	24 - COMP24
					Permit Req.						Req Mon MO AVG <=	0.002 DAILY MX	19 - mg/L	01/YR - Annual	24 - COMP24			
					Value NODI													
34488	Trichlorofluoromethane	1 - Effluent Gross	0	--	Sample						<	0.0005	<	0.0005	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.01 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													
34631	3,3'-Dichlorobenzidine	1 - Effluent Gross	0	--	Sample						<	0.0004	<	0.0004	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						<=	0.005 MO AVG	<=	0.01 DAILY MX	19 - mg/L		01/YR - Annual	GR - GRAB
					Value NODI													
34668	Dichlorodifluoromethane	1 - Effluent Gross	0	--	Sample						<	0.0003	<	0.0003	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.01 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													
39337	.alpha.-BHC	1 - Effluent Gross	0	--	Sample						<	0.007	<	0.007	28 - ug/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						<=	0.01 MO AVG	Req Mon DAILY MX	28 - ug/L	01/YR - Annual		GR - GRAB	
					Value NODI													
39700	Hexachlorobenzene	1 - Effluent Gross	0	--	Sample						<	0.05	<	0.05	28 - ug/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						<=	0.2 MO AVG	Req Mon DAILY MX	28 - ug/L	01/YR - Annual		GR - GRAB	
					Value NODI													
77819	Tri-n-butyl phosphate	1 - Effluent Gross	0	--	Sample						<	0.0006	<	0.0006	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.1 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													
78247	Chromium, hexavalent tot recoverable	1 - Effluent Gross	0	--	Sample						<	0.005	<	0.005	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.011 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													
78356	2-Butanone	1 - Effluent Gross	0	--	Sample						<	0.002	<	0.002	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.5 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													
81551	Xylene [mix of m+o+p]	1 - Effluent Gross	0	--	Sample						<	0.0011	<	0.0011	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Permit Req.						Req Mon MO AVG <=	0.05 DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB			
					Value NODI													

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
No errors.

Comments
As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 2) General Engineering Laboratory: NY Lab No. 11501, and New England Bioassay (NEB): NY Lab No. 12157. Also, NYCRR Part 750-2(e)(3) requires reporting of Method Detection Limits (MDLs) where monitoring is not performed under ELAP. To that end, the MDL for Total Residual Chlorine analysis, performed by the CHBWV wastewater treatment plant operators is 0.01 mg/L.

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User: william.kean@chbwv.com
Name: William Kean
E-Mail: william.kean@chbwv.com
Date/Time: 2023-01-18 13:26 (Time Zone: -05:00)

Report Last Signed By

User: ELIZABETH.LOWES@CHBWV.COM
Name: Elizabeth Lowes
E-Mail: elizabeth.lowes@chbwv.com
Date/Time: 2023-01-19 08:42 (Time Zone: -05:00)

DMR Copy of Record

Permit			
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585
Permitted Feature:	001 External Outfall	Discharge:	001-M OUTFALL 001 MONTHLY PROC WW, GW, STORM
Facility:	WEST VALLEY DEMONSTRATION PROJ		
Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799		

Report Dates & Status			
Monitoring Period:	From 12/01/22 to 12/31/22	DMR Due Date:	01/28/23
Status:	NetDMR Validated		

Considerations for Form Completion

Principal Executive Officer			
First Name:	Bryan C.	Title:	Director, USDOE-WVDP
Last Name:	Bower	Telephone:	716-942-4368

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration						# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3				Units	
00154	Sulfate [as S]	1 - Effluent Gross	0	--	Sample													19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00181	Oxygen demand, ultimate	1 - Effluent Gross	0	--	Sample												19 - mg/L	02/BA - Twice Per Batch	CA - CALCTD	
					Permit Req.						Req Mon MO AVG	<=	22.0 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample												19 - mg/L	02/BA - Twice Per Batch	GR - GRAB	
					Permit Req.						>=	3.0 MINIMUM		Req Mon MAXIMUM						
					Value NODI						C - No Discharge		C - No Discharge							
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample												19 - mg/L	02/BA - Twice Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG	<=	10.0 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00400	pH	1 - Effluent Gross	0	--	Sample												12 - SU	01/BA - Once Per Batch	GR - GRAB	
					Permit Req.						>=	6.5 MINIMUM		<=	8.5 MAXIMUM					
					Value NODI						C - No Discharge		C - No Discharge							
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample												19 - mg/L	02/BA - Twice Per Batch	24 - COMP24	
					Permit Req.						<=	30.0 MO AVG	<=	45.0 DAILY MX						
					Value NODI						C - No Discharge		C - No Discharge							
00545	Solids, settleable	1 - Effluent Gross	0	--	Sample												25 - mL/L	02/BA - Twice Per Batch	GR - GRAB	
					Permit Req.						Req Mon MO AVG	<=	0.3 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00556	Oil & Grease	1 - Effluent Gross	0	--	Sample												19 - mg/L	01/BA - Once Per Batch	GR - GRAB	
					Permit Req.						Req Mon MO AVG	<=	15.0 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00615	Nitrogen, nitrite total [as N]	1 - Effluent Gross	0	--	Sample												19 - mg/L	01/BA - Once Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG	<=	0.1 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00620	Nitrogen, nitrate total [as N]	1 - Effluent Gross	0	--	Sample												19 - mg/L	01/BA - Once Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00625	Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	0	--	Sample												19 - mg/L	02/BA - Twice Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00746	Sulfide, dissolved, [as S]	1 - Effluent Gross	0	--	Sample												19 - mg/L	01/BA - Once Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG	<=	0.4 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							
00978	Arsenic, total recoverable	1 - Effluent Gross	0	--	Sample												19 - mg/L	01/BA - Once Per Batch	24 - COMP24	
					Permit Req.						Req Mon MO AVG	<=	0.15 DAILY MX							
					Value NODI						C - No Discharge		C - No Discharge							

DMR Copy of Record

Permit					
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY	Facility:	WEST VALLEY DEMONSTRATION PROJ
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585	Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799
Permitted Feature:	001 External Outfall	Discharge:	001-S OUTFALL 001 SEMI-ANNUAL		

Report Dates & Status					
Monitoring Period:	From 07/01/22 to 12/31/22	DMR Due Date:	01/28/23	Status:	NetDMR Validated

Considerations for Form Completion

Principal Executive Officer					
First Name:	Bryan C.	Title:	Director, USDOE-WVDP	Telephone:	716-942-4368
Last Name:	Bower				

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading			Quality or Concentration			# of Ex.	Frequency of Analysis	Sample Type			
						Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1				Value 1	Qualifier 2	Value 2
00722	Cyanide, free [amenable to chlorination]	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01055	Manganese, total [as Mn]	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01067	Nickel, total [as Ni]	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01094	Zinc, total recoverable	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01114	Lead, total recoverable	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01118	Chromium, total recoverable	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
01119	Copper, total recoverable	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												
39410	Heptachlor	1 - Effluent Gross	0	--	Sample												
					Permit Req.												
					Value NODI												

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
No errors.

Comments
As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 2) General Engineering Laboratory: NY Lab No. 11501, and New England Bioassay (NEB): NY Lab No. 12157. Also, NYCRR Part 750-2(e)(3) requires reporting of Method Detection Limits (MDLs) where monitoring is not performed under ELAP. To that end, the MDL for Total Residual Chlorine analysis, performed by the CHBWW wastewater treatment plant operators is 0.01 mg/L.

Attachments
No attachments.

Report Last Saved By
U.S. DEPT OF ENERGY

User: william.kean@chbww.com
Name: William Kean

E-Mail: william.kean@chbwv.com
Date/Time: 2023-01-18 13:27 (Time Zone: -05:00)

Report Last Signed By

User: ELIZABETH.LOWES@CHBWV.COM
Name: Elizabeth Lowes
E-Mail: elizabeth.lowes@chbwv.com
Date/Time: 2023-01-19 08:42 (Time Zone: -05:00)

DMR Copy of Record

Permit

Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY	Facility:	WEST VALLEY DEMONSTRATION PROJ
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585	Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799
Permitted Feature:	001 External Outfall	Discharge:	001-U OUTFALL 001 ACTION LEVELS ANNUAL		

Report Dates & Status

Monitoring Period:	From 01/01/22 to 12/31/22	DMR Due Date:	01/28/23	Status:	NetDMR Validated
---------------------------	---------------------------	----------------------	----------	----------------	------------------

Considerations for Form Completion

SEE PERMIT FOR REPORTING REQUIREMENTS

Principal Executive Officer

First Name:	Bryan C.	Title:	Director, USDOE-WVDP	Telephone:	716-942-4368
Last Name:	Bower				

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type					
						Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units			
01007	Barium, total [as Ba]	V - See Comments	0	--	Sample										=	0.04	19 - mg/L	0	01/YR - Annual	24 - COMP24			
					Permit Req.													<=	0.5 DAILY MX	19 - mg/L	0	01/YR - Annual	24 - COMP24
					Value NODI																		
01097	Antimony, total [as Sb]	V - See Comments	0	--	Sample										<	0.0068	19 - mg/L	0	01/YR - Annual	24 - COMP24			
					Permit Req.													<=	1.0 DAILY MX	19 - mg/L	0	01/YR - Annual	24 - COMP24
					Value NODI																		
32106	Chloroform	V - See Comments	0	--	Sample										<	0.0005	19 - mg/L	0	01/YR - Annual	GR - GRAB			
					Permit Req.													<=	0.3 DAILY MX	19 - mg/L	0	01/YR - Annual	GR - GRAB
					Value NODI																		

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 2) General Engineering Laboratory: NY Lab No. 11501, and New England Bioassay (NEB): NY Lab No. 12157. Also, NYCRR Part 750-2(e)(3) requires reporting of Method Detection Limits (MDLs) where monitoring is not performed under ELAP. To that end, the MDL for Total Residual Chlorine analysis, performed by the CHBWW wastewater treatment plant operators is 0.01 mg/L.

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User: william.kean@chbvw.com
 Name: William Kean
 E-Mail: william.kean@chbvw.com
 Date/Time: 2023-01-18 13:27 (Time Zone: -05:00)

Report Last Signed By

User: ELIZABETH.LOWES@CHBWW.COM
 Name: Elizabeth Lowes
 E-Mail: elizabeth.lowes@chbvw.com
 Date/Time: 2023-01-19 08:42 (Time Zone: -05:00)

DMR Copy of Record

Permit																			
Permit #:	NY0000973			Permittee:	U.S. DEPT OF ENERGY				Facility:	WEST VALLEY DEMONSTRATION PROJ									
Major:	Yes			Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585				Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799									
Permitted Feature:	001 External Outfall			Discharge:	001-V OUTFALL 001 ACTION LEVELS SEMI-ANNUAL														
Report Dates & Status																			
Monitoring Period:	From 07/01/22 to 12/31/22			DMR Due Date:	01/28/23				Status:	NetDMR Validated									
Considerations for Form Completion																			
SEE PERMIT FOR REPORTING REQUIREMENTS																			
Principal Executive Officer																			
First Name:	Bryan C.			Title:	Director, USDOE-WVDP				Telephone:	716-942-4368									
Last Name:	Bower																		
No Data Indicator (NODI)																			
Form NODI:	--																		
Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
01022	Boron, total [as B]	V - See Comments	0	--										=	0.036	19 - mg/L	0	02/YR - Twice Per Year	24 - COMP24
														<=	2.0 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Sample														
					Permit Req.														
					Value NODI														
01152	Titanium, total [as Ti]	V - See Comments	0	--										<	0.0011	19 - mg/L	0	02/YR - Twice Per Year	24 - COMP24
														<=	0.65 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Sample														
					Permit Req.														
					Value NODI														
71870	Bromide [as Br]	V - See Comments	0	--										<	0.37	19 - mg/L	0	02/YR - Twice Per Year	24 - COMP24
														<=	5.0 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Sample														
					Permit Req.														
					Value NODI														
Submission Note																			
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.																			
Edit Check Errors																			
No errors.																			
Comments																			
As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 2) General Engineering Laboratory: NY Lab No. 11501, and New England Bioassay (NEB): NY Lab No. 12157. Also, NYCRR Part 750-2(e)(3) requires reporting of Method Detection Limits (MDLs) where monitoring is not performed under ELAP. To that end, the MDL for Total Residual Chlorine analysis, performed by the CHBWV wastewater treatment plant operators is 0.01 mg/L.																			
Attachments																			
No attachments.																			
Report Last Saved By																			
U.S. DEPT OF ENERGY																			
User:	william.kean@chbwv.com																		
Name:	William Kean																		
E-Mail:	william.kean@chbwv.com																		
Date/Time:	2023-01-18 13:27 (Time Zone: -05:00)																		
Report Last Signed By																			
User:	ELIZABETH.LOWES@CHBWV.COM																		
Name:	Elizabeth Lowes																		
E-Mail:	elizabeth.lowes@chbwv.com																		
Date/Time:	2023-01-19 08:42 (Time Zone: -05:00)																		

DMR Copy of Record

Permit					
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY	Facility:	WEST VALLEY DEMONSTRATION PROJ
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585	Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799
Permitted Feature:	001 External Outfall	Discharge:	001-W OUTFALL 001 WET TESTING QUARTERLY		

Report Dates & Status					
Monitoring Period:	From 10/01/22 to 12/31/22	DMR Due Date:	02/28/23	Status:	NetDMR Validated

Considerations for Form Completion
SEE PERMIT FOOTNOTES FOR WET TESTING REQUIREMENTS

Principal Executive Officer					
First Name:	Bryan C.	Title:	Director, USDOE-WVDP	Telephone:	716-942-4368
Last Name:	Bower				

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type				
						Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units		
61425	Toxicity [acute], Ceriodaphnia dubia	V - See Comments	0	--	Sample									=	0.3	2F - tox acute	0	01/90 - Quarterly	24 - COMP24			
					Permit Req.													<=	0.3 MAXIMUM	2F - tox acute	01/90 - Quarterly	24 - COMP24
					Value NODI																	
61426	Toxicity [chronic], Ceriodaphnia dubia	V - See Comments	0	--	Sample									=	1.0	2G - tox chronic	0	01/90 - Quarterly	24 - COMP24			
					Permit Req.													<=	1.0 MAXIMUM	2G - tox chronic	01/90 - Quarterly	24 - COMP24
					Value NODI																	
61427	Toxicity [acute], Pimephales promelas [Fathead Minnow]	V - See Comments	0	--	Sample									=	0.3	2F - tox acute	0	01/90 - Quarterly	24 - COMP24			
					Permit Req.													<=	0.3 MAXIMUM	2F - tox acute	01/90 - Quarterly	24 - COMP24
					Value NODI																	
61428	Toxicity [chronic], Pimephales promelas [Fathead Minnow]	V - See Comments	0	--	Sample									=	1.0	2G - tox chronic	0	01/90 - Quarterly	24 - COMP24			
					Permit Req.													<=	1.0 MAXIMUM	2G - tox chronic	01/90 - Quarterly	24 - COMP24
					Value NODI																	

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
No errors.

Comments
As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 2) General Engineering Laboratory: NY Lab No. 11501, and New England Bioassay (NEB): NY Lab No. X12157. Also, NYCRR Part 750-2(e)(3) requires reporting of Method Detection Limits (MDLs) where monitoring is not performed under ELAP. To that end, the MDL for Total Residual Chlorine analysis, performed by the CHBWV wastewater treatment plant operators is 0.01 mg/L.

Attachments		
Name	Type	Size
WVDP_October_2022_Whole_Effluent_Toxicity_Test_Report.pdf	pdf	3000216.0

Report Last Saved By
U.S. DEPT OF ENERGY

User: william.kean@chbvw.com
Name: William Kean
E-Mail: william.kean@chbvw.com
Date/Time: 2023-01-18 13:28 (Time Zone: -05:00)

Report Last Signed By
User: ELIZABETH.LOWES@CHBWV.COM
Name: Elizabeth Lowes
E-Mail: elizabeth.lowes@chbvw.com
Date/Time: 2023-01-19 08:42 (Time Zone: -05:00)

DMR Copy of Record

Permit			
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585
Permitted Feature:	007 External Outfall	Discharge:	007-M SANITARY, NC COOLING WATER, UTILITY WASTEWATER, STORMWATER
Facility:			WEST VALLEY DEMONSTRATION PROJ
Facility Location:			10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799

Report Dates & Status			
Monitoring Period:	From 12/01/22 to 12/31/22	DMR Due Date:	01/28/23
Status:	NetDMR Validated		

Considerations for Form Completion

Principal Executive Officer			
First Name:	Bryan C.	Title:	Director, USDOE-WVDP
Last Name:	Bower	Telephone:	716-942-4368

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration						# of Ex.	Frequency of Analysis	Sample Type					
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3				Units				
00181	Oxygen demand, ultimate	1 - Effluent Gross	0	--	Sample																		
					Permit Req.								Req Mon MO AVG	<=	22.0 DAILY MX	19 - mg/L	01/30 - Monthly	CA - CALCTD					
					Value NODI										C - No Discharge	C - No Discharge							
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample																		
					Permit Req.								>=	3.0 MINIMUM		Req Mon MAXIMUM	19 - mg/L	02/30 - Twice Per Month	GR - GRAB				
					Value NODI										C - No Discharge	C - No Discharge							
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample																		
					Permit Req.										Req Mon MO AVG	<=	10.0 DAILY MX	19 - mg/L	02/30 - Twice Per Month	24 - COMP24			
					Value NODI										C - No Discharge	C - No Discharge							
00400	pH	1 - Effluent Gross	0	--	Sample																		
					Permit Req.										>=	6.5 MINIMUM		<=	8.5 MAXIMUM	12 - SU	02/30 - Twice Per Month	GR - GRAB	
					Value NODI										C - No Discharge	C - No Discharge							
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample																		
					Permit Req.											<=	30.0 MO AVG	<=	45.0 DAILY MX	19 - mg/L	02/30 - Twice Per Month	24 - COMP24	
					Value NODI												C - No Discharge	C - No Discharge					
00545	Solids, settleable	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG	<=	0.3 DAILY MX	25 - mL/L	02/30 - Twice Per Month	GR - GRAB	
					Value NODI												C - No Discharge	C - No Discharge					
00556	Oil & Grease	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG	<=	15.0 DAILY MX	19 - mg/L	02/30 - Twice Per Month	GR - GRAB	
					Value NODI												C - No Discharge	C - No Discharge					
00615	Nitrogen, nitrite total [as N]	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG	<=	0.1 DAILY MX	19 - mg/L	01/30 - Monthly	24 - COMP24	
					Value NODI												C - No Discharge	C - No Discharge					
00625	Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/30 - Monthly	24 - COMP24	
					Value NODI												C - No Discharge	C - No Discharge					
01045	Iron, total [as Fe]	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	02/30 - Twice Per Month	24 - COMP24	
					Value NODI												C - No Discharge	C - No Discharge					
34726	Nitrogen, ammonia, total [as NH3]	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												<=	1.49 MO AVG	<=	2.1 DAILY MX	19 - mg/L	02/30 - Twice Per Month	24 - COMP24
					Value NODI												C - No Discharge	C - No Discharge					
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG				01/30 - Monthly	CN - CONTIN	
					Value NODI												C - No Discharge	C - No Discharge					
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample																		
					Permit Req.												Req Mon MO AVG	<=	0.1 DAILY MX	19 - mg/L	01/30 - Monthly	GR - GRAB	
					Value NODI												C - No Discharge	C - No Discharge					

DMR Copy of Record

Parameter		Monitoring Location	Season #	Param. NODI	Quantity or Loading				Quality or Concentration				# of Ex.	Frequency of Analysis	Sample Type				
Code	Name				Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
32106	Chloroform	1 - Effluent Gross	0	--															
					Sample Permit Req.														
					Value NODI														

Permit
 Permit #: **NY0000973** | Permittee: U.S. DEPT OF ENERGY | Facility: WEST VALLEY DEMONSTRATION PROJ
 Major: Yes | Permittee Address: 1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585 | Facility Location: 10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799
 Permitted Feature: 007 External Outfall | Discharge: **007-V** OUTFALL 007 ANNUAL MONITORING

Report Dates & Status
 Monitoring Period: From 01/01/22 to 12/31/22 | DMR Due Date: 01/28/23 | Status: NetDMR Validated

Considerations for Form Completion

Principal Executive Officer
 First Name: Bryan C. | Title: Director, USDOE-WVDP | Telephone: 716-942-4368
 Last Name: Bower

No Data Indicator (NODI)
 Form NODI: --

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
 No errors.

Comments

Attachments
 No attachments.

Report Last Saved By
 U.S. DEPT OF ENERGY

User: william.kean@chbwv.com
 Name: William Kean
 E-Mail: william.kean@chbwv.com
 Date/Time: 2023-01-18 13:28 (Time Zone: -05:00)

Report Last Signed By
 User: ELIZABETH.LOWES@CHBWV.COM
 Name: Elizabeth Lowes
 E-Mail: elizabeth.lowes@chbwv.com
 Date/Time: 2023-01-19 08:42 (Time Zone: -05:00)

DMR Copy of Record

Permit																			
Permit #:	NY0000973	Permittee:	U.S. DEPT OF ENERGY	Facility:	WEST VALLEY DEMONSTRATION PROJ														
Major:	Yes	Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585	Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799														
Permitted Feature:	01B Internal Outfall	Discharge:	01B-M MERCURY PRETREATMENT																
Report Dates & Status																			
Monitoring Period:	From 12/01/22 to 12/31/22	DMR Due Date:	01/28/23	Status:	NetDMR Validated														
Considerations for Form Completion																			
Principal Executive Officer																			
First Name:	Bryan C.	Title:	Director, USDOE-WVDP	Telephone:	716-942-4368														
Last Name:	Bower																		
No Data Indicator (NODI)																			
Form NODI:	--																		
Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00056	Flow rate	1 - Effluent Gross	0	--	Sample													01/07 - Weekly	CN - CONTIN
					Permit Req.	Req Mon MO AVG		Req Mon DAILY MX	07 - gal/d										
					Value NODI	C - No Discharge		C - No Discharge											
71900	Mercury, total [as Hg]	1 - Effluent Gross	0	--	Sample													02/BA - Twice Per Batch	GR - GRAB
					Permit Req.								Req Mon MO AVG	<=	50.0 DAILY MX	3M - ng/L			
					Value NODI								C - No Discharge		C - No Discharge				
Submission Note																			
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.																			
Edit Check Errors																			
No errors.																			
Comments																			
Attachments																			
No attachments.																			
Report Last Saved By																			
U.S. DEPT OF ENERGY																			
User:	william.kean@chbwv.com																		
Name:	William Kean																		
E-Mail:	william.kean@chbwv.com																		
Date/Time:	2023-01-18 13:28 (Time Zone: -05:00)																		
Report Last Signed By																			
User:	ELIZABETH.LOWES@CHBWV.COM																		
Name:	Elizabeth Lowes																		
E-Mail:	elizabeth.lowes@chbwv.com																		
Date/Time:	2023-01-19 08:42 (Time Zone: -05:00)																		

DMR Copy of Record

Parameter		Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
Code	Name				Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
70295	Solids, total dissolved	Z - Instream Monitoring	0	--															
					Sample														
					Permit Req.								Req Mon MO AVG	<=	500.0 DAILY MX	19 - mg/L		02/DS - Twice Per Discharge	CA - CALCTD
					Value NODI								C - No Discharge		C - No Discharge				

Permit
 Permit #: **NY0000973** | Permittee: **U.S. DEPT OF ENERGY** | Facility: **WEST VALLEY DEMONSTRATION PROJ**
 Major: **Yes** | Permittee Address: **1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585** | Facility Location: **10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799**
 Permitted Feature: **116 Internal Outfall** | Discharge: **116-M PSEUDO MON. POINT @FRANKS CRK**

Report Dates & Status
 Monitoring Period: **From 12/01/22 to 12/31/22** | DMR Due Date: **01/28/23** | Status: **NetDMR Validated**

Considerations for Form Completion
 IF PSUEDO MONITORING POINT REPORT IS NOT REQUIRED DURING THE MONITORING PERIOD, EITHER CHECK THENO DISCHARGE BOX OR ENTER 'NODI A' IN PLACE OF A MEASUREMENT TO INDICATE A GENERAL PERMIT EXEMPTION.

Principal Executive Officer
 First Name: **Bryan C.** | Title: **Director, USDOE-WVDP** | Telephone: **716-942-4368**
 Last Name: **Bower**

No Data Indicator (NODI)
 Form NODI: **--**

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
 No errors.

Comments

Attachments
 No attachments.

Report Last Saved By
U.S. DEPT OF ENERGY

User: **william.kean@chbwv.com**
 Name: **William Kean**
 E-Mail: **william.kean@chbwv.com**
 Date/Time: **2023-01-18 13:29 (Time Zone: -05:00)**

Report Last Signed By
 User: **ELIZABETH.LOWES@CHBWV.COM**
 Name: **Elizabeth Lowes**
 E-Mail: **elizabeth.lowes@chbwv.com**
 Date/Time: **2023-01-19 08:42 (Time Zone: -05:00)**

DMR Copy of Record

Permit																			
Permit #:	NY0000973			Permittee:	U.S. DEPT OF ENERGY				Facility:	WEST VALLEY DEMONSTRATION PROJ									
Major:	Yes			Permittee Address:	1000 INDEPENDENCE AVE SW WASHINGTON, DC 20585				Facility Location:	10282 ROCK SPRINGS ROAD WEST VALLEY, NY 14171-9799									
Permitted Feature:	SUM Internal Outfall			Discharge:	SUM-N SUM OF OUTFALLS 1 & 7														
Report Dates & Status																			
Monitoring Period:	From 12/01/22 to 12/31/22			DMR Due Date:	01/28/23				Status:	NetDMR Validated									
Considerations for Form Completion																			
Principal Executive Officer																			
First Name:	Bryan C.			Title:	Director, USDOE-WVDP				Telephone:	716-942-4368									
Last Name:	Bower																		
No Data Indicator (NODI)																			
Form NODI:	--																		
Parameter	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type			
Code	Name			Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units				
01045	Iron, total [as Fe]	2 - Effluent Net	0	--															
				Sample Permit Req.									Req Mon MO AVG	<=	1.0 DAILY MX	19 - mg/L		01/30 - Monthly	CA - CALCTD
				Value NODI									C - No Discharge		C - No Discharge				
Submission Note																			
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.																			
Edit Check Errors																			
No errors.																			
Comments																			
Attachments																			
												Name	Type	Size					
												WVDP_December_2022_Net_Iron_Calculation.pdf	pdf	319319.0					
Report Last Saved By																			
U.S. DEPT OF ENERGY																			
User:	william.kean@chbwv.com																		
Name:	William Kean																		
E-Mail:	william.kean@chbwv.com																		
Date/Time:	2023-01-18 13:29 (Time Zone: -05:00)																		
Report Last Signed By																			
User:	ELIZABETH.LOWES@CHBWV.COM																		
Name:	Elizabeth Lowes																		
E-Mail:	elizabeth.lowes@chbwv.com																		
Date/Time:	2023-01-19 08:42 (Time Zone: -05:00)																		

Attachment B

**Storm Water Discharge Monitoring Results for
July 1 through December 31, 2022
Monitoring Period**

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 1, OUTFALL S04
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit	
		First Flush Grab	Flow-weighted Composite		
Group A Parameters	pH	8.1	S.U.	N.R.	Not Specified in Permit.
	Oil and Grease	< 1.6		N.R.	15 mg/L
	BOD-5	3.2		2.6	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	340		230	
	Total Dissolved Solids (TDS)	180		510	
	Phosphorus, Total	0.77		0.41	
Group B Parameters	Aluminum	13		6.3	
	Iron	20		8.7	
	Copper, Total Recoverable (TR)	0.028		0.016	
	Lead (TR)	0.041		0.021	
	Zinc (TR)	0.17		0.096	
Group C Parameters	Total Nitrogen (as N)	< 0.93		< 0.83	
	TKN	0.57		0.44	
	Nitrate Nitrogen (as N)	0.34		0.37	
	Nitrite Nitrogen (as N)	< 0.020		< 0.020	
	Ammonia Nitrogen (as NH3)	0.17		0.12	
	Cadmium, TR	0.00032		0.00017	
	Chromium, TR	0.015		0.011	
	Hexavalent Chromium, TR	0.012		< 0.0050	
	Selenium, TR	0.00054		< 0.00044	
	Vanadium, TR	0.019		0.014	
	Surfactant (as LAS)	N.R.		N.R.	
	Alpha BHC	N.R.		N.R.	
	Settleable Solids	N.R.		N.R.	
	Sulfide	N.R.		N.R.	
Paraquat Dichloride	< 0.00030		N.R.		
Flow	Total Flow, gallons	N.R.		800,000	
	Maximum Flow rate, gallons per minute	17,000		N.R.	
	Method of flow measurement	Staff Gauge			
Rainfall Event and Monitoring Summary	Date(s) of event monitored	07/28/22		07/28/22	
	Duration of storm event, in minutes	N.R.		105	Rain started at 0930 EST on 7/28/22 and ended at 1115 EST on 7/28/22.
	Date and Time of sample collection	07/28/22 1125		07/28/22 1405	
	Sampling Duration (Minutes)	Instantaneous		180	
	Total rainfall during sampling event, in inches	N.R.		0.64	
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.		77	0.32 inches was recorded on 7/25/22 at 0445 EST. The outfall was at base flow conditions upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 2, OUTFALL S06/Duplicate
Monitoring Period: January 1 through June 30, 2022**

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab / Duplicate	Flow-weighted Composite	
Group A Parameters	pH	7.6 / 7.7 S.U.	N.R.	Not Specified in Permit.
	Oil and Grease	< 1.7 / < 1.6	N.R.	15 mg/L
	BOD-5	4.7 / 4.2	4.4	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	52 / 55	38	
	Total Dissolved Solids (TDS)	970 / 950	890	
Phosphorus, Total	0.10 / 0.14	0.11		
Group B Parameters	Aluminum	0.17 / 0.20	0.56	
	Iron	2.3 / 2.3	2.0	
	Copper, Total Recoverable (TR)	< 0.0030 / < 0.0030	0.0052	
	Lead (TR)	0.0090 / 0.012	0.0086	
	Zinc (TR)	0.018 / 0.020	0.022	
Group C Parameters	Total Nitrogen (as N)	N.R.	N.R.	
	TKN	N.R.	N.R.	
	Nitrate Nitrogen (as N)	N.R.	N.R.	
	Nitrite Nitrogen (as N)	N.R.	N.R.	
	Ammonia Nitrogen (as NH3)	N.R.	N.R.	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	N.R.	N.R.	
	Surfactant (as LAS)	0.00044 / 0.00067	0.0015	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
Paraquat Dichloride	< 0.00030	N.R.		
Flow	Total Flow, gallons	N.R.	1,500	
	Maximum Flow rate, gallons per minute	38	N.R.	
	Method of flow measurement	Flow Meter		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	07/18/22	07/18/22	
	Duration of storm event, in minutes	N.R.	795	Rain started at 0030 EST on 07/18/22 and ended at 1345 EST on 07/18/22.
	Date and Time of sample collection	07/18/22 0740	07/18/22 0850	
	Sampling Duration (Minutes)	Instantaneous	80	
	Total rainfall during sampling event, in inches	N.R.	0.59	An additional 0.09 inches was recorded after sampling was completed for a storm total of 0.68 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	0.5	Precipitation of 0.46 inches was recorded on 07/17/22 at 2400 EST. There was base flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 2, OUTFALL S33
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit	
		First Flush Grab	Flow-weighted Composite		
Group A Parameters	pH	7.5	S.U.	N.R.	Not Specified in Permit.
	Oil and Grease	< 1.6		N.R.	15 mg/L
	BOD-5	5.2		5.0	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	100		9.6	
	Total Dissolved Solids (TDS)	18		120	
	Phosphorus, Total	0.30		0.14	
Group B Parameters	Aluminum	3.3		1.8	
	Iron	6.0		2.7	
	Copper, Total Recoverable (TR)	0.0065		0.0047	
	Lead (TR)	0.012		0.0064	
	Zinc (TR)	0.043		0.025	
Group C Parameters	Total Nitrogen (as N)	N.R.		N.R.	
	TKN	N.R.		N.R.	
	Nitrate Nitrogen (as N)	N.R.		N.R.	
	Nitrite Nitrogen (as N)	N.R.		N.R.	
	Ammonia Nitrogen (as NH3)	N.R.		N.R.	
	Cadmium, TR	N.R.		N.R.	
	Chromium, TR	N.R.		N.R.	
	Hexavalent Chromium, TR	N.R.		N.R.	
	Selenium, TR	N.R.		N.R.	
	Vanadium, TR	N.R.		N.R.	
	Surfactant (as LAS)	0.036		0.051	
	Alpha BHC	N.R.		N.R.	
	Settleable Solids	N.R.		N.R.	
	Sulfide	N.R.		N.R.	
Paraquat Dichloride	N.R.		N.R.		
Flow	Total Flow, gallons	N.R.		39,000	
	Maximum Flow rate, gallons per minute	780		N.R.	
	Method of flow measurement	Staff Gauge			
Rainfall Event and Monitoring Summary	Date(s) of event monitored	07/28/22		07/28/22	
	Duration of storm event, in minutes	N.R.		105	Rain started at 0930 EST on 07/28/22 and ended at 1115 EST on 07/28/22.
	Date and Time of sample collection	07/28/22 1135		07/28/22 1420	
	Sampling Duration (Minutes)	Instantaneous		180	
	Total rainfall during sampling event, in inches	N.R.		0.64	
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.		77	Precipitation of 0.32 inches was recorded on 07/25/22 at 0445 EST. There was no flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 3, OUTFALL S12
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L, Mercury, total in ng/L via method 1631		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	7.5 S.U.	N.R.	Not specified in permit.
	Oil and Grease	1.7	N.R.	15 mg/L
	BOD-5	3.8	3.0	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	150	140	
	Total Dissolved Solids (TDS)	890	470	
	Phosphorus, Total	0.48	0.33	
Group B Parameters	Aluminum	0.78	1.7	
	Iron	2.1	3.6	
	Copper, Total Recoverable (TR)	0.0048	0.0077	
	Lead (TR)	0.0029	0.013	
	Zinc (TR)	0.042	0.044	
Group C Parameters	Total Nitrogen (as N)	< 1.6	< 1.4	
	TKN	1.4	1.0	
	Nitrate Nitrogen (as N)	0.11	0.31	
	Nitrite Nitrogen (as N)	< 0.033	< 0.033	
	Ammonia Nitrogen (as NH3)	1.1	0.090	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	N.R.	N.R.	
	Surfactant (as LAS)	N.R.	N.R.	
	Alpha BHC	< 0.0000064	< 0.0000063	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
	Mercury, Total (ng/L)	28	N.R.	
Paraquat Dichloride	< 0.00030	N.R.		
Flow	Total Flow, gallons	N.R.	2,300	
	Maximum Flow rate, gallons per minute	50	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	09/13/22	09/13/22	
	Duration of storm event, in minutes	N.R.	60	Rain started at 1330 EST on 09/13/22 and ended at 1430 EST on 09/13/22.
	Date and Time of sample collection	09/13/22 1520	09/13/22 1625	
	Sampling Duration (Minutes)	Instantaneous	80	
	Total rainfall during sampling event, in inches	N.R.	0.28	
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	14	Precipitation of 0.25 inches was recorded on 09/12/22 at 2400 EST. Outfall was at base flow conditions upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 4, OUTFALL S34 / DUPLICATE**

Monitoring Period: July 1 through December 31, 2022

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab / Duplicate	Flow-weighted Composite	
Group A Parameters	pH	8.2 / 8.2 S.U.	N.R.	Not specified in permit.
	Oil and Grease	< 1.6 / < 1.6	N.R.	15 mg/L
	BOD-5	9.6 / 5.1	5.8	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	1200 / 1000	730	
	Total Dissolved Solids (TDS)	300 / 220	160	
	Phosphorus, Total	0.29 / 0.23	0.46	
Group B Parameters	Aluminum	21 / 18	18	
	Iron	25 / 30	24	
	Copper, Total Recoverable (TR)	0.036 / 0.044	0.036	
	Lead (TR)	0.069 / 0.092	0.065	
	Zinc (TR)	0.37 / 0.30	0.28	
Group C Parameters	Total Nitrogen (as N)	N.R.	N.R.	
	TKN	N.R.	N.R.	
	Nitrate Nitrogen (as N)	N.R.	N.R.	
	Nitrite Nitrogen (as N)	N.R.	N.R.	
	Ammonia Nitrogen (as NH3)	N.R.	N.R.	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	N.R.	N.R.	
	Surfactant (as LAS)	0.019 / 0.039	< 0.013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
	Paraquat Dichloride	N.R.	N.R.	
Flow	Total Flow, gallons	N.R.	430,000	
	Maximum Flow rate, gallons per minute	12,000	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	8/30/22	8/30/22	
	Duration of storm event, in minutes	N.R.	720	Rain started at 1015 EST on 8/30/22 and ended at 2215 EST on 8/30/22.
	Date and Time of sample collection	8/30/22 1340	8/30/22 1600	
	Sampling Duration (Minutes)	Instantaneous	160	
	Total rainfall during event, in inches	N.R.	0.80	An additional 0.44 inches was recorded after sampling was completed for a storm total of 1.24 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	169	Precipitation of 0.20 inches was recorded on 8/23/22 at 0900 EST. Outfall was at base flow conditions.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 5, OUTFALL S28
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L, mL/L for Settleable Solids		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	8.6 S.U.	N.R.	Not specified in permit.
	Oil and Grease	< 1.6	N.R.	15 mg/L
	BOD-5	5.7	4.5	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	1000	800	
	Total Dissolved Solids (TDS)	320	330	
	Phosphorus, Total	0.48	0.32	
Group B Parameters	Aluminum	51	26	
	Iron	72	32	
	Copper, Total Recoverable (TR)	0.090	0.045	
	Lead (TR)	0.16	0.076	
	Zinc (TR)	0.49	0.23	
Group C Parameters	Total Nitrogen (as N)	< 0.61	< 0.58	
	TKN	0.27	0.22	
	Nitrate Nitrogen (as N)	0.32	0.34	
	Nitrite Nitrogen (as N)	< 0.020	< 0.020	
	Ammonia Nitrogen (as NH3)	0.025	0.035	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	0.057	0.032	
	Surfactant (as LAS)	< 0.013	< 0.013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	1.1	0.5	
	Sulfide	< 0.67	< 0.67	
Paraquat Dichloride	< 0.00030	N. R.		
Flow	Total Flow, gallons	N.R.	12,000	
	Maximum Flow rate, gallons per minute	260	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	8/30/22	8/30/22	
	Duration of storm event, in minutes	N.R.	720	Rain started at 1015 EST on 8/30/22 and ended at 2215 EST on 8/30/22.
	Date and Time of sample collection	8/30/22 1340	8/30/22 1625	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.80	An additional 0.44 inches was recorded after sampling was completed for a storm Total of 1.24 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	169	Precipitation of 0.20 inches was recorded on 8/23/22 at 0900 EST. There was flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 6, OUTFALL S37**

Monitoring Period: January 1 through June 30, 2022

Parameter Group	Parameter	Results in mg/L, mL/L for Settleable Solids		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	7.7 S.U.	N.R.	Not specified in permit.
	Oil and Grease	6.7	N.R.	15 mg/L
	BOD-5	7.5	11	Not specified in permit. N.R. = Not required. N.A = Not available
	Total Suspended Solids (TSS)	4.0	< 4.0	
	Total Dissolved Solids (TDS)	340	270	
	Phosphorus, Total	0.042	0.061	
Group B Parameters	Aluminum	0.14	0.16	
	Iron	0.22	0.21	
	Copper, Total Recoverable (TR)	0.0066	0.0063	
	Lead (TR)	0.00034	0.00020	
	Zinc (TR)	0.0034	0.0031	
Group C Parameters	Total Nitrogen (as N)	5.5	3.7	
	TKN	1.6	1.4	
	Nitrate Nitrogen (as N)	3.8	2.2	
	Nitrite Nitrogen (as N)	0.10	0.091	
	Ammonia Nitrogen (as NH3)	0.095	0.070	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	0.0012	0.0012	
	Surfactant (as LAS)	N.A.	N.A.	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	0.1	0.1	
	Sulfide	< 0.67	< 0.67	
Paraquat Dichloride	N.R.	N.R.		
Flow	Total Flow, gallons	N.R.	410	
	Maximum Flow rate, gallons per minute	4	N.R.	
	Method of flow measurement	V-notch Weir		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	07/18/22	07/18/22	
	Duration of storm event, in minutes	N.R.	795	Rain started at 0030 EST on 07/18/22 and ended at 1345 EST on 07/18/22.
	Date and Time of sample collection	07/18/22 0740	07/18/22 1030	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.59	An additional 0.09 inches was recorded after sampling was completed for a storm total of 0.68 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	0.5	Precipitation of 0.46 inches was recorded on 07/17/22 at 2400 EST. There was no flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 6, OUTFALL S43
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L, mL/L for Settleable Solids		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	8.0 S.U.	N.R.	Not specified in permit.
	Oil and Grease	1.6	N.R.	15 mg/L
	BOD-5	8.0	7.0	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	44	90	
	Total Dissolved Solids (TDS)	110	180	
	Phosphorus, Total	0.27	0.33	
Group B Parameters	Aluminum	5.9	8.6	
	Iron	4.9	8.9	
	Copper, Total Recoverable (TR)	0.0061	0.011	
	Lead (TR)	0.0020	0.0050	
	Zinc (TR)	0.011	0.025	
Group C Parameters	Total Nitrogen (as N)	< 1.0	< 0.72	
	TKN	0.97	0.68	
	Nitrate Nitrogen (as N)	0.020	< 0.020	
	Nitrite Nitrogen (as N)	< 0.020	< 0.020	
	Ammonia Nitrogen (as NH3)	0.032	0.030	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	0.0073	0.023	
	Surfactant (as LAS)	< 0.0013	< 0.0013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	< 0.1	< 0.1	
	Sulfide	< 1.3	< 1.3	
Paraquat Dichloride	N.R.	N.R.		
Flow	Total Flow, gallons	N.R.	160	
	Maximum Flow rate, gallons per minute	2.0	N.R.	
	Method of flow measurement	V-notch Weir		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	09/19/22	09/19/22	
	Duration of storm event, in minutes	N.R.	105	Rain started at 0915 EST on 09/19/22 and ended at 1100 EST on 09/19/22.
	Date and Time of sample collection	09/19/22 1210	09/19/22 1455	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.44	
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	139	Precipitation of 0.28 inches was recorded on 09/13/22 at 1430 EST. There was flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 7, OUTFALL S20
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit	
		First Flush Grab/Duplicate	Flow-weighted Composite		
Group A Parameters	pH	8.0	S.U.	N.R.	Not specified in permit.
	Oil and Grease	< 1.6		N.R.	15 mg/L
	BOD-5	2.6		2.8	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	5.6		< 4.0	
	Total Dissolved Solids (TDS)	520		100	
	Phosphorus, Total	0.045		< 0.0050	
Group B Parameters	Aluminum	0.62		0.42	
	Iron	0.59		0.35	
	Copper, Total Recoverable (TR)	0.0020		0.0017	
	Lead (TR)	0.00078		0.00086	
	Zinc (TR)	0.0074		0.0050	
Group C Parameters	Total Nitrogen (as N)	< 0.86		< 0.84	
	TKN	0.59		0.46	
	Nitrate Nitrogen (as N)	0.25		0.36	
	Nitrite Nitrogen (as N)	< 0.020		< 0.020	
	Ammonia Nitrogen (as NH3)	0.30		0.28	
	Cadmium, TR	N.R.		N.R.	
	Chromium, TR	N.R.		N.R.	
	Hexavalent Chromium, TR	N.R.		N.R.	
	Selenium, TR	N.R.		N.R.	
	Vanadium, TR	N.R.		N.R.	
	Surfactant (as LAS)	< 0.013		< 0.013	
	Alpha BHC	N.R.		N.R.	
	Settleable Solids	N.R.		N.R.	
	Sulfide	< 0.67		< 0.67	
Paraquat Dichloride	< 0.00030		N.R.		
Flow	Total Flow, gallons	N.R.		330,000	
	Maximum Flow rate, gallons per minute	6,800		N.R.	
	Method of flow measurement	Staff Gauge			
Rainfall Event and Monitoring Summary	Date(s) of event monitored	7/28/22		7/28/22	
	Duration of storm event, in minutes	N.R.		105	Rain started at 0930 EDT on 7/28/22 and ended at 1115 EST on 7/28/22.
	Date and Time of sample collection	7/28/22 1130		7/28/22 1420	
	Sampling Duration (Minutes)	Instantaneous		180	
	Total rainfall during event, in inches	N.R.		0.64	
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.		77	Precipitation of 0.32 inches was recorded on 7/25/22 at 0445 EST. There was no flow at the outfall upon arrival.

**STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 8, OUTFALL S35
Monitoring Period: July 1 through December 31, 2022**

Parameter Group	Parameter	Results, in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	8.9 S.U.	N.R.	Not specified in permit.
	Oil and Grease	< 1.5	N.R.	15 mg/L
	BOD-5	3.2	4.9	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	1000	490	
	Total Dissolved Solids (TDS)	200	240	
	Phosphorus, Total	0.24	0.066	
Group B Parameters	Aluminum	37	18	
	Iron	50	20	
	Copper, Total Recoverable (TR)	0.066	0.030	
	Lead (TR)	0.15	0.052	
	Zinc (TR)	0.41	0.16	
Group C Parameters	Total Nitrogen (as N)	< 0.48	< 1.2	
	TKN	0.22	0.48	
	Nitrate Nitrogen (as N)	0.24	0.65	
	Nitrite Nitrogen (as N)	< 0.020	< 0.020	
	Ammonia Nitrogen (as NH3)	0.033	0.025	
	Cadmium, TR	N.R.	N.R.	
	Chromium, TR	N.R.	N.R.	
	Hexavalent Chromium, TR	N.R.	N.R.	
	Selenium, TR	N.R.	N.R.	
	Vanadium, TR	N.R.	N.R.	
	Surfactant (as LAS)	< 0.013	< 0.013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
	Paraquat Dichloride	< 0.00030	N.R.	
Flow	Total Flow, gallons	N.R.	5,100	
	Maximum Flow rate, gallons per minute	140	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	8/30/22	8/30/22	
	Duration of storm event, in minutes	N.R.	720	Rain started at 1015 EST on 8/30/22 and ended at 2215 EST on 8/30/22.
	Date and Time of sample collection	8/30/22 1335	8/30/22 1620	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during event, in inches	N.R.	0.80	An additional 0.44 inches was recorded after sampling was completed for a storm total of 1.24 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	169	Precipitation of 0.20 inches was recorded on 8/23/22 at 0900 EST. There was no flow at the outfall upon arrival.

Attachment C

Whole Effluent Toxicity (WET) Testing Final Report for the October 2022 Discharge

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Chester Wrotniak
CH2M Hill BWXT West Valley (CHBWV)
10282 Rock Springs Road
MS-ACC-22
West Valley, New York 14171-9799

Generated 12/7/2022 12:34:18 PM

JOB DESCRIPTION

SPDES
SDG NUMBER 1336

JOB NUMBER

480-203596-1

Eurofins Buffalo

Job Notes

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

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

Authorization



Generated
12/7/2022 12:34:18 PM

Authorized for release by
John Schove, Project Manager II
John.Schove@et.eurofinsus.com
(716)504-9838

Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Subcontract Data	6

Case Narrative

Client: CH2M Hill BWXT West Valley (CHBWV)
Project/Site: SPDES

Job ID: 480-203596-1
SDG: 1336

Job ID: 480-203596-1

Laboratory: Eurofins Buffalo

Narrative

**Job Narrative
480-203596-1**

Comments

Aquatic Toxicity (1002.0; EPA 821-R-02-013 / 1000.0; EPA 821-R-02-013) analysis was performed by New England Bioassay Laboratory. Results for this analysis can be found in the Subcontract Data section of this report.

No additional comments.

Receipt

The sample was received on 10/25/2022 10:24 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice.

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



Sample Summary

Client: CH2M Hill BWXT West Valley (CHBWV)
Project/Site: SPDES

Job ID: 480-203596-1
SDG: 1336

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-203596-1	2022- 07367 WNSP001	Water	10/24/22 07:00	10/25/22 10:24

1

2

3

4

5



77 Batson Drive
 Manchester, CT 06042
 (860)-643-9560
 www.nebio.com

New England Bioassay Inc.

Aquatic Toxicity Testing Services

CHRONIC AQUATIC TOXICITY TEST REPORT

Permitee: West Valley Demonstration Project NPDES # NY0000973
 Report submitted to: Test America
10 Hazelwood Dr, Amhesrt NY 14228
 Sample ID: WNSP001
 Test Month/Year: October 2022
 NEB Proj # 44240

Test Type / Method: *Ceriodaphnia dubia* Chronic Static-Renewal Freshwater
 Test Method 1002.0; EPA 821-R-02-013
Pimephales promelas Chronic Static-Renewal Freshwater
 Test Method 1000.0; EPA 821-R-02-013

Effluent Sample Dates: #1 10/23-24/22 #2 10/26-27/22

Test Start Date: 10/25/22

Results Summary

Your results were as follows:

Failed P.promelas TUC - Please proceed according to the instructions in your permit

Acute Test Results

Species	LC50	TUa	Permit Limit	Pass / Fail
<i>Ceriodaphnia dubia</i>	>100%	0.3	≤ 0.3	Pass
<i>Pimephales promelas</i>	>100%	0.3	≤ 0.3	Pass

Chronic Test Results

Species	C-NOEC	TUC	IC25	Permit Limit	Pass/Fail
<i>Ceriodaphnia dubia</i>	100%	1.0	>100%	≤ 1.0	Pass
<i>Pimephales promelas</i>	50%	2.0	>100%	≤ 1.0	Fail

Data Qualifiers affecting this test:

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

This report shall not be reproduced, except in its entirety, without approval of NEB. NEB is the sole authority for authorizing edits or modifications to the data contained in this report. NEB holds no responsibility for results and/or data that are not consistent with the original. Please contact the Lab Director, Kimberly Wills, at 860-643-9560 or kimberly.wills@nebio.com if you have questions concerning these results.



Test Report Certification

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: WNSP001 Test Start Date: 10/25/22

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

NY0000973
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: 12/5/22
(Date)

Kimberly Wills
Kimberly Wills
Laboratory Director
New England Bioassay Inc.

General Test Conditions

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: WNSP001 Test Start Date: 10/25/22

Sample Collection Information

Effluent #1 Dates/Times: 10/23-24/22 @ 0700-0700 Receiving Water #1 Date/Time: 10/24/22 @ 0630
Effluent #2 Dates/Times: 10/26-27/22 @ 0800-0800 Receiving Water #2 Date/Time: 10/27/22 @ 0815
Effluent #3 Dates/Times: N/A @ N/A Receiving Water #3 Date/Time: N/A @ N/A

Were a minimum of three samples collected? Yes No *(see note below)
Were samples used within the first 36 hours of collection? Yes No * (see note below)

* sample collection note: NYSDEC has approved West Valley Demonstration Project to use only two sets of samples for their chronic testing due to the batch nature of their discharge.

Test Conditions

Permittee's Receiving Water: Erdman Brook

Ceriodaphnia dubia

- Dilution water: Receiving water collected at a point immediately upstream of or away from the discharge
- Control water: Laboratory synthetic moderately hard water (hardness 80 - 100 mg/L CaCO3)

Pimephales promelas

- Dilution water: Laboratory synthetic moderately hard water (hardness 80 - 100 mg/L CaCO3)
- Control water: Receiving water collected at a point immediately upstream of or away from the discharge

Effluent concentrations tested: 0%, 6.25%, 12.5%, 25%, 50%, 100%

Was effluent salinity adjusted? No Yes with Instant Ocean sea salts to N/A ppt

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

- Dechlorination was not required

Aeration: Did Dissolved Oxygen levels fall below 40% saturation? Yes No

Test Aerated at <100 bubbles/minute as of: N/A (for Fathead minnow test only)

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

Reference Toxicant Data

Ceriodaphnia dubia

Date: 10/3/22
Toxicant: Sodium chloride
Dilution Water: NEB CTRMH
Organism Source: NEB
Reproduction IC25: 0.72 g/L
Results within range Yes No

Fathead minnows

Date: 10/3/22
Toxicant: Sodium chloride
Dilution Water: NEB Soft Water
Organism Source: NEB
Growth IC25: 1.49 g/L
Results within range Yes No

Ceriodaphnia dubia Test Results

Permittee name: West Valley Demonstration Project Permit number: NY0000973
 Client sample ID: WNSP001 Test Dates: 10/25/22 - 11/1/22

Test Acceptability Criteria

Lab Control Diluent: 90 % Mean Lab Diluent Reproduction: 37.6 young per female
 Brook Control Survival: 90 % Mean Brook Control Reproduction: 38.6 young per female
 Thiosulfate Control Survival: N/A % Mean Thiosulfate Control Reproduction: N/A young per female
 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

	Permit Limit	Test Result	Pass/Fail Status
Acute Data	48 hr LC50	>100%	
	48 hr NOEC	100%	
	TUa	≤ 0.3	Pass
Chronic Data	Chronic LC50	>100%	
	Survival C-NOEC	100%	
	Survival C-LOEC	>100%	
	Reproduction C-NOEC	100%	
	Reproduction C-LOEC	>100%	
	Reproduction IC25	>100%	
	Reproduction IC50	>100%	
	Reportable C-NOEC	100%	
	Reportable C-LOEC	>100%	
	MATC	>100%	
	TUc	≤ 1.0	Pass

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

Test Variability

Reproduction PMSD: 28.4% Upper & Lower EPA bounds: 13 - 47% Low Within bounds High

- PMSD exceeds upper bounds. Test results are highly variable and may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC)
- The PMSD falls within the upper (47%) and lower (13%) bounds. Results are reportable.
- PMSD falls below the lower bound test variability criterion. The test is very sensitive. The relative percent difference (RPD) between the control and each treatment was calculated and compared to the lower bound.
 - The RPD values for all concentrations fall below the lower bound. Any differences observed in this test are considered statistically insignificant.
 - Some of the concentrations that were flagged as statistically significant have RPD values that fall below the lower bound. Any differences observed in these concentrations will not be considered statistically significantly decreased from the control.
 - No statistically significant reductions were observed in this test.

***Ceriodaphnia dubia* Test Results**

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: WNSP001 Test Dates: 10/25/22 - 11/1/22

Concentration - Response Evaluation
--

Survival: #12 No significant effects at any test concentration with a flat concentration-response curve. Test concentrations performed very similarly to dilution control.

Reproduction: #12 No significant effects at any test concentration with a relatively flat concentration-response curve. Test concentrations performed both above and below (but similarly to) the dilution control.

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

Survival	Reproduction	
<u> X </u>	<u> X </u>	Results are reliable and reportable
<u> </u>	<u> </u>	Results are anomalous (see explanation below)
<u> </u>	<u> </u>	Results are inconclusive - retest (see explanation below)

Results Discussion (if applicable):
--

Pimephales promelas Test Results

Permittee name: West Valley Demonstration Project Permit number: NY0000973
 Client sample ID: WNSP001 Test Dates: 10/25/22 - 11/1/22

Test Acceptability Criteria

Lab Diluent Survival: 100 % Mean Lab Diluent Growth: 0.42 mg
 Brook Control Survival: 37.5 % Mean Brook Control Growth: 0.19 mg
 Thiosulfate Control Survival: N/A % Mean Thiosulfate Control Growth: N/A mg

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

		Permit Limit	Test Result	Pass/Fail Status
Acute Data	48 hr LC50		>100%	
	48 hr NOEC		100%	
	TUa	≤ 0.3	0.3	Pass
Chronic Data	Chronic LC50		>100%	
	Survival C-NOEC		50%	
	Survival C-LOEC		100%	
	Growth C-NOEC		50%	
	Growth C-LOEC		>50%	
	Growth IC25		>100%	
	Growth IC50		>100%	
	Reportable C-NOEC		50%	
	Reportable C-LOEC		>50%	
	MATC		70.7%	
	TUc	≤ 1.0	2.0	Fail

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

Test Variability

- Growth PMSD: 27.9% Upper & Lower EPA bounds: 12 - 30% Low Within bounds High
- PMSD exceeds upper bounds. Test results are highly variable and may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC)
- The PMSD falls within the upper (30%) and lower (12%) bounds. Results are reportable.
- PMSD falls below the lower bound test variability criterion. The test is very sensitive. The relative percent difference (RPD) between the control and each treatment was calculated and compared to the lower bound.
- The RPD values for all concentrations fall below the lower bound. Any differences observed in this test are considered statistically insignificant.
- Some of the concentrations that were flagged as statistically significant have RPD values that fall below the lower bound. Any differences observed in these concentrations will not be considered statistically significantly decreased from the control.
- No statistically significant reductions were observed in this test.

***Pimephales promelas* Test Results**

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: WNSP001 Test Dates: 10/25/22 - 11/1/22

Concentration - Response Evaluation

Survival: #7 The concentration-response relationship observed in this data set corresponds to the following item number in Chapter Four of "Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)", EPA 821-B-00-004, July 2000: #7 Significant effects only at highest concentration.

Growth: #16 Per EPA protocols one or more test concentrations were not included in the analysis for reproduction/growth due to a statistically significant effect in that concentration for survival. Of the remaining test concentrations included in the analysis, there were no significant effects at any test concentration with a relatively flat concentration-response curve. Test concentrations performed similarly to the dilution control.

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

Survival	Growth	
<u> X </u>	<u> X </u>	Results are reliable and reportable
<u> </u>	<u> </u>	Results are anomalous (see explanation below)
<u> </u>	<u> </u>	Results are inconclusive - retest (see explanation below)

Results Discussion (if applicable):

TEST METHODS

Ceriodaphnia dubia

Test type:	Chronic Static Renewal Freshwater Test
Test Reference Manual:	EPA-821-R-02-013 "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms"
Test Method:	<i>Ceriodaphnia dubia</i> Survival and Reproduction Test - EPA 1002.0
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/m ² /s, or 50-100 ft-c (recommended)
Photoperiod:	16 hours light, 8 hours dark (recommended)
Test chamber size:	30 mL (recommended minimum)
Test solution volume:	15 mL (recommended minimum)
Renewal of Test Solutions:	Daily (required)
Age of Test Organisms:	Less than 24 hours; and all released within a 8-h period (required)
Number of Neonates Per Test Chamber:	1 Assigned using blocking by known parentage (required)
Number of Replicate Test Chambers Per Treatment:	10 (required minimum)
Number of Neonates Per Test Concentration:	10 (required minimum)
Feeding Regime:	Fed 0.1 mL each of YCT and algal suspension per exposure chamber daily. (recommended)
Cleaning:	Use new plastic cups daily (recommended)
Aeration:	None (recommended)
Test Duration:	Until 60% or more of control females have three broods (maximum test duration 8 days) (required)
Endpoints:	Survival and reproduction (required)
Test Acceptability:	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of surviving control females must produce three broods. (required)
Sampling Requirements:	Minimum of three samples with a maximum holding time of 36 hours before first use. (required)
Sample volume required:	1 L/Day (recommended)

Pimephales promelas

Test type:	Chronic Static Renewal Freshwater Test
Test Reference Manual:	EPA-821-R-02-013 "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms"
Test Method:	<i>Pimephales promelas</i> Survival and Growth Test - EPA 1000.0
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/m ² /s, or 50-100 ft-c (recommended)
Photoperiod:	16 hours light, 8 hours dark (recommended)
Test chamber size:	600 mL (500 mL is recommended minimum)
Test solution volume:	250 mL (recommended minimum)
Renewal of Test Solutions:	Daily (required)
Age of Test Organisms:	Newly hatched larvae less than 24 hours old (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:	Feed 0.15 g of a concentrated suspension of newly hatched brine shrimp nauplii twice daily, 6 h between feedings (at the beginning of the work day prior to renewal, and at the end of the work day following renewal). Sufficient <i>Artemia</i> are added to provide an excess.
Cleaning:	Siphoned daily, immediately before test solution renewal (required)
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:	7 days (required)
Endpoints:	Survival and growth (weight) (required)
Test Acceptability:	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg (required)
Sampling Requirements:	Minimum of three samples with a maximum holding time of 36 hours before first use. (required)
Sample volume required:	2.5 L/Day (recommended)

CERIODAPHNIA DUBIA DATASHEETS & STATISTICAL ANALYSIS

NEW ENGLAND BIOASSAY TOXICITY DATA FORM

CHRONIC COVER SHEET

CLIENT: Test America
 ADDRESS: 10 Hazelwood Drive
Amherst, NY 14228
 PERMITTEE: West Valley Demonstration Project
 PERMIT NUMBER: NY0000973
 DILUTION WATER: Moderately Hard Lab Synthetic

C. dubia TEST ID # 22-2033a
 CHAIN OF CUSTODY # c42-5354/55
 NEB PROJECT # 44240
 SAMPLE ID: WNSP001

INVERTEBRATES

TEST SET-UP TECHNICIAN: DB
 TEST SPECIES: *Ceriodaphnia dubia*
 NEB LOT # Cd22(RMH 313)
 AGE: < 24 hours
 TEST SOLUTION VOLUME (mls): 15
 ORGANISMS PER TEST CHAMBER: 1
 ORGANISMS PER CONCENTRATION: 10

LABORATORY CONTROL WATER (MHRCF)

Lot Number	Hardness mg/L CaCO ₃	Alkalinity mg/L CaCO ₃
C42-MH031	92	60

	DATE	TIME
TEST START:	10/25/22	1320
TEST END:	11/1/22	1458

COMMENTS: _____

FILTRATION: The following were filtered prior to use through a 55 µm mesh filter due to the presence of organisms:

Sample:			
Date/Tech:			

REVIEWED BY: Kimberly Wills DATE: 12/5/22



NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Ceriodaphnia dubia</i>		
DILUTION WATER SOURCE:		Moderately Hard Lab Synthetic			START DATE:		10/25/22 TIME: 1320		
NEB Lab Diluent		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		25.0	24.5	25.2	24.2	24.8	24.3	25.0	
D.O. mg/L Initial		8.2	8.2	8.2	8.5	8.4	8.4	8.3	
pH s.u. Initial		7.5	7.6	7.4	7.8	7.7	7.9	7.7	
Conductivity µS Initial		323	323	321	322	324	326	321	
Tech Initials Final		SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C Final		24.4	24.1	24.0	24.0	24.6	24.0	24.7	
D.O. mg/L Final		8.1	8.1	7.3	8.4	8.3	8.5	8.1	
pH s.u. Final		7.5	7.9	7.9	7.7	7.7	7.7	7.9	
Conductivity µS Final		325	345	353	334	347	344	329	
Erdman Brook Control		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		24.3	24.4	25.3	24.6	24.3	24.0	25.0	
D.O. mg/L Initial		11.0	9.4	8.4	10.9	9.1	7.9	9.3	
pH s.u. Initial		7.4	7.5	7.3	7.7	7.5	9.1	7.8	
Conductivity µS Initial		313	312	310	295	297	299	295	
Tech Initials Final		SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C Final		24.3	24.1	24.0	24.0	24.7	24.0	24.8	
D.O. mg/L Final		8.0	8.1	7.3	8.3	8.2	8.5	8.1	
pH s.u. Final		7.7	7.9	8.0	7.8	7.8	7.7	8.0	
Conductivity µS Final		313	325	319	308	314	315	310	
6.25%		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		24.8	24.5	25.1	24.6	24.7	24.1	24.4	
D.O. mg/L Initial		8.3	8.3	8.7	8.5	8.5	8.5	8.4	
pH s.u. Initial		7.6	7.7	7.4	7.8	7.6	7.9	7.7	
Conductivity µS Initial		398	394	396	393	401	399	401	
Tech Initials Final		SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C Final		24.3	24.0	24.0	24.0	24.9	24.0	24.8	
D.O. mg/L Final		8.0	8.1	7.4	8.3	8.2	8.5	8.1	
pH s.u. Final		7.4	7.9	8.0	7.9	7.9	7.8	8.0	
Conductivity µS Final		400	402	400	407	419	411	408	



NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Ceriodaphnia dubia</i>		
DILUTION WATER SOURCE:		Moderately Hard Lab Synthetic			START DATE:		10/25/22 TIME: 1320		
12.5%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	24.8	25.2	24.7	24.6	24.1	24.9	
D.O. mg/L	Initial	8.4	8.2	8.4	8.5	8.5	8.5	8.3	
pH s.u.	Initial	7.6	7.8	7.4	7.8	7.6	7.9	7.7	
Conductivity µS	Initial	481	476	481	472	483	481	482	
Tech Initials	Final	SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C	Final	24.4	24.0	24.0	24.0	25.0	24.0	24.8	
D.O. mg/L	Final	8.0	8.2	7.4	8.3	8.3	8.6	8.1	
pH s.u.	Final	7.7	7.9	7.9	8.0	7.9	7.7	7.9	
Conductivity µS	Final	484	483	493	485	503	498	488	
25%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	24.9	24.9	25.2	24.7	24.7	24.3	25.1	
D.O. mg/L	Initial	8.7	8.3	8.4	8.8	8.6	8.6	8.4	
pH s.u.	Initial	7.6	7.8	7.4	7.8	7.6	7.9	7.9	
Conductivity µS	Initial	628	620	623	620	628	629	629	
Tech Initials	Final	SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C	Final	24.5	24.0	24.0	24.0	25.0	24.0	24.7	
D.O. mg/L	Final	8.0	8.2	7.4	8.3	8.3	8.8	8.1	
pH s.u.	Final	7.8	7.9	7.9	8.0	7.9	7.8	7.9	
Conductivity µS	Final	628	628	631	634	650	640	629	
50%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	25.0	25.1	24.6	24.7	24.2	25.1	
D.O. mg/L	Initial	9.1	8.4	8.4	9.1	8.7	8.9	8.5	
pH s.u.	Initial	7.6	7.7	7.5	7.7	7.6	7.8	7.9	
Conductivity µS	Initial	926	919	920	918	929	931	921	
Tech Initials	Final	SM/AG	DB	SM/AG	MM	MM	AB	AB	
Temp °C	Final	24.5	24.0	24.0	24.0	25.3	24.0	24.7	
D.O. mg/L	Final	8.0	8.2	7.4	8.4	8.3	8.9	8.1	
pH s.u.	Final	7.8	7.9	8.0	8.0	7.9	7.9	8.0	
Conductivity µS	Final	919	927	928	945	960	945	934	



NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY						
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Ceriodaphnia dubia</i>	
DILUTION WATER SOURCE:		Moderately Hard Lab Synthetic			START DATE:		10/25/22 TIME: 1320	
100%	1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG
Temp °C	Initial	24.9	24.9	25.0	24.3	24.5	24.0	25.1
D.O. mg/L	Initial	10.7	8.9	8.5	10.3	8.9	9.6	8.8
pH s.u.	Initial	7.6	7.8	7.6	7.6	7.7	7.7	7.8
Conductivity µS	Initial	1,515	1,509	1,507	1,505	1,509	1,529	1,506
Tech Initials	Final	SM/AG	DB	SM/AG	MM	MM	AB	AB
Temp °C	Final	24.5	24.0	24.0	24.0	25.4	24.0	24.6
D.O. mg/L	Final	8.0	8.2	7.5	8.4	8.4	8.9	8.1
pH s.u.	Final	8.0	8.0	8.0	8.1	7.9	7.9	8.1
Conductivity µS	Final	1,503	1,513	1,517	1,529	1,531	1,520	1,514
	1	2	3	4	5	6	7	Remarks
Tech Initials	Initial							
Temp °C	Initial							
D.O. mg/L	Initial							
pH s.u.	Initial							
Conductivity µS	Initial							
Tech Initials	Final							
Temp °C	Final							
D.O. mg/L	Final							
pH s.u.	Final							
Conductivity µS	Final							

- 1
- 2
- 3
- 4
- 5

NEW ENGLAND BIOASSAY - CHRONIC TOXICITY TEST BROOD DATA SHEET

FACILITY NAME & ADDRESS: West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY			
NEB PROJECT NUMBER: 44240	NEB TEST NUMBER: 22-2033a	COC # c42-5354/55	
TEST ORGANISM: <i>Ceriodaphnia dubia</i>	AGE: <24 hours	Lot # Cd22(RMH 313)	
START DATE: 10/25/22	TIME: 1320	END DATE: 11/1/22	TIME: 1458

Effluent Concentration	Culture Lot# Cd22(RMH 313)											Total Live Young	# Live Adults	Analyst-Transfer	Analyst-Counts
	Cup #	A2	A3	A4	A6	A11	A17	B3	B5	B6	B8				
	Day Number	Replicate													
	A	B	C	D	E	F	G	H	I	J					
NEB Lab Diluent	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	DB	
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	CF	
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	MM/AG	
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	AN/AG	AN/AG
	4	6	5	8	7	5	4	7	6	7	7	62	10	MM/AG	MM/AG
	5	15	11	13	13	11	8	14	16	16	14	131	10	AG	AG
	6	18	✓	19	14/x	15	✓	18	22	20	16	142	9	DB	DB
	7	✓	21	✓	✓	✓	20	✓	✓	✓	✓	41	9		AN/PD
	totals	39	37	40	34	31	32	39	44	43	37	376	9		MC
Erdman Brook Control		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	7	8	8	7	6	7	7	8	7	7	72	10		
	5	14	11	15	12	18	11	18	16	15	14	144	10		
	6	✓	✓	19	20	17	16	17	6/x	18	18	125	9		
	7	23	20	✓	1	✓	1	✓	✓	✓	✓	45	9		
	totals	44	39	42	40	41	35	42	30	40	39	386	9		
6.25%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	7	9	8	8	8	4	7	8	8	7	74	10		
	5	15	14	7	15	14	7	16	15	16	13	132	10		
	6	✓	✓	18	✓	17	✓	22	21	18	19	115	10		
	7	✓	21	17	✓	✓	19	✓	✓	✓	✓	57	10		
	totals	22	44	50	23	39	30	45	44	42	39	378	10		

Notes: _____



NEW ENGLAND BIOASSAY - CHRONIC TOXICITY TEST BROOD DATA SHEET

FACILITY NAME & ADDRESS: West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY	
NEB PROJECT NUMBER: 44240	ORGANISM: <i>Ceriodaphnia dubia</i> START DATE: 10/25/22

Effluent Concentration	Day Number	Replicate										Total Live Young	# Live Adults		
		A	B	C	D	E	F	G	H	I	J				
12.5%	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	7	6	7	7	6	5	7	7	6	6	64	10		
	5	12	13	15	13	16	12	16	14	15	13	139	10		
	6	16	✓	21	18	19	✓	23	17	2	19	135	10		
	7	✓	20	1	✓	✓	8	✓	✓	✓	2	31	10		
		totals	35	39	44	38	41	25	46	38	23	40	369	10	
25%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	4	5	7	8	8	✓	7	9	✓/x	8	56	9		
	5	14	15	18	14	15	14	14	14	X	15	133	9		
	6	✓	✓	21	19	16	✓	20	22	X	20	118	9		
	7	9	8	✓	✓	✓	12	✓	✓	X	✓	29	9		
	totals	27	28	46	41	39	26	41	45	0	43	336	9		
50%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	9	7	4	7	7	5	6	4	8	6	63	10		
	5	16	13	19	11	14	11	16	16/x	10	15	141	9		
	6	18	✓	✓	22	21	✓	16	X	✓	✓	77	9		
	7	✓	15	18	✓	✓	1	✓	X	✓	5	39	9		
	totals	43	35	41	40	42	17	38	20	18	26	320	9		
100%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	4	9	7	4	7	8	3	7	7	5	8	65	10		
	5	15	16	19	15	12	1	16	18	14/x	13	139	9		
	6	17	22	✓	21	23	✓	21	14	X	✓	118	9		
	7	1	✓	12	✓	✓	3	✓	✓	X	✓	16	9		
	totals	42	45	35	43	43	7	44	39	19	21	338	9		



CETIS Analytical Report

Report Date: 02 Nov-22 09:04 (p 1 of 2)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test				New England Bioassay			
Analysis ID: 01-3643-8426	Endpoint: Reproduction	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 9:00	Analysis: Nonparametric-Control vs Treatments	Status Level: 1					
Edit Date: 02 Nov-22 8:58	MD5 Hash: E6C72DA8451A51F56A562EC0C64945D0	Editor ID: 008-848-998-5					
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable					
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture	Age: <24				
Sample ID: 01-1615-9050	Code: 6EC724A	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 30h	Client: Eurofins						

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	10.68	28.41%

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	114	75	2	18	CDF	0.9629	Non-Significant Effect
		12.5	109	75	3	18	CDF	0.9082	Non-Significant Effect
		25	105.5	75	2	18	CDF	0.8444	Non-Significant Effect
		50	95	75	2	18	CDF	0.5278	Non-Significant Effect
		100	108.5	75	3	18	CDF	0.9005	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	37.6	15	>>	Yes	Passes Criteria
PMSD	0.2841	0.13	0.47	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	301.283	60.2567	5	0.5533	0.7351	Non-Significant Effect
Error	5880.9	108.906	54			
Total	6182.18		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	12.79	15.09	0.0255	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8959	0.9459	9.4E-05	Non-Normal Distribution

Reproduction Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	37.6	34.51	40.69	38	31	44	1.368	11.50%	0.00%
6.25		10	37.8	30.94	44.66	40.5	22	50	3.032	25.37%	-0.53%
12.5		10	36.9	31.54	42.26	38.5	23	46	2.369	20.30%	1.86%
25		10	33.6	23.56	43.64	40	0	46	4.438	41.77%	10.64%
50		10	32	24.41	39.59	36.5	17	43	3.353	33.14%	14.89%
100		10	33.8	24.28	43.32	40.5	7	45	4.211	39.39%	10.11%

Reproduction Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	39	37	40	34	31	32	39	44	43	37
6.25		22	44	50	23	39	30	45	44	42	39
12.5		35	39	44	38	41	25	46	38	23	40
25		27	28	46	41	39	26	41	45	0	43
50		43	35	41	40	42	17	38	20	18	26
100		42	45	35	43	43	7	44	39	19	21

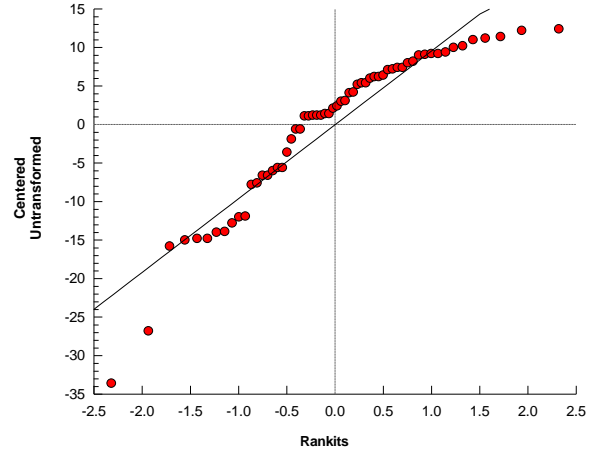
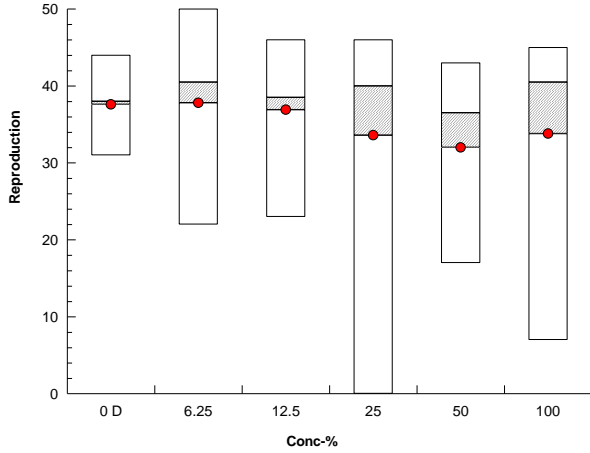


Ceriodaphnia 7-d Survival and Reproduction Test

New England Bioassay

Analysis ID: 01-3643-8426 Endpoint: Reproduction CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00 Analysis: Nonparametric-Control vs Treatments Status Level: 1
Edit Date: 02 Nov-22 8:58 MD5 Hash: E6C72DA8451A51F56A562EC0C64945D0 Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 1 of 6)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test				New England Bioassay			
Analysis ID: 08-8327-0236	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 9:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1					
Edit Date: 02 Nov-22 8:58	MD5 Hash: 6DFFCF255519977902535414E38EA216	Editor ID: 008-848-998-5					
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable					
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture Age: <24					
Sample ID: 01-1615-9050	Code: 6EC724A	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 30h	Client: Eurofins						

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	22116	200	Yes	Two-Point Interpolation

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

2d Survival Rate Summary			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	A/B	Mean	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%
6.25		10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%
12.5		10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%
25		10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%
50		10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%
100		10	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	10/10	1.0000	0.00%

2d Survival Rate Detail												
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10	
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
6.25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
12.5		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	

2d Survival Rate Binomials												
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10	
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	



CETIS Analytical Report

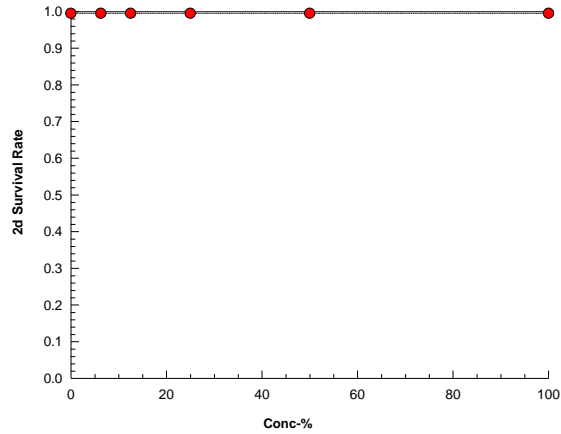
Report Date: 02 Nov-22 09:05 (p 2 of 6)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test

New England Bioassay

Analysis ID: 08-8327-0236	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 8:58	MD5 Hash: 6DFFCF255519977902535414E38EA216	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 3 of 6)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test				New England Bioassay			
Analysis ID: 12-9832-3695	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 9:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1					
Edit Date: 02 Nov-22 8:58	MD5 Hash: A182513760B674005EEE83AB2C3AF26A	Editor ID: 008-848-998-5					
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable					
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture	Age: <24				
Sample ID: 01-1615-9050	Code: 6EC724A	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 30h	Client: Eurofins						

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1171523	200	Yes	Two-Point Interpolation

Test Acceptability Criteria		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.9	0.8	>>	Yes	Passes Criteria

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

7d Survival Rate Summary			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	A/B	Mean	%Effect
0	D	10	0.9000	1.0000	0.0000	1.0000	35.14%	0.00%	9/10	0.9667	0.00%
6.25		10	1.0000	1.0000	1.0000	1.0000	0.00%	-11.11%	10/10	0.9667	0.00%
12.5		10	1.0000	1.0000	1.0000	1.0000	0.00%	-11.11%	10/10	0.9667	0.00%
25		10	0.9000	1.0000	0.0000	1.0000	35.14%	0.00%	9/10	0.9000	6.90%
50		10	0.9000	1.0000	0.0000	1.0000	35.14%	0.00%	9/10	0.9000	6.90%
100		10	0.9000	1.0000	0.0000	1.0000	35.14%	0.00%	9/10	0.9000	6.90%

7d Survival Rate Detail											
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000

7d Survival Rate Binomials											
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1



CETIS Analytical Report

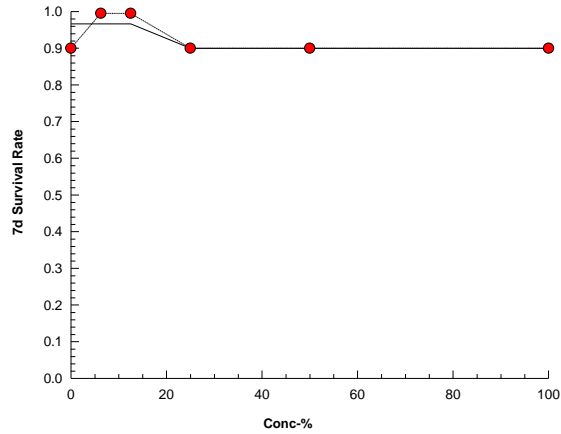
Report Date: 02 Nov-22 09:05 (p 4 of 6)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test

New England Bioassay

Analysis ID: 12-9832-3695	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 8:58	MD5 Hash: A182513760B674005EEE83AB2C3AF26A	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 5 of 6)
 Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test				New England Bioassay	
Analysis ID: 15-9592-6573	Endpoint: Reproduction	CETIS Version: CETISv1.9.7			
Analyzed: 02 Nov-22 9:01	Analysis: Linear Interpolation (ICPIN)	Status Level: 1			
Edit Date: 02 Nov-22 8:58	MD5 Hash: E6C72DA8451A51F56A562EC0C64945D0	Editor ID: 008-848-998-5			
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:			
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water			
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable			
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture		Age: <24	
Sample ID: 01-1615-9050	Code: 6EC724A	Project:			
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N			
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:			
Sample Age: 30h	Client: Eurofins				

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	7559	200	Yes	Two-Point Interpolation

Test Acceptability Criteria		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	37.6	15	>>	Yes	Passes Criteria

Point Estimates						
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC25	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Reproduction Summary			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	10	37.6	38	31	44	11.50%	0.00%	37.7	0.00%
6.25		10	37.8	40.5	22	50	25.37%	-0.53%	37.7	0.00%
12.5		10	36.9	38.5	23	46	20.30%	1.86%	36.9	2.12%
25		10	33.6	40	0	46	41.77%	10.64%	33.6	10.88%
50		10	32	36.5	17	43	33.14%	14.89%	32.9	12.73%
100		10	33.8	40.5	7	45	39.39%	10.11%	32.9	12.73%

Reproduction Detail											
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	39	37	40	34	31	32	39	44	43	37
6.25		22	44	50	23	39	30	45	44	42	39
12.5		35	39	44	38	41	25	46	38	23	40
25		27	28	46	41	39	26	41	45	0	43
50		43	35	41	40	42	17	38	20	18	26
100		42	45	35	43	43	7	44	39	19	21



CETIS Analytical Report

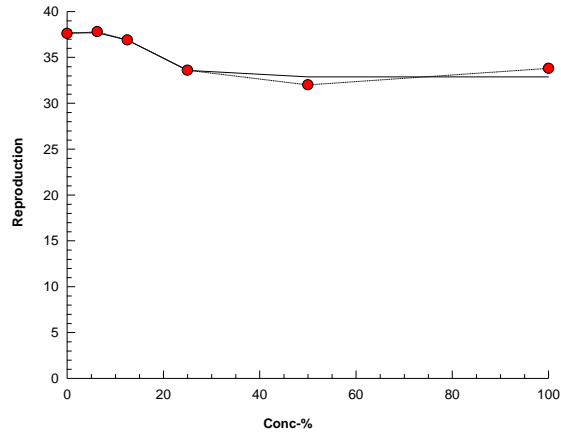
Report Date: 02 Nov-22 09:05 (p 6 of 6)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test

New England Bioassay

Analysis ID: 15-9592-6573	Endpoint: Reproduction	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:01	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 8:58	MD5 Hash: E6C72DA8451A51F56A562EC0C64945D0	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 1 of 4)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test **New England Bioassay**

Analysis ID: 08-1854-7715	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00	Analysis: STP 2xK Contingency Tables	Status Level: 1
Edit Date: 02 Nov-22 8:58	MD5 Hash: 6DFFCF255519977902535414E38EA216	Editor ID: 008-848-998-5
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture Age: <24
Sample ID: 01-1615-9050	Code: 6EC724A	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 30h	Client: Eurofins	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	---	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Conc-%	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	1.0000	Exact	1.0000	Non-Significant Effect
		12.5	1.0000	Exact	1.0000	Non-Significant Effect
		25	1.0000	Exact	1.0000	Non-Significant Effect
		50	1.0000	Exact	1.0000	Non-Significant Effect
		100	1.0000	Exact	1.0000	Non-Significant Effect

2d Survival Rate Frequencies

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	10	0	10	1.0000	0.0000	0.00%
6.25		10	0	10	1.0000	0.0000	0.00%
12.5		10	0	10	1.0000	0.0000	0.00%
25		10	0	10	1.0000	0.0000	0.00%
50		10	0	10	1.0000	0.0000	0.00%
100		10	0	10	1.0000	0.0000	0.00%

2d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
6.25		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
12.5		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
25		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%

2d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 2 of 4)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test

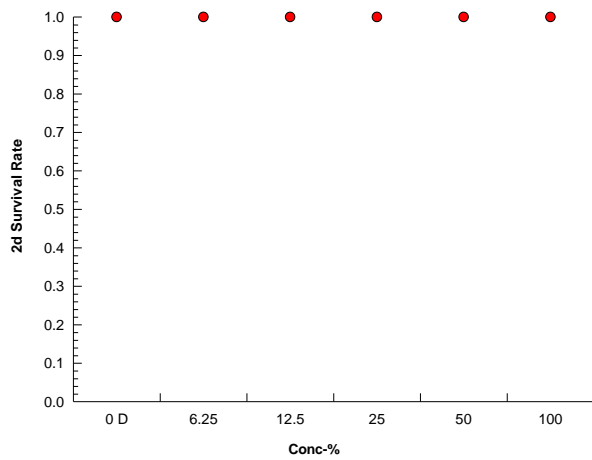
New England Bioassay

Analysis ID: 08-1854-7715 Endpoint: 2d Survival Rate CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00 Analysis: STP 2xK Contingency Tables Status Level: 1
Edit Date: 02 Nov-22 8:58 MD5 Hash: 6DFFCF255519977902535414E38EA216 Editor ID: 008-848-998-5

2d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 3 of 4)
Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test				New England Bioassay			
Analysis ID: 20-0630-7795	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 9:00	Analysis: STP 2xK Contingency Tables	Status Level: 1					
Edit Date: 02 Nov-22 8:58	MD5 Hash: A182513760B674005EEE83AB2C3AF26A	Editor ID: 008-848-998-5					
Batch ID: 03-0485-2978	Test Type: Reproduction-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:20	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 14:58	Species: Ceriodaphnia dubia	Brine: Not Applicable					
Test Length: 7d 2h	Taxon: Branchiopoda	Source: In-House Culture	Age: <24				
Sample ID: 01-1615-9050	Code: 6EC724A	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 30h	Client: Eurofins						

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	100	>100	---	1

Fisher Exact/Bonferroni-Holm Test

Control	vs	Conc-%	Test Stat	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	1.0000	Exact	1.0000	Non-Significant Effect
		12.5	1.0000	Exact	1.0000	Non-Significant Effect
		25	0.7632	Exact	1.0000	Non-Significant Effect
		50	0.7632	Exact	1.0000	Non-Significant Effect
		100	0.7632	Exact	1.0000	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.9	0.8	>>	Yes	Passes Criteria

7d Survival Rate Frequencies

Conc-%	Code	NR	R	NR + R	Prop NR	Prop R	%Effect
0	D	9	1	10	0.9000	0.1000	0.00%
6.25		10	0	10	1.0000	0.0000	-11.11%
12.5		10	0	10	1.0000	0.0000	-11.11%
25		9	1	10	0.9000	0.1000	0.00%
50		9	1	10	0.9000	0.1000	0.00%
100		9	1	10	0.9000	0.1000	0.00%

7d Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	0.9000	0.6738	1.0000	1.0000	0.0000	1.0000	0.1000	35.14%	0.00%
6.25		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%
12.5		10	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-11.11%
25		10	0.9000	0.6738	1.0000	1.0000	0.0000	1.0000	0.1000	35.14%	0.00%
50		10	0.9000	0.6738	1.0000	1.0000	0.0000	1.0000	0.1000	35.14%	0.00%
100		10	0.9000	0.6738	1.0000	1.0000	0.0000	1.0000	0.1000	35.14%	0.00%

7d Survival Rate Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000



CETIS Analytical Report

Report Date: 02 Nov-22 09:05 (p 4 of 4)
 Test Code/ID: 22-2033 / 17-7412-3606

Ceriodaphnia 7-d Survival and Reproduction Test **New England Bioassay**

Analysis ID: 20-0630-7795	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 9:00	Analysis: STP 2xK Contingency Tables	Status Level: 1
Edit Date: 02 Nov-22 8:58	MD5 Hash: A182513760B674005EEE83AB2C3AF26A	Editor ID: 008-848-998-5

7d Survival Rate Binomials												
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10	
0	D	1/1	1/1	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1	
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1	1/1	
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1	

Graphics

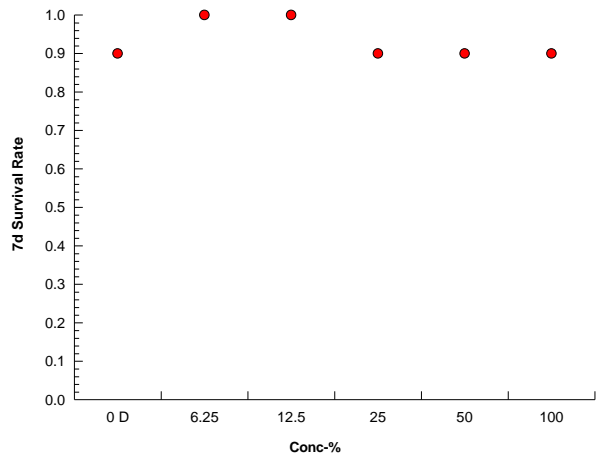


Table of Random Permutations of 16

C.dubia Test ID#

22-2033a

7	12	15	15	1	2	7	16	10	2	14	15	7	13	13	10	6	1	8	10
13	3	8	16	7	10	11	10	13	5	11	7	13	16	7	7	5	13	2	14
3	1	4	5	14	13	3	14	9	13	13	2	9	15	6	2	8	4	5	8
11	8	16	14	15	6	2	6	2	16	8	5	12	3	9	13	4	3	10	4
14	9	1	6	3	9	14	13	8	6	5	8	14	7	3	15	13	11	4	7
2	16	10	13	5	5	13	2	11	7	3	12	5	14	12	16	2	2	9	15
4	6	13	7	2	15	1	9	1	4	7	10	6	9	11	9	7	6	16	11
6	14	6	10	4	14	4	15	3	3	4	16	2	6	5	1	12	10	6	9
10	15	2	1	13	12	16	3	4	8	10	1	15	5	14	12	14	12	3	2
12	10	7	12	9	11	9	8	12	14	15	4	11	8	16	8	9	14	14	1
15	7	5	2	10	7	8	12	6	15	6	13	16	12	15	4	11	8	12	6
16	2	11	8	8	8	15	5	16	1	1	9	8	1	8	14	16	5	13	5
9	13	14	3	6	4	10	11	5	12	9	3	10	4	4	3	10	9	1	3
8	11	9	4	11	3	12	7	7	10	12	14	3	10	1	6	15	16	15	12
1	5	12	11	16	16	5	4	14	9	16	11	1	2	10	5	1	15	7	13
5	4	3	9	12	1	6	1	15	11	2	6	4	11	2	11	3	7	11	16
11	8	16	5	5	13	1	13	2	16	14	12	9	8	7	5	13	3	13	3
2	2	8	8	14	16	4	3	8	11	10	14	15	1	2	11	4	5	15	9
6	13	2	13	6	5	9	15	11	10	12	6	16	15	16	9	10	12	16	15
14	12	4	16	16	11	14	10	5	12	3	3	12	14	15	13	6	4	1	16
8	6	3	9	4	10	6	4	16	2	2	9	8	16	4	6	5	15	7	8
9	15	12	10	3	2	12	6	1	15	4	13	7	7	9	12	14	8	8	11
3	10	11	12	13	12	5	11	7	8	9	5	14	11	10	1	3	13	3	5
16	1	13	14	8	14	15	5	3	7	11	15	6	12	5	7	11	1	14	4
1	14	14	2	9	15	16	14	6	14	7	8	3	13	11	8	7	7	12	7
4	4	6	4	12	3	11	8	15	9	8	1	13	6	3	3	15	9	9	12
15	5	1	11	10	6	3	7	10	5	5	11	10	10	12	15	16	14	5	2
5	3	5	6	7	7	13	2	14	3	16	4	5	5	13	4	9	16	2	6
12	7	15	15	15	9	8	12	12	13	15	10	1	4	6	16	2	6	11	1
10	11	10	3	2	4	2	1	4	6	6	7	11	9	14	10	8	11	4	13
7	9	7	7	11	1	7	16	13	1	13	2	4	2	1	2	12	2	10	14
13	16	9	1	1	8	10	9	9	4	1	16	2	3	8	14	1	10	6	10
						rep					conc								
1	6	7	4	8	6	5	2	8	15	4	6	6	1	4	5	7	13	2	10
9	15	11	3	11	15	9	10	1	3	8	2	15	7	9	8	16	1	14	3
10	16	4	5	12	9	16	11	7	1	7	16	11	8	3	3	12	2	3	4
4	14	1	9	5	5	4	13	6	8	15	5	12	5	7	16	5	11	8	1
7	3	13	14	15	2	1	14	16	5	14	9	2	16	1	12	6	14	4	13
16	11	2	1	14	16	6	9	3	4	16	14	3	15	11	11	3	9	12	5
3	10	16	16	13	7	13	1	11	14	9	10	16	2	10	2	10	7	10	16
11	13	9	13	4	13	8	3	5	13	10	12	5	12	5	14	13	16	5	6
15	2	3	12	9	12	2	4	13	10	3	13	14	4	2	1	14	8	6	12
14	1	14	6	10	1	3	12	4	2	2	4	13	3	16	9	9	3	7	14
13	12	5	11	3	11	15	8	2	7	11	7	8	14	6	4	4	4	15	11
12	5	10	7	2	14	7	15	14	16	13	1	9	10	12	10	11	10	9	8
8	9	8	10	6	4	11	7	10	11	6	8	4	9	8	15	8	6	11	9
2	7	6	2	1	8	10	6	15	12	1	11	7	11	13	6	1	15	13	15
6	4	15	8	16	10	14	16	9	6	12	3	10	6	14	7	2	12	16	7
5	8	12	15	7	3	12	5	12	9	5	15	1	13	15	13	15	5	1	2
13	4	10	4	16	13	16	13	5	3	6	14	1	16	8	7	2	3	3	12
5	14	4	6	8	2	15	1	13	14	16	4	15	4	3	12	12	1	4	7
2	2	2	15	14	16	9	12	16	6	10	15	14	9	10	1	14	8	8	16
7	12	15	8	12	3	5	14	7	12	5	13	16	1	7	5	11	2	9	3
6	9	7	14	9	14	10	11	15	11	12	1	12	12	14	16	3	11	11	8
14	5	16	7	10	8	11	8	14	13	7	11	6	3	11	4	4	6	6	9
15	11	8	9	7	12	8	7	1	15	9	3	3	7	13	11	10	4	5	1
11	6	6	1	4	1	3	16	12	5	4	9	13	13	6	8	15	9	1	14
4	10	3	16	2	11	7	9	6	9	1	8	4	11	5	2	16	10	12	4
1	8	1	13	1	15	4	4	11	4	2	16	5	8	1	9	5	12	16	6
9	7	14	2	6	4	14	10	9	8	15	10	7	10	9	10	6	14	10	11
12	1	9	10	15	5	2	15	10	2	14	2	8	2	4	13	8	5	15	5
3	3	12	11	5	9	6	6	3	10	13	12	9	6	2	15	7	15	7	13
10	15	11	5	13	7	12	5	2	7	11	5	10	15	12	3	1	13	13	10
8	13	13	3	3	10	13	2	4	1	8	6	11	14	15	6	9	16	2	2
16	16	5	12	11	6	1	3	8	16	3	7	2	5	16	14	13	7	14	15



Ceriodaphnia dubia

Culture Chart

Lot # C222(RMH 313) A

Brood mother source: 3025

A4

Source's brood size: 27

(Qty.)

WEST VALLEY 10-25-22

Tech	OB	CF	OB	A1	A1		A1	A1		AN						
Date	10-17	10-18	10-19	10-20	10-21		10-23	10-24		10-25						
Day	0	1	2	3	4	5	6	7		8	9	10	11	12	13	14
Cup #	Beaker		Tray													
1	N	N	N	N	5		24	Y ^{T1} ₂₀	1	Y						
2	N	N	N	N	6		24	Y ^{T2} ₂₁	2	Y ^{T1} ₂₀						
3	N	N	N	N	5		24	Y ^{T1} ₁₉	3	Y ^{T2} ₁₉						
4	N	N	N	N	5		24	Y ^{T3} ₂₁	4	Y ^{T3} ₁₉						
5	N	N	N	N	6		24	Y ^{T4} ₁₈	5	Y						
6	N	N	N	N	4		24	Y ^{T2} ₁₉	6	Y ^{T4} ₂₃						
7	N	N	N	N	4		24	Y ^{T5} ₂₂	7	Y						
8	N	N	N	N	5		24	Y ^{T3} ₂₀	8	Y						
9	N	N	N	N	6		24	Y ^{T6} ₁₉	9	Y						
10	N	N	N	N	6		24	Y ^{T4} ₁₈	10	Y						
11	N	N	N	N	5		24	Y ^{T5} ₂₁	11	Y ^{T5} ₂₂						
12	N	N	N	N	6		24	Y ^{T7} ₂₀	12	Y						
13	N	N	N	N	5		12	Y ^{T6} ₁₉	13	Y						
14	N	N	N	N	5		24	Y ^{T8} ₂₁	14	Y						
15	N	N	N	N	7		24	Y ^{F1} ₁₈	15	Y						
16	N	N	N	N	6		24	Y ^{T8} ₂₂	16	Y						
17	N	N	N	N	5		24	Y ^{T9} ₂₁	17	Y ^{T10} ₁₈						
18	N	N	N	N	6		24	Y ^{T10} ₂₀	18	Y						

Y = neonates present, and EPA criterion has been met N = no neonates P = Neonates present in P.M. on previous day
 2B = two broods present. 2Y = two broods and criterion met: ≥ 20 neos. by 3rd brood. T# = neonates used in test replicate, #=neonates in brood.

Test organism collection:

Project #	Symbol	P	Tray diagram?	Time period, neonates released	Collection date / time
	T		Y	12-23-22/1700 → 12-23-22/1905	12-24-22/1330
	(T)		Y	12-23-22/1700 → 12-23-22/1905	12-24-22/1430
44340	T		Y	12-24-22/1730 → 12-24-22/1810	12-25-22/1145
	T				
	T				

Ceriodaphnia dubia

Culture Chart

Lot # C222(KMH 313) B

Brood mother source: 3025

AS

Source's brood size:

(Qty.)

~~WCSF VALLEY 10-25-22~~

Tech	DBS	CF	DB	AH	AG		AH	AH		AN						
Date	10-17	10-18	10-19	10-20	10-21		10-23	10-24		10-25						
Day	0	1	2	3	4	5	6	7		8	9	10	11	12	13	14
Cup #	Beaker		Tray													
1	N	N	N	N	7		24	Y	1	Y						
2	N	N	N	N	6		24	Y	2	Y						
3	N	N	N	N	6		24	Y	3	Y ¹⁷ ₂₃						
4	N	N	N	N	6		24	Y	4	Y						
5	N	N	N	N	9		24	Y	5	Y ¹⁸ ₂₄						
6	N	N	N	N	5		24	Y	6	Y ¹⁹ ₂₄						
7	N	N	N	N	6		11	Y	7	Y ¹						
8	N	N	N	N	6		10	Y	8	Y ¹⁰ ₂₄						
9	N	N	N	N	5		24	Y	9	Y						
10	N	N	N	N	6		10	Y	10	X						
11	N	N	N	N	5		24	Y	11	Y						
12	N	N	N	N	6		24	Y	12	Y						
13	N	N	N	N	4		11	Y	13	Y						
14	N	N	N	N	6		10	Y	14	Y						
15	N	N	N	N	7		24	Y	15	Y						
16	N	N	N	N	7		24	Y	16	Y						
17	N	N	N	N	6		24	Y	17	Y						
18	N	N	N	N	5		24	Y	18	Y						

Y = neonates present, and EPA criterion has been met N = no neonates P = Neonates present in P.M. on previous day
 2B = two broods present. 2Y = two broods and criterion met: ≥ 20 neos. by 3rd brood. T# = neonates used in test replicate, #=neonates in brood.

Test organism collection:

Project #	Symbol	P	Tray diagram?	Time period, neonates released	Collection date / time
442410	T		Y	12-24-22/1730 → 12-24-22/1800	12-25-22/145
	T				
	T				
	T				
	T				

PIMEPHALES PROMELAS DATASHEETS & STATISTICAL ANALYSIS

NEW ENGLAND BIOASSAY TOXICITY DATA FORM

CHRONIC COVER SHEET

CLIENT: Test America
 ADDRESS: 10 Hazelwood Drive
Amherst, NY 14228
 PERMITTEE: West Valley Demonstration Project
 PERMIT NUMBER: NY0000973
 DILUTION WATER: Moderately Hard Synthetic

P.promelas TEST ID # 22-2033b
 CHAIN OF CUSTODY # c42-5354/55
 NEB PROJECT # 44240
 SAMPLE ID: WNSP001

VERTEBRATES

TEST SET-UP TECHNICIAN: AB
 TEST SPECIES: *Pimephales promelas*
 NEB LOT # Pp22(10-25)1530
 AGE: < 24 hours
 TEST SOLUTION VOLUME (mls): 400
 ORGANISMS PER TEST CHAMBER: 10
 ORGANISMS PER CONCENTRATION: 40

LABORATORY CONTROL WATER (MHRCF)

Lot Number	Hardness mg/L	Alkalinity mg/L
C42-MH031	92	60

	DATE	TIME
TEST START:	10/25/22	1358
TEST END:	11/1/22	1555

COMMENTS:

REVIEWED BY: *Kimberly Wills* DATE: 12/5/22



NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Pimephales promelas</i>		
DILUTION WATER SOURCE:		Moderately Hard Synthetic			START DATE:		10/25/22 TIME: 1358		
NEB Lab Synthetic Diluent		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		25.0	24.5	25.2	24.2	24.8	24.3	25.0	
D.O. mg/L Initial		8.2	8.2	8.2	8.5	8.4	8.4	8.3	
pH s.u. Initial		7.5	7.6	7.4	7.8	7.7	7.9	7.7	
Conductivity µS Initial		323	323	321	322	324	326	321	
Tech Initials Final		SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C Final		25.0	24.5	24.2	24.4	24.0	24.0	24.3	
D.O. mg/L Final		7.2	7.5	7.6	8.0	7.6	7.8	7.3	
pH s.u. Final		7.7	7.5	7.6	7.8	7.8	7.6	7.6	
Conductivity µS Final		340	364	338	347	354	356	348	
Erdman Brook Control		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		24.3	24.4	25.3	24.6	24.3	24.0	25.0	
D.O. mg/L Initial		11.0	9.4	8.4	10.9	9.1	7.9	9.3	
pH s.u. Initial		7.4	7.5	7.3	7.7	7.5	9.1	7.8	
Conductivity µS Initial		313	312	310	295	297	299	295	
Tech Initials Final		SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C Final		25.1	24.9	24.6	24.4	24.4	24.4	24.6	
D.O. mg/L Final		7.7	7.5	7.4	8.0	7.9	7.9	7.0	
pH s.u. Final		7.6	7.5	7.7	7.6	8.0	7.7	7.6	
Conductivity µS Final		327	334	331	322	310	318	318	
6.25%		1	2	3	4	5	6	7	Remarks
Tech Initials Initial		AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C Initial		24.8	24.5	25.1	24.6	24.7	24.1	24.4	
D.O. mg/L Initial		8.3	8.3	8.7	8.5	8.5	8.5	8.4	
pH s.u. Initial		7.6	7.7	7.4	7.8	7.6	7.9	7.7	
Conductivity µS Initial		398	394	396	393	401	399	401	
Tech Initials Final		SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C Final		24.7	24.5	24.0	24.7	24.0	24.2	24.3	
D.O. mg/L Final		7.3	7.7	7.6	7.9	7.9	7.6	6.9	
pH s.u. Final		7.6	7.5	7.6	7.7	7.9	7.8	7.6	
Conductivity µS Final		417	420	420	424	420	423	428	

NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Pimephales promelas</i>		
DILUTION WATER SOURCE:		Moderately Hard Synthetic			START DATE:		10/25/22 TIME: 1358		
12.5%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	24.8	25.2	24.7	24.6	24.1	24.9	
D.O. mg/L	Initial	8.4	8.2	8.4	8.5	8.5	8.5	8.3	
pH s.u.	Initial	7.6	7.8	7.4	7.8	7.6	7.9	7.7	
Conductivity µS	Initial	481	476	481	472	483	481	482	
Tech Initials	Final	SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.9	24.6	24.2	24.4	24.2	24.3	24.4	
D.O. mg/L	Final	7.2	7.5	7.5	7.9	7.8	7.5	6.7	
pH s.u.	Final	7.7	7.5	7.6	7.7	7.9	7.6	7.6	
Conductivity µS	Final	496	502	507	501	504	515	507	
25%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	24.9	24.9	25.2	24.7	24.7	24.3	25.1	
D.O. mg/L	Initial	8.7	8.3	8.4	8.8	8.6	8.6	8.4	
pH s.u.	Initial	7.6	7.8	7.4	7.8	7.6	7.9	7.9	
Conductivity µS	Initial	628	620	623	620	628	629	629	
Tech Initials	Final	SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.9	24.6	24.3	24.4	24.1	24.1	24.4	
D.O. mg/L	Final	7.3	7.4	7.0	7.6	7.1	7.5	6.8	
pH s.u.	Final	7.7	7.6	7.6	7.7	7.7	7.7	7.6	
Conductivity µS	Final	641	640	649	656	654	653	660	
50%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	25.0	25.1	24.6	24.7	24.2	25.1	
D.O. mg/L	Initial	9.1	8.4	8.4	9.1	8.7	8.9	8.5	
pH s.u.	Initial	7.6	7.7	7.5	7.7	7.6	7.8	7.9	
Conductivity µS	Initial	926	919	920	918	929	931	921	
Tech Initials	Final	SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.8	24.6	24.1	24.4	24.3	24.1	24.4	
D.O. mg/L	Final	7.4	7.6	7.5	7.6	7.3	7.4	6.6	
pH s.u.	Final	7.7	7.7	7.8	7.7	7.9	7.9	7.6	
Conductivity µS	Final	932	938	949	957	960	953	961	

NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Pimephales promelas</i>		
DILUTION WATER SOURCE:		Moderately Hard Synthetic			START DATE:		10/25/22 TIME: 1358		
100%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	24.9	24.9	25.0	24.3	24.5	24.0	25.1	
D.O. mg/L	Initial	10.7	8.9	8.5	10.3	8.9	9.6	8.8	
pH s.u.	Initial	7.6	7.8	7.6	7.6	7.7	7.7	7.8	
Conductivity µS	Initial	1,515	1,509	1,507	1,505	1,509	1,529	1,506	
Tech Initials	Final	SM/AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.8	24.6	24.0	24.4	24.0	24.0	24.3	
D.O. mg/L	Final	7.4	7.5	7.2	7.8	7.4	7.4	6.9	
pH s.u.	Final	7.8	7.8	7.7	7.7	8.0	8.0	7.8	
Conductivity µS	Final	1,481	1,535	1,557	1,552	1,562	1,556	1,553	
		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial								
Temp °C	Initial								
D.O. mg/L	Initial								
pH s.u.	Initial								
Conductivity µS	Initial								
Tech Initials	Final								
Temp °C	Final								
D.O. mg/L	Final								
pH s.u.	Final								
Conductivity µS	Final								

**NEB'S SURVIVAL DATA SHEET FOR FATHEAD MINNOW LARVAL
SURVIVAL AND GROWTH TEST**

FACILITY NAME & ADDRESS:	West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY								
NEB PROJECT NUMBER:	44240	TEST NUMBER:	22-2033b	COC #	c42-5354/55				
TEST ORGANISM:	<i>Pimephales promelas</i>		AGE:	<24 hours		Lot #	Pp22(10-25)1530		
START DATE:	10/25/22	TIME:	1358	END DATE:	11/1/22	TIME:	1555		

Effluent Concentration	Replicate Number	Number of Survivors								
		Day								
		0	1	2	3	4	5	6	7	Remarks
	ANALYST	AB	AG	AN	CF	MM	TS	SM/AG	SM/PD	
NEB Lab Synthetic Diluent	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
Erdman Brook Control	A	10	10	10	8	8	8	7	7	
	B	10	10	10	7	2	2	0	0	
	C	10	10	10	9	8	8	8	7	
	D	10	10	10	8	2	1	1	1	
6.25%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
12.5%	A	10	10	10	10	10	10	9	9	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	9	9	
	D	10	10	10	10	10	10	10	10	
25%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	9	9	9	9	9	
	C	10	10	10	10	9	9	9	9	
	D	10	10	10	10	8	8	8	8	
50%	A	10	9	9	9	9	9	9	9	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	9	9	9	9	9	
	D	10	10	10	10	10	6	4	4	
100%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	5	2	1	0	0	
	C	10	10	10	9	9	8	8	8	
	D	10	10	10	8	7	7	6	6	

D.O. concentration fell below 4.0 mg/L Yes No
 Replicates in all concentrations were aerated starting: N/A Tech Initials: N/A



NEW ENGLAND BIOASSAY OBSERVATION DATA FORM

Permittee: West Valley Demonstration Project

Test Species: Pimephales promelas

Test ID: 22-2033b

Test Date: 10/25/22

Project # 44240

Concentration or Dilution	All organisms appear healthy and normal unless noted							
	Day 4 Observations Date: 10/29/22 Technician: MM							
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:		Rep B:	F	Rep C:	F	Rep D:	F
6.25%	Rep A:		Rep B:		Rep C:		Rep D:	
12.5%	Rep A:		Rep B:		Rep C:		Rep D:	
25%	Rep A:		Rep B:		Rep C:	F	Rep D:	F
50%	Rep A:		Rep B:		Rep C:		Rep D:	
100%	Rep A:		Rep B:	F	Rep C:		Rep D:	NF
	Day 5 Observations Date: 10/30/22 Technician: TS							
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:		Rep B:		Rep C:		Rep D:	F
6.25%	Rep A:		Rep B:		Rep C:		Rep D:	
12.5%	Rep A:		Rep B:		Rep C:		Rep D:	
25%	Rep A:		Rep B:		Rep C:		Rep D:	
50%	Rep A:		Rep B:		Rep C:		Rep D:	F, 2NF
100%	Rep A:		Rep B:	F	Rep C:	F	Rep D:	

F= fungus NF = no fungus SL = slightly lethargic L = lethargic VL = very lethargic TD = tangled in debris MT = missing test organism

TE = technician error (organism accidentally killed by technician) SS = stuck in surface tension DW = dead above water line



NEW ENGLAND BIOASSAY OBSERVATION DATA FORM

Permittee: West Valley Demonstration Project

Test Species: Pimephales promelas

Test ID: 22-2033b

Test Date: 10/25/22

Project # 44240

Concentration or Dilution	All organisms appear healthy and normal unless noted							
	Day 6 Observations Date: 10/31/22 Technician: SM/AG							
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:	F	Rep B:	F	Rep C:		Rep D:	
6.25%	Rep A:		Rep B:		Rep C:		Rep D:	
12.5%	Rep A:		Rep B:		Rep C:	nf	Rep D:	
25%	Rep A:		Rep B:		Rep C:		Rep D:	
50%	Rep A:		Rep B:		Rep C:		Rep D:	F
100%	Rep A:		Rep B:	f	Rep C:		Rep D:	f
	Day Observations Date: Technician:							
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:		Rep B:		Rep C:		Rep D:	
6.25%	Rep A:		Rep B:		Rep C:		Rep D:	
12.5%	Rep A:		Rep B:		Rep C:		Rep D:	
25%	Rep A:		Rep B:		Rep C:		Rep D:	
50%	Rep A:		Rep B:		Rep C:		Rep D:	
100%	Rep A:		Rep B:		Rep C:		Rep D:	

F= fungus NF = no fungus SL = slightly lethargic L = lethargic VL = very lethargic TD = tangled in debris MT = missing test organism

TE = technician error (organism accidentally killed by technician) SS = stuck in surface tension DW = dead above water line



NEW ENGLAND BIOASSAY WEIGHT DATA FOR FATHEAD MINNOW LARVAL SURVIVAL AND GROWTH TEST

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY	
NEB PROJECT #	44240	NEB TEST NUMBER:	22-2033b
TEST START DATE	10/25/22	WEIGHING DATE:	11/2/22
TEST END DATE	11/1/22		
DRYING TEMPERATURE (°C)	100 ± 4	DRYING TIME:	minimum 6 hours
ANALYST-INITIAL WEIGHTS	JN/KW	ANALYST-FINAL WEIGHTS	Jn/Kw
Effluent Concentration	Replicate Number	A Weight of boat (mg)	B Dry Weight: Foil and Larvae (mg)
NEB Lab Synthetic Diluent	A	917.30	922.11
	B	918.09	922.52
	C	915.32	918.93
	D	918.80	922.87
Erdman Brook Control	A	919.21	923.11
	B	924.31	N/A
	C	918.42	921.78
	D	918.94	919.34
6.25%	A	919.96	925.37
	B	913.83	918.78
	C	916.33	921.30
	D	917.94	922.60
12.5%	A	914.55	918.89
	B	917.87	922.72
	C	914.85	919.54
	D	914.47	918.83
25%	A	910.96	916.79
	B	916.19	921.94
	C	914.59	919.76
	D	917.45	922.71
50%	A	916.92	922.49
	B	915.41	920.96
	C	915.45	920.57
	D	913.97	916.61
100%	A	914.31	919.98
	B	914.16	N/A
	C	914.71	919.68
	D	914.98	919.45

Concentration	Rep	Final Weight (mg)	Initial Weight (mg)	Total Weight (mg)	Average per fish (mg)	Mean fish weight (mg)	Standard Deviation
NEB Lab Synthetic Diluent	1	922.11	917.30	4.81	0.481	0.4230	0.051198958
	2	922.52	918.09	4.43	0.443		
	3	918.93	915.32	3.61	0.361		
	4	922.87	918.80	4.07	0.407		
Erdman Brook Control	1	923.11	919.21	3.90	0.390	0.1915	0.199922485
	2	0.00	0.00	0.00	0.000		
	3	921.78	918.42	3.36	0.336		
	4	919.34	918.94	0.40	0.040		
6.25%	1	925.37	919.96	5.41	0.541	0.4997	0.03093407
	2	918.78	913.83	4.95	0.495		
	3	921.30	916.33	4.97	0.497		
	4	922.60	917.94	4.66	0.466		
12.5%	1	918.89	914.55	4.34	0.434	0.4560	0.025126347
	2	922.72	917.87	4.85	0.485		
	3	919.54	914.85	4.69	0.469		
	4	918.83	914.47	4.36	0.436		
25%	1	916.79	910.96	5.83	0.583	0.5502	0.033559648
	2	921.94	916.19	5.75	0.575		
	3	919.76	914.59	5.17	0.517		
	4	922.71	917.45	5.26	0.526		
50%	1	922.49	916.92	5.57	0.557	0.4720	0.140211745
	2	920.96	915.41	5.55	0.555		
	3	920.57	915.45	5.12	0.512		
	4	916.61	913.97	2.64	0.264		
100%	1	919.98	914.31	5.67	0.567	0.3778	0.256597447
	2	0.00	0.00	0.00	0.000		
	3	919.68	914.71	4.97	0.497		
	4	919.45	914.98	4.47	0.447		

CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 1 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test				New England Bioassay			
Analysis ID: 15-0989-8343	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7		Analyzed: 02 Nov-22 13:59	Analysis: Nonparametric-Control vs Treatments	Status Level: 1	
Edit Date: 02 Nov-22 13:58	MD5 Hash: FE233EE2A4E2123691A5C959571F3B26	Editor ID: 008-848-998-5		Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:	
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water		Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable	
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture		Age: <24	Sample ID: 11-8318-7371	Code: 468601AB	
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Project:		Sample Date: 24 Oct-22 09:10	CAS (PC):	Source: West Valley Demonstration Project (N	
Sample Age: 31h	Client: Eurofins	Station:		Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.04568	4.57%

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	16	10	1	6	CDF	0.6105	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	0.0055332	0.0011066	5	1	0.4457	Non-Significant Effect
Error	0.0199195	0.0011066	18			
Total	0.0254527		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	0.4634	0.884	<1.0E-05	Non-Normal Distribution

2d 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	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
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	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
100		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%



Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 15-0989-8343 Endpoint: 2d Survival Rate CETIS Version: CETISv1.9.7
 Analyzed: 02 Nov-22 13:59 Analysis: Nonparametric-Control vs Treatments Status Level: 1
 Edit Date: 02 Nov-22 13:58 MD5 Hash: FE233EE2A4E2123691A5C959571F3B26 Editor ID: 008-848-998-5

2d 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		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

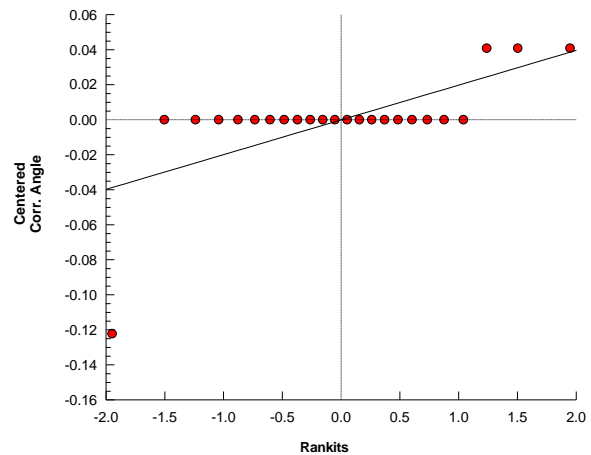
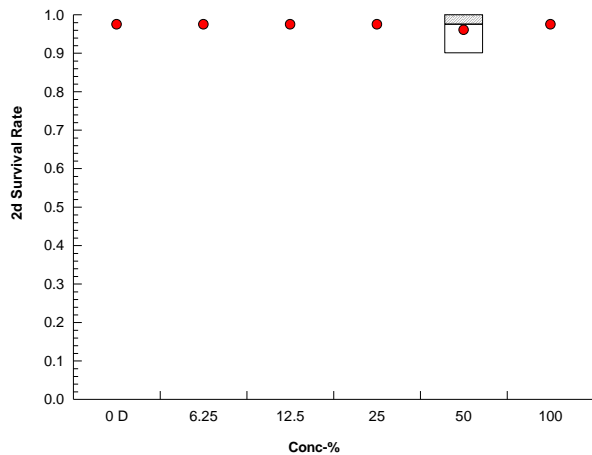
Angular (Corrected) Transformed Detail

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		1.2490	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

2d 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		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 3 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test				New England Bioassay			
Analysis ID: 13-9768-8677	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 14:00	Analysis: Parametric-Control vs Treatments	Status Level: 1					
Edit Date: 02 Nov-22 13:58	MD5 Hash: 6F4017BB98F446D20EA01F0931293F61	Editor ID: 008-848-998-5					
Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable					
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture	Age: <24				
Sample ID: 11-8318-7371	Code: 468601AB	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 31h	Client: Eurofins						

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	50	100	70.71	2	0.3227	32.27%

Dunnett Multiple Comparison Test									
Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	0	2.407	0.445	6	CDF	0.8333	Non-Significant Effect
		12.5	0.4404	2.407	0.445	6	CDF	0.6731	Non-Significant Effect
		25	0.8524	2.407	0.445	6	CDF	0.4883	Non-Significant Effect
		50	1.423	2.407	0.445	6	CDF	0.2535	Non-Significant Effect
		100*	2.816	2.407	0.445	6	CDF	0.0224	Significant Effect

Test Acceptability Criteria					
Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.8	>>	Yes	Passes Criteria

ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.790797	0.158159	5	2.31	0.0869	Non-Significant Effect
Error	1.23224	0.0684579	18			
Total	2.02304		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	0.8125	0.884	0.0005	Non-Normal Distribution

7d 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	0.9500	0.8581	1.0000	0.9500	0.9000	1.0000	0.0289	6.08%	5.00%
25		4	0.9000	0.7701	1.0000	0.9000	0.8000	1.0000	0.0408	9.07%	10.00%
50		4	0.8000	0.3691	1.0000	0.9000	0.4000	1.0000	0.1354	33.85%	20.00%
100		4	0.6000	0.0000	1.0000	0.7000	0.0000	1.0000	0.2160	72.01%	40.00%

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	1.3310	1.1810	1.4800	1.3310	1.2490	1.4120	0.0471	7.07%	5.77%
25		4	1.2540	1.0560	1.4530	1.2490	1.1070	1.4120	0.0623	9.93%	11.17%
50		4	1.1490	0.6415	1.6560	1.2490	0.6847	1.4120	0.1594	27.75%	18.65%
100		4	0.8910	0.0419	1.7400	0.9966	0.1588	1.4120	0.2668	59.89%	36.90%



Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 13-9768-8677 Endpoint: 7d Survival Rate CETIS Version: CETISv1.9.7
 Analyzed: 02 Nov-22 14:00 Analysis: Parametric-Control vs Treatments Status Level: 1
 Edit Date: 02 Nov-22 13:58 MD5 Hash: 6F4017BB98F446D20EA01F0931293F61 Editor ID: 008-848-998-5

7d 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		0.9000	1.0000	0.9000	1.0000
25		1.0000	0.9000	0.9000	0.8000
50		0.9000	1.0000	0.9000	0.4000
100		1.0000	0.0000	0.8000	0.6000

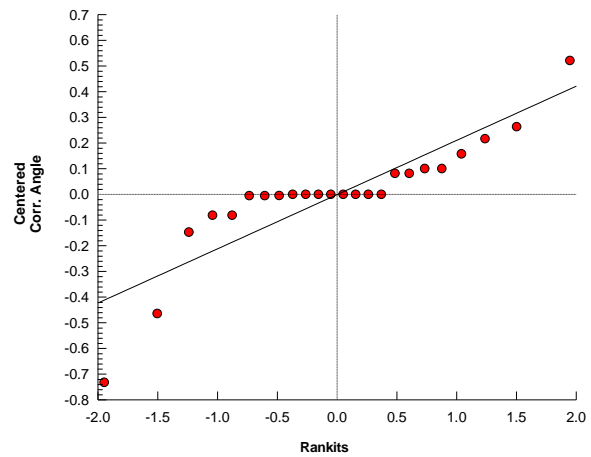
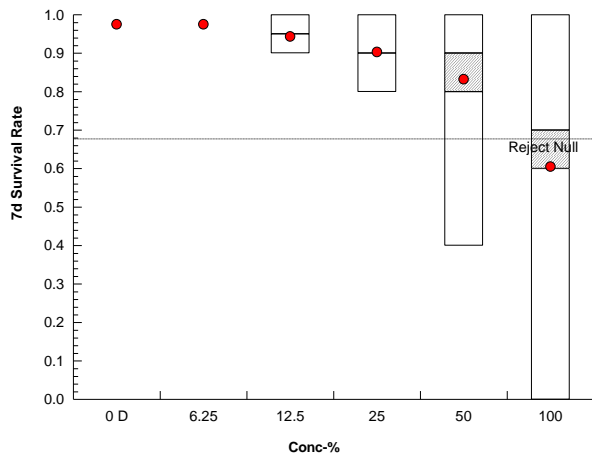
Angular (Corrected) Transformed Detail

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		1.2490	1.4120	1.2490	1.4120
25		1.4120	1.2490	1.2490	1.1070
50		1.2490	1.4120	1.2490	0.6847
100		1.4120	0.1588	1.1070	0.8861

7d 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		9/10	10/10	9/10	10/10
25		10/10	9/10	9/10	8/10
50		9/10	10/10	9/10	4/10
100		10/10	0/10	8/10	6/10

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 5 of 6)
 Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test New England Bioassay

Analysis ID: 00-0389-0290	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:00	Analysis: Parametric-Control vs Treatments	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: 0AD89E6CA4A174118644A3B516437432	Editor ID: 008-848-998-5
Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 11-8318-7371	Code: 468601AB	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Untransformed	C > T	50	>50	---	2	0.1178	27.85%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	-1.535	2.356	0.118	6	CDF	0.9939	Non-Significant Effect
		12.5	-0.6601	2.356	0.118	6	CDF	0.9444	Non-Significant Effect
		25	-2.545	2.356	0.118	6	CDF	0.9996	Non-Significant Effect
		50	-0.9801	2.356	0.118	6	CDF	0.9738	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits			Decision
		Lower	Upper	Overlap	
Control Resp	0.423	0.25	>>	Yes	Passes Criteria
PMSD	0.2785	0.12	0.3	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0368545	0.0092136	4	1.843	0.1731	Non-Significant Effect
Error	0.0749852	0.0049990	15			
Total	0.11184		19			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	11.88	13.28	0.0182	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.8443	0.866	0.0043	Non-Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.423	0.3415	0.5045	0.425	0.361	0.481	0.0256	12.10%	0.00%
6.25		4	0.4997	0.4505	0.549	0.496	0.466	0.541	0.01547	6.19%	-18.14%
12.5		4	0.456	0.416	0.496	0.4525	0.434	0.485	0.01256	5.51%	-7.80%
25		4	0.5502	0.4968	0.6036	0.5505	0.517	0.583	0.01678	6.10%	-30.08%
50		4	0.472	0.2489	0.6951	0.5335	0.264	0.557	0.07011	29.71%	-11.58%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.481	0.443	0.361	0.407
6.25		0.541	0.495	0.497	0.466
12.5		0.434	0.485	0.469	0.436
25		0.583	0.575	0.517	0.526
50		0.557	0.555	0.512	0.264

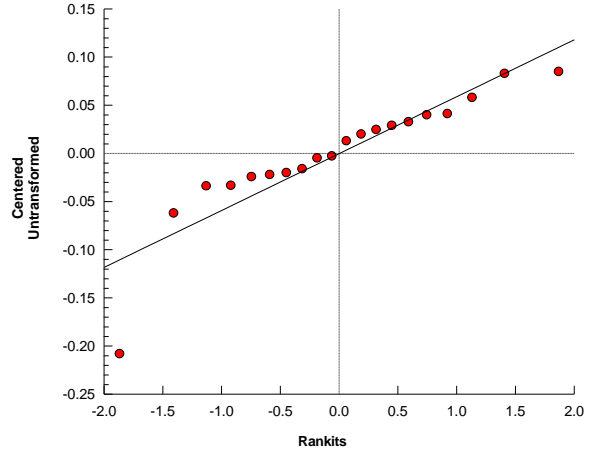
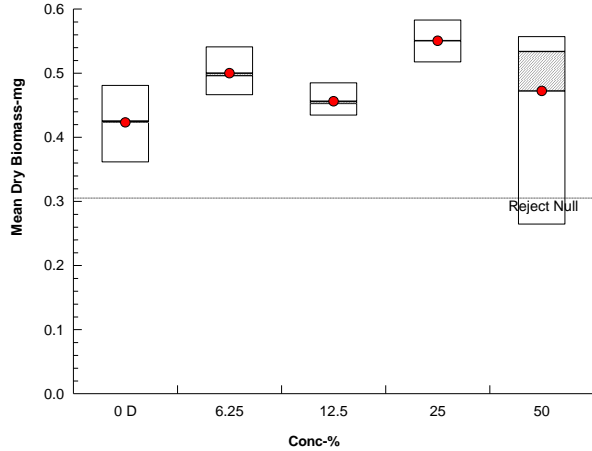


Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 00-0389-0290	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:00	Analysis: Parametric-Control vs Treatments	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: 0AD89E6CA4A174118644A3B516437432	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 1 of 6)
 Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 06-6652-8764	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 13:59	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: FE233EE2A4E2123691A5C959571F3B26	Editor ID: 008-848-998-5
Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 11-8318-7371	Code: 468601AB	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	734413	200	Yes	Two-Point Interpolation

Point Estimates

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

2d Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			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	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9875	1.25%
100		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9875	1.25%

2d 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		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

2d 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		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10



CETIS Analytical Report

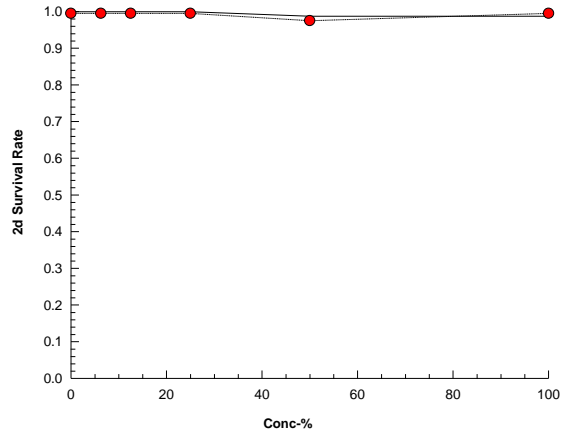
Report Date: 02 Nov-22 14:03 (p 2 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 06-6652-8764	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 13:59	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: FE233EE2A4E2123691A5C959571F3B26	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 3 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 15-8931-9180	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 13:59	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: 6F4017BB98F446D20EA01F0931293F61	Editor ID: 008-848-998-5
Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 11-8318-7371	Code: 468601AB	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1419922	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.8	>>	Yes	Passes Criteria

Point Estimates

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

7d Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			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	0.9500	0.9500	0.9000	1.0000	6.08%	5.00%	38/40	0.9500	5.00%
25		4	0.9000	0.9000	0.8000	1.0000	9.07%	10.00%	36/40	0.9000	10.00%
50		4	0.8000	0.9000	0.4000	1.0000	33.85%	20.00%	32/40	0.8000	20.00%
100		4	0.6000	0.7000	0.0000	1.0000	72.01%	40.00%	24/40	0.6000	40.00%

7d 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		0.9000	1.0000	0.9000	1.0000
25		1.0000	0.9000	0.9000	0.8000
50		0.9000	1.0000	0.9000	0.4000
100		1.0000	0.0000	0.8000	0.6000

7d 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		9/10	10/10	9/10	10/10
25		10/10	9/10	9/10	8/10
50		9/10	10/10	9/10	4/10
100		10/10	0/10	8/10	6/10



CETIS Analytical Report

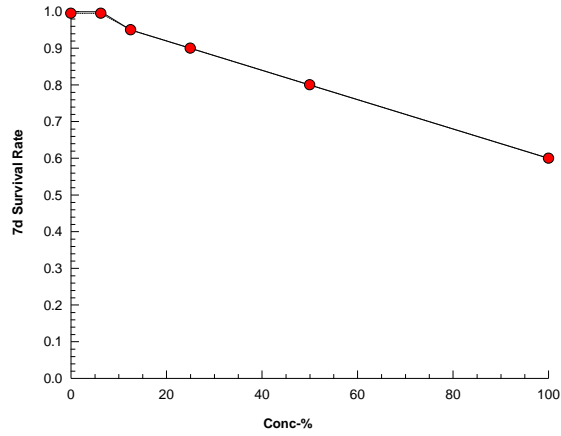
Report Date: 02 Nov-22 14:03 (p 4 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 15-8931-9180	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 13:59	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: 6F4017BB98F446D20EA01F0931293F61	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 5 of 6)
 Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test				New England Bioassay	
Analysis ID: 02-4897-7368	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7			
Analyzed: 02 Nov-22 14:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1			
Edit Date: 02 Nov-22 13:58	MD5 Hash: 6B4B1414DD1190E17412A342B0AA6960	Editor ID: 008-848-998-5			
Batch ID: 11-4838-8408	Test Type: Growth-Survival (7d)	Analyst:			
Start Date: 25 Oct-22 13:58	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water			
Ending Date: 01 Nov-22 15:55	Species: Pimephales promelas	Brine: Not Applicable			
Test Length: 7d 2h	Taxon: Actinopterygii	Source: In-House Culture	Age: <24		
Sample ID: 11-8318-7371	Code: 468601AB	Project:			
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N			
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:			
Sample Age: 31h	Client: Eurofins				

Linear Interpolation Options					
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	655298	200	Yes	Two-Point Interpolation

Test Acceptability Criteria		TAC Limits			
Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	0.423	0.25	>>	Yes	Passes Criteria

Point Estimates						
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC25	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Mean Dry Biomass-mg Summary			Calculated Variate						Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	4	0.423	0.425	0.361	0.481	12.10%	0.00%	0.4822	0.00%
6.25		4	0.4997	0.496	0.466	0.541	6.19%	-18.14%	0.4822	0.00%
12.5		4	0.456	0.4525	0.434	0.485	5.51%	-7.80%	0.4822	0.00%
25		4	0.5502	0.5505	0.517	0.583	6.10%	-30.08%	0.4822	0.00%
50		4	0.472	0.5335	0.264	0.557	29.71%	-11.58%	0.472	2.13%
100		4	0.3777	0.472	0	0.567	67.93%	10.70%	0.3777	21.67%

Mean Dry Biomass-mg Detail					
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.481	0.443	0.361	0.407
6.25		0.541	0.495	0.497	0.466
12.5		0.434	0.485	0.469	0.436
25		0.583	0.575	0.517	0.526
50		0.557	0.555	0.512	0.264
100		0.567	0	0.497	0.447



CETIS Analytical Report

Report Date: 02 Nov-22 14:03 (p 6 of 6)
Test Code/ID: 22-2033b / 13-2058-5042

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 02-4897-7368	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:00	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 13:58	MD5 Hash: 6B4B1414DD1190E17412A342B0AA6960	Editor ID: 008-848-998-5

Graphics

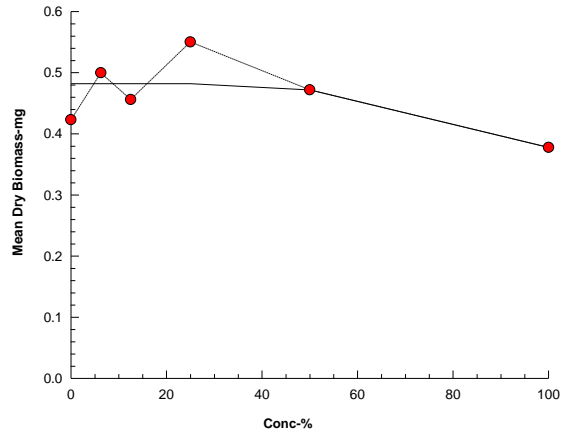


Table of Random Permutations of 16

P.promelas Test ID# 22-2033b

7	12	15	15	1	2	7	16	10	2	14	15	7	13	13	10	6	1	8	10
13	3	8	16	7	10	11	10	13	5	11	7	13	16	7	7	5	13	2	14
3	1	4	5	14	13	3	14	9	13	13	2	9	15	6	2	8	4	5	8
11	8	16	14	15	6	2	6	2	16	8	5	12	3	9	13	4	3	10	4
14	9	1	6	3	9	14	13	8	6	5	8	14	7	3	15	13	11	4	7
2	16	10	13	5	5	13	2	11	7	3	12	5	14	12	16	2	2	9	15
4	6	13	7	2	15	1	9	1	4	7	10	6	9	11	9	7	6	16	11
6	14	6	10	4	14	4	15	3	3	4	16	2	6	5	1	12	10	6	9
10	15	2	1	13	12	16	3	4	8	10	1	15	5	14	12	14	12	3	2
12	10	7	12	9	11	9	8	12	14	15	4	11	8	16	8	9	14	14	1
15	7	5	2	10	7	8	12	6	15	6	13	16	12	15	4	11	8	12	6
16	2	11	8	8	8	15	5	16	1	1	9	8	1	8	14	16	5	13	5
9	13	14	3	6	4	10	11	5	12	9	3	10	4	4	3	10	9	1	3
8	11	9	4	11	3	12	7	7	10	12	14	3	10	1	6	15	16	15	12
1	5	12	11	16	16	5	4	14	9	16	11	1	2	10	5	1	15	7	13
5	4	3	9	12	1	6	1	15	11	2	6	4	11	2	11	3	7	11	16
					REP														
11	8	16	5	5	13	1	13	2	16	14	12	9	8	7	5	13	3	13	3
2	2	8	8	14	16	4	3	8	11	10	14	15	1	2	11	4	5	15	9
6	13	2	13	6	5	9	15	11	10	12	6	16	15	16	9	10	12	16	15
14	12	4	16	16	11	14	10	5	12	3	3	12	14	15	13	6	4	1	16
8	6	3	9	4	10	6	4	16	2	2	9	8	16	4	6	5	15	7	8
9	15	12	10	3	2	12	6	1	15	4	13	7	7	9	12	14	8	8	11
3	10	11	12	13	12	5	11	7	8	9	5	14	11	10	1	3	13	3	5
16	1	13	14	8	14	15	5	3	7	11	15	6	12	5	7	11	1	14	4
1	14	14	2	9	15	16	14	6	14	7	8	3	13	11	8	7	7	12	7
4	4	6	4	12	3	11	8	15	9	8	1	13	6	3	3	15	9	9	12
15	5	1	11	10	6	3	7	10	5	5	11	10	10	12	15	16	14	5	2
5	3	5	6	7	7	13	2	14	3	16	4	5	5	13	4	9	16	2	6
12	7	15	15	15	9	8	12	12	13	15	10	1	4	6	16	2	6	11	1
10	11	10	3	2	4	2	1	4	6	6	7	11	9	14	10	8	11	4	13
7	9	7	7	11	1	7	16	13	1	13	2	4	2	1	2	12	2	10	14
13	16	9	1	1	8	10	9	9	4	1	16	2	3	8	14	1	10	6	10
1	6	7	4	8	6	5	2	8	15	4	6	6	1	4	5	7	13	2	10
9	15	11	3	11	15	9	10	1	3	8	2	15	7	9	8	16	1	14	3
10	16	4	5	12	9	16	11	7	1	7	16	11	8	3	3	12	2	3	4
4	14	1	9	5	5	4	13	6	8	15	5	12	5	7	16	5	11	8	1
7	3	13	14	15	2	1	14	16	5	14	9	2	16	1	12	6	14	4	13
16	11	2	1	14	16	6	9	3	4	16	14	3	15	11	11	3	9	12	5
3	10	16	16	13	7	13	1	11	14	9	10	16	2	10	2	10	7	10	16
11	13	9	13	4	13	8	3	5	13	10	12	5	12	5	14	13	16	5	6
15	2	3	12	9	12	2	4	13	10	3	13	14	4	2	1	14	8	6	12
14	1	14	6	10	1	3	12	4	2	2	4	13	3	16	9	9	3	7	14
13	12	5	11	3	11	15	8	2	7	11	7	8	14	6	4	4	4	15	11
12	5	10	7	2	14	7	15	14	16	13	1	9	10	12	10	11	10	9	8
8	9	8	10	6	4	11	7	10	11	6	8	4	9	8	15	8	6	11	9
2	7	6	2	1	8	10	6	15	12	1	11	7	11	13	6	1	15	13	15
6	4	15	8	16	10	14	16	9	6	12	3	10	6	14	7	2	12	16	7
5	8	12	15	7	3	12	5	12	9	5	15	1	13	15	13	15	5	1	2
13	4	10	4	16	13	16	13	5	3	6	14	1	16	8	7	2	3	3	12
5	14	4	6	8	2	15	1	13	14	16	4	15	4	3	12	12	1	4	7
2	2	2	15	14	16	9	12	16	6	10	15	14	9	10	1	14	8	8	16
7	12	15	8	12	3	5	14	7	12	5	13	16	1	7	5	11	2	9	3
6	9	7	14	9	14	10	11	15	11	12	1	12	12	14	16	3	11	11	8
14	5	16	7	10	8	11	8	14	13	7	11	6	3	11	4	4	6	6	9
15	11	8	9	7	12	8	7	1	15	9	3	3	7	13	11	10	4	5	1
11	6	6	1	4	1	3	16	12	5	4	9	13	13	6	8	15	9	1	14
4	10	3	16	2	11	7	9	6	9	1	8	4	11	5	2	16	10	12	4
1	8	1	13	1	15	4	4	11	4	2	16	5	8	1	9	5	12	16	6
9	7	14	2	6	4	14	10	9	8	15	10	7	10	9	10	6	14	10	11
12	1	9	10	15	5	2	15	10	2	14	2	8	2	4	13	8	5	15	5
3	3	12	11	5	9	6	6	3	10	13	12	9	6	2	15	7	15	7	13
10	15	11	5	13	7	12	5	2	7	11	5	10	15	12	3	1	13	13	10
8	13	13	3	3	10	13	2	4	1	8	6	11	14	15	6	9	16	2	2
16	16	5	12	11	6	1	3	8	16	3	7	2	5	16	14	13	7	14	15



SAMPLE RECEIPT CHEMISTRY & CHAIN OF CUSTODY DOCUMENTS

NEW ENGLAND BIOASSAY - INITIAL CHEMISTRY DATA

PERMITTEE: West Valley Demonstration Project
 NEB JOB # 44240

DATE RECEIVED	10/25/22		10/28/22			
SAMPLE TYPE:	EFF #1	BROOK #1	EFF #2	BROOK #2		
COC #	C42-5354	C42-5355	C42-5406	C42-5406		
pH (SU)	7.9	7.8	7.1	7.5		
Temperature (°C)	2.0, 1.2	1.3	0.7, 1.3, 1.1	0.7		
Dissolved Oxygen (mg/L)	12.0	11.8	11.3	11.4		
Conductivity (µmhos)	1,518	301	1,512	291		
Salinity (ppt)	<1	<1	<1	<1		
TRC - DPD (mg/L)	0.020	0.031	<0.001	0.020		
TRC - Amperometric (mg/L)	N/A	N/A	N/A	N/A		
Hardness (mg/L as CaCO ₃)	156	126	166	120		
Alkalinity (mg/l as CaCO ₃)	127	103	131	100		
Tech Initials	MM/AG	MM/AG	MM/KO	MM/KO		

NOTE: NA = NOT APPLICABLE

Data Reviewed By: Kimberly Wills Date Reviewed: 12/5/22



NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

EFFLUENT

Sample Set #1

Sampler: Roesch
Title: _____
Facility: West Valley

Sampling Method: Composite
Sample ID: Outfall 001
Start Date: 10-23-22 Time: 0700
End Date: 10-24-22 Time: 0700

Sampling Method: _____ Grab (for pH and TRC only _____)
Date Collected: _____
Time Collected: _____

Sample Type: _____ Prechlorinated
_____ Dechlorinated
 Unchlorinated
_____ Chlorinated

Effluent Sampling Location and Procedures: SP001 Em-2

Receiving Water Sampling Location and Procedures: ER353 EM-2

Requested Analysis: Chronic and modified acute

Sample Shipment

Method of Shipment: UPS Next Day Air

Relinquished By: _____ Date: _____ Time: _____
Received By: [Signature] NEB Date: 10-25-22 Time: 1024
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____

FOR NEB USE ONLY

Temperature of Effluent Upon Receipt at Lab: 2.0, 1.2 °C
Temperature of Receiving Water Upon Receipt at Lab: 1.3 °C
Effluent COC# C42-5354
Receiving Water COC# C42-5355

IF THIS COOLER IS MISPLACED OR THE LABEL IS LOST, PLEASE SHIP TO:
KIM WILLS, NEW ENGLAND BIOASSAY, 77 BATSON DRIVE, MANCHESTER CT 06042



Received
ON ICE

CH2M Hill B&W West Valley LLC (CHBWV) 10282 Rock Springs Rd. West Valley, NY 14171
 CHAIN-OF-CUSTODY / REQUEST-FOR-ANALYSIS / PACKING SHEET

Sample Type: LIQUID- SPDES/PROCESS WATER

Electronic Disk - YES

External Lab Destination Test America	Purchase Order Number CH-007532	Charge Number WV03.IN.01.01.02.01	Release Number 1336	Report Format Level 1	Priority 10 Days	OrderID: 221020-01 Work Order: SP-Asap
--	------------------------------------	--------------------------------------	------------------------	--------------------------	---------------------	---

Custodian Signature: ASR C-O-C Reviewed By: [Signature]
 Report Data To: Dave Klenk (716) 485-3109
 Chet Wrotniak (716) 982-6403

Location Code	Sample ID	Date	Time	# Cont	Preservative	Tests	Sample Notes
WN5P001	2022-07367	10/24/22	07:00	1	Cool	wet_du_a wet_pr_uv_a wet_du_c wet_pr_uv_c wet_pr_a wet_pr_c Initial Sample	

WN5P001 (Ferdman Brook) also included in shipping manifest

Signature Rel: Date/Time	Date/Time	Signature Rel: Date/Time	Date/Time	Cool?	YES NO	Temp: C
Signature Rec: Date/Time	10-24-22 0910	Signature Rec: Date/Time		YES	NO	
Signature Rel: Date/Time		Signature Rel: Date/Time		NO	NO	
Signature Rec: Date/Time		Signature Rec: Date/Time		NO	NO	

NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

Sample set# 2

EFFLUENT

Sampler: Regan
Title: Env. Scientist
Facility: West Valley

RECEIVING WATER

Sampler: Regan
Title: Env. Scientist
Facility: West Valley

Sampling Method: Composite

Sample ID: Outfall 001
Start Date: 10-26-22 Time: 08:00
End Date: 10-27-22 Time: 08:00

Sampling Method: Grab

Sample ID: Erdman Brook
Date Collected: 10-27-22
Time Collected: 8:15

Sampling Method: Grab (for pH and TRC only)

Date Collected: _____
Time Collected: _____

Sample Type: _____ Prechlorinated
_____ Dechlorinated
 Unchlorinated
_____ Chlorinated

Received
ON ICE

Effluent Sampling Location and Procedures: SPOO1 EM-02

Receiving Water Sampling Location and Procedures: ERB53 EM-02

Requested Analysis: Chronic and modified acute

Sample Shipment

Method of Shipment: UPS Next Day Air
Relinquished By: [Signature] Date: 10-27-22 Time: 0830
Received By: [Signature] NEB Date: 10-28-22 Time: 1031
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____

FOR NEB USE ONLY

Temperature of Effluent Upon Receipt at Lab: 0.7, 1.3, 1.1 °C Temperature of Receiving Water Upon Receipt at Lab: 0.7 °C
Effluent COC# C42-5406 Receiving Water COC# C42-5407

**IF THIS COOLER IS MISPLACED OR THE LABEL IS LOST, PLEASE SHIP TO:
KIM WILLS, NEW ENGLAND BIOASSAY, 77 BATSON DRIVE, MANCHESTER CT 06042**

CH2M Hill B&W West Valley LLC (CHBWV) 10282 Rock Springs Rd. West Valley, NY 14171
 CHAIN-OF-CUSTODY / REQUEST-FOR-ANALYSIS / PACKING SHEET

Sample Type: LIQUID- SPDES/PROCESS WATER

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID: 221020-01 Work Order: SP-Asap
Test America	CH-007532	WV03.IN.01.01.02.01	13387	1	10 Days	

Custodian Signature: _____
 C-O-C Reviewed By: [Signature] 10/27/22
 Report Data To: Dave Klenk (716) 485-3109
 Chet Wrotniak (716) 982-6403

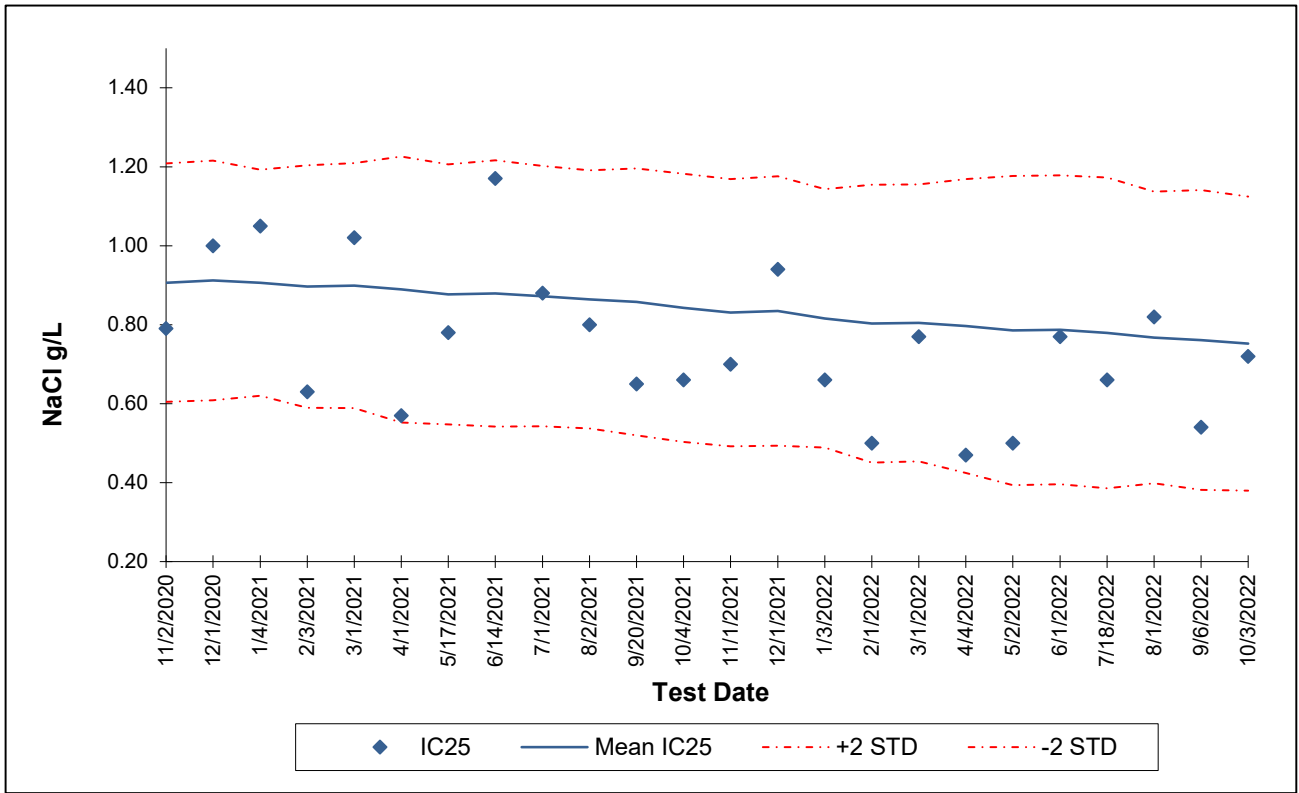
Location Code	Sample ID	Date	Time	# Cont	Preservative	Tests	Sample Notes
WN/SP001	2022-07378	10/27/22	08:00	3	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c	ReFreshing sample

*WONERS (EADMAN BLACK)
 Also Included in shipment*

Signature Rel: Date/Time	<u>[Signature]</u> 10-28-22	Signature Rel: Date/Time	
Signature Rec: Date/Time	10/31	Signature Rec: Date/Time	
Signature Rel: Date/Time		Signature Rel: Date/Time	
Signature Rec: Date/Time		Signature Rec: Date/Time	
Signature Rel: Date/Time		Sample Receipt at Lab:	Cool? YES NO
Signature Rec: Date/Time		Signature Rec: Date/Time	Temp: C

REFERENCE TOXICANT CHARTS

New England Bioassay
Reference Toxicant Data: Sodium chloride (NaCl) *Ceriodaphnia dubia* Chronic Reproduction IC₂₅

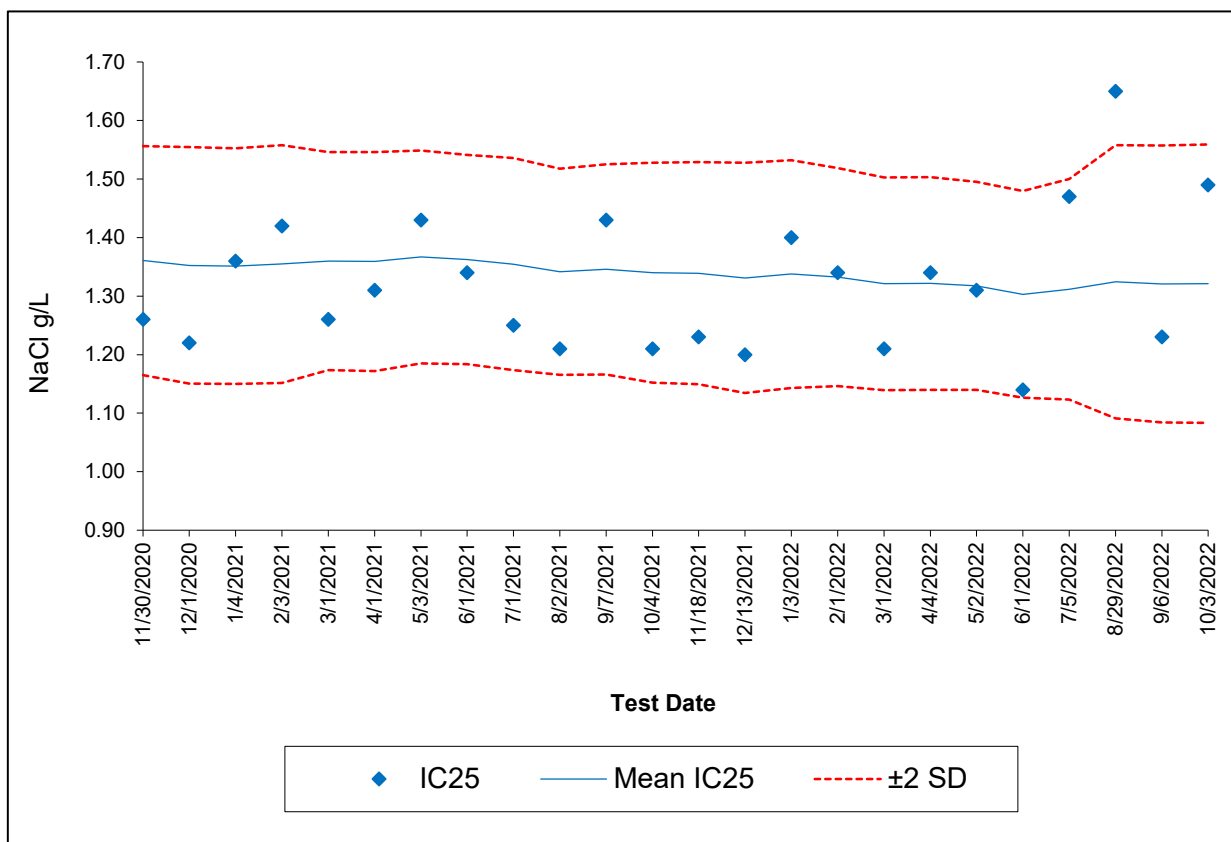


Test ID	Date	IC ₂₅	Mean IC ₂₅	STD	-2STD	+2STD	Avg. CV	Repro PMSD (%)	Avg. PMSD (%)
20-1609	11/2/2020	0.79	0.91	0.15	0.60	1.21	0.17	11.83	20.22
20-1738	12/1/2020	1.00	0.91	0.15	0.61	1.22	0.17	9.35	19.96
21-8	1/4/2021	1.05	0.91	0.14	0.62	1.19	0.16	14.78	18.88
21-139	2/3/2021	0.63	0.90	0.15	0.59	1.20	0.17	14.82	18.71
21-261	3/1/2021	1.02	0.90	0.16	0.59	1.21	0.17	11.44	18.36
21-427	4/1/2021	0.57	0.89	0.17	0.55	1.23	0.19	9.83	18.35
21-679	5/17/2021	0.78	0.88	0.16	0.55	1.21	0.19	14.03	18.29
21-824	6/14/2021	1.17	0.88	0.17	0.54	1.22	0.19	11.06	18.11
21-909	7/1/2021	0.88	0.87	0.16	0.54	1.20	0.19	14.51	18.19
21-1065	8/2/2021	0.80	0.86	0.16	0.54	1.19	0.19	7.11	17.48
21-1384	9/20/2021	0.65	0.86	0.17	0.52	1.20	0.20	16.31	17.35
21-1450	10/4/2021	0.66	0.84	0.17	0.50	1.18	0.20	18.06	17.35
21-1614	11/1/2021	0.70	0.83	0.17	0.49	1.17	0.20	32.72	18.13
21-1749	12/1/2021	0.94	0.83	0.17	0.49	1.18	0.20	26.37	18.15
22-02	1/3/2022	0.66	0.82	0.16	0.49	1.14	0.20	14.17	17.73
22-156	2/1/2022	0.50	0.80	0.18	0.45	1.15	0.22	22.20	17.70
22-302	3/1/2022	0.77	0.80	0.18	0.45	1.16	0.22	10.96	17.73
22-496	4/4/2022	0.47	0.80	0.19	0.42	1.17	0.23	14.23	17.58
22-667	5/2/2022	0.50	0.79	0.20	0.39	1.18	0.25	22.29	17.25
22-871	6/1/2022	0.77	0.79	0.20	0.40	1.18	0.25	13.26	17.30
22-1212	7/18/2022	0.66	0.78	0.20	0.39	1.17	0.25	21.83	17.18
22-1326	8/1/2022	0.82	0.77	0.18	0.40	1.14	0.24	15.61	16.19
22-1589	9/6/2022	0.54	0.76	0.19	0.38	1.14	0.25	17.78	15.71
22-1835	10/3/2022	0.72	0.75	0.19	0.38	1.12	0.25	22.88	16.14

National 75th Percentile and 90th Percentile CV Averages for *Ceriodaphnia* Reproduction IC₂₅ (EPA 833-R-00-003): 0.45 - 0.62
 PMSD Upper and Lower Bounds for *Ceriodaphnia* Reproduction (EPA-821-R-02-013): 13% - 47%

New England Bioassay

Reference Toxicant Data: Sodium chloride (NaCl) *Pimephales promelas* 7-day Chronic Growth IC₂₅



Test ID	Date	IC ₂₅	Mean IC ₂₅	STD	-2STD	+2STD	Avg. CV	Growth PMSD (%)	Avg. PMSD (%)
20-1741	11/30/2020	1.26	1.36	0.10	1.17	1.56	0.07	11.25	11.02
20-1742	12/1/2020	1.22	1.35	0.10	1.15	1.55	0.07	7.26	10.93
21-9	1/4/2021	1.36	1.35	0.10	1.15	1.55	0.07	12.19	11.03
21-140	2/3/2021	1.42	1.35	0.10	1.15	1.56	0.07	6.07	10.91
21-262	3/1/2021	1.26	1.36	0.09	1.17	1.55	0.07	8.42	10.98
21-428	4/1/2021	1.31	1.36	0.09	1.17	1.55	0.07	9.30	10.73
21-593	5/3/2021	1.43	1.37	0.09	1.19	1.55	0.07	9.51	10.81
21-738	6/1/2021	1.34	1.36	0.09	1.18	1.54	0.07	10.96	10.93
21-910	7/1/2021	1.25	1.35	0.09	1.17	1.54	0.07	10.00	10.90
21-1066	8/2/2021	1.21	1.34	0.09	1.17	1.52	0.07	12.34	10.82
21-1274	9/7/2021	1.43	1.35	0.09	1.17	1.53	0.07	12.36	10.81
21-1451	10/4/2021	1.21	1.34	0.09	1.15	1.53	0.07	13.54	10.96
21-1615	11/18/2021	1.23	1.34	0.09	1.15	1.53	0.07	7.76	10.77
21-1812	12/13/2021	1.20	1.33	0.10	1.13	1.53	0.07	10.88	10.90
22-03	1/3/2022	1.40	1.34	0.10	1.14	1.53	0.07	14.75	11.27
22-157	2/1/2022	1.34	1.33	0.09	1.15	1.52	0.07	6.06	11.16
22-303	3/1/2022	1.21	1.32	0.09	1.14	1.50	0.07	9.21	10.29
22-497	4/4/2022	1.34	1.32	0.09	1.14	1.50	0.07	18.60	10.68
22-668	5/2/2022	1.31	1.32	0.09	1.14	1.50	0.07	12.47	10.84
22-872	6/1/2022	1.14	1.30	0.09	1.13	1.48	0.07	10.45	10.81
22-1114	7/5/2022	1.47	1.31	0.09	1.12	1.50	0.07	16.02	11.13
22-1546	8/29/2022	1.65	1.32	0.12	1.09	1.56	0.09	20.64	11.66
22-1590	9/6/2022	1.23	1.32	0.12	1.08	1.56	0.09	15.22	11.56
22-1836	10/3/2022	1.49	1.32	0.12	1.08	1.56	0.09	15.11	11.68

National 75th Percentile and 90th Percentile CV Averages for Fathead Growth IC₂₅ (EPA 833-R-00-003): 0.38 - 0.45
 PMSD Upper and Lower Bounds for Fathead Growth (EPA-821-R-02-013): 12% - 30%

NYELAP ACCREDITATION ANALYTE LIST



Department of Health

KATHY HOCHUL
Governor

MARY T. BASSETT, M.D., M.P.H.
Commissioner

KRISTIN M. PROUD
Acting Executive Deputy Commissioner

LAB ID: 12157

April 01, 2022

MS. KIMBERLY WILLS
NEW ENGLAND BIOASSAY INC.
77 BATSON DRIVE
MANCHESTER, CT 06042

Dear Ms. Wills,

A revised certificate has been generated because of the change(s) listed below.

If your laboratory has applied for a change in the laboratory's location and/or technical director, the approved change(s) will be reflected on the certificate.

If the changes to your certification are due to insufficient proficiency tests and/or proficiency test failures, the expired certificates must be returned to the Environmental Laboratory Approval Program (ELAP) office within 10 days of the date of this letter. In addition, your laboratory must investigate the root cause for any insufficient and/or unsatisfactory proficiency tests and keep this on file for review during an onsite assessment. Also, the laboratory must provide a corrective action report to ELAP within 30 calendar days of a request by the program.

In addition, your laboratory must investigate and document the root cause for any insufficient and/or unsatisfactory proficiency tests. If your lab lost accreditation due to two PT failures, you must submit the corrective action response to ELAP for review before accreditation will be re-instated.

AppCat	Analyte Name	Method Name	Comments	Date
NW - NELAC	Fathead minnow-Pimephales promelas	EPA 1000.0	Raised to Approved	04/05/2022
NW - NELAC	Fathead minnow-Pimephales promelas	EPA 2000.0	Raised to Approved	04/05/2022
NW - NELAC	Opossum shrimp-Americamysis bahia	EPA 1007.0	Raised to Approved	04/05/2022
NW - NELAC	Opossum shrimp-Americamysis bahia	EPA 2007.0	Raised to Approved	04/05/2022
NW - NELAC	Sheephead minnow-Cyprinodon variegatus	EPA 1004.0	Raised to Approved	04/05/2022
NW - NELAC	Sheephead minnow-Cyprinodon variegatus	EPA 2004.0	Raised to Approved	04/05/2022
NW - NELAC	Water flea-Ceriodaphnia dubia	EPA 1002.0	Raised to Approved	04/05/2022
NW - NELAC	Water flea-Ceriodaphnia dubia	EPA 2002.0	Raised to Approved	04/05/2022

1
2
3
4
5



New England Bioassay Inc.

Aquatic Toxicity Testing Services

77 Batson Drive
Manchester, CT 06042
(860)-643-9560
www.nebio.com

CHRONIC AQUATIC TOXICITY TEST REPORT

Permitee: West Valley Demonstration Project NPDES # NY0000973
 Report submitted to: Test America
10 Hazelwood Dr, Amhesrt NY 14228
 Sample ID: UV Treated
 Test Month/Year: October 2022
 NEB Proj # 44240

Test Type / Method: *Pimephales promelas* Chronic Static-Renewal Freshwater
 Test Method 1000.0; EPA 821-R-02-013

Effluent Sample Dates: #1 10/23-24/22 #2 10/26-27/22

Test Start Date: 10/25/22

Results Summary

Your results were as follows:

Passed all permit limits

Acute Test Results

Species	LC50	TUa	Permit Limit	Pass / Fail
<i>Pimephales promelas</i>	>100%	0.3	≤ 0.3	Pass

Chronic Test Results

Species	C-NOEC	TUc	IC25	Permit Limit	Pass/Fail
<i>Pimephales promelas</i>	100%	1.0	>100%	≤ 1.0	Pass

Data Qualifiers affecting this test:

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

This report shall not be reproduced, except in its entirety, without approval of NEB. NEB is the sole authority for authorizing edits or modifications to the data contained in this report. NEB holds no responsibility for results and/or data that are not consistent with the original. Please contact the Lab Director, Kimberly Wills, at 860-643-9560 or kimberly.wills@nebio.com if you have questions concerning these results.



Test Report Certification

- 1
- 2
- 3
- 4
- 5

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: UV Treated Test Start Date: 10/25/22

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

NY0000973
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: 12/5/22
(Date)

Kimberly Wills
Kimberly Wills
Laboratory Director
New England Bioassay Inc.

General Test Conditions

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: UV Treated Test Start Date: 10/25/22

Sample Collection Information

Effluent #1 Dates/Times: 10/23-24/22 @ 0700-0700 Receiving Water #1 Date/Time: 10/24/22 @ 0630
Effluent #2 Dates/Times: 10/26-27/22 @ 0800-0800 Receiving Water #2 Date/Time: 10/27/22 @ 0815
Effluent #3 Dates/Times: N/A @ N/A Receiving Water #3 Date/Time: N/A @ N/A

Were a minimum of three samples collected? Yes No *(see note below)

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

* sample collection note: NYSDEC has approved West Valley Demonstration Project to use only two sets of samples for their chronic testing due to the batch nature of their discharge.

Test Conditions

Permittee's Receiving Water: Erdman Brook

Pimephales promelas

- Dilution water: Laboratory synthetic moderately hard water (hardness 80 - 100 mg/L CaCO₃)
- Control water: Not Applicable

Effluent concentrations tested: 0%, 6.25%, 12.5%, 25%, 50%, 100%

Was effluent salinity adjusted? No Yes with Instant Ocean sea salts to N/A ppt

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

- Dechlorination was not required

Aeration: Did Dissolved Oxygen levels fall below 40% saturation? Yes No

Test Aerated at <100 bubbles/minute as of: N/A (for Fathead minnow test only)

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

Reference Toxicant Data

Fathead minnows

Date: 10/3/22
Toxicant: Sodium chloride
Dilution Water: NEB Soft Water
Organism Source: NEB
Growth IC25: 1.49 g/L
Results within range Yes No

Pimephales promelas Test Results

Permittee name: West Valley Demonstration Project Permit number: NY0000973
 Client sample ID: UV Treated Test Dates: 10/25/22 - 11/1/22

Test Acceptability Criteria

Lab Diluent Survival: 100 % Mean Lab Diluent Growth: 0.48 mg
 Brook Control Survival: N/A % Mean Brook Control Growth: N/A mg
 Thiosulfate Control Survival: N/A % Mean Thiosulfate Control Growth: N/A mg

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

		Permit Limit	Test Result	Pass/Fail Status
Acute Data	48 hr LC50		>100%	
	48 hr NOEC		100%	
	TUa	≤ 0.3	0.3	Pass
Chronic Data	Chronic LC50		>100%	
	Survival C-NOEC		100%	
	Survival C-LOEC		>100%	
	Growth C-NOEC		100%	
	Growth C-LOEC		>100%	
	Growth IC25		>100%	
	Growth IC50		>100%	
	Reportable C-NOEC		100%	
	Reportable C-LOEC		>100%	
	MATC		>100%	
	TUc	≤ 1.0	1.0	Pass

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

Test Variability

Growth PMSD: 13.0% Upper & Lower EPA bounds: 12 - 30% Low Within bounds High

- PMSD exceeds upper bounds. Test results are highly variable and may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC)
- The PMSD falls within the upper (30%) and lower (12%) bounds. Results are reportable.
- PMSD falls below the lower bound test variability criterion. The test is very sensitive. The relative percent difference (RPD) between the control and each treatment was calculated and compared to the lower bound.
 - The RPD values for all concentrations fall below the lower bound. Any differences observed in this test are considered statistically insignificant.
 - Some of the concentrations that were flagged as statistically significant have RPD values that fall below the lower bound. Any differences observed in these concentrations will not be considered statistically significantly decreased from the control.
 - No statistically significant reductions were observed in this test.

***Pimephales promelas* Test Results**

Permittee name: West Valley Demonstration Project Permit number: NY0000973
Client sample ID: UV Treated Test Dates: 10/25/22 - 11/1/22

Concentration - Response Evaluation

Survival: #12 No significant effects at any test concentration with a flat concentration-response curve. Test concentrations performed very similarly to dilution control.

Growth: #12 No significant effects at any test concentration with a relatively flat concentration-response curve. Test concentrations performed both above and below (but similarly to) the dilution control.

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

Survival	Growth	
<u> X </u>	<u> X </u>	Results are reliable and reportable
<u> </u>	<u> </u>	Results are anomalous (see explanation below)
<u> </u>	<u> </u>	Results are inconclusive - retest (see explanation below)

Results Discussion (if applicable):

TEST METHODS

Pimephales promelas

Test type:	Chronic Static Renewal Freshwater Test
Test Reference Manual:	EPA-821-R-02-013 "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms"
Test Method:	<i>Pimephales promelas</i> Survival and Growth Test - EPA 1000.0
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/m ² /s, or 50-100 ft-c (recommended)
Photoperiod:	16 hours light, 8 hours dark (recommended)
Test chamber size:	600 mL (500 mL is recommended minimum)
Test solution volume:	250 mL (recommended minimum)
Renewal of Test Solutions:	Daily (required)
Age of Test Organisms:	Newly hatched larvae less than 24 hours old (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:	Feed 0.15 g of a concentrated suspension of newly hatched brine shrimp nauplii twice daily, 6 h between feedings (at the beginning of the work day prior to renewal, and at the end of the work day following renewal). Sufficient <i>Artemia</i> are added to provide an excess.
Cleaning:	Siphoned daily, immediately before test solution renewal (required)
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:	7 days (required)
Endpoints:	Survival and growth (weight) (required)
Test Acceptability:	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg (required)
Sampling Requirements:	Minimum of three samples with a maximum holding time of 36 hours before first use. (required)
Sample volume required:	2.5 L/Day (recommended)

PIMEPHALES PROMELAS DATASHEETS & STATISTICAL ANALYSIS

NEW ENGLAND BIOASSAY TOXICITY DATA FORM

CHRONIC COVER SHEET

CLIENT: Test America
 ADDRESS: 10 Hazelwood Drive
Amherst, NY 14228
 PERMITTEE: West Valley Demonstration Project
 PERMIT NUMBER: NY0000973
 DILUTION WATER: Moderately Hard Synthetic

P.promelas TEST ID # 22-2034
 CHAIN OF CUSTODY # c42-5354/55
 NEB PROJECT # 44240
 SAMPLE ID: UV Treated

VERTEBRATES

TEST SET-UP TECHNICIAN: AB
 TEST SPECIES: *Pimephales promelas*
 NEB LOT # Pp22(10-25)1530
 AGE: < 24 hours
 TEST SOLUTION VOLUME (mls): 400
 ORGANISMS PER TEST CHAMBER: 10
 ORGANISMS PER CONCENTRATION: 40

LABORATORY CONTROL WATER (MHRCF)

Lot Number	Hardness mg/L	Alkalinity mg/L
C42-MH031	92	60

	DATE	TIME
TEST START:	10/25/22	1345
TEST END:	11/1/22	1441

COMMENTS: UV Treatment: Effluent was treated prior to mixing the test each day using a UV sterilization pen (SteriPEN adventurer opti). 1 L of effluent was treated at a time as per the instructions of the UV Sterilizer, for a total of 3L treated per day. The test concentrations were then mixed with the UV treated effluent using synthetic laboratory water as the diluent.

REVIEWED BY: *Kimberly Wills* DATE: 12/5/22

NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Pimephales promelas</i>		
DILUTION WATER SOURCE:		Moderately Hard Synthetic			START DATE:		10/25/22	TIME: 1345	
NEB Lab Synthetic Diluent		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.1	24.9	24.4	24.9	24.3	24.1	24.9	
D.O. mg/L	Initial	8.2	8.2	8.4	8.4	8.5	8.4	8.3	
pH s.u.	Initial	7.7	7.6	7.0	7.8	8.0	7.9	7.9	
Conductivity µS	Initial	323	322	326	322	322	325	322	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.4	24.3	24.0	24.0	24.0	24.0	24.2	
D.O. mg/L	Final	7.8	7.6	7.8	8.2	7.8	7.7	6.8	
pH s.u.	Final	7.5	7.2	7.2	7.8	7.9	7.5	7.7	
Conductivity µS	Final	339	346	346	357	350	355	353	
6.25%		1	2	3	4	5	6	7	
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.1	24.9	24.7	25.0	24.3	24.1	25.0	
D.O. mg/L	Initial	8.3	8.3	8.3	8.4	8.5	8.4	8.3	
pH s.u.	Initial	7.6	7.7	7.0	7.9	8.0	7.9	7.9	
Conductivity µS	Initial	405	408	400	402	400	404	400	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.8	24.1	24.0	24.0	24.0	24.0	24.4	
D.O. mg/L	Final	7.1	7.5	7.3	8.0	7.9	7.7	6.4	
pH s.u.	Final	7.6	7.3	7.4	7.8	7.9	7.6	7.6	
Conductivity µS	Final	420	432	427	435	425	355	432	
12.5%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	24.9	24.8	24.8	24.3	24.1	25.0	
D.O. mg/L	Initial	8.4	8.3	8.3	8.4	8.5	8.4	8.3	
pH s.u.	Initial	7.7	7.7	7.2	7.9	8.0	7.9	7.9	
Conductivity µS	Initial	485	473	480	467	474	475	474	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.7	23.7	24.5	24.6	24.1	24.4	24.7	
D.O. mg/L	Final	6.9	7.3	6.6	7.5	7.8	7.0	6.8	
pH s.u.	Final	7.6	7.3	7.3	7.7	7.9	7.6	7.6	
Conductivity µS	Final	500	496	498	498	492	497	496	

NEB'S DATA SHEET FOR ROUTINE CHEMICAL AND PHYSICAL DETERMINATIONS

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY							
NEB PROJECT NUMBER:		44240			TEST ORGANISM		<i>Pimephales promelas</i>		
DILUTION WATER SOURCE:		Moderately Hard Synthetic			START DATE:		10/25/22	TIME: 1345	
25%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	24.9	24.8	24.8	24.4	24.1	24.9	
D.O. mg/L	Initial	8.7	8.5	8.4	8.6	8.6	8.5	8.4	
pH s.u.	Initial	7.7	7.7	7.2	7.8	8.0	7.9	7.9	
Conductivity µS	Initial	632	621	632	624	626	631	625	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.5	24.4	24.0	24.5	24.0	24.0	24.3	
D.O. mg/L	Final	7.1	7.3	7.3	7.4	8.0	7.2	6.7	
pH s.u.	Final	7.5	7.4	7.6	7.7	8.0	7.6	7.7	
Conductivity µS	Final	641	646	657	653	651	664	656	
50%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	25.0	24.8	24.8	24.7	24.4	24.1	25.1	
D.O. mg/L	Initial	9.1	8.7	8.4	8.9	8.8	8.8	8.5	
pH s.u.	Initial	7.6	7.8	7.3	7.8	8.0	7.8	7.9	
Conductivity µS	Initial	930	920	932	919	930	936	928	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.4	24.3	24.0	24.0	24.0	24.0	24.0	
D.O. mg/L	Final	7.7	7.6	7.6	7.7	7.5	7.4	6.4	
pH s.u.	Final	7.0	7.5	7.8	7.7	8.0	7.8	7.7	
Conductivity µS	Final	944	945	970	982	985	975	975	
100%		1	2	3	4	5	6	7	Remarks
Tech Initials	Initial	AB	SM/AG	MM	SM/AG	MM	TS	SM/AG	
Temp °C	Initial	24.9	24.6	24.7	24.4	24.4	24.0	25.2	
D.O. mg/L	Initial	10.6	9.8	8.6	10.0	9.1	9.4	8.7	
pH s.u.	Initial	7.6	7.7	7.4	7.7	7.9	7.7	7.9	
Conductivity µS	Initial	1,512	1,510	1,521	1,507	1,510	1,531	1,503	
Tech Initials	Final	AG	AN	SM/AG	MM	TS	SM/AG	AN	
Temp °C	Final	24.2	24.4	24.2	24.0	24.0	24.1	24.4	
D.O. mg/L	Final	7.7	7.6	7.8	7.6	7.5	7.3	6.4	
pH s.u.	Final	7.7	7.7	7.9	7.7	8.1	7.9	7.8	
Conductivity µS	Final	1,523	1,542	1,545	1,571	1,581	1,550	1,550	

**NEB'S SURVIVAL DATA SHEET FOR FATHEAD MINNOW LARVAL
SURVIVAL AND GROWTH TEST**

FACILITY NAME & ADDRESS:	West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY									
NEB PROJECT NUMBER:	44240	TEST NUMBER:	22-2034	COC #	c42-5354/55					
TEST ORGANISM:	<i>Pimephales promelas</i>			AGE:	<24 hours	Lot #	5			
START DATE:	10/25/22	TIME:	1345	END DATE:	11/1/22	TIME:	1441			

24.9

Effluent Concentration	Replicate Number	Number of Survivors								
		Day								
		0	1	2	3	4	5	6	7	Remarks
	ANALYST	AB	AG	AN	SM/AG	MM	TS	AB	SM/PD	
NEB Lab Synthetic Diluent	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
6.25%	A	10	10	10	10	10	9	9	9	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
12.5%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	9	9	9	9	9	9	
	D	10	10	10	10	10	10	10	10	
25%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
50%	A	10	10	9	9	9	9	9	9	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	
100%	A	10	10	10	10	10	10	10	10	
	B	10	10	10	10	10	10	10	10	
	C	10	10	10	10	10	10	10	10	
	D	10	10	10	10	10	10	10	10	

D.O. concentration fell below 4.0 mg/L Yes No

Replicates in all concentrations were aerated starting: N/A Tech Initials: N/A

NEW ENGLAND BIOASSAY WEIGHT DATA FOR FATHEAD MINNOW LARVAL SURVIVAL AND GROWTH TEST

FACILITY NAME & ADDRESS:		West Valley Demonstration Project WSNP001, 10282 Rock Springs Rd West Valley NY	
NEB PROJECT #	44240	NEB TEST NUMBER:	22-2034
TEST START DATE	10/25/22	WEIGHING DATE:	11/2/22
TEST END DATE	11/1/22		
DRYING TEMPERATURE (°C)	100 ± 4	DRYING TIME:	minimum 6 hours
ANALYST-INITIAL WEIGHTS	JN/KW	ANALYST-FINAL WEIGHTS	Jn/Kw
Effluent Concentration	Replicate Number	A Weight of boat (mg)	B Dry Weight: Foil and Larvae (mg)
NEB Lab Synthetic Diluent	A	923.19	927.62
	B	918.40	923.19
	C	917.00	921.78
	D	915.05	920.06
6.25%	A	917.96	922.76
	B	919.17	924.32
	C	919.38	924.21
	D	916.90	922.41
12.5%	A	914.74	919.97
	B	912.90	918.42
	C	918.22	923.23
	D	912.08	917.60
25%	A	919.93	925.41
	B	919.65	924.15
	C	916.74	920.74
	D	916.18	921.06
50%	A	923.00	928.67
	B	915.46	921.52
	C	914.42	919.86
	D	913.56	919.27
100%	A	919.61	925.44
	B	917.05	922.63
	C	919.70	925.00
	D	914.15	920.19



Concentration	Rep	Final Weight (mg)	Initial Weight (mg)	Total Weight (mg)	Average per fish (mg)	Mean fish weight (mg)	Standard Deviation
NEB Lab Synthetic Diluent	1	927.62	923.19	4.43	0.443	0.4753	0.02397742
	2	923.19	918.40	4.79	0.479		
	3	921.78	917.00	4.78	0.478		
	4	920.06	915.05	5.01	0.501		
6.25%	1	922.76	917.96	4.80	0.480	0.5073	0.033190109
	2	924.32	919.17	5.15	0.515		
	3	924.21	919.38	4.83	0.483		
	4	922.41	916.90	5.51	0.551		
12.5%	1	919.97	914.74	5.23	0.523	0.5320	0.024779023
	2	918.42	912.90	5.52	0.552		
	3	923.23	918.22	5.01	0.501		
	4	917.60	912.08	5.52	0.552		
25%	1	925.41	919.93	5.48	0.548	0.4715	0.062447311
	2	924.15	919.65	4.50	0.450		
	3	920.74	916.74	4.00	0.400		
	4	921.06	916.18	4.88	0.488		
50%	1	928.67	923.00	5.67	0.567	0.5720	0.025599479
	2	921.52	915.46	6.06	0.606		
	3	919.86	914.42	5.44	0.544		
	4	919.27	913.56	5.71	0.571		
100%	1	925.44	919.61	5.83	0.583	0.5688	0.031951787
	2	922.63	917.05	5.58	0.558		
	3	925.00	919.70	5.30	0.530		
	4	920.19	914.15	6.04	0.604		

CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 1 of 6)
 Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test **New England Bioassay**

Analysis ID: 02-2830-7909	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Nonparametric-Control vs Treatments	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B9218C07B1C138FFA4453DECE6B4DDD	Editor ID: 008-848-998-5
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.05598	5.60%

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	16	10	1	6	CDF	0.6105	Non-Significant Effect
		25	18	10	1	6	CDF	0.8333	Non-Significant Effect
		50	16	10	1	6	CDF	0.6105	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	0.0088531	0.0017706	5	0.8	0.5640	Non-Significant Effect
Error	0.039839	0.0022133	18			
Total	0.0486921		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	0.6154	0.884	<1.0E-05	Non-Normal Distribution

2d 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	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
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	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
25		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
50		4	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
100		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%



Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 02-2830-7909 Endpoint: 2d Survival Rate CETIS Version: CETISv1.9.7
 Analyzed: 02 Nov-22 14:06 Analysis: Nonparametric-Control vs Treatments Status Level: 1
 Edit Date: 02 Nov-22 9:09 MD5 Hash: B9218C07B1C138FFA4453DECE6B4DDD Editor ID: 008-848-998-5

2d 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	0.9000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

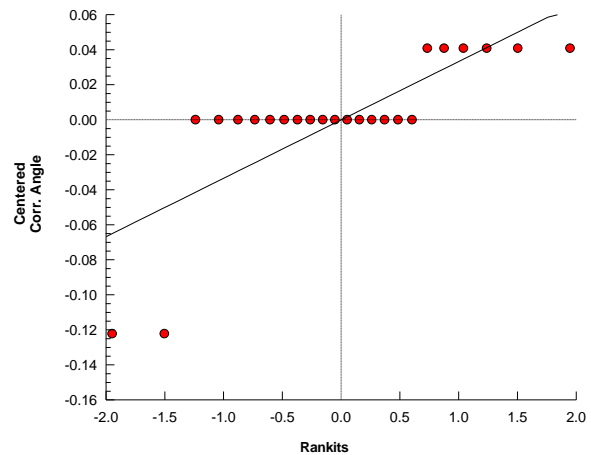
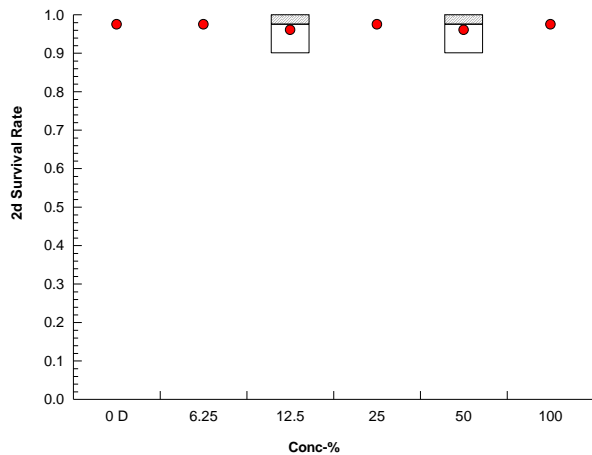
Angular (Corrected) Transformed Detail

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	1.2490	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.2490	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

2d 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	9/10	10/10
25		10/10	10/10	10/10	10/10
50		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 3 of 6)
Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test				New England Bioassay			
Analysis ID: 01-3359-6554	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7					
Analyzed: 02 Nov-22 14:06	Analysis: Nonparametric-Control vs Treatments	Status Level: 1					
Edit Date: 02 Nov-22 9:09	MD5 Hash: 68122CFD3330FC5603626471259FDCDF	Editor ID: 008-848-998-5					
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:					
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water					
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable					
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture	Age: <24				
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:					
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N					
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:					
Sample Age: 31h	Client: Eurofins						

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.06453	6.45%

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	16	10	1	6	CDF	0.6105	Non-Significant Effect
		12.5	16	10	1	6	CDF	0.6105	Non-Significant Effect
		25	18	10	1	6	CDF	0.8333	Non-Significant Effect
		50	16	10	1	6	CDF	0.6105	Non-Significant Effect
		100	18	10	1	6	CDF	0.8333	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.8	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0099598	0.001992	5	0.6	0.7006	Non-Significant Effect
Error	0.0597585	0.0033199	18			
Total	0.0697182		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	0.6694	0.884	<1.0E-05	Non-Normal Distribution

7d 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	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
12.5		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50		4	0.9750	0.8954	1.0000	1.0000	0.9000	1.0000	0.0250	5.13%	2.50%
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	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
12.5		4	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
25		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%
50		4	1.3710	1.2420	1.5010	1.4120	1.2490	1.4120	0.0407	5.94%	2.89%
100		4	1.4120	1.4120	1.4120	1.4120	1.4120	1.4120	0.0000	0.00%	0.00%



Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 01-3359-6554 Endpoint: 7d Survival Rate CETIS Version: CETISv1.9.7
 Analyzed: 02 Nov-22 14:06 Analysis: Nonparametric-Control vs Treatments Status Level: 1
 Edit Date: 02 Nov-22 9:09 MD5 Hash: 68122CFD3330FC5603626471259FDCDF Editor ID: 008-848-998-5

7d 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		0.9000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	0.9000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

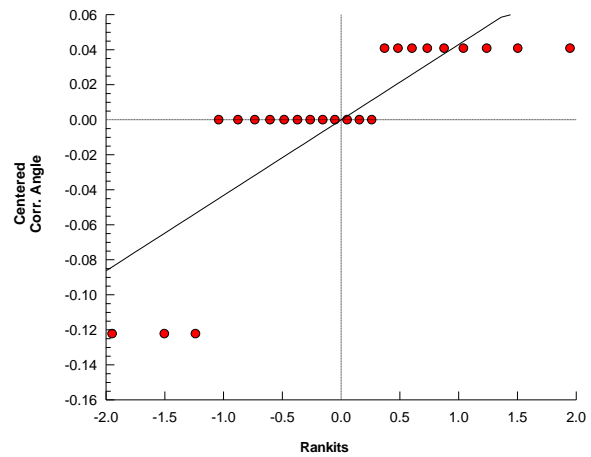
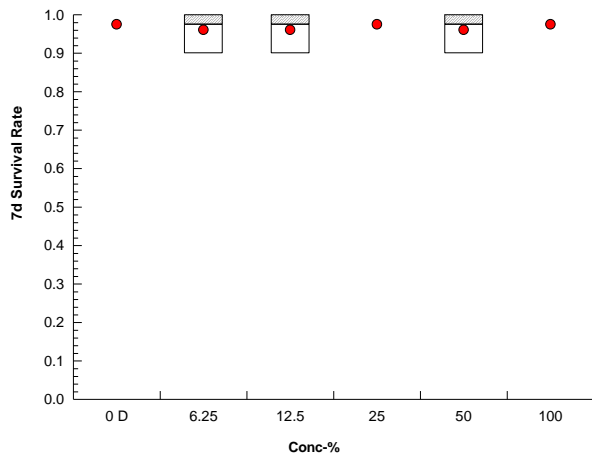
Angular (Corrected) Transformed Detail

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

7d 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		9/10	10/10	10/10	10/10
12.5		10/10	10/10	9/10	10/10
25		10/10	10/10	10/10	10/10
50		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 5 of 6)
 Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test **New England Bioassay**

Analysis ID: 07-3027-5941	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Parametric-Control vs Treatments	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B25BCF85818B06C86257FD6945957BF3	Editor ID: 008-848-998-5
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Untransformed	C > T	100	>100	---	1	0.06163	12.97%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	-1.25	2.407	0.062	6	CDF	0.9914	Non-Significant Effect
		12.5	-2.216	2.407	0.062	6	CDF	0.9996	Non-Significant Effect
		25	0.1465	2.407	0.062	6	CDF	0.7866	Non-Significant Effect
		50	-3.779	2.407	0.062	6	CDF	1.0000	Non-Significant Effect
		100	-3.652	2.407	0.062	6	CDF	1.0000	Non-Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.4753	0.25	>>	Yes	Passes Criteria
PMSD	0.1297	0.12	0.3	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0389373	0.0077875	5	5.94	0.0021	Significant Effect
Error	0.0235982	0.0013110	18			
Total	0.0625356		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	4.278	15.09	0.5102	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9852	0.884	0.9695	Normal Distribution

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.4753	0.4371	0.5134	0.4785	0.443	0.501	0.01199	5.05%	0.00%
6.25		4	0.5072	0.4544	0.5601	0.499	0.48	0.551	0.01659	6.54%	-6.73%
12.5		4	0.532	0.4926	0.5714	0.5375	0.501	0.552	0.01239	4.66%	-11.94%
25		4	0.4715	0.3721	0.5709	0.469	0.4	0.548	0.03122	13.24%	0.79%
50		4	0.572	0.5313	0.6127	0.569	0.544	0.606	0.0128	4.48%	-20.36%
100		4	0.5688	0.5179	0.6196	0.5705	0.53	0.604	0.01598	5.62%	-19.67%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.443	0.479	0.478	0.501
6.25		0.48	0.515	0.483	0.551
12.5		0.523	0.552	0.501	0.552
25		0.548	0.45	0.4	0.488
50		0.567	0.606	0.544	0.571
100		0.583	0.558	0.53	0.604

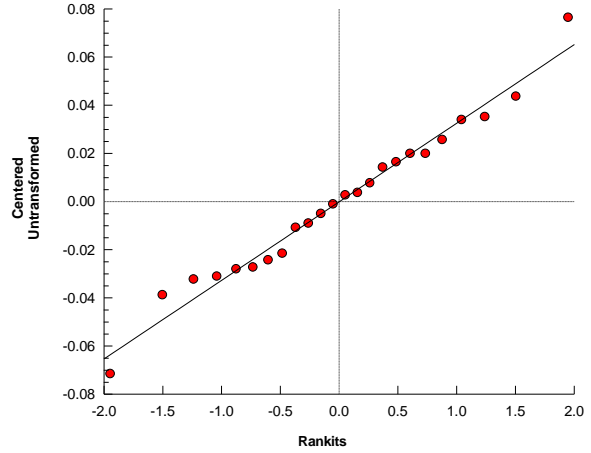
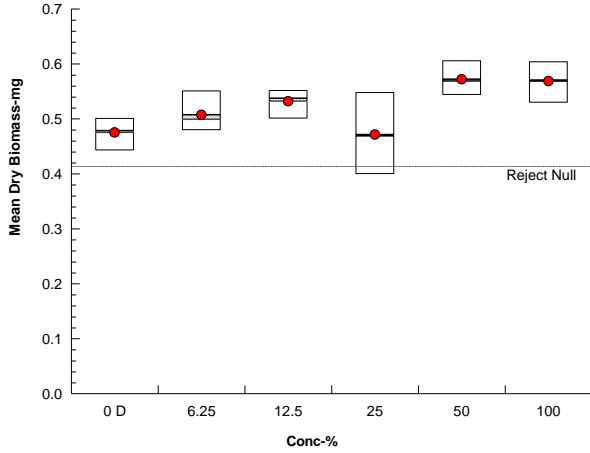


Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 07-3027-5941	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Parametric-Control vs Treatments	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B25BCF85818B06C86257FD6945957BF3	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 1 of 6)
 Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 16-9976-0179	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B9218C07B1C138FFA4453DECE6B4DDD	Editor ID: 008-848-998-5
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	598981	200	Yes	Two-Point Interpolation

Point Estimates

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

2d Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			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	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9875	1.25%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9875	1.25%
50		4	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9875	1.25%
100		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9875	1.25%

2d 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	0.9000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

2d 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	9/10	10/10
25		10/10	10/10	10/10	10/10
50		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

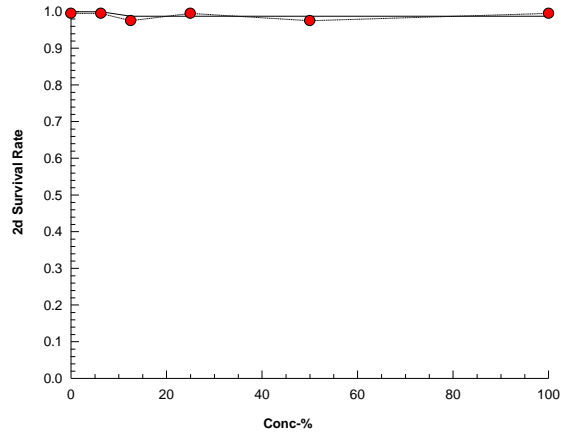


Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 16-9976-0179	Endpoint: 2d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B9218C07B1C138FFA4453DECE6B4DDD	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 3 of 6)
 Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 09-7590-3491	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: 68122CFD3330FC5603626471259FDCDF	Editor ID: 008-848-998-5
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	2057161	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	1	0.8	>>	Yes	Passes Criteria

Point Estimates

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

7d Survival Rate Summary

Conc-%	Code	Count	Calculated Variate(A/B)							Isotonic Variate	
			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	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9850	1.50%
12.5		4	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9850	1.50%
25		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9850	1.50%
50		4	0.9750	1.0000	0.9000	1.0000	5.13%	2.50%	39/40	0.9850	1.50%
100		4	1.0000	1.0000	1.0000	1.0000	0.00%	0.00%	40/40	0.9850	1.50%

7d 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		0.9000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	0.9000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		0.9000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

7d 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		9/10	10/10	10/10	10/10
12.5		10/10	10/10	9/10	10/10
25		10/10	10/10	10/10	10/10
50		9/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10



CETIS Analytical Report

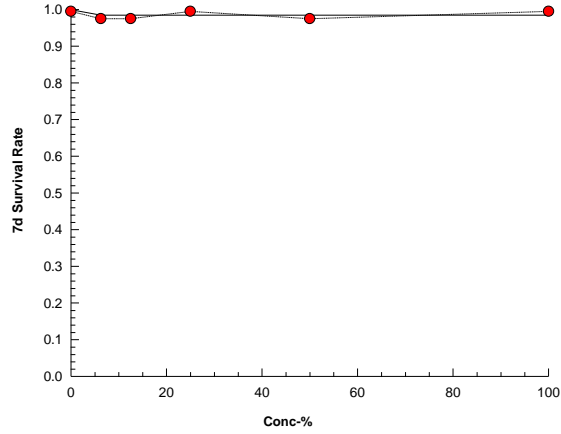
Report Date: 02 Nov-22 14:07 (p 4 of 6)
Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 09-7590-3491	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: 68122CFD3330FC5603626471259FDCDF	Editor ID: 008-848-998-5

Graphics



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 5 of 6)
 Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test **New England Bioassay**

Analysis ID: 04-5824-0765	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B25BCF85818B06C86257FD6945957BF3	Editor ID: 008-848-998-5
Batch ID: 02-4561-4025	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 25 Oct-22 13:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 01 Nov-22 14:41	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 7d 1h	Taxon: Actinopterygii	Source: In-House Culture Age: <24
Sample ID: 16-1544-5022	Code: 6049BC1E	Project:
Sample Date: 24 Oct-22 07:00	Material: Not Applicable	Source: West Valley Demonstration Project (N
Receipt Date: 24 Oct-22 09:10	CAS (PC):	Station:
Sample Age: 31h	Client: Eurofins	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1999153	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

Attribute	Test Stat	TAC Limits		Overlap	Decision
		Lower	Upper		
Control Resp	0.4753	0.25	>>	Yes	Passes Criteria

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC25	>100	---	---	<1	---	---
IC50	>100	---	---	<1	---	---

Mean Dry Biomass-mg Summary

Conc-%	Code	Count	Calculated Variate						Isotonic Variate	
			Mean	Median	Min	Max	CV%	%Effect	Mean	%Effect
0	D	4	0.4753	0.4785	0.443	0.501	5.05%	0.00%	0.5211	0.00%
6.25		4	0.5072	0.499	0.48	0.551	6.54%	-6.73%	0.5211	0.00%
12.5		4	0.532	0.5375	0.501	0.552	4.66%	-11.94%	0.5211	0.00%
25		4	0.4715	0.469	0.4	0.548	13.24%	0.79%	0.5211	0.00%
50		4	0.572	0.569	0.544	0.606	4.48%	-20.36%	0.5211	0.00%
100		4	0.5688	0.5705	0.53	0.604	5.62%	-19.67%	0.5211	0.00%

Mean Dry Biomass-mg Detail

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.443	0.479	0.478	0.501
6.25		0.48	0.515	0.483	0.551
12.5		0.523	0.552	0.501	0.552
25		0.548	0.45	0.4	0.488
50		0.567	0.606	0.544	0.571
100		0.583	0.558	0.53	0.604



CETIS Analytical Report

Report Date: 02 Nov-22 14:07 (p 6 of 6)
Test Code/ID: 22-2034 / 21-4527-6074

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID: 04-5824-0765	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.9.7
Analyzed: 02 Nov-22 14:06	Analysis: Linear Interpolation (ICPIN)	Status Level: 1
Edit Date: 02 Nov-22 9:09	MD5 Hash: B25BCF85818B06C86257FD6945957BF3	Editor ID: 008-848-998-5

Graphics

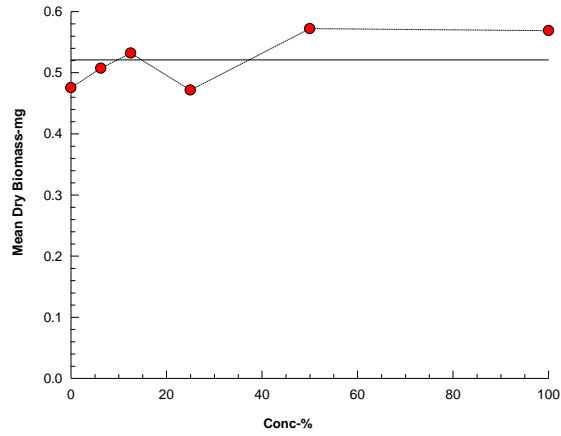


Table of Random Permutations of 16

P.promelas Test ID#

22-2034

7	12	15	15	1	2	7	16	10	2	14	15	7	13	13	10	6	1	8	10
13	3	8	16	7	10	11	10	13	5	11	7	13	16	7	7	5	13	2	14
3	1	4	5	14	13	3	14	9	13	13	2	9	15	6	2	8	4	5	8
11	8	16	14	15	6	2	6	2	16	8	5	12	3	9	13	4	3	10	4
14	9	1	6	3	9	14	13	8	6	5	8	14	7	3	15	13	11	4	7
2	16	10	13	5	5	13	2	11	7	3	12	5	14	12	16	2	2	9	15
4	6	13	7	2	15	1	9	1	4	7	10	6	9	11	9	7	6	16	11
6	14	6	10	4	14	4	15	3	3	4	16	2	6	5	1	12	10	6	9
10	15	2	1	13	12	16	3	4	8	10	1	15	5	14	12	14	12	3	2
12	10	7	12	9	11	9	8	12	14	15	4	11	8	16	8	9	14	14	1
15	7	5	2	10	7	8	12	6	15	6	13	16	12	15	4	11	8	12	6
16	2	11	8	8	8	15	5	16	1	1	9	8	1	8	14	16	5	13	5
9	13	14	3	6	4	10	11	5	12	9	3	10	4	4	3	10	9	1	3
8	11	9	4	11	3	12	7	7	10	12	14	3	10	1	6	15	16	15	12
1	5	12	11	16	16	5	4	14	9	16	11	1	2	10	5	1	15	7	13
5	4	3	9	12	1	6	1	15	11	2	6	4	11	2	11	3	7	11	16
11	8	16	5	5	13	1	13	2	16	14	12	9	8	7	5	13	3	13	3
2	2	8	8	14	16	4	3	8	11	10	14	15	1	2	11	4	5	15	9
6	13	2	13	6	5	9	15	11	10	12	6	16	15	16	9	10	12	16	15
14	12	4	16	16	11	14	10	5	12	3	3	12	14	15	13	6	4	1	16
8	6	3	9	4	10	6	4	16	2	2	9	8	16	4	6	5	15	7	8
9	15	12	10	3	2	12	6	1	15	4	13	7	7	9	12	14	8	8	11
3	10	11	12	13	12	5	11	7	8	9	5	14	11	10	1	3	13	3	5
16	1	13	14	8	14	15	5	3	7	11	15	6	12	5	7	11	1	14	4
1	14	14	2	9	15	16	14	6	14	7	8	3	13	11	8	7	7	12	7
4	4	6	4	12	3	11	8	15	9	8	1	13	6	3	3	15	9	9	12
15	5	1	11	10	6	3	7	10	5	5	11	10	10	12	15	16	14	5	2
5	3	5	6	7	7	13	2	14	3	16	4	5	5	13	4	9	16	2	6
12	7	15	15	15	9	8	12	12	13	15	10	1	4	6	16	2	6	11	1
10	11	10	3	2	4	2	1	4	6	6	7	11	9	14	10	8	11	4	13
7	9	7	7	11	1	7	16	13	1	13	2	4	2	1	2	12	2	10	14
13	16	9	1	1	8	10	9	9	4	1	16	2	3	8	14	1	10	6	10
1	6	7	4	8	6	5	2	8	15	REP	6	6	1	4	5	7	13	2	10
9	15	11	3	11	15	9	10	1	3	4	2	15	7	9	8	16	1	14	3
10	16	4	5	12	9	16	11	7	1	7	16	11	8	3	3	12	2	3	4
4	14	1	9	5	5	4	13	6	8	15	5	12	5	7	16	5	11	8	1
7	3	13	14	15	2	1	14	16	5	14	9	2	16	1	12	6	14	4	13
16	11	2	1	14	16	6	9	3	4	16	14	3	15	11	11	3	9	12	5
3	10	16	16	13	7	13	1	11	14	9	10	16	2	10	2	10	7	10	16
11	13	9	13	4	13	8	3	5	13	10	12	5	12	5	14	13	16	5	6
15	2	3	12	9	12	2	4	13	10	3	13	14	4	2	1	14	8	6	12
14	1	14	6	10	1	3	12	4	2	2	4	13	3	16	9	9	3	7	14
13	12	5	11	3	11	15	8	2	7	11	7	8	14	6	4	4	4	15	11
12	5	10	7	2	14	7	15	14	16	13	1	9	10	12	10	11	10	9	8
8	9	8	10	6	4	11	7	10	11	6	8	4	9	8	15	8	6	11	9
2	7	6	2	1	8	10	6	15	12	1	11	7	11	13	6	1	15	13	15
6	4	15	8	16	10	14	16	9	6	12	3	10	6	14	7	2	12	16	7
5	8	12	15	7	3	12	5	12	9	5	15	1	13	15	13	15	5	1	2
13	4	10	4	16	13	16	13	5	3	6	14	1	16	8	7	2	3	3	12
5	14	4	6	8	2	15	1	13	14	16	4	15	4	3	12	12	1	4	7
2	2	2	15	14	16	9	12	16	6	10	15	14	9	10	1	14	8	8	16
7	12	15	8	12	3	5	14	7	12	5	13	16	1	7	5	11	2	9	3
6	9	7	14	9	14	10	11	15	11	12	1	12	12	14	16	3	11	11	8
14	5	16	7	10	8	11	8	14	13	7	11	6	3	11	4	4	6	6	9
15	11	8	9	7	12	8	7	1	15	9	3	3	7	13	11	10	4	5	1
11	6	6	1	4	1	3	16	12	5	4	9	13	13	6	8	15	9	1	14
4	10	3	16	2	11	7	9	6	9	1	8	4	11	5	2	16	10	12	4
1	8	1	13	1	15	4	4	11	4	2	16	5	8	1	9	5	12	16	6
9	7	14	2	6	4	14	10	9	8	15	10	7	10	9	10	6	14	10	11
12	1	9	10	15	5	2	15	10	2	14	2	8	2	4	13	8	5	15	5
3	3	12	11	5	9	6	6	3	10	13	12	9	6	2	15	7	15	7	13
10	15	11	5	13	7	12	5	2	7	11	5	10	15	12	3	1	13	13	10
8	13	13	3	3	10	13	2	4	1	8	6	11	14	15	6	9	16	2	2
16	16	5	12	11	6	1	3	8	16	3	7	2	5	16	14	13	7	14	15



SAMPLE RECEIPT CHEMISTRY & CHAIN OF CUSTODY DOCUMENTS

NEW ENGLAND BIOASSAY - INITIAL CHEMISTRY DATA

PERMITTEE: West Valley Demonstration Project
 NEB JOB # 44240

DATE RECEIVED	10/25/22		10/28/22			
SAMPLE TYPE:	EFF #1	BROOK #1	EFF #2	BROOK #2		
COC #	C42-5354	C42-5355	C42-5406	C42-5406		
pH (SU)	7.9	7.8	7.1	7.5		
Temperature (°C)	2.0, 1.2	1.3	0.7, 1.3, 1.1	0.7		
Dissolved Oxygen (mg/L)	12.0	11.8	11.3	11.4		
Conductivity (µmhos)	1,518	301	1,512	291		
Salinity (ppt)	<1	<1	<1	<1		
TRC - DPD (mg/L)	0.020	0.031	<0.001	0.020		
TRC - Amperometric (mg/L)	N/A	N/A	N/A	N/A		
Hardness (mg/L as CaCO ₃)	156	126	166	120		
Alkalinity (mg/l as CaCO ₃)	127	103	131	100		
Tech Initials	MM/AG	MM/AG	MM/KO	MM/KO		

NOTE: NA = NOT APPLICABLE

Data Reviewed By: Kimberly Wills Date Reviewed: 12/5/22



NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

EFFLUENT

Sample Set #1

Sampler: Roesch
Title: _____
Facility: West Valley

Sampling Method: Composite
Sample ID: Outfall 001
Start Date: 10-23-22 Time: 0700
End Date: 10-24-22 Time: 0700

Sampling Method: _____ Grab (for pH and TRC only _____)
Date Collected: _____
Time Collected: _____

Sample Type: _____ Prechlorinated
_____ Dechlorinated
 Unchlorinated
_____ Chlorinated

Effluent Sampling Location and Procedures: SP001 Em-2

Receiving Water Sampling Location and Procedures: ER353 EM-2

Requested Analysis: Chronic and modified acute

Sample Shipment

Method of Shipment: UPS Next Day Air

Relinquished By: _____ Date: _____ Time: _____
Received By: Mymel NEB Date: 10-25-22 Time: 1024
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____
Relinquished By: _____ Date: _____ Time: _____
Received By: _____ Date: _____ Time: _____

FOR NEB USE ONLY

Temperature of Effluent Upon Receipt at Lab: 2.0, 1.2 °C

Temperature of Receiving Water Upon Receipt at Lab: 1.3 °C

Effluent COC# C42-5354

Receiving Water COC# C42-5355

IF THIS COOLER IS MISPLACED OR THE LABEL IS LOST, PLEASE SHIP TO:
KIM WILLS, NEW ENGLAND BIOASSAY, 77 BATSON DRIVE, MANCHESTER CT 06042

1
2
3
4
5

Received
ON ICE

CH2M Hill B&W West Valley LLC (CHBWV) 10282 Rock Springs Rd. West Valley, NY 14171
 CHAIN-OF-CUSTODY / REQUEST-FOR-ANALYSIS / PACKING SHEET

Sample Type: LIQUID- SPDES/PROCESS WATER

Electronic Disk - YES

External Lab Destination Test America	Purchase Order Number CH-007532	Charge Number WV03.IN.01.01.02.01	Release Number 1336	Report Format Level 1	Priority 10 Days	OrderID: 221020-01 Work Order: SP-Asap
--	------------------------------------	--------------------------------------	------------------------	--------------------------	---------------------	---

Custodian Signature: ASR C-O-C Reviewed By: [Signature]
 Report Data To: Dave Klenk (716) 485-3109
 Chet Wrotniak (716) 982-6403

Location Code	Sample ID	Date	Time	# Cont	Preservative	Tests	Sample Notes
WN5P001	2022-07367	10/24/22	07:00	1	Cool	wet_du_a wet_pr_uv_a wet_du_c wet_pr_uv_c wet_pr_a wet_pr_c Initial Sample	


WN5P001 (Ferdman Brook) also included in shipping manifest

Signature Rel: Date/Time	<u>ASR</u>	Signature Rel: Date/Time	
Signature Rec: Date/Time	<u>10-24-22 0910</u>	Signature Rec: Date/Time	
Signature Rel: Date/Time		Signature Rel: Date/Time	
Signature Rec: Date/Time		Signature Rec: Date/Time	
Signature Rel: Date/Time		Sample Receipt at Lab:	Cool? YES NO
Signature Rec: Date/Time		Signature Rec: Date/Time	Temp: C

CH2M Hill B&W West Valley LLC (CHBWV) 10282 Rock Springs Rd. West Valley, NY 14171
 CHAIN-OF-CUSTODY / REQUEST-FOR-ANALYSIS / PACKING SHEET

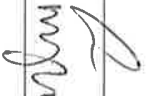
Sample Type: LIQUID- SPDES/PROCESS WATER

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID: 221020-01 Work Order: SP-Asap
Test America	CH-007532	WV03.IN.01.01.02.01	13387	1	10 Days	
Custodian Signature: _____		C-O-C Reviewed By: 		Report Data To: Dave Klenk (716) 485-3109 Chet Wrotniak (716) 982-6403		

Location Code	Sample ID	Date	Time	# Cont	Preservative	Tests	Sample Notes
WN/SP001	2022-07378	10/27/22	08:00	3	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c	ReFreshing sample

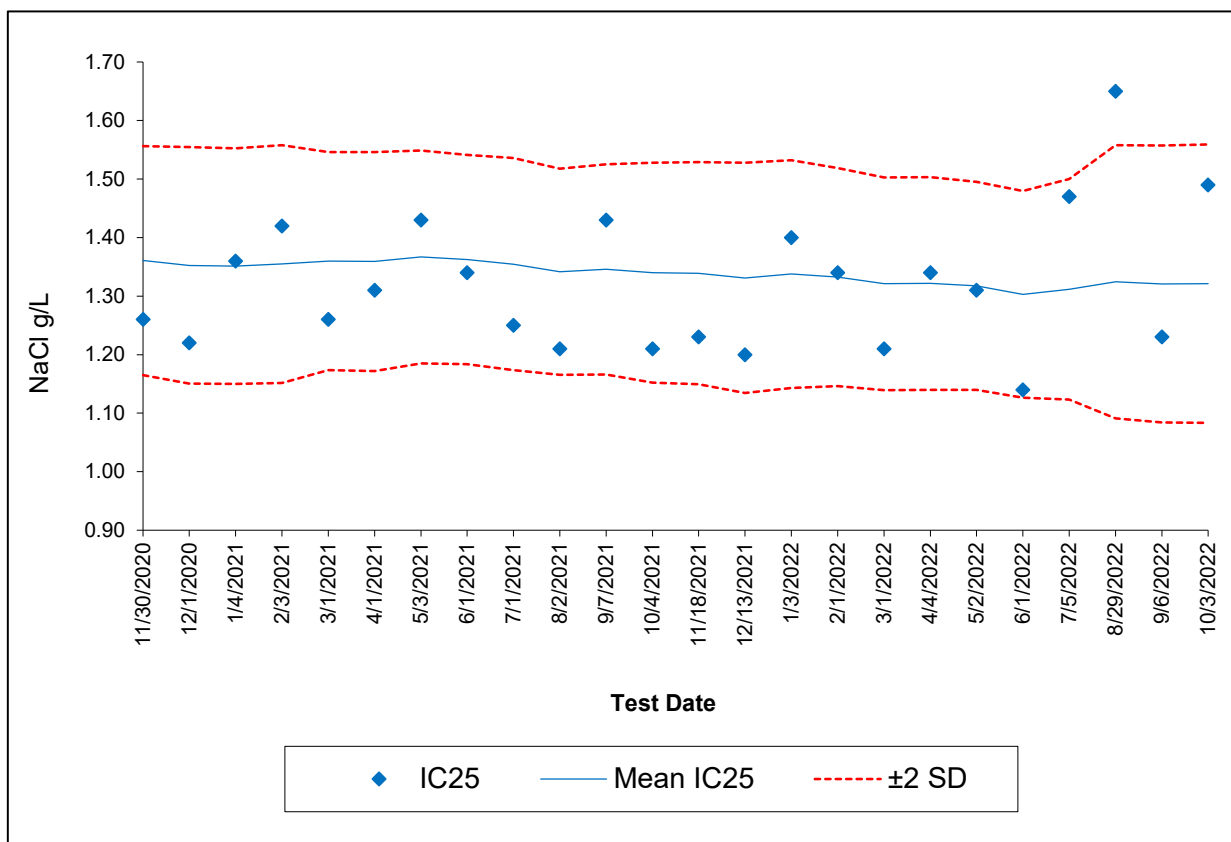
*WONERS (EADMAN BLACK)
 Also Included in shipment*

Signature Rel: Date/Time	 10/27/22 0830	Signature Rel: Date/Time	
Signature Rec: Date/Time	myrune NER 10-28-22 1031	Signature Rec: Date/Time	
Signature Rel: Date/Time		Signature Rel: Date/Time	
Signature Rec: Date/Time		Signature Rec: Date/Time	
Signature Rel: Date/Time		Sample Receipt at Lab:	Cool? YES NO
Signature Rec: Date/Time		Signature Rec: Date/Time	Temp: C

REFERENCE TOXICANT CHARTS

New England Bioassay

Reference Toxicant Data: Sodium chloride (NaCl) *Pimephales promelas* 7-day Chronic Growth IC₂₅



Test ID	Date	IC ₂₅	Mean IC ₂₅	STD	-2STD	+2STD	Avg. CV	Growth PMSD (%)	Avg. PMSD (%)
20-1741	11/30/2020	1.26	1.36	0.10	1.17	1.56	0.07	11.25	11.02
20-1742	12/1/2020	1.22	1.35	0.10	1.15	1.55	0.07	7.26	10.93
21-9	1/4/2021	1.36	1.35	0.10	1.15	1.55	0.07	12.19	11.03
21-140	2/3/2021	1.42	1.35	0.10	1.15	1.56	0.07	6.07	10.91
21-262	3/1/2021	1.26	1.36	0.09	1.17	1.55	0.07	8.42	10.98
21-428	4/1/2021	1.31	1.36	0.09	1.17	1.55	0.07	9.30	10.73
21-593	5/3/2021	1.43	1.37	0.09	1.19	1.55	0.07	9.51	10.81
21-738	6/1/2021	1.34	1.36	0.09	1.18	1.54	0.07	10.96	10.93
21-910	7/1/2021	1.25	1.35	0.09	1.17	1.54	0.07	10.00	10.90
21-1066	8/2/2021	1.21	1.34	0.09	1.17	1.52	0.07	12.34	10.82
21-1274	9/7/2021	1.43	1.35	0.09	1.17	1.53	0.07	12.36	10.81
21-1451	10/4/2021	1.21	1.34	0.09	1.15	1.53	0.07	13.54	10.96
21-1615	11/18/2021	1.23	1.34	0.09	1.15	1.53	0.07	7.76	10.77
21-1812	12/13/2021	1.20	1.33	0.10	1.13	1.53	0.07	10.88	10.90
22-03	1/3/2022	1.40	1.34	0.10	1.14	1.53	0.07	14.75	11.27
22-157	2/1/2022	1.34	1.33	0.09	1.15	1.52	0.07	6.06	11.16
22-303	3/1/2022	1.21	1.32	0.09	1.14	1.50	0.07	9.21	10.29
22-497	4/4/2022	1.34	1.32	0.09	1.14	1.50	0.07	18.60	10.68
22-668	5/2/2022	1.31	1.32	0.09	1.14	1.50	0.07	12.47	10.84
22-872	6/1/2022	1.14	1.30	0.09	1.13	1.48	0.07	10.45	10.81
22-1114	7/5/2022	1.47	1.31	0.09	1.12	1.50	0.07	16.02	11.13
22-1546	8/29/2022	1.65	1.32	0.12	1.09	1.56	0.09	20.64	11.66
22-1590	9/6/2022	1.23	1.32	0.12	1.08	1.56	0.09	15.22	11.56
22-1836	10/3/2022	1.49	1.32	0.12	1.08	1.56	0.09	15.11	11.68

National 75th Percentile and 90th Percentile CV Averages for Fathead Growth IC₂₅ (EPA 833-R-00-003): 0.38 - 0.45
 PMSD Upper and Lower Bounds for Fathead Growth (EPA-821-R-02-013): 12% - 30%

NYELAP ACCREDITATION ANALYTE LIST



Department of Health

KATHY HOCHUL
Governor

MARY T. BASSETT, M.D., M.P.H.
Commissioner

KRISTIN M. PROUD
Acting Executive Deputy Commissioner

LAB ID: 12157

April 01, 2022

MS. KIMBERLY WILLS
NEW ENGLAND BIOASSAY INC.
77 BATSON DRIVE
MANCHESTER, CT 06042

Dear Ms. Wills,

A revised certificate has been generated because of the change(s) listed below.

If your laboratory has applied for a change in the laboratory's location and/or technical director, the approved change(s) will be reflected on the certificate.

If the changes to your certification are due to insufficient proficiency tests and/or proficiency test failures, the expired certificates must be returned to the Environmental Laboratory Approval Program (ELAP) office within 10 days of the date of this letter. In addition, your laboratory must investigate the root cause for any insufficient and/or unsatisfactory proficiency tests and keep this on file for review during an onsite assessment. Also, the laboratory must provide a corrective action report to ELAP within 30 calendar days of a request by the program.

In addition, your laboratory must investigate and document the root cause for any insufficient and/or unsatisfactory proficiency tests. If your lab lost accreditation due to two PT failures, you must submit the corrective action response to ELAP for review before accreditation will be re-instated.

AppCat	Analyte Name	Method Name	Comments	Date
NW - NELAC	Fathead minnow-Pimephales promelas	EPA 1000.0	Raised to Approved	04/05/2022
NW - NELAC	Fathead minnow-Pimephales promelas	EPA 2000.0	Raised to Approved	04/05/2022
NW - NELAC	Opossum shrimp-Americamysis bahia	EPA 1007.0	Raised to Approved	04/05/2022
NW - NELAC	Opossum shrimp-Americamysis bahia	EPA 2007.0	Raised to Approved	04/05/2022
NW - NELAC	Sheephead minnow-Cyprinodon variegatus	EPA 1004.0	Raised to Approved	04/05/2022
NW - NELAC	Sheephead minnow-Cyprinodon variegatus	EPA 2004.0	Raised to Approved	04/05/2022
NW - NELAC	Water flea-Ceriodaphnia dubia	EPA 1002.0	Raised to Approved	04/05/2022
NW - NELAC	Water flea-Ceriodaphnia dubia	EPA 2002.0	Raised to Approved	04/05/2022

1
2
3
4
5

Attachment D
CHBWV Environmental Certification

CHBWV ENVIRONMENTAL CERTIFICATION

1. To be signed by a CHBWV Officer

I certify under penalty of law that I have reviewed the environmental submittal, including all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the document has been prepared in accordance with all applicable requirements and the information is, to the best of my knowledge and belief, true, accurate, and complete.

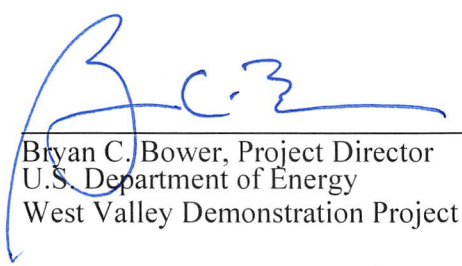
<u>E. A. Lowes/V.P. Regulatory Strategy</u>	<u><i>Elizabeth Lowes</i></u>	<u>1-19-23</u>
Name/Title (type or print)	Signature	Date signed

Attachment E

**WVDP SPDES Permit “Special Conditions – Industry Best Management Practices,”
Permittee Certification of Annual Review**

**WVDP SPDES Permit “Special Conditions – Industry Best Management Practices,”
Permittee Certification of Annual Review**

I certify under penalty of law that the annual review of the Clean Water Act /SPDES Best Management Practices (BMP) and Storm Water Pollution Prevention Plan (SWPPP) for the WVDP (WVDP-206) was completed by December 31, 2022, as per the “Special Conditions – Industry Best Management Practices” section of the SPDES Permit.



Bryan C. Bower, Project Director
U.S. Department of Energy
West Valley Demonstration Project

12-12-2022
Date