CH2MHILL • BWXT West Valley, LLC
West Valley Demonstration Project

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

AC-PRES
WD:2023:0546
July 19, 2023

Attention: Jennifer M. Dundas

SUBJECT: Contract No. DE-EM0001529, Section J-3, Item 127, State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR) for the Period June 1 through June 30, 2023, SPDES Permit No. NY-0000973, West Valley Demonstration Project (WVDP) and Storm Water Monitoring Results for January 1, 2023 through June 30, 2023

REFERENCE: 1) 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. Splitt:

This letter is submitted for Contracting Officer Representative's approval to inform you that the SPDES DMR for the reporting period June 1 through June 30, 2023 including the Net Iron calculation sheet has been submitted electronically. Please note that semi-annual sampling results for outfall 001 and the Whole Effluent Toxicity (WET) sampling results for the second quarter are also included. 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 storm water monitoring results for the period of January 1, 2023 through June 30, 2023.

If you have any questions, please contact Michael Pendl at (716) 942-4466 or Elizabeth Lowes at (716) 481-0429.

Sincerely,

Approval Obtained Electronically

John D. Rendall
President & General Manager

JDR:MPP:bnj

Attachments:
A) SPDES DMR for June 1 through June 30, 2023 Monitoring Period, including Semi-Annual Results and Whole Effluent Toxicity
B) Storm Water Discharge Monitoring Results for January 1 through June 30, 2023 Monitoring Period
C) Whole Effluent Toxicity (WET) Testing Final Report for the May 2023 Discharge
D) CHBWV Environmental Certification
E) 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. Cherry, 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
M. P. Pendl, CHBWV
J. T. Pillittere, CHBWV (Public Reading Room)
R. E. Steiner, CHBWV
K. A. Wooley, CHBWV
Letter Log (B. Jeffery), CHBWV
CHBWV OITS #2230562

Attachment A

SPDES DMR for June 1 through June 30, 2023 Monitoring Period, including Semi-Annual Results and Whole Effluent Toxicity

SYNOPSIS

State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR) for the Period June 1 through June 30, 2023, SPDES Permit No. NY-0000973, West Valley Demonstration Project (WVDP) and Storm Water Monitoring Results for January 1, 2023 through June 30, 2023

The SPDES DMR for the June 1 through June 30, 2023 Monitoring Period is provided as Attachment A. There were no discharges at outfalls 001-M, 007-M, 007-W, 116-M, Sum-N or internal outfall 01B-M during the monitoring period of June 1, 2023 through June 30, 2023. Please note that semi-annual sampling results for outfall 001-S, 001-V and the second quarter Whole Effluent Toxicity (WET) sampling results 001-W are also included within this DMR.

CHBWV is also submitting the analytical results and data for the semi-annual storm water monitoring for the monitoring period of January 1, 2023 through June 30, 2023 as Attachment B. 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 June 12, June 14, and June 26, 2023. The on-site pH measured near the site's rain gauge on each of these dates was: 7.7 SU; 7.6 SU; and 6.9 SU respectively.

Storm water sampling at outfall S20 was completed on June 12, 2023. Precipitation started 20:45 EST on June 11, 2023. Prior precipitation greater than 0.1 inches was on May 20, 2023. There was flow at the outfall upon arrival.

Storm water sampling at outfalls S04, S06, S09 and S34 was completed on June 14, 2023. The number of hours between storm events was 41 hours (less than the normally required 72 hours). Outfalls S04, S06 and S34 were at base flow conditions, and there was no flow at S09 upon arrival.

Storm water sampling at outfalls S17, S27 and S37 was completed on June 26, 2023. The number of hours between storm events was 55 hours (less than the normally required 72 hours). There was flow at the outfalls upon arrival.

In addition, sampling at outfall S43 for total recoverable lead at the Live Fire Range was completed on June 26, 2023 with a reported result of 0.001 mg/L as compared to 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 5 through June 6, 2023 and therefore, storm water outfalls that would be affected were sampled for Paraquat Dichloride on the dates shown below in the table of results.

Outfall/Site	Parameter	Date Collected	Result	Units
S04	Paraquat Dichloride	06/12/23	<0.00037	mg/L
S06	Paraquat Dichloride	06/14/23	0.00069	mg/L
S09	Paraquat Dichloride	06/12/23	<0.00032	mg/L
S12	Paraquat Dichloride	06/14/23	<0.00032	mg/L
S20	Paraquat Dichloride	06/12/23	<0.00032	mg/L
S27	Paraquat Dichloride	06/26/23	<0.00032	mg/L
S28	Paraquat Dichloride	06/14/23	<0.00032	mg/L
S35	Paraquat Dichloride	06/14/23	<0.00032	mg/L
S36	Paraquat Dichloride	06/14/23	<0.00032	mg/L
LAGOON 3	Paraquat Dichloride	06/12/23	<0.00032	mg/L

SPDES DISCHARGE MONITORING REPORT – JUNE 1 THROUGH JUNE 30, 2023
NET IRON EFFLUENT CONCENTRATION CALCULATION
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT NO. NY-0000973

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

X1 = 0.000 mg/L

X2 = 0.000 mg/L

V1 = 0.000 L/month

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

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

X1 = 0.000 mg/L

X2 = 0.000 mg/L

V7 = 0.00 L/month

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

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

X1 = 0.000 mg/L

X2 = 0.000 mg/L

X3 = 0.000 mg/L

X4 = 0.000 mg/L

VRW = 0.00 L/month

IRON DISCHARGE CONCENTRATION = $\frac{M1 + M7 - MRW}{V1 + V7}$ = 0.00 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-M** OUTFALL 001 MONTHLY PROC WW, GW, STORM		
Report Dates & Status					
Monitoring Period:	**From 06/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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			
00154	**Sulfate [as S]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/BA - Once Per Batch	24 - COMP24
					Value NODI									C - No Discharge		C - No Discharge				
00181	**Oxygen demand, ultimate**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG	<=	22.0 DAILY MX	19 - mg/L		02/BA - Twice Per Batch	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/BA - Twice Per Batch	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/BA - Twice Per Batch	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		01/BA - Once Per Batch	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/BA - Twice Per Batch	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/BA - Twice Per Batch	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		01/BA - Once Per Batch	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/BA - Once Per Batch	24 - COMP24
					Value NODI									C - No Discharge		C - No Discharge				
00620	**Nitrogen, nitrate total [as N]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/BA - Once Per Batch	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		02/BA - Twice Per Batch	24 - COMP24
					Value NODI									C - No Discharge		C - No Discharge				
00746	**Sulfide, dissolved, [as S]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG	<=	0.4 DAILY MX	19 - mg/L		01/BA - Once Per Batch	24 - COMP24
					Value NODI									C - No Discharge		C - No Discharge				
00978	**Arsenic, total recoverable**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG	<=	0.15 DAILY MX	19 - mg/L		01/BA - Once Per Batch	24 - COMP24
					Value NODI									C - No Discharge		C - No Discharge				

00979	**Cobalt, total recoverable**	1 - Effluent Gross	0	--	Sample															
					Permit Req.										Req Mon MO AVG	<=	0.005 DAILY MX	19 - mg/L		01/BA - Once Per Batch	GR - GRAB
					Value NODI										C - No Discharge		C - No Discharge				
00981	**Selenium, total recoverable**	1 - Effluent Gross	0	--	Sample															
					Permit Req.										Req Mon MO AVG	<=	0.004 DAILY MX	19 - mg/L		01/BA - Once Per Batch	GR - GRAB
					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/BA - Twice Per Batch	24 - COMP24
					Value NODI										C - No Discharge		C - No Discharge				
01105	**Aluminum, total [as Al]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									<=	2.0 MO AVG	<=	4.0 DAILY MX	19 - mg/L		01/BA - Once Per Batch	24 - COMP24
					Value NODI										C - No Discharge		C - No Discharge				
01128	**Vanadium, total recoverable**	1 - Effluent Gross	0	--	Sample															
					Permit Req.										Req Mon MO AVG	<=	0.014 DAILY MX	19 - mg/L		01/BA - Once Per Batch	GR - GRAB
					Value NODI										C - No Discharge		C - No Discharge				
34726	**Nitrogen, ammonia, total [as NH3]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									<=	1.5 MO AVG	<=	2.1 DAILY MX	19 - mg/L		02/BA - Twice Per Batch	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		Req Mon DAILY MX	03 - MGD										02/BA - Twice Per Batch	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/BA - Once Per Batch	GR - GRAB
					Value NODI										C - No Discharge		C - No Discharge				
70295	**Solids, total dissolved**	1 - Effluent Gross	0	--	Sample															
					Permit Req.										Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		02/BA - Twice Per Batch	GR - GRAB
					Value NODI										C - No Discharge		C - No Discharge				
71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									<=	50.0 MO AVG		Req Mon DAILY MX	3M - ng/L		01/BA - Once Per Batch	GR - GRAB
					Value NODI										C - No Discharge		C - No Discharge				
81646	**Surfactants [linear alkylate sulfonate]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.										Req Mon MO AVG	<=	0.04 DAILY MX	19 - mg/L		01/BA - Once Per Batch	GR - GRAB
					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_January_2023_June_2023_Storm_Water_Data.pdf	pdf	161479.0
WVDP_June_2023_Synopsis_.pdf	pdf	113838.0

Report Last Saved By

U.S. DEPT OF ENERGY

User:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl
E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-18 09:12 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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-S** OUTFALL 001 SEMI-ANNUAL		
Report Dates & Status					
Monitoring Period:	**From 01/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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			
00722	**Cyanide, free [amenable to chlorination]**	1 - Effluent Gross	0	--	Sample								<	0.005	<	0.005	19 - mg/L		02/YR - Twice Per Year	GR - GRAB
					Permit Req.									Req Mon MO AVG	<=	0.005 DAILY MX	19 - mg/L		02/YR - Twice Per Year	GR - GRAB
					Value NODI															
01055	**Manganese, total [as Mn]**	1 - Effluent Gross	0	--	Sample								=	0.098	=	0.098	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	2.0 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01067	**Nickel, total [as Ni]**	1 - Effluent Gross	0	--	Sample								<	0.0013	<	0.0013	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.079 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01094	**Zinc, total recoverable**	1 - Effluent Gross	0	--	Sample								=	0.0061	=	0.0061	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.13 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01114	**Lead, total recoverable**	1 - Effluent Gross	0	--	Sample								<	0.00017	<	0.00017	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.006 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01118	**Chromium, total recoverable**	1 - Effluent Gross	0	--	Sample								=	87.0	=	0.00087	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.11 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01119	**Copper, total recoverable**	1 - Effluent Gross	0	--	Sample								=	0.0009	=	0.0009	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.014 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
39410	**Heptachlor**	1 - Effluent Gross	0	--	Sample								<	0.0067	<	0.0067	28 - ug/L		02/YR - Twice Per Year	GR - GRAB
					Permit Req.								<=	0.01 MO AVG		Req Mon DAILY MX	28 - ug/L		02/YR - Twice Per Year	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) Eurofins: NY Lab No. 10026; and 2) General Engineering Laboratory: NY Lab No. 11501. 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 CHBWV Environmental Services is 0.02 mg/L.

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl

E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-15 11:22 (Time Zone: -04:00)
Report Last Signed By	
User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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 01/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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: --

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			
01022	**Boron, total [as B]**	V - See Comments	0	--	Sample										=	0.027	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.										<=	2.0 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
01152	**Titanium, total [as Ti]**	V - See Comments	0	--	Sample										<	0.0011	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.										<=	0.65 DAILY MX	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Value NODI															
71870	**Bromide [as Br]**	V - See Comments	0	--	Sample										<	0.37	19 - mg/L		02/YR - Twice Per Year	24 - COMP24
					Permit Req.										<=	5.0 DAILY MX	19 - mg/L		02/YR - Twice Per Year	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) Eurofins: NY Lab No. 10026; and 2) General Engineering Laboratory: NY Lab No. 11501. 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 CHBWV Environmental Services is 0.02 mg/L.

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl
E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-15 11:25 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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 04/01/23 to 06/30/23**	**DMR Due Date:**	**08/28/23**	**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:	--				

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			
61425	**Toxicity [acute], Ceriodaphnia dubia**	V - See Comments	0	--	Sample										=	0.3	2F - tox acute		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		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		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		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) Eurofins: 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 CHBWV Environmental Services is 0.02 mg/L.

Attachments

Name	Type	Size
WVDP_May_2023_WET_Test_Final_Report.pdf	pdf	2843130.0

Report Last Saved By

U.S. DEPT OF ENERGY

User:	MICHAEL.PENDL@CHBWV.COM
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Date/Time:	2023-07-10 11:40 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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:	007 External Outfall	**Discharge:**	**007-M** SANITARY, NC COOLING WATER, UTILITY WASTEWATER, STORMWATER		

Report Dates & Status

Monitoring Period:	**From 06/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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			
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		Req Mon DAILY MX	03 - MGD									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				

70295	**Solids, total dissolved**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI									C - No Discharge		C - No Discharge				
71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG	<=	50.0 DAILY MX	3M - ng/L		01/30 - Monthly	GR - GRAB
					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:	MICHAEL.PENDL@CHBWV.COM
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E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-08 09:02 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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:	007 External Outfall	**Discharge:**	**007-W** OUTFALL 007 WET TESTING QUARTERLY		
Report Dates & Status					
Monitoring Period:	**From 04/01/23 to 06/30/23**	**DMR Due Date:**	**08/28/23**	**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:	--				

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			
61425	**Toxicity [acute], Ceriodaphnia dubia**	V - See Comments	0	--	Sample															
					Permit Req.										<=	0.3 MAXIMUM	2F - tox acute		01/90 - Quarterly	24 - COMP24
					Value NODI											C - No Discharge				
61426	**Toxicity [chronic], Ceriodaphnia dubia**	V - See Comments	0	--	Sample															
					Permit Req.										<=	1.0 MAXIMUM	2G - tox chronic		01/90 - Quarterly	24 - COMP24
					Value NODI											C - No Discharge				
61427	**Toxicity [acute], Pimephales promelas [Fathead Minnow]**	V - See Comments	0	--	Sample															
					Permit Req.										<=	0.3 MAXIMUM	2F - tox acute		01/90 - Quarterly	24 - COMP24
					Value NODI											C - No Discharge				
61428	**Toxicity [chronic], Pimephales promelas [Fathead Minnow]**	V - See Comments	0	--	Sample															
					Permit Req.										<=	1.0 MAXIMUM	2G - tox chronic		01/90 - Quarterly	24 - COMP24
					Value NODI											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:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl
E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-08 09:08 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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 06/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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			
00056	**Flow rate**	1 - Effluent Gross	0	--	Sample															
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	07 - gal/d									01/07 - Weekly	CN - CONTIN
					Value NODI		C - No Discharge		C - No Discharge											
71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Sample															
					Permit Req.									Req Mon MO AVG	<=	50.0 DAILY MX	3M - ng/L		02/BA - Twice Per Batch	GR - GRAB
					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:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl
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Date/Time:	2023-07-08 09:03 (Time Zone: -04:00)

Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
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Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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:	116 Internal Outfall	**Discharge:**	**116-M** PSEUDO MON. POINT @FRANKS CRK		
Report Dates & Status					
Monitoring Period:	**From 06/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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:	--				

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				

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:	MICHAEL.PENDL@CHBWV.COM
Name:	Michael Pendl
E-Mail:	michael.pendl@chbwv.com
Date/Time:	2023-07-08 09:04 (Time Zone: -04:00)
Report Last Signed By	
User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
E-Mail:	elizabeth.lowes@chbwv.com
Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

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 06/01/23 to 06/30/23**	**DMR Due Date:**	**07/28/23**	**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_June_2023_Net_Iron_Calculation.pdf	pdf	70404.0

Report Last Saved By

U.S. DEPT OF ENERGY

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Report Last Signed By

User:	ELIZABETH.LOWES@CHBWV.COM
Name:	Elizabeth Lowes
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Date/Time:	2023-07-19 07:28 (Time Zone: -04:00)

Attachment B

Storm Water Discharge Monitoring Results for January 1 through June 30, 2023 Monitoring Period

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 1, OUTFALL S04
Monitoring Period: January 1 through June 30, 2023

Parameter Group	Parameter	Results in mg/L		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	3.7	2.1	Not specified in permit. N.R. = Not Required. R = Unreliable.
	Total Suspended Solids (TSS)	110	170	
	Total Dissolved Solids (TDS)	1400	300	
	Phosphorus, Total	0.16	0.25	
Group B Parameters	Aluminum	1.3	5.0	
	Iron	1.4	4.4	
	Copper, Total Recoverable (TR)	0.0080	0.0062	
	Lead (TR)	0.0065	0.010	
	Zinc (TR)	0.052	0.039	
Group C Parameters	Total Nitrogen (as N)	< 0.73	< 0.53	
	TKN	0.65	0.32	
	Nitrate Nitrogen (as N)	0.058	0.19	
	Nitrite Nitrogen (as N)	< 0.020	< 0.020 (R)	
	Ammonia Nitrogen (as NH3)	0.055	0.018	
	Cadmium, TR	0.00011	0.000094	
	Chromium, TR	0.0046	0.0026	
	Hexavalent Chromium, TR	< 0.0050	< 0.0050	
	Selenium, TR	< 0.00044	< 0.00044	
	Vanadium, TR	0.0068	0.0045	
	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	< 0.00037	N.R.	
Flow	Total Flow, gallons	N.R.	330,000	
	Maximum Flow rate, gallons per minute	2,700	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/14/23	06/14/23	
	Duration of storm event, in minutes	N.R.	765	Rain started at 06:45 EST on 06/14/23 and ended at 19:30 EST on 06/14/23.
	Date and Time of sample collection	06/14/23 08:30	06/14/23 11:20	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.32	An additional 0.28 inches was recorded after sampling was completed for a storm total of 0.60 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	41	0.13 inches was recorded on 06/12/23 at 14:00 EST. The outfall was at base flow conditions upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 2, OUTFALL S06
Monitoring Period: January 1 through June 30, 2023

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab / Duplicate	Flow-weighted Composite	
Group A Parameters	pH	7.5 S.U.	N.R.	Not Specified in Permit.
	Oil and Grease	< 1.6	N.R.	15 mg/L
	BOD-5	3.6	4.3	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	18	13	
	Total Dissolved Solids (TDS)	1100	1100	
	Phosphorus, Total	<0.020	<0.020	
Group B Parameters	Aluminum	0.039	0.043	
	Iron	0.50	1.7	
	Copper, Total Recoverable (TR)	0.00038	0.00067	
	Lead (TR)	<0.00050	<0.00050	
	Zinc (TR)	<0.0033	0.0054	
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)	0.025	0.021	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
	Paraquat Dichloride	0.00069	N.R.	
Flow	Total Flow, gallons	N.R.	1,900	
	Maximum Flow rate, gallons per minute	12	N.R.	
	Method of flow measurement	Flow Meter		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/14/23	06/14/23	
	Duration of storm event, in minutes	N.R.	765	Rain started at 06:45 EST on 06/14/23 and ended at 19:30 EST on 06/14/23.
	Date and Time of sample collection	06/14/23 09:00	06/14/23 11:45	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.34	An additional 0.26 inches was recorded after sampling was completed for a storm total of 0.60 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	41	0.13 inches was recorded on 06/12/23 at 14:00 EST. The outfall was at base flow conditions upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 3, OUTFALL S09
Monitoring Period: January 1 through June 30, 2023

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	8.0 S.U.	N.R.	Not specified in permit.
	Oil and Grease	2.2	N.R.	15 mg/L
	BOD-5	< 12 (R)	2.7	Not specified in permit. N.R. = Not Required. R = Unreliable.
	Total Suspended Solids (TSS)	1100	690	
	Total Dissolved Solids (TDS)	620	320	
	Phosphorus, Total	1.7	1.2	
Group B Parameters	Aluminum	3.8	2.9	
	Iron	7.0	5.6	
	Copper, Total Recoverable (TR)	0.034	0.024	
	Lead (TR)	0.075	0.044	
	Zinc (TR)	0.24	0.17	
Group C Parameters	Total Nitrogen (as N)	3.3	<1.9	
	TKN	3.2	1.6	
	Nitrate Nitrogen (as N)	0.12	0.23	
	Nitrite Nitrogen (as N)	0.025	<0.020 (R)	
	Ammonia Nitrogen (as NH3)	0.045	0.059	
	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	< 0.0000067	< 0.0000064	
	Settleable Solids	N.R.	N.R.	
	Sulfide	N.R.	N.R.	
	Mercury, Total (ng/L)	37	N.R.	
	Paraquat Dichloride	<0.00032	N.R.	
Flow	Total Flow, gallons	N.R.	100,000	
	Maximum Flow rate, gallons per minute	920	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/14/23	06/14/23	
	Duration of storm event, in minutes	N.R.	765	Rain started at 06:45 EST on 06/14/23 and ended at 19:30 EST on 06/14/23.
	Date and Time of sample collection	06/14/23 08:15	06/14/23 11:00	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.30	An additional 0.30 inches was recorded after sampling was completed for a storm total of 0.60 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	41	0.13 inches was recorded on 06/12/23 at 14:00 EST. There was no flow at the outfall upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 4, OUTFALL S34/Duplicate
Monitoring Period: January 1 through June 30, 2023

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	7.8 S.U.	N.R.	Not specified in permit.
	Oil and Grease	2.8 / 3.4	N.R.	15 mg/L
	BOD-5	<2.4 / <2.4 (R)	<2.4 (R)	Not specified in permit. N.R. = Not Required. R = Unreliable.
	Total Suspended Solids (TSS)	120 / 320	190	
	Total Dissolved Solids (TDS)	180 / 180	190	
	Phosphorus, Total	0.50 / 0.20	0.21	
Group B Parameters	Aluminum	0.89 / 1.1	0.79	
	Iron	2.7 / 2.6	1.8	
	Copper, Total Recoverable (TR)	0.0077 / 0.0077	0.0061	
	Lead (TR)	0.016 / 0.015	0.011	
	Zinc (TR)	0.060 / 0.061	0.042	
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)	<0.013 / <0.013 (R)	<0.013 (R)	
	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.	33,000	
	Maximum Flow rate, gallons per minute	470	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/14/23	06/14/23	
	Duration of storm event, in minutes	N.R.	765	Rain started at 06:45 EST on 06/14/23 and ended at 19:30 EST on 06/14/23.
	Date and Time of sample collection	06/14/23 08:30	06/14/23 11:20	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during event, in inches	N.R.	0.32	An additional 0.28 inches was recorded after sampling was completed for a storm total of 0.60 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	41	0.13 inches was recorded on 06/12/23 at 14:00 EST. The outfall was at base flow conditions upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 5, OUTFALL S17
Monitoring Period: January 1 through June 30, 2023

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	8.7 S.U.	N.R.	Not specified in permit.
	Oil and Grease	<1.5	N.R.	15 mg/L
	BOD-5	2.5	4.8	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	230	46	
	Total Dissolved Solids (TDS)	180	320	
	Phosphorus, Total	0.84	0.50	
Group B Parameters	Aluminum	23	13	
	Iron	33	17	
	Copper, Total Recoverable (TR)	0.042	0.027	
	Lead (TR)	0.063	0.031	
	Zinc (TR)	0.23	0.13	
Group C Parameters	Total Nitrogen (as N)	2.4	4.4	
	TKN	2.0	3.6	
	Nitrate Nitrogen (as N)	0.34	0.73	
	Nitrite Nitrogen (as N)	0.028	0.025	
	Ammonia Nitrogen (as NH3)	0.092	0.032	
	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	0.029	0.023	
	Surfactant (as LAS)	<0.013	<0.013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	0.30	0.20	
	Sulfide	<0.033	<0.033	
	Paraquat Dichloride	N.R.	N. R.	
Flow	Total Flow, gallons	N.R.	160,000	
	Maximum Flow rate, gallons per minute	1,700	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/26/23	06/26/23	
	Duration of storm event, in minutes	N.R.	570	Rain started at 09:30 EST on 06/26/23 and ended at 19:00 EST on 06/26/23.
	Date and Time of sample collection	06/26/23 15:35	06/26/23 18:25	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.90	An additional 0.04 inches was recorded after sampling was completed for a storm total of 0.94 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	55	Precipitation of 0.12 inches was recorded on 06/24/23 at 02:30 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, 2023

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	7.4 S.U.	N.R.	Not specified in permit.
	Oil and Grease	<1.5	N.R.	15 mg/L
	BOD-5	4.5	4.2	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	<4.0	7.6	
	Total Dissolved Solids (TDS)	190	210	
	Phosphorus, Total	0.055	0.061	
Group B Parameters	Aluminum	0.65	0.38	
	Iron	1.1	0.79	
	Copper, Total Recoverable (TR)	0.0032	0.0033	
	Lead (TR)	0.00046	0.00036	
	Zinc (TR)	0.0037	0.0032	
Group C Parameters	Total Nitrogen (as N)	2.6	4.9	
	TKN	1.4	2.0	
	Nitrate Nitrogen (as N)	1.2	2.9	
	Nitrite Nitrogen (as N)	0.025	0.046	
	Ammonia Nitrogen (as NH3)	0.024	0.015	
	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	0.0014	
	Surfactant (as LAS)	<0.013	0.013	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	<0.10	<0.10	
	Sulfide	<0.033	< 0.033	
	Paraquat Dichloride	N.R.	N.R.	
Flow	Total Flow, gallons	N.R.	2,100	
	Maximum Flow rate, gallons per minute	29	N.R.	
	Method of flow measurement	V-notch Weir		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/26/23	06/26/23	
	Duration of storm event, in minutes	N.R.	570	Rain started at 09:30 EST on 06/26/23 and ended at 19:00 EST on 06/26/23.
	Date and Time of sample collection	06/26/23 15:35	06/26/23 18:20	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during sampling event, in inches	N.R.	0.90	An additional 0.04 inches was recorded after sampling was completed for a storm total of 0.94 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	55	Precipitation of 0.12 inches was recorded on 06/24/23 at 02:30 EST. There was flow at the outfall upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 7, OUTFALL S20
Monitoring Period: January 1 through June 30, 2023

Parameter Group	Parameter	Results in mg/L		Permit No. NY-0000973 Compliance Limit
		First Flush Grab	Flow-weighted Composite	
Group A Parameters	pH	8.5 S.U.	N.R.	Not specified in permit.
	Oil and Grease	3.1	N.R.	15 mg/L
	BOD-5	7.2	7.3	Not specified in permit. N.R. = Not required.
	Total Suspended Solids (TSS)	< 4.0	< 4.0	
	Total Dissolved Solids (TDS)	21	21	
	Phosphorus, Total	0.067	0.063	
Group B Parameters	Aluminum	< 0.060	< 0.060	
	Iron	0.056	0.059	
	Copper, Total Recoverable (TR)	0.0023	0.0021	
	Lead (TR)	< 0.00017	< 0.00017	
	Zinc (TR)	0.0030	0.0038	
Group C Parameters	Total Nitrogen (as N)	1.7	1.7	
	TKN	1.2	1.3	
	Nitrate Nitrogen (as N)	0.41	0.39	
	Nitrite Nitrogen (as N)	0.047	0.052	
	Ammonia Nitrogen (as NH3)	0.57	0.47	
	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)	0.11	0.075	
	Alpha BHC	N.R.	N.R.	
	Settleable Solids	N.R.	N.R.	
	Sulfide	< 0.033	< 0.033	
	Paraquat Dichloride	< 0.00032	N.R.	
Flow	Total Flow, gallons	N.R.	8,400	
	Maximum Flow rate, gallons per minute	170	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/12/23	06/12/23	
	Duration of storm event, in minutes	N.R.	1035	Rain started at 20:45 EST on 06/11/23 and ended at 14:00 EST on 06/12/23.
	Date and Time of sample collection	06/12/23 11:35	06/12/23 14:20	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during event, in inches	N.R.	0.17	An additional 0.07 inches was recorded after sampling was completed for a storm total of 0.24 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	535	Precipitation of 0.70 inches was recorded on 5/20/23 at 14:15 EST. There was flow at the outfall upon arrival.

STORM WATER DISCHARGE MONITORING DATA
FOR OUTFALL GROUP 8, OUTFALL S27
Monitoring Period: January 1 through June 30, 2023

Parameter Group	Parameter	Results, in mg/L		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	<1.6	N.R.	15 mg/L
	BOD-5	5.6	4.9	Not specified in permit. N.R. = Not Required.
	Total Suspended Solids (TSS)	59	15	
	Total Dissolved Solids (TDS)	340	320	
	Phosphorus, Total	0.21	0.16	
Group B Parameters	Aluminum	6.9	4.5	
	Iron	9.1	5.2	
	Copper, Total Recoverable (TR)	0.016	0.0066	
	Lead (TR)	0.021	0.0092	
	Zinc (TR)	0.062	0.017	
Group C Parameters	Total Nitrogen (as N)	3.7	3.8	
	TKN	2.4	2.0	
	Nitrate Nitrogen (as N)	1.3	1.8	
	Nitrite Nitrogen (as N)	0.024	0.037	
	Ammonia Nitrogen (as NH3)	0.065	0.056	
	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	<0.00032	N.R.	
Flow	Total Flow, gallons	N.R.	48,000	
	Maximum Flow rate, gallons per minute	410	N.R.	
	Method of flow measurement	Staff Gauge		
Rainfall Event and Monitoring Summary	Date(s) of event monitored	06/26/23	06/26/23	
	Duration of storm event, in minutes	N.R.	570	Rain started at 09:30 EST on 06/26/23 and ended at 19:00 EST on 06/26/23.
	Date and Time of sample collection	06/26/23 15:30	06/26/23 18:20	
	Sampling Duration (Minutes)	Instantaneous	180	
	Total rainfall during event, in inches	N.R.	0.90	An additional 0.04 inches was recorded after sampling was completed for a storm total of 0.94 inches.
	Number of hours between event sampled and previous measurable (> 0.1 inch) event	N.R.	55	Precipitation of 0.12 inches was recorded on 06/24/23 at 02:30 EST. There was flow at the outfall upon arrival.

Attachment C

Whole Effluent Toxicity (WET) Testing Final Report for the May 2023 Discharge

eurofins | Environment Testing

1 2 3 4 5

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 6/22/2023 12:40:10 PM

JOB DESCRIPTION

SPDES
SDG NUMBER 1374

JOB NUMBER

480-209715-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

See page two for job notes and contact information.

myEOL

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

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

Table of Contents

Case Narrative

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

Job ID: 480-209715-1
SDG: 1374

Job ID: 480-209715-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-209715-1

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 5/19/2023 9:30 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: 480-209715-1
SDG: 1374

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-209715-1	2023- 03455 WNSP001	Water	05/18/23 09:00	05/19/23 09:30

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: Outfall 001
Test Month/Year: May 2023
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 5/17-18/23 #2 5/21-22/23

Test Start Date: 5/19/23

Results Summary

Your results were as follows:

Passed all permit limits

Acute Test Results

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

Chronic Test Results

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

Data Qualifiers affecting this test:

Certifications & Approvals: NH ELAP (2071), NJ DEP (CT405), NYSDOH (12157)

Test Report Certification

Permittee name:	West Valley Demonstration Project	Permit number:	NY0000973
Client sample ID:	Outfall 001	Test Start Date:	5/19/23

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: 6/21/23 (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: Outfall 001 | Test Start Date: 5/19/23

Sample Collection Information

Effluent #1 Dates/Times: 5/17-18/23 @ 0945-0900 | Receiving Water #1 Date/Time: 5/18/23 @ 0730

Effluent #2 Dates/Times: 5/21-22/23 @ 0730-0730 | Receiving Water #2 Date/Time: 5/22/23 @ 0750

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. The #1 samples were used within the first 36 hrs, but due to a shipping delay, the #2 samples were first used outside 36 hrs

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

- Chlorine was elevated due to interference. Chlorine was ≤ 0.05 mg/L by amperometric titration

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		***Fathead minnows***	
Date:	5/1/23	Date:	5/1/23
Toxicant:	Sodium chloride	Toxicant:	Sodium chloride
Dilution Water:	NEB CTRMH	Dilution Water:	NEB Soft Water
Organism Source:	NEB	Organism Source:	NEB
Reproduction IC25:	0.89 g/L	Growth IC25:	1.22 g/L
Results within range	Yes ☑ No ☐	Results within range	Yes ☑ No ☐

Ceriodaphnia dubia Test Results

Permittee name: West Valley Demonstration Project Permit number: NY0000973

Client sample ID: Outfall 001 Test Dates: 5/19/23 - 5/26/23

Test Acceptability Criteria

Lab Control Control:	100	%	Mean Lab Control Reproduction:	39.7	young per female
Brook Diluent Survival:	100	%	Mean Brook Diluent Reproduction:	38.4	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	0.3	Pass
Chronic Data	Chronic LC50		>100%	
	Survival C-NOEC		100%	
	Survival C-LOEC		>100%	
	Survival IC25		>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	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: 15.9% 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: Outfall 001 Test Dates: 5/19/23 - 5/26/23

Concentration - Response Evaluation

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

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	
X	X	Results are reliable and reportable
		Results are anomalous (see explanation below)
		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: Outfall 001 Test Dates: 5/19/23 - 5/26/23

Test Acceptability Criteria

Lab Diluent Survival:	100 %	Mean Lab Diluent Growth:	0.39 mg
Brook Control Survival:	80 %	Mean Brook Control Growth:	0.34 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%	
	Survival IC25		>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: 14.6% 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: Outfall 001 Test Dates: 5/19/23 - 5/26/23

Concentration - Response Evaluation

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

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	
X	X	Results are reliable and reportable
		Results are anomalous (see explanation below)
		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:	*Ceriodaphnia dubia* 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/m2/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:	*Pimephales promelas* 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/m2/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 *Artemia* 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	*C.dubia* TEST ID #	23-887a
ADDRESS:	10 Hazelwood Drive	CHAIN OF CUSTODY #	C43-2877/78
	Amherst, NY 14228	NEB PROJECT #	44240
PERMITTEE:	West Valley Demonstration Project	SAMPLE ID:	Outfall 001
PERMIT NUMBER:	NY0000973		
DILUTION WATER:	Erdman Brook		

INVERTEBRATES

TEST SET-UP TECHNICIAN:	GP/PD
TEST SPECIES:	*Ceriodaphnia dubia*
NEB LOT #	Cd23(RMH138)
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 $CaCO_3$
C43-MH013	88	61

	DATE	TIME
TEST START:	5/19/23	1118
TEST END:	5/26/23	1046

COMMENTS: Effluent #1 used on day 5 due to samples #2 not arriving. DB 5-23-23

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: 6/21/23

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: 23-887a		COC # C43-2877/78
TEST ORGANISM: *Ceriodaphnia dubia*	AGE: <24 hours		Lot # Cd23(RMH138)
START DATE: 5/19/23	TIME: 1118	END DATE: 5/26/23	TIME: 1046

Effluent Concentration	Day Number	Culture Lot# Cd23(RMH138) Cup # / Replicate										Total Live Young	# Live Adults	Analyst-Transfer	Analyst-Counts
		B1 / A	B3 / B	B4 / C	B5 / D	B6 / E	B9 / F	B10 / G	B12 / H	B15 / I	B17 / J				
NEB Lab Control	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	GP/PD	
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	GP/PD	
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	PD	
	3	6	7	7	7	6	6	6	8	9	6	68	10	TM/AG	TM/AG
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10	DB	DB
	5	16	16	15	12	13	15	15	16	14	14	146	10	TM/AG	TM/AG
	6	20	20	17	16	17	17	18	17	20	21	183	10	SM/AG	SM/AG
	7	~~18~~	~~21~~	~~23~~	~~19~~	✓	✓	~~19~~	~~19~~	✓	~~17~~	0	10	DB	DB
	totals	42	43	39	35	36	38	39	41	43	41	397	10		MC
Erdman Brook Diluent		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	8	7	8	6	7	7	8	7	7	7	72	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	16	20	16	16	17	15	19	8	11	15	153	10		
	6	20	21	12	17	11	16	16	16	15	15	159	10		
	7	~~24~~	~~19~~	~~18~~	~~20~~	~~18~~	~~22~~	~~24~~	~~23~~	~~22~~	~~18~~	0	10		
	totals	44	48	36	39	35	38	43	31	33	37	384	10		
6.25%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	7	6	7	4	6	7	7	4	5	8	61	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	15	18	17	✓	12	18	16	17	17	15	145	10		
	6	12	18	20	8	14	17	18	16	13	20	156	10		
	7	~~22~~	~~19~~	~~23~~	✓	~~19~~	1	~~21~~	~~20~~	~~16~~	~~23~~	1	10		
	totals	34	42	44	12	32	43	41	37	35	43	363	10		

Notes: Replicates in which the neonates are marked with a strike are judged to contain 4th broods (rather than split-broods), and the 4th brood is not included in the reproduction totals per EPA-821-R-02-013.

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: *Ceriodaphnia dubia*	START DATE: 5/19/23

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	7	6	6	6	6	6	7	6	8	7	65	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	17	16	5	15	19	18	15	17	17	17	156	10		
	6	15	16	17	19	21	16	19	14	13	13	163	10		
	7	~~21~~	~~20~~	~~21~~	~~18~~	~~19~~	~~24~~	~~22~~	~~16~~	~~22~~	~~20~~	0	10		
	totals	39	38	28	40	46	40	41	37	38	37	384	10		
25%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	6	6	7	8	5	5	6	5	9	7	64	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	19	15	16	17	19	15	15	13	16	15	160	10		
	6	21	13	16	13	15	16	16	16	16	17	159	10		
	7	~~19~~	~~26~~	~~24~~	~~22~~	~~20~~	~~22~~	~~23~~	~~19~~	~~17~~	~~22~~	0	10		
	totals	46	34	39	38	39	36	37	34	41	39	383	10		
50%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	7	8	6	6	4	8	5	7	4	7	62	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	17	17	16	13	14	20	14	18	14	✓	143	10		
	6	15	20	18	20	15	20	15	18	16	18	175	10		
	7	~~24~~	~~21~~	~~20~~	~~23~~	~~21~~	~~22~~	~~21~~	~~22~~	~~24~~	18	18	10		
	totals	39	45	40	39	33	48	34	43	34	43	398	10		
100%		A	B	C	D	E	F	G	H	I	J				
	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	3	6	9	8	8	5	9	✓	7	8	8	68	10		
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	10		
	5	18	16	18	20	18	20	17	16	17	15	175	10		
	6	17	15	17	20	11	6	15	16	19	17	153	10		
	7	~~19~~	~~19~~	~~25~~	✓	~~23~~	20	18	~~23~~	~~22~~	~~24~~	38	10		
	totals	41	40	43	48	34	55	50	39	44	40	434	10		

CETIS Analytical Report

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

Analysis ID:	11-0056-9947	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5
Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:** <24
Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1099716	200	Yes	Two-Point Interpolation

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

2d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**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

Group	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

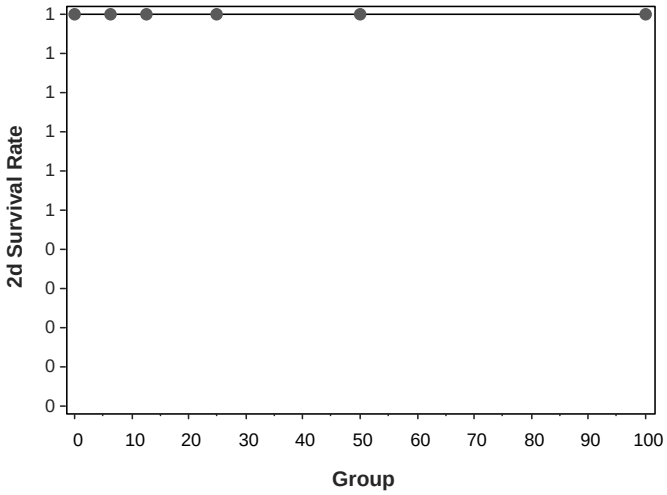
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100	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

CETIS Analytical Report

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

Analysis ID:	11-0056-9947	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	18-3222-8878	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**			
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water		
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable		
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture	**Age:**	<24

Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units
Untransformed	C > T	100	>100	---	---

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	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

Group	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

Group	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

Group	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

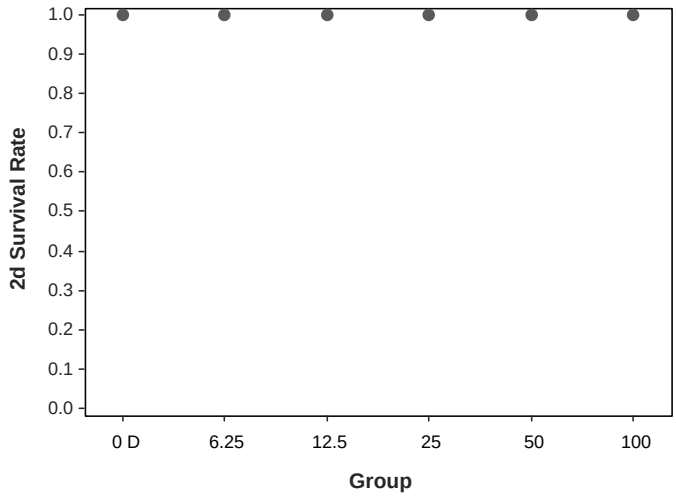
Ceriodaphnia 7-d Survival and Reproduction Test **New England Bioassay**

Analysis ID:	18-3222-8878	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

2d Survival Rate Binomials

Group	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

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

Analysis ID:	21-1357-8482	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture	**Age:** <24

Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1846582	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**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%

7d Survival Rate Detail

Group	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

7d Survival Rate Binomials

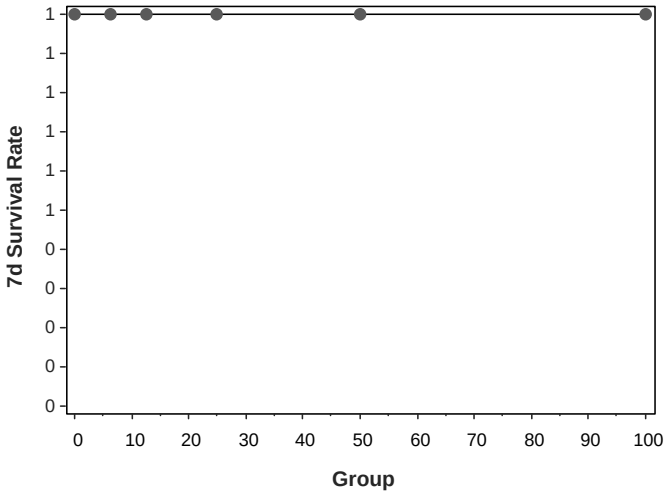
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100	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

CETIS Analytical Report

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

Analysis ID:	21-1357-8482	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	03-5544-2361	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture	**Age:** <24

Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units
Untransformed	C > T	100	>100	---	---

Fisher Exact/Bonferroni-Holm Test

Control	vs	Group	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

Test Acceptability Criteria

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

7d Survival Rate Frequencies

Group	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%

7d Survival Rate Summary

Group	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%

7d Survival Rate Detail

Group	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

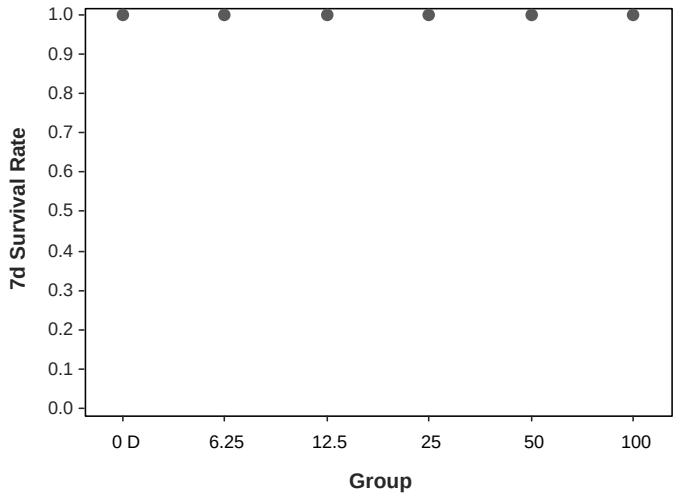
Ceriodaphnia 7-d Survival and Reproduction Test **New England Bioassay**

Analysis ID:	03-5544-2361	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:43	**Analysis:**	STP 2xK Contingency Tables	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

7d Survival Rate Binomials

Group	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: 04 Jun-23 16:04 (p 1 of 2)
Test Code/ID: 23-887a / 06-9150-3356

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

Analysis ID:	05-2773-3091	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:04	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5
Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:** <24
Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	717026	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC25	>100	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**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%

7d Survival Rate Detail

Group	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

7d Survival Rate Binomials

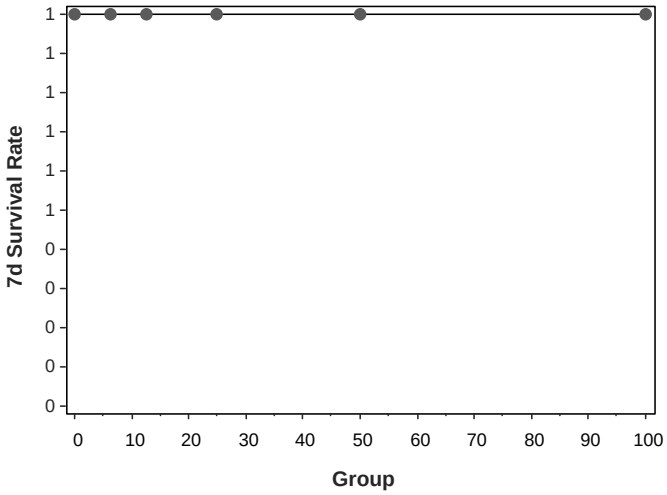
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6.25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100	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

CETIS Analytical Report

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

Analysis ID:	05-2773-3091	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:04	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	521A0DF2AE1E59D72392DBABE0C7AEF	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	14-7649-8968	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:47	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	D99900D0393381E84BB9A5E0891B1ED5	**Editor ID:**	008-848-998-5

Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable	
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture	**Age:** <24

Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	---	6.119	15.93%

Steel Many-One Rank Sum Test

Control	vs	Group	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	18	102.5	75	4	CDF	0.7709	Non-Significant Effect
		12.5	18	111.5	75	3	CDF	0.9403	Non-Significant Effect
		25	18	108	75	4	CDF	0.8923	Non-Significant Effect
		50	18	114	75	4	CDF	0.9629	Non-Significant Effect
		100	18	130	75	4	CDF	0.9994	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	38.4	15	<<	Yes	Passes Criteria
PMSD	0.1593	0.13	0.47	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	284.4	56.88	5	1.592	0.1779	Non-Significant Effect
Error	1929	35.7222	54			
Total	2213.4		59			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	10.64	15.09	0.0590	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9262	0.9459	0.0014	Non-Normal Distribution

Reproduction Summary

Group	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	10	38.4	34.64	42.16	37.5	31	48	1.661	13.68%	0.00%
6.25		10	36.3	29.47	43.13	39	12	44	3.019	26.30%	5.47%
12.5		10	38.4	35.18	41.62	38.33	28	46	1.424	11.72%	0.00%
25		10	38.3	35.78	40.82	38.75	34	46	1.116	9.21%	0.26%
50		10	39.8	36.19	43.41	39.33	33	48	1.597	12.69%	-3.65%
100		10	43.4	39.03	47.77	42	34	55	1.933	14.09%	-13.02%

Reproduction Detail

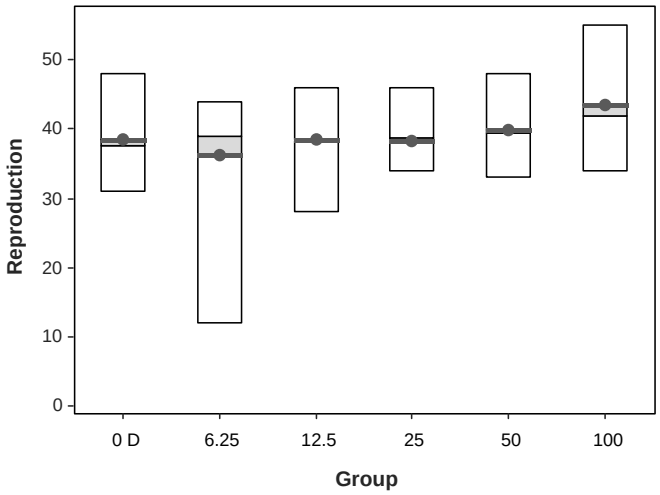
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	44	48	36	39	35	38	43	31	33	37
6.25		34	42	44	12	32	43	41	37	35	43
12.5		39	38	28	40	46	40	41	37	38	37
25		46	34	39	38	39	36	37	34	41	39
50		39	45	40	39	33	48	34	43	34	43
100		41	40	43	48	34	55	50	39	44	40

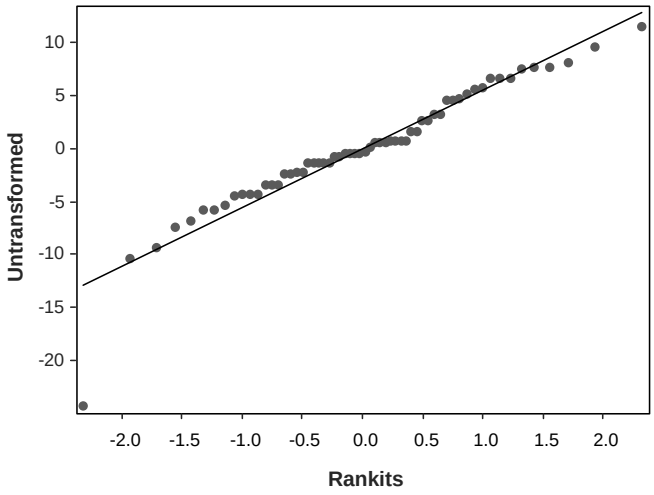
CETIS Analytical Report

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

Analysis ID:	14-7649-8968	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:47	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	D99900D0393381E84BB9A5E0891B1ED5	**Editor ID:**	008-848-998-5

Graphics





CETIS Analytical Report

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

Analysis ID:	18-2328-3128	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:48	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	D99900D0393381E84BB9A5E0891B1ED5	**Editor ID:**	008-848-998-5
Batch ID:	19-4429-5160	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 11:18	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 10:46	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	6d 23h	**Taxon:**	Branchiopoda	**Source:**	In-House Culture **Age:** <24
Sample ID:	04-1202-5750	**Code:**	188F0396	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	26h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	294247	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	38.4	15	<<	Yes	Passes Criteria

Point Estimates

Level		95% LCL	95% UCL
IC25	>100	---	---
IC50	>100	---	---

Reproduction Summary

			Calculated Variate						Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	10	38.4	37.5	31	48	13.68%	0.00%	39.1	0.00%
6.25		10	36.3	39	12	44	26.30%	5.47%	39.1	0.00%
12.5		10	38.4	38.33	28	46	11.72%	0.00%	39.1	0.00%
25		10	38.3	38.75	34	46	9.21%	0.26%	39.1	0.00%
50		10	39.8	39.33	33	48	12.69%	-3.65%	39.1	0.00%
100		10	43.4	42	34	55	14.09%	-13.02%	39.1	0.00%

Reproduction Detail

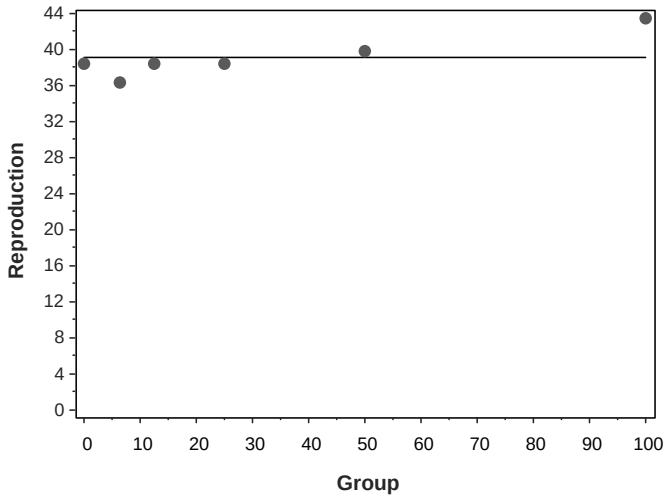
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	44	48	36	39	35	38	43	31	33	37
6.25		34	42	44	12	32	43	41	37	35	43
12.5		39	38	28	40	46	40	41	37	38	37
25		46	34	39	38	39	36	37	34	41	39
50		39	45	40	39	33	48	34	43	34	43
100		41	40	43	48	34	55	50	39	44	40

CETIS Analytical Report

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

Analysis ID:	18-2328-3128	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:48	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:41	**MD5 Hash:**	D99900D0393381E84BB9A5E0891B1ED5	**Editor ID:**	008-848-998-5

Graphics



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			*Ceriodaphnia dubia*	
DILUTION WATER SOURCE:	Erdman Brook			START DATE:			5/19/23 TIME:	1118
NEB Lab Control	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.9	25.0	25.4	25.2	25.2	25.1	24.7	
D.O. mg/L Initial	8.2	8.2	8.2	8.3	8.3	8.2	8.2	
pH s.u. Initial	7.9	7.9	7.5	7.9	7.5	7.8	7.9	
Conductivity µS Initial	323	322	319	324	322	319	319	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.0	25.2	25.0	24.9	25.3	24.5	25.5	
D.O. mg/L Final	8.2	8.0	8.4	8.3	7.7	8.3	8.1	
pH s.u. Final	8.0	7.7	7.8	7.3	7.4	7.8	7.8	
Conductivity µS Final	335	325	324	325	335	327	329	
Erdman Brook Diluent	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.8	24.9	25.3	24.9	24.8	24.6	24.9	
D.O. mg/L Initial	9.9	9.5	8.4	9.3	9.5	9.5	8.9	
pH s.u. Initial	7.8	7.7	7.4	7.7	7.6	7.6	7.6	
Conductivity µS Initial	256	256	254	254	254	255	259	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	25.4	25.1	24.9	25.4	24.6	25.6	
D.O. mg/L Final	8.1	8.0	8.4	8.3	7.7	8.3	8.0	
pH s.u. Final	8.2	7.9	8.0	7.5	7.6	7.8	7.9	
Conductivity µS Final	266	259	260	259	268	265	270	
6.25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.8	24.9	25.3	24.8	24.8	24.5	24.8	
D.O. mg/L Initial	10.0	9.4	8.5	9.4	9.5	9.4	8.8	
pH s.u. Initial	7.8	7.8	7.4	7.7	7.6	7.5	7.7	
Conductivity µS Initial	330	330	327	327	341	330	327	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	25.3	25.1	25.1	25.4	24.8	25.7	
D.O. mg/L Final	8.0	8.0	8.5	8.3	7.8	8.2	8.0	
pH s.u. Final	8.2	7.9	8.0	7.6	7.7	8.0	7.9	
Conductivity µS Final	339	332	330	335	357	337	337	

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			*Ceriodaphnia dubia*	
DILUTION WATER SOURCE:	Erdman Brook			START DATE:			5/19/23 TIME:	1118
12.5%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	=F7	PD	TM/AG	GP	
Temp °C Initial	24.7	25.0	25.3	24.7	24.8	24.4	24.6	
D.O. mg/L Initial	10.0	9.4	8.5	9.5	9.4	9.5	8.8	
pH s.u. Initial	7.8	7.8	7.4	7.7	7.7	7.6	7.7	
Conductivity µS Initial	404	391	393	380	392	387	384	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	25.2	25.1	25.1	25.5	24.5	25.6	
D.O. mg/L Final	8.0	8.0	8.5	8.3	7.8	8.3	8.0	
pH s.u. Final	8.2	7.9	8.1	7.6	7.7	8.0	8.0	
Conductivity µS Final	415	393	399	393	411	400	401	
25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.7	24.9	25.3	24.7	24.8	24.4	24.6	
D.O. mg/L Initial	10.0	9.4	8.5	9.5	9.4	9.5	8.8	
pH s.u. Initial	7.8	7.8	7.5	7.7	7.7	7.6	7.7	
Conductivity µS Initial	517	515	505	507	506	511	506	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	25.2	25.3	25.1	25.4	24.5	25.6	
D.O. mg/L Final	8.1	8.0	8.6	8.3	7.8	8.3	8.1	
pH s.u. Final	8.2	8.0	8.1	7.7	7.8	8.0	8.0	
Conductivity µS Final	529	514	509	513	516	515	514	
50%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.7	25.0	25.3	24.7	24.8	24.4	24.3	
D.O. mg/L Initial	10.1	9.4	8.5	9.5	9.3	9.5	8.7	
pH s.u. Initial	7.9	7.8	7.6	7.7	7.8	7.6	7.8	
Conductivity µS Initial	772	768	766	763	760	766	756	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	25.2	25.3	25.2	25.4	24.5	25.7	
D.O. mg/L Final	8.1	8.0	8.7	8.4	7.8	8.3	8.1	
pH s.u. Final	8.3	8.0	8.2	7.8	7.9	8.1	8.1	
Conductivity µS Final	785	763	766	768	778	769	767	

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			*Ceriodaphnia dubia*	
DILUTION WATER SOURCE:	Erdman Brook			START DATE:			5/19/23 TIME:	1118
100%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	IR/PD	TS/PD	PD	PD	PD	TM/AG	GP	
Temp °C Initial	24.7	24.8	25.3	24.4	24.8	24.4	24.0	
D.O. mg/L Initial	10.4	9.4	8.5	9.9	9.3	10.2	8.7	
pH s.u. Initial	8.0	7.9	7.7	7.8	7.9	7.7	7.9	
Conductivity µS Initial	1,289	1,288	1,289	1,274	1,284	1,267	1,261	
Tech Initials Final	TS/PD	TS/PD	AG	SM	JG	KO	DB	
Temp °C Final	25.2	24.9	25.3	25.2	25.3	24.4	25.7	
D.O. mg/L Final	8.2	8.0	8.7	8.3	7.8	8.3	8.0	
pH s.u. Final	8.4	8.2	8.3	7.9	8.0	8.2	8.2	
Conductivity µS Final	1,303	1,282	1,284	1,286	1,303	1,280	1,287	
	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								

Table of Random Permutations of 16

C.dubia Test ID# 23-887a

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	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
	CONC					REP													
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 # Cd23 (RMH 138) B

Brood mother source: RMH 123 B.1 Source's brood size: 20 (Qty.) West Valley 5-19.23

Tech	AH	SK	EM	SD		SD	AH	JG		SD	SD	AH				
Date	5-9	5-10	5-11	5-12	5-13	5-14	5-15	5-16		5-17	5-18	5-19				
Day	0	1	2	3	4	5	6	7		8	9	10	11	12	13	14
Cup #	Beaker		Tray													
1	N	N	N	N		6	11	T1 Y20	1	N	y	T1 Y20				
2	N	N	N	N		8	10	T2 Y18	2	N	y	y				
3	N	N	N	N		5	10	T3 Y18	3	N	y	T2 y 23				
4	N	N	N	N		4	9	T4 Y14	4	N	y	y T3 22				
5	N	N	N	N		5	12	T5 Y19	5	N	y	y T4 22				
6	N	N	N	N		5	11	T6 Y18	6	N	y	T5 y 23				
7	N	N	N	N		7	12	T7 Y15	7	N	y	y				
8	N	N	N	N		6	13	T8 Y21	8	N	y	y				
9	N	N	N	N		6	12	T9 Y21	9	N	y	T6 y 25				
10	N	N	N	N		6	11	T10 Y20	10	N	y	T7 y 22				
11	N	N	N	N		6	13	Y	11	N	y	y				
12	N	N	N	N		5	11	Y	12	N	y	T8 y 24				
13	N	N	N	N		6	13	Y	13	N	y	y				
14	N	N	N	N		7	10	Y	14	N	y	y				
15	N	N	N	N		5	11	Y	15	N	y	y T9 22				
16	N	N	N	N		7	11	Y	16	N	y	y				
17	N	N	N	N		6	11	Y	17	N	y	y T10 23				
18	N	N	N	N		5	11	Y	18	N	y	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
46213	T		Y	5.15.23/1630 → 5.15.23/1900	5/16/23 1225
44240	T		Y	5.18.23/1615 → 5.18.23/1820	5.19.23/0945
	T				
	T				
	T				

PIMEPHALES PROMELAS
DATASHEETS & STATISTICAL ANALYSIS

NEW ENGLAND BIOASSAY TOXICITY DATA FORM
CHRONIC COVER SHEET

CLIENT:	Test America	*P.promelas* TEST ID #	23-887b
ADDRESS:	10 Hazelwood Drive	CHAIN OF CUSTODY #	C43-2877/78
	Amherst, NY 14228	NEB PROJECT #	44240
PERMITTEE:	West Valley Demonstration Project	SAMPLE ID:	Outfall 001
PERMIT NUMBER:	NY0000973		
DILUTION WATER:	Moderately Hard Synthetic		

VERTEBRATES

TEST SET-UP TECHNICIAN:	IR/PD
TEST SPECIES:	*Pimephales promelas*
NEB LOT #	Pp23(5-19)1524
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
C43-MH013	88	61

	DATE	TIME
TEST START:	5/19/23	1223
TEST END:	5/26/23	1218

COMMENTS: Effluent #1 used on day 5 due to samples #2 not arriving. DB 5-23-23

REVIEWED BY: Kimberly Wills DATE: 6/21/23

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:	23-887b	COC #	C43-2877/78		
TEST ORGANISM:	*Pimephales promelas*	AGE:	<24 hours	Lot #	Pp23(5-19)1524		
START DATE:	5/19/23	TIME:	1223	END DATE:	5/26/23	TIME:	1218

Effluent Concentration	Replicate Number	Number of Survivors								
		Day								
		0	1	2	3	4	5	6	7	Remarks
	ANALYST	IR/PD	TS/PD	TS/PD	TS/PD	TS/DB	IR/AG	SK	SM	
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	9	9	9	9	9	
	B	10	10	10	9	8	8	8	8	
	C	10	10	10	10	10	10	9	9	
	D	10	10	10	8	6	6	6	6	
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	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	
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	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	
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 OBSERVATION DATA FORM

Permittee: West Valley Demonstration Project Test Species: *Pimephales promelas* Test ID: 23-887b

Test Date: 5/19/23 Project # 44240

Concentration or Dilution	All organisms appear healthy and normal unless noted							
	Day 3 Observations		Date: 5/22/23		Technician: TS/PD			
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:	F	Rep B:	NF	Rep C:		Rep D:	NF
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:	
	Day 4 Observations		Date: 5/23/23		Technician: TS/DB			
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:		Rep B:		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:		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 OBSERVATION DATA FORM

Permittee: West Valley Demonstration Project Test Species: *Pimephales promelas* Test ID: 23-887b

Test Date: 5/19/23 Project # 44240

Concentration or Dilution	All organisms appear healthy and normal unless noted							
	Day 6 Observations		Date: 5/25/23		Technician: SK			
Lab Diluent	Rep A:		Rep B:		Rep C:		Rep D:	
Brook Control	Rep A:		Rep B:		Rep C:	F	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:	
	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:	23-887b
TEST START DATE	5/19/23	WEIGHING DATE:	Not Recorded
TEST END DATE	5/26/23		
DRYING TEMPERATURE (°C)	100 ± 4	DRYING TIME:	minimum 6 hours
ANALYST-INITIAL WEIGHTS	TM/DB	ANALYST-FINAL WEIGHTS	Not Recorded

Effluent Concentration	Replicate Number	A Weight of boat (mg)	B Dry Weight: Foil and Larvae (mg)
NEB Lab Synthetic Diluent	A	926.87	930.64
	B	925.14	928.72
	C	923.47	927.57
	D	923.87	928.20
Erdman Brook Control	A	924.66	927.72
	B	923.87	927.53
	C	927.20	930.45
	D	926.54	930.11
6.25%	A	926.60	930.85
	B	928.35	931.94
	C	929.96	933.44
	D	928.16	932.46
12.5%	A	926.15	930.14
	B	928.89	933.45
	C	927.75	931.74
	D	931.75	936.00
25%	A	927.07	931.44
	B	925.87	930.78
	C	923.50	927.57
	D	925.43	930.48
50%	A	928.50	933.34
	B	928.31	933.23
	C	926.50	931.49
	D	925.06	929.74
100%	A	924.35	928.37
	B	925.74	930.17
	C	928.02	931.91
	D	929.95	934.42

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	930.64	926.87	3.77	0.377	0.3945	0.033471381
	2	928.72	925.14	3.58	0.358		
	3	927.57	923.47	4.10	0.410		
	4	928.20	923.87	4.33	0.433		
Erdman Brook Control	1	927.72	924.66	3.06	0.306	0.3385	0.027910571
	2	927.53	923.87	3.66	0.366		
	3	930.45	927.20	3.25	0.325		
	4	930.11	926.54	3.57	0.357		
6.25%	1	930.85	926.60	4.25	0.425	0.3905	0.043007751
	2	931.94	928.35	3.59	0.359		
	3	933.44	929.96	3.48	0.348		
	4	932.46	928.16	4.30	0.430		
12.5%	1	930.14	926.15	3.99	0.399	0.4198	0.027097048
	2	933.45	928.89	4.56	0.456		
	3	931.74	927.75	3.99	0.399		
	4	936.00	931.75	4.25	0.425		
25%	1	931.44	927.07	4.37	0.437	0.4600	0.045912961
	2	930.78	925.87	4.91	0.491		
	3	927.57	923.50	4.07	0.407		
	4	930.48	925.43	5.05	0.505		
50%	1	933.34	928.50	4.84	0.484	0.4858	0.01332604
	2	933.23	928.31	4.92	0.492		
	3	931.49	926.50	4.99	0.499		
	4	929.74	925.06	4.68	0.468		
100%	1	928.37	924.35	4.02	0.402	0.4202	0.029113284
	2	930.17	925.74	4.43	0.443		
	3	931.91	928.02	3.89	0.389		
	4	934.42	929.95	4.47	0.447		

CETIS Analytical Report

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

Analysis ID:	00-6279-6685	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:53	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5
Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:** <24
Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	504532	200	Yes	Two-Point Interpolation

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

2d Survival Rate Summary

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

2d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

2d Survival Rate Binomials

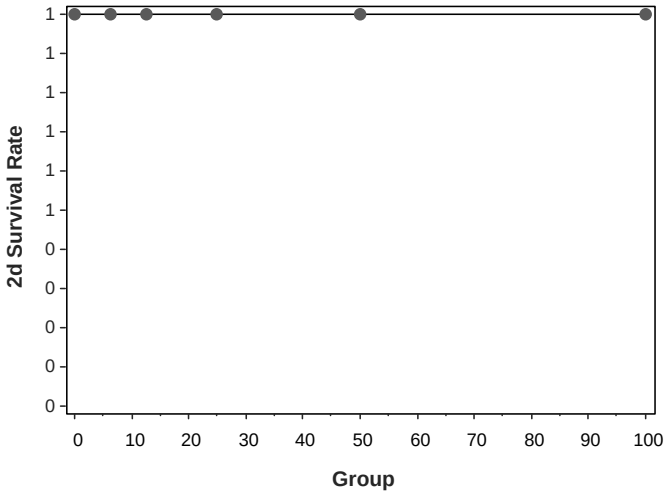
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	00-6279-6685	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:53	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	03-3893-0615	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:53	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5
Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:** <24
Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

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

Steel Many-One Rank Sum Test

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

ANOVA Table

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

ANOVA Assumptions Tests

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

2d Survival Rate Summary

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

Angular (Corrected) Transformed Summary

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

CETIS Analytical Report

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

Analysis ID:	03-3893-0615	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:53	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

2d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

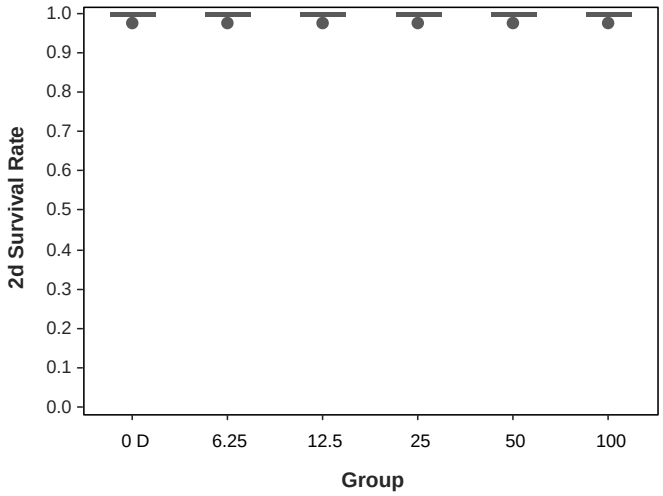
Angular (Corrected) Transformed Detail

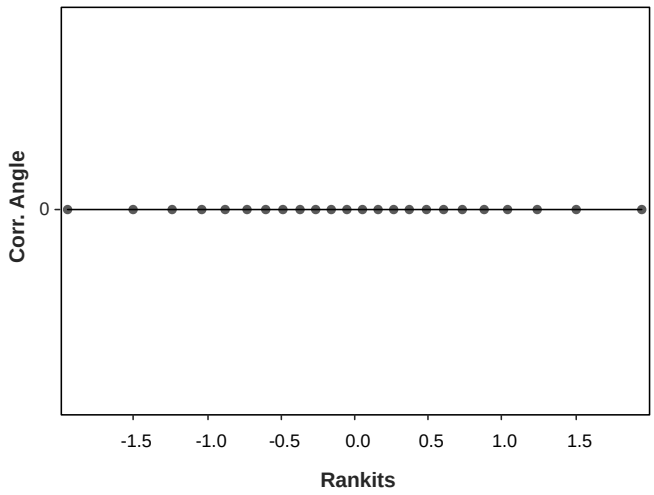
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
6.25		1.4120	1.4120	1.4120	1.4120
12.5		1.4120	1.4120	1.4120	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.4120	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

2d Survival Rate Binomials

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics





CETIS Analytical Report

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

Analysis ID:	06-5964-3230	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5
Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:** <24
Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	957995	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

7d Survival Rate Summary

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

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

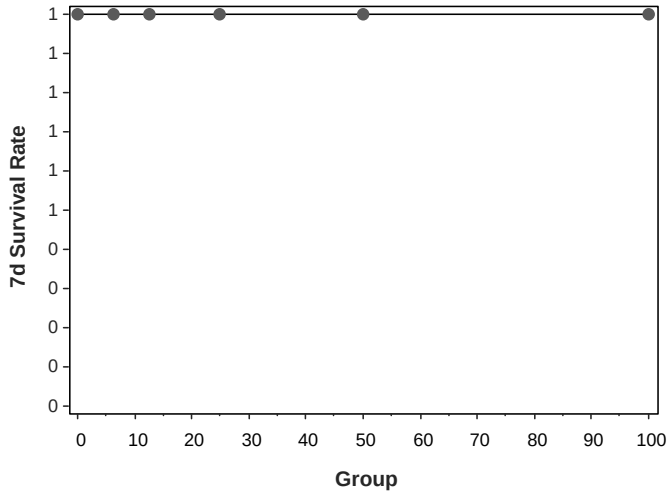
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	06-5964-3230	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	11-2390-4533	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

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

Steel Many-One Rank Sum Test

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

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
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	0	5			Indeterminate
Error	0	0	18			
Total	0		23			

ANOVA Assumptions Tests

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

7d Survival Rate Summary

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

Angular (Corrected) Transformed Summary

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

CETIS Analytical Report

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

Analysis ID:	11-2390-4533	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

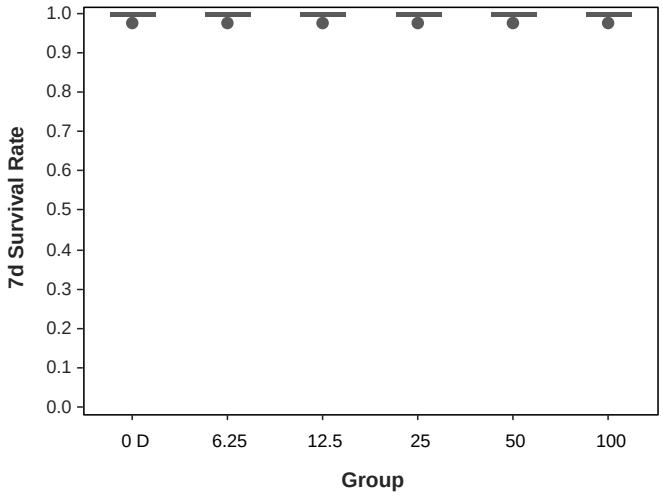
Angular (Corrected) Transformed Detail

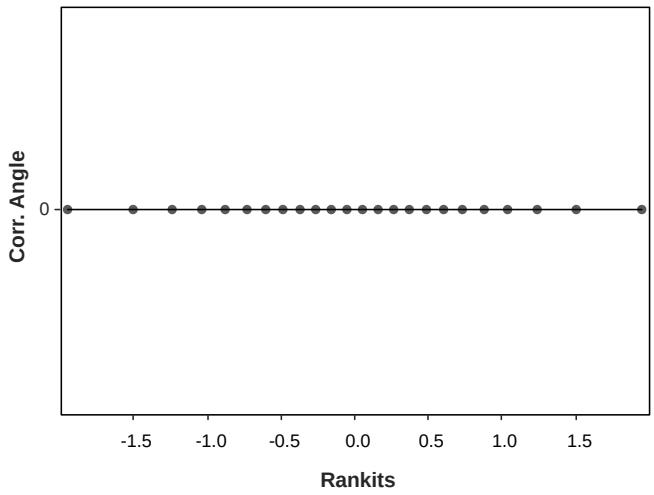
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
6.25		1.4120	1.4120	1.4120	1.4120
12.5		1.4120	1.4120	1.4120	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.4120	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

7d Survival Rate Binomials

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics





CETIS Analytical Report

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

Analysis ID:	10-4327-5844	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5
Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture **Age:** <24
Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1667863	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC25	>100	---	---

7d Survival Rate Summary

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

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

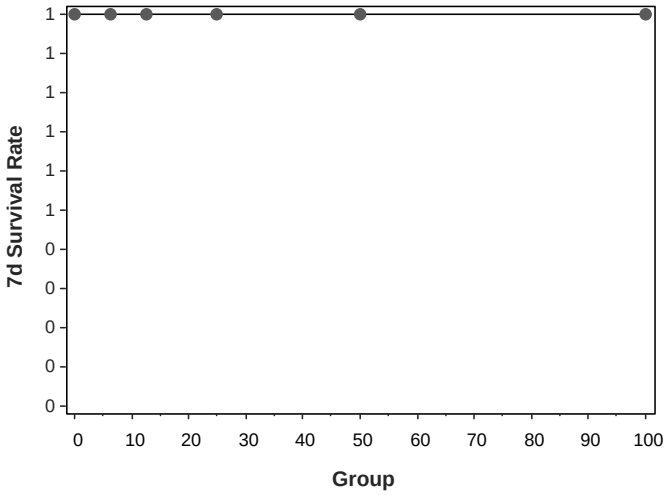
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	10-4327-5844	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:03	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	16-8540-2512	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	125B427BD299FF63600683E9FDD9DC4D	**Editor ID:**	008-848-998-5

Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**			
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water		
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**	<24

Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	---	0.05746	14.57%

Dunnett Multiple Comparison Test

Control	vs	Group	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	6	0.1675	2.407	0.05746	CDF	0.7793	Non-Significant Effect
		12.5	6	-1.058	2.407	0.05746	CDF	0.9853	Non-Significant Effect
		25	6	-2.744	2.407	0.05746	CDF	0.9999	Non-Significant Effect
		50	6	-3.823	2.407	0.05746	CDF	1.0000	Non-Significant Effect
		100	6	-1.079	2.407	0.05746	CDF	0.9861	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.3945	0.25	<<	Yes	Passes Criteria
PMSD	0.1457	0.12	0.3	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0280573	0.0056115	5	4.924	0.0052	Significant Effect
Error	0.0205132	0.0011396	18			
Total	0.0485705		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	4.016	15.09	0.5471	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9357	0.884	0.1311	Normal Distribution

Mean Dry Biomass-mg Summary

Group	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.3945	0.3412	0.4478	0.3935	0.358	0.433	0.01674	8.49%	0.00%
6.25		4	0.3905	0.3221	0.4589	0.392	0.348	0.43	0.0215	11.01%	1.01%
12.5		4	0.4197	0.3766	0.4629	0.4077	0.399	0.456	0.01355	6.46%	-6.40%
25		4	0.46	0.3869	0.5331	0.464	0.407	0.505	0.02296	9.98%	-16.60%
50		4	0.4857	0.4645	0.507	0.488	0.468	0.499	0.006663	2.74%	-23.13%
100		4	0.4202	0.3739	0.4666	0.4225	0.389	0.447	0.01456	6.93%	-6.53%

Mean Dry Biomass-mg Detail

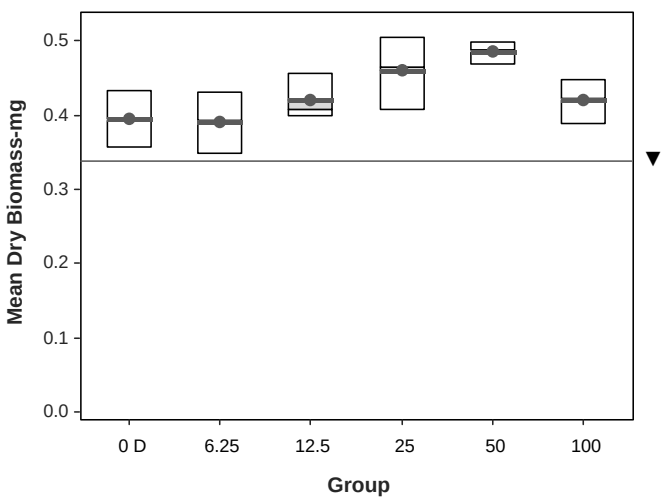
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.377	0.358	0.41	0.433
6.25		0.425	0.359	0.348	0.43
12.5		0.399	0.456	0.399	0.425
25		0.437	0.491	0.407	0.505
50		0.484	0.492	0.499	0.468
100		0.402	0.443	0.389	0.447

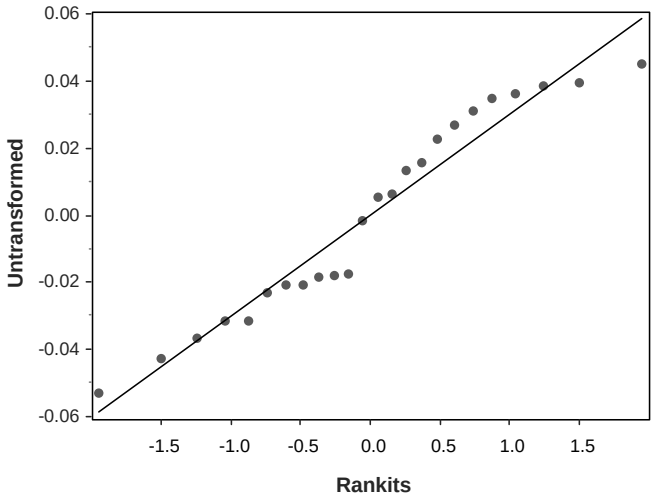
CETIS Analytical Report

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

Analysis ID:	16-8540-2512	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	125B427BD299FF63600683E9FDD9DC4D	**Editor ID:**	008-848-998-5

Graphics





CETIS Analytical Report

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

Analysis ID:	12-2827-6656	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	125B427BD299FF63600683E9FDD9DC4D	**Editor ID:**	008-848-998-5

Batch ID:	05-6527-4548	**Test Type:**	Growth-Survival (7d)	**Analyst:**			
Start Date:	19 May-23 12:23	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water		
Ending Date:	26 May-23 12:18	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**	<24

Sample ID:	00-0781-6788	**Code:**	774654	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	27h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1202159	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.3945	0.25	<<	Yes	Passes Criteria

Point Estimates

Level		95% LCL	95% UCL
IC25	>100	---	---
IC50	>100	---	---

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	4	0.3945	0.3935	0.358	0.433	8.49%	0.00%	0.4301	0.00%
6.25		4	0.3905	0.392	0.348	0.43	11.01%	1.01%	0.4301	0.00%
12.5		4	0.4197	0.4077	0.399	0.456	6.46%	-6.40%	0.4301	0.00%
25		4	0.46	0.464	0.407	0.505	9.98%	-16.60%	0.4301	0.00%
50		4	0.4857	0.488	0.468	0.499	2.74%	-23.13%	0.4301	0.00%
100		4	0.4202	0.4225	0.389	0.447	6.93%	-6.53%	0.4202	2.30%

Mean Dry Biomass-mg Detail

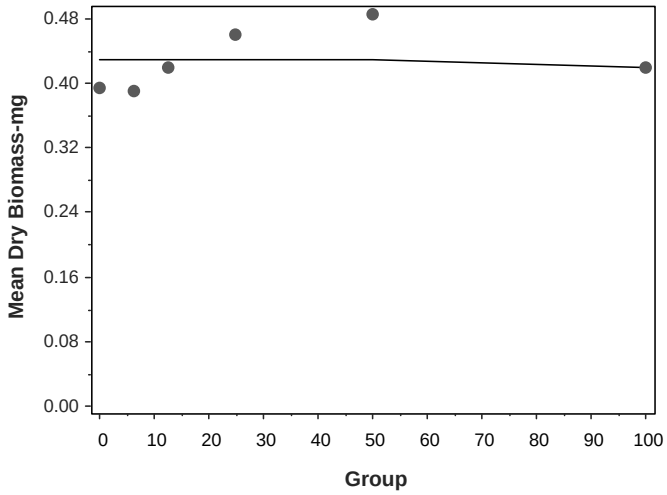
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.377	0.358	0.41	0.433
6.25		0.425	0.359	0.348	0.43
12.5		0.399	0.456	0.399	0.425
25		0.437	0.491	0.407	0.505
50		0.484	0.492	0.499	0.468
100		0.402	0.443	0.389	0.447

CETIS Analytical Report

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

Analysis ID:	12-2827-6656	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 15:54	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:52	**MD5 Hash:**	125B427BD299FF63600683E9FDD9DC4D	**Editor ID:**	008-848-998-5

Graphics



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		*Pimephales promelas*	
DILUTION WATER SOURCE:	Moderately Hard Synthetic				START DATE:		5/19/23 TIME:	1223
NEB Lab Synthetic Diluent	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	25.0	25.2	24.5	25.2	25.4	25.3	25.1	
D.O. mg/L Initial	8.2	8.2	8.4	8.3	8.3	8.2	8.2	
pH s.u. Initial	7.5	7.9	7.9	8.0	7.4	7.8	8.0	
Conductivity µS Initial	320	324	319	319	321	322	319	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.4	25.6	25.5	25.6	25.5	25.0	25.2	
D.O. mg/L Final	7.4	6.8	7.2	7.0	7.0	7.6	7.0	
pH s.u. Final	7.7	7.5	7.5	7.5	7.5	7.5	7.5	
Conductivity µS Final	344	346	342	342	346	345	346	
Erdman Brook Control	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	24.4	24.8	25.0	24.8	24.8	24.4	25.0	
D.O. mg/L Initial	10.8	9.9	8.7	10.0	9.9	9.7	9.0	
pH s.u. Initial	7.5	7.7	7.8	7.7	7.5	7.4	7.6	
Conductivity µS Initial	250	254	251	250	252	258	256	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.5	25.5	25.3	25.7	25.6	25.4	25.7	
D.O. mg/L Final	7.7	7.4	7.0	7.1	7.1	7.5	7.0	
pH s.u. Final	7.8	7.9	7.7	7.7	7.6	7.5	7.6	
Conductivity µS Final	274	279	281	281	276	279	310	
6.25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	25.0	25.2	24.5	25.1	25.3	25.1	25.0	
D.O. mg/L Initial	8.3	8.2	8.4	8.4	8.4	8.2	8.3	
pH s.u. Initial	7.7	7.9	7.9	8.0	7.6	7.7	8.0	
Conductivity µS Initial	386	383	385	380	379	384	386	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.4	25.5	25.3	25.7	25.6	25.3	25.7	
D.O. mg/L Final	7.5	7.0	7.3	7.0	6.9	7.4	7.0	
pH s.u. Final	7.8	7.7	7.7	7.6	7.5	7.6	7.6	
Conductivity µS Final	410	410	410	405	403	407	404	

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		*Pimephales promelas*	
DILUTION WATER SOURCE:	Moderately Hard Synthetic				START DATE:		5/19/23 TIME:	1223
12.5%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	25.0	25.1	24.5	25.1	25.4	25.1	25.0	
D.O. mg/L Initial	8.4	8.3	8.4	8.4	8.3	8.3	8.3	
pH s.u. Initial	7.7	7.9	7.9	7.9	7.6	7.7	8.1	
Conductivity µS Initial	440	450	444	444	441	445	440	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.1	25.2	25.1	25.4	25.4	25.1	25.5	
D.O. mg/L Final	7.6	7.2	7.2	7.1	6.7	7.4	7.0	
pH s.u. Final	7.9	7.8	7.7	7.7	7.5	7.6	7.6	
Conductivity µS Final	472	476	474	472	468	471	460	
25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	25.0	25.1	24.6	25.0	25.4	25.1	25.0	
D.O. mg/L Initial	8.8	8.5	8.4	8.6	8.3	8.5	8.3	
pH s.u. Initial	7.8	7.9	8.0	7.9	7.6	7.7	8.1	
Conductivity µS Initial	570	576	568	563	566	568	563	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.2	25.4	25.2	25.1	25.4	25.3	25.5	
D.O. mg/L Final	7.6	7.1	7.2	7.3	7.0	7.4	6.9	
pH s.u. Final	7.9	7.9	7.8	7.8	7.7	7.7	7.7	
Conductivity µS Final	601	603	596	591	593	593	584	
50%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	24.8	25.1	24.7	24.8	25.4	24.9	24.9	
D.O. mg/L Initial	9.3	8.7	8.4	9.0	8.5	9.0	8.4	
pH s.u. Initial	7.8	7.9	8.0	7.9	7.7	7.7	8.1	
Conductivity µS Initial	810	818	802	808	811	812	803	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.1	25.4	25.1	25.3	25.3	25.0	25.6	
D.O. mg/L Final	7.6	7.2	7.1	7.0	6.9	7.4	6.8	
pH s.u. Final	8.0	8.0	7.9	7.8	7.8	7.8	7.8	
Conductivity µS Final	845	843	834	840	841	850	828	

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		*Pimephales promelas*	
DILUTION WATER SOURCE:	Moderately Hard Synthetic				START DATE:		5/19/23 TIME:	1223
100%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	TM/PD	IR/AG	GP	
Temp °C Initial	24.3	24.8	24.9	24.3	25.3	24.4	24.5	
D.O. mg/L Initial	11.0	10.1	8.8	10.2	9.1	10.3	9.0	
pH s.u. Initial	7.8	7.8	8.0	7.9	7.8	7.6	8.0	
Conductivity µS Initial	1,287	1,302	1,292	1,288	1,288	1,294	1,284	
Tech Initials Final	TS/PD	GP/PD	TS/PD	SM	IR/AG	SK	SK	
Temp °C Final	25.6	25.7	25.6	25.6	25.7	25.2	25.7	
D.O. mg/L Final	7.7	7.5	7.1	7.1	6.9	7.5	6.9	
pH s.u. Final	8.1	8.1	8.1	8.0	7.9	7.9	7.9	
Conductivity µS Final	1,317	1,322	1,314	1,314	1,317	1,318	1,306	
	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								

Table of Random Permutations of 16

P.promelas Test ID# 23-887b

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

															conc				
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

									reps										
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	5/19/23		5/24/23			
SAMPLE TYPE:	EFF #1	BROOK #1	EFF #2	BROOK #2	EFF #3	BROOK #3
COC #	C43-2877	C43-2878	C43-2928	C43-2929		
pH (SU)	7.5	7.4	7.7	7.5		
Temperature (°C)	1.1, 0.4, 0.4	1.0, 0.9	5.8, 5.6	1.8		
Dissolved Oxygen (mg/L)	12.2	12.4	11.1	10.3		
Conductivity (µmhos)	1,304	253	1,282	255		
Salinity (ppt)	<1	<1	<1	<1		
TRC - DPD (mg/L)	0.028	0.052	0.082	0.091		
TRC - Amperometric (mg/L)	N/A	< 0.05	< 0.05	< 0.05		
Hardness (mg/L as $CaCO_3$)	152	100	150	102		
Alkalinity (mg/l as $CaCO_3$)	152	90	146	89		
Tech Initials	SK/AG	SK/AG	DB	DB		

NOTE: NA = NOT APPLICABLE

Data Reviewed By: Kimberly Wills Date Reviewed: 6/21/23

NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

Sample set# 1

EFFLUENT

Sampler: C Roesch
Title: Environmental Scientist
Facility: West Valley

RECEIVING WATER

Sampler: C Roesch
Title: Environmental Scientist
Facility: West Valley

Sampling Method: X **Composite**
Sample ID: Outfall 001
Start Date: 5-17-23 Time: 0945
End Date: 5-19-23 Time: 0900

Sampling Method: X Grab
Sample ID: Erdman Brook
Date Collected: 5-18-23
Time Collected: 0730

Sample Type:
___ Prechlorinated
___ Dechlorinated
/ Unchlorinated
___ Chlorinated

Ended Early for Shipping Purposes

Effluent Sampling Location and Procedures: WNSP001 EM-2

Receiving Water Sampling Location and Procedures: WNERB53 EM-2

Requested Analysis: X Chronic and modified acute

Sample Shipment

Method of Shipment: UP Next Day Air

Relinquished By:		Date: 5-18-23	Time:
Received By:	Shannon Ruffel WB	Date: 5-19-23	Time: 0808
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: 1.1, 0.4 °C
Temperature of Receiving Water Upon Receipt at Lab: 1.0, 0.9 °C

Effluent COC# C43 - 2577
Receiving Water COC# C43 - 2578

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: SPDES

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID: / Work Order:
Test America	CH-007532	WV03.IN.01.01.01.02.01	1374	1	10 Days	230501-07 / SP-Discharge

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
WNSP001	2023-03455	05/18/23	09:00	1	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c,	NEB water for dilution for minnow. Receiving water for control., Receiving water for dilution for water flea. NEB water for control.

Project Notes: Initial sample, Erdman Brook also included in shipment

Signature Rel: Date/Time [signature] 5-18-23 0930 Signature Rec: Date/Time Shannon Kuffel NEB 0806	Signature Rel: Date/Time Signature Rec: Date/Time
Signature Rel: Date/Time Signature Rec: Date/Time	Signature Rel: Date/Time Signature Rec: Date/Time
Signature Rel: Date/Time Signature Rec: Date/Time	Sample Receipt at Lab: Cool? YES NO Temp: C Signature Rec: Date/Time YES NO

NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

Sample set# 2

EFFLUENT

Sampler: C. Rossi
Title: Environmental Scientist
Facility: West Valley

Sampling Method: X **Composite**
Sample ID: Outfall 001
Start Date: 5-21-23 Time: 0730
End Date: 5-22-23 Time: 0730

Sample Type:
___ Prechlorinated
___ Dechlorinated
X Unchlorinated
___ Chlorinated

RECEIVING WATER

Sampler: J Zientek
Title: Engineer
Facility: West Valley

Sampling Method: X Grab
Sample ID: Erdman Brook
Date Collected: 5-22-23
Time Collected: 0750

Received
ON ICE

Effluent Sampling Location and Procedures: WNSP001 EM-2

Receiving Water Sampling Location and Procedures: WNERB53 EM-2

Requested Analysis: X Chronic and modified acute

Sample Shipment

Method of Shipment: UPS Next Day Air

Relinquished By:	[signature]	Date: 5-22-23	Time: 0830
Received By:	Dewin Burke NEB	Date: 5-24-23	Time: 0809
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: 5.8,5.6 °C
Temperature of Receiving Water Upon Receipt at Lab: 8.0,8.8 °C

Effluent COC# C43-2928
Receiving Water COC# C43-2929

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: SPDES

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID:
Test America	CH-007532	WV03.IN.01.01.01.02.01	1374	1	10 Days	230501-07 Work Order: SP-Discharge

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
WNSP001	2023-03456 C43-2928	05/22/23	07:30	1	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c,	NEB water for dilution for minnow. Receiving water for control., Receiving water for dilution for water flea. NEB water for control.

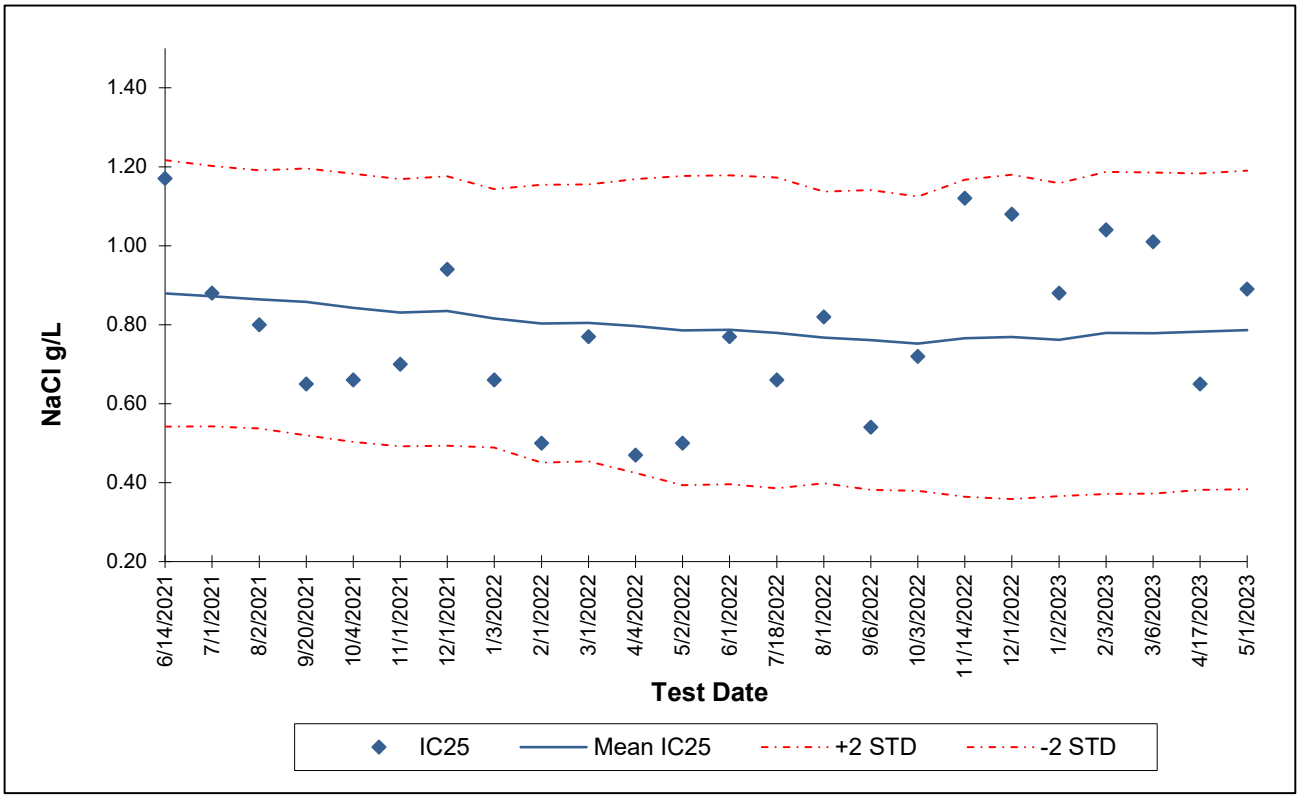
Project Notes: Re-freshing sample, Erdman Brook also included in shipment

Signature Rel: Date/Time 5-22-23 0830	Signature Rel: Date/Time
Signature Rec: Date/Time Dan Bellows NEB 5-24-23 0809	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 Temp: C
Signature Rec: Date/Time	Signature Rec: Date/Time YES NO

REFERENCE TOXICANT CHARTS

New England Bioassay

Reference Toxicant Data: Sodium chloride (NaCl) *Ceriodaphnia dubia* Chronic Reproduction IC_{25}

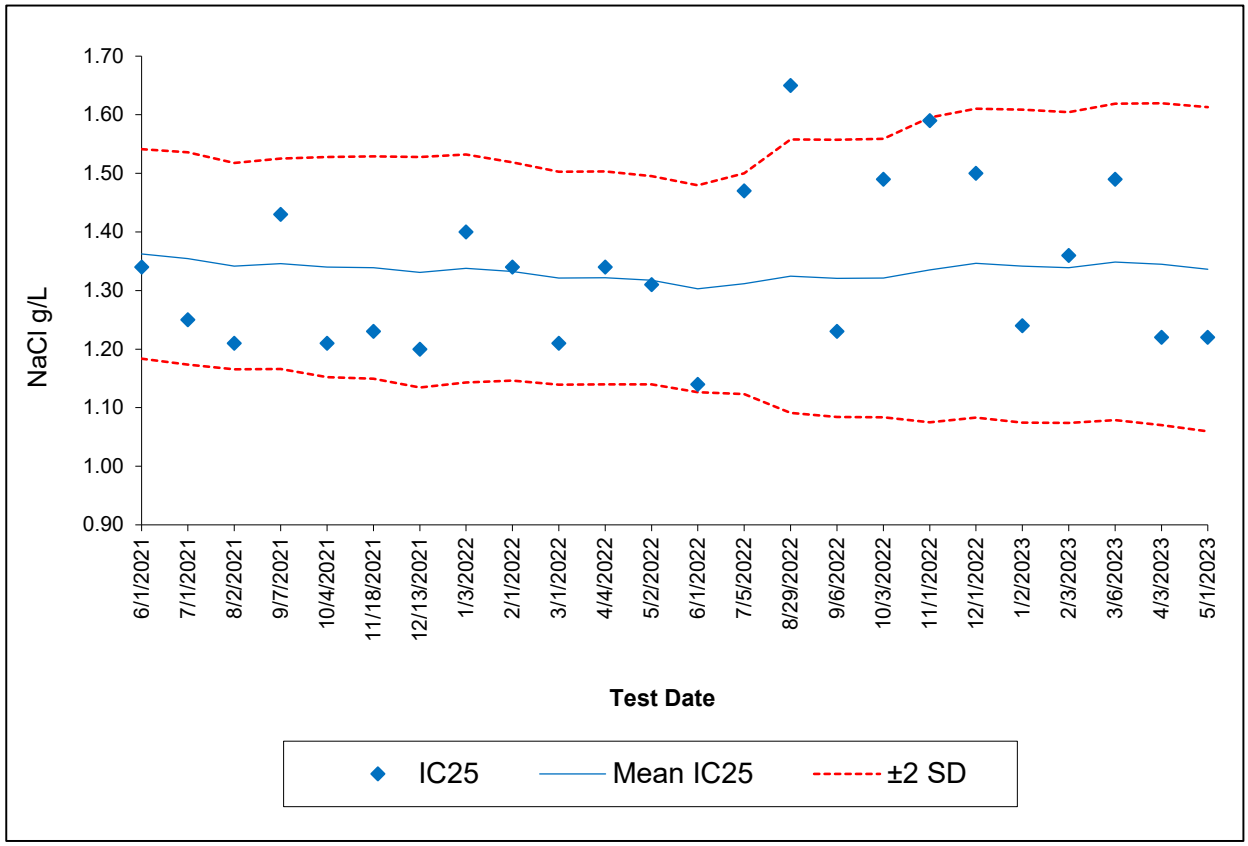


Test ID	Date	IC_{25}	Mean IC_{25}	STD	-2STD	+2STD	Avg. CV	Repro PMSD (%)	Avg. PMSD (%)
21-824	6/14/2021	1.17	0.88	0.17	0.54	1.22	0.19	11.06	18.11
21-909	7/1/2021	0.88	0.87	0.16	0.54	1.20	0.19	14.51	18.19
21-1065	8/2/2021	0.80	0.86	0.16	0.54	1.19	0.19	7.11	17.48
21-1384	9/20/2021	0.65	0.86	0.17	0.52	1.20	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
22-2141	11/14/2022	1.12	0.77	0.20	0.36	1.17	0.26	10.74	16.10
22-2223	12/1/2022	1.08	0.77	0.21	0.36	1.18	0.27	12.08	16.21
23-2	1/2/2023	0.88	0.76	0.20	0.37	1.16	0.26	8.95	15.97
23-164	2/3/2023	1.04	0.78	0.20	0.37	1.19	0.26	8.50	15.71
23-371	3/6/2023	1.01	0.78	0.20	0.37	1.19	0.26	27.48	16.37
23-655	4/17/2023	0.65	0.78	0.20	0.38	1.18	0.26	9.74	16.37
23-731	5/1/2023	0.89	0.79	0.20	0.38	1.19	0.26	21.31	16.67

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 IC_{25}



Test ID	Date	IC_{25}	Mean IC_{25}	STD	-2STD	+2STD	Avg. CV	Growth PMSD (%)	Avg. PMSD (%)
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
22-2069	11/1/2022	1.59	1.34	0.13	1.07	1.60	0.10	7.02	11.51
22-2224	12/1/2022	1.50	1.35	0.13	1.08	1.61	0.10	5.38	11.43
23-3	1/2/2023	1.24	1.34	0.13	1.07	1.61	0.10	5.48	11.15
23-165	2/3/2023	1.36	1.34	0.13	1.07	1.60	0.10	18.13	11.65
23-372	3/6/2023	1.49	1.35	0.13	1.08	1.62	0.10	7.92	11.63
23-547	4/3/2023	1.22	1.35	0.14	1.07	1.62	0.10	7.36	11.55
23-732	5/1/2023	1.22	1.34	0.14	1.06	1.61	0.10	8.94	11.53

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2024
Issued April 01, 2022
Revised March 30, 2023

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

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

NY Lab Id No: 12157

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2016) for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Aquatic Toxicity

Fathead minnow-Pimephales promelas	EPA 1000.0
	EPA 2000.0
Opossum shrimp-Americamysis bahia	EPA 1007.0
	EPA 2007.0
Sheephead minnow-Cyprinodon varie	EPA 1004.0
	EPA 2004.0
Water flea-Ceriodaphnia dubia	EPA 1002.0
	EPA 2002.0

Serial No.: 66816

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: May 2023
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 5/17-18/23 #2 5/12-22/23

Test Start Date: 5/19/23

Results Summary

Your results were as follows:

Passed all permit limits

Acute Test Results

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

Chronic Test Results

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

Data Qualifiers affecting this test:

Certifications & Approvals: NH ELAP (2071), NJ DEP (CT405), NYSDOH (12157)

Test Report Certification

Permittee name:	West Valley Demonstration Project	Permit number:	NY0000973
Client sample ID:	UV Treated	Test Start Date:	5/19/23

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: 6/21/23 (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: 5/19/23

Sample Collection Information

Effluent #1 Dates/Times: 5/17-18/23 @ 0945-0900

Effluent #2 Dates/Times: 5/12-22/23 @ 0730-0730

Effluent #3 Dates/Times: 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. The #1 samples were used within the first 36 hrs, but due to a shipping delay, the #2 samples were first used outside 36 hrs

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

• Chlorine was elevated due to interference. Chlorine was ≤ 0.05 mg/L by amperometric titration

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:	5/1/23
Toxicant:	Sodium chloride
Dilution Water:	NEB Soft Water
Organism Source:	NEB
Growth IC25:	1.22 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: 5/19/23 - 5/26/23

Test Acceptability Criteria

Lab Diluent Survival:	100 %	Mean Lab Diluent Growth:	0.40 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%	
	Survival IC25		>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: 8.86% 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: 5/19/23 - 5/26/23

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: #13 No significant effects at any test concentration with a relatively flat concentration-response curve. Test concentrations performed equal to or better than the dilution control.

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

Survival	Growth	
X	X	Results are reliable and reportable
		Results are anomalous (see explanation below)
		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:	*Pimephales promelas* 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/m2/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 *Artemia* 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	*P.promelas* TEST ID #	23-888
ADDRESS:	10 Hazelwood Drive	CHAIN OF CUSTODY #	C43-2877
	Amherst, NY 14228	NEB PROJECT #	44240
PERMITTEE:	West Valley Demonstration Project	SAMPLE ID:	UV Treated
PERMIT NUMBER:	NY0000973		
DILUTION WATER:	Moderately Hard Synthetic		

VERTEBRATES

TEST SET-UP TECHNICIAN:	IR/PD
TEST SPECIES:	*Pimephales promelas*
NEB LOT #	Pp23(5-19)1524
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
C43-MH013	88	61

	DATE	TIME
TEST START:	5/19/23	1308
TEST END:	5/26/23	1333

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: 6/21/23

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:	23-888	COC #	C43-2877		
TEST ORGANISM:	*Pimephales promelas*	AGE:	<24 hours	Lot #	Pp23(5-19)1524		
START DATE:	5/19/23	TIME:	1308	END DATE:	5/26/23	TIME:	1333

Effluent Concentration	Replicate Number	Number of Survivors								
		Day								
		0	1	2	3	4	5	6	7	Remarks
	ANALYST	IR/PD	TS/PD	TS/PD	TS/PD	TS/DB	IR/AG	DB	SM	
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	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	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	
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	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	9	9	9	9	
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:	23-888
TEST START DATE	5/19/23	WEIGHING DATE:	Not Recorded
TEST END DATE	5/26/23		
DRYING TEMPERATURE (°C)	100 ± 4	DRYING TIME:	minimum 6 hours
ANALYST-INITIAL WEIGHTS	TM/DB	ANALYST-FINAL WEIGHTS	Not Recorded

Effluent Concentration	Replicate Number	A Weight of boat (mg)	B Dry Weight: Foil and Larvae (mg)
NEB Lab Synthetic Diluent	A	927.03	931.22
	B	923.75	927.34
	C	927.87	932.04
	D	923.39	927.59
6.25%	A	925.09	929.31
	B	929.41	933.33
	C	927.90	932.17
	D	929.82	933.86
12.5%	A	926.37	930.31
	B	927.47	931.79
	C	927.94	931.84
	D	927.61	931.74
25%	A	923.52	927.92
	B	922.08	926.25
	C	926.87	931.20
	D	925.79	930.31
50%	A	922.95	927.42
	B	924.13	928.12
	C	920.55	924.83
	D	924.24	928.63
100%	A	924.96	928.90
	B	923.38	927.33
	C	927.94	932.10
	D	928.72	933.12

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	931.22	927.03	4.19	0.419	0.4038	0.029859393
	2	927.34	923.75	3.59	0.359		
	3	932.04	927.87	4.17	0.417		
	4	927.59	923.39	4.20	0.420		
6.25%	1	929.31	925.09	4.22	0.422	0.4112	0.016194135
	2	933.33	929.41	3.92	0.392		
	3	932.17	927.90	4.27	0.427		
	4	933.86	929.82	4.04	0.404		
12.5%	1	930.31	926.37	3.94	0.394	0.4072	0.01931105
	2	931.79	927.47	4.32	0.432		
	3	931.84	927.94	3.90	0.390		
	4	931.74	927.61	4.13	0.413		
25%	1	927.92	923.52	4.40	0.440	0.4355	0.014617341
	2	926.25	922.08	4.17	0.417		
	3	931.20	926.87	4.33	0.433		
	4	930.31	925.79	4.52	0.452		
50%	1	927.42	922.95	4.47	0.447	0.4283	0.020998016
	2	928.12	924.13	3.99	0.399		
	3	924.83	920.55	4.28	0.428		
	4	928.63	924.24	4.39	0.439		
100%	1	928.90	924.96	3.94	0.394	0.4112	0.021685248
	2	927.33	923.38	3.95	0.395		
	3	932.10	927.94	4.16	0.416		
	4	933.12	928.72	4.40	0.440		

CETIS Analytical Report

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

Analysis ID:	16-1607-0383	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:00	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	1070599	200	Yes	Two-Point Interpolation

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

2d Survival Rate Summary

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

2d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

2d Survival Rate Binomials

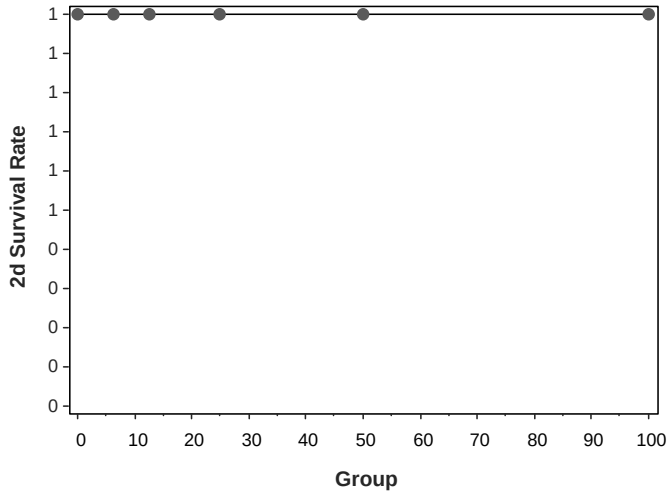
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	16-1607-0383	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:00	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	00-0938-2812	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:00	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

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

Steel Many-One Rank Sum Test

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

ANOVA Table

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

ANOVA Assumptions Tests

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

2d Survival Rate Summary

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

Angular (Corrected) Transformed Summary

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

CETIS Analytical Report

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

Analysis ID:	00-0938-2812	**Endpoint:**	2d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:00	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	68E117461239090AA7E1427F0F536296	**Editor ID:**	008-848-998-5

2d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

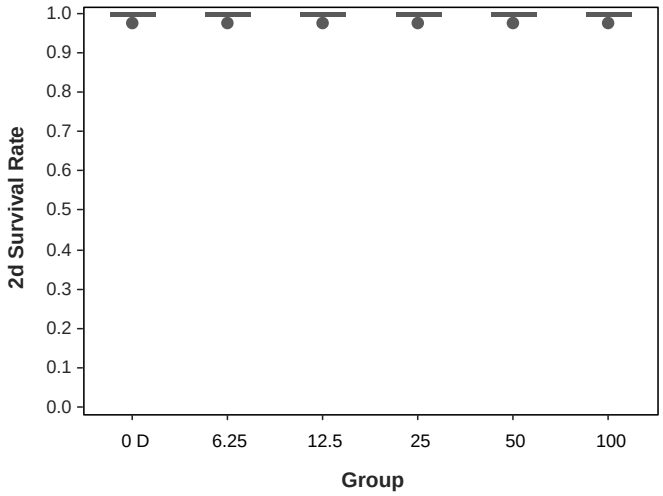
Angular (Corrected) Transformed Detail

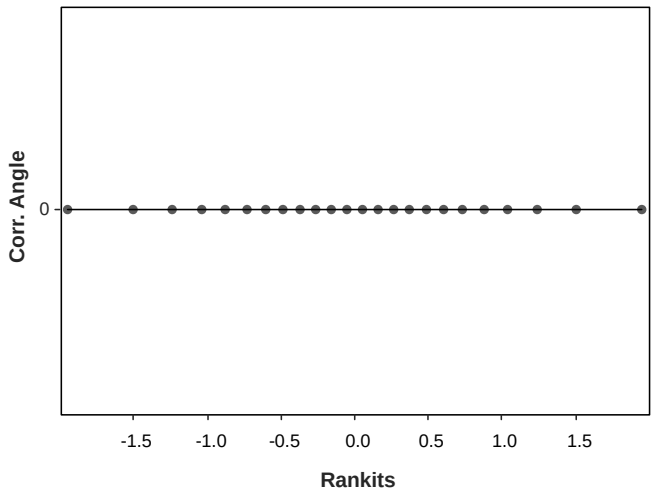
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
6.25		1.4120	1.4120	1.4120	1.4120
12.5		1.4120	1.4120	1.4120	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.4120	1.4120	1.4120	1.4120
100		1.4120	1.4120	1.4120	1.4120

2d Survival Rate Binomials

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	10/10

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test

New England Bioassay

Analysis ID:	12-1671-1744	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**			
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water		
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**	<24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Log(X)	Linear	309828	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC50	>100	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**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%

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

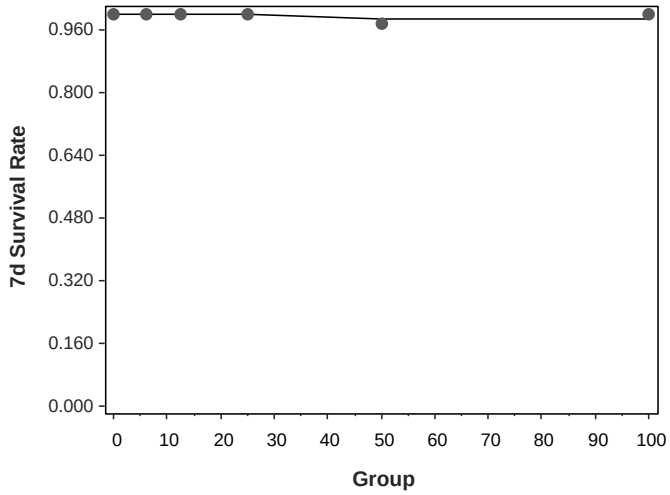
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	9/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	12-1671-1744	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	20-1032-0485	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**			
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water		
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable		
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:**	<24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

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

Steel Many-One Rank Sum Test

Control	vs	Group	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	6	18	10	1	CDF	0.8333	Non-Significant Effect
		12.5	6	18	10	1	CDF	0.8333	Non-Significant Effect
		25	6	18	10	1	CDF	0.8333	Non-Significant Effect
		50	6	16	10	1	CDF	0.6105	Non-Significant Effect
		100	6	18	10	1	CDF	0.8333	Non-Significant Effect

Test Acceptability Criteria

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

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0055332	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

7d Survival Rate Summary

Group	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

Group	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%

CETIS Analytical Report

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

Analysis ID:	20-1032-0485	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	1.0000	1.0000

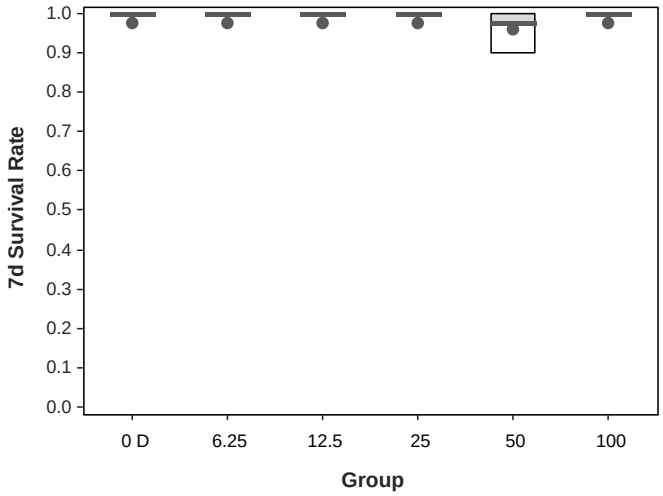
Angular (Corrected) Transformed Detail

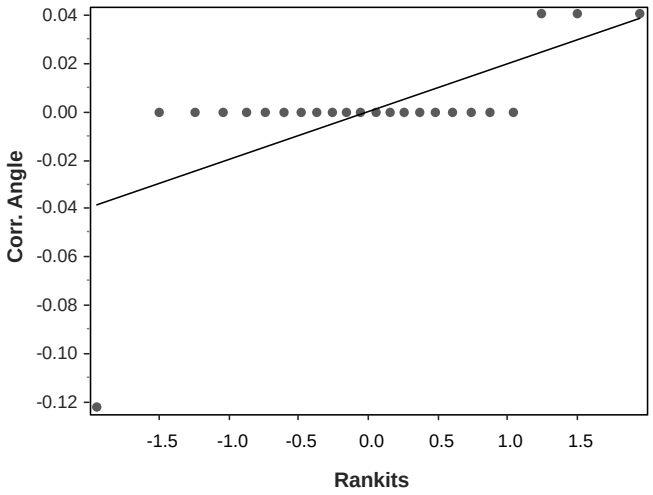
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.4120	1.4120	1.4120	1.4120
6.25		1.4120	1.4120	1.4120	1.4120
12.5		1.4120	1.4120	1.4120	1.4120
25		1.4120	1.4120	1.4120	1.4120
50		1.4120	1.4120	1.4120	1.2490
100		1.4120	1.4120	1.4120	1.4120

7d Survival Rate Binomials

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	9/10
100		10/10	10/10	10/10	10/10

Graphics





CETIS Analytical Report

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

Analysis ID:	20-7710-6655	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	681739	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

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

Point Estimates

Level		95% LCL	95% UCL
LC25	>100	---	---

7d Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**ΣA/ΣB**	**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%

7d Survival Rate Detail

Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	1.0000	1.0000

7d Survival Rate Binomials

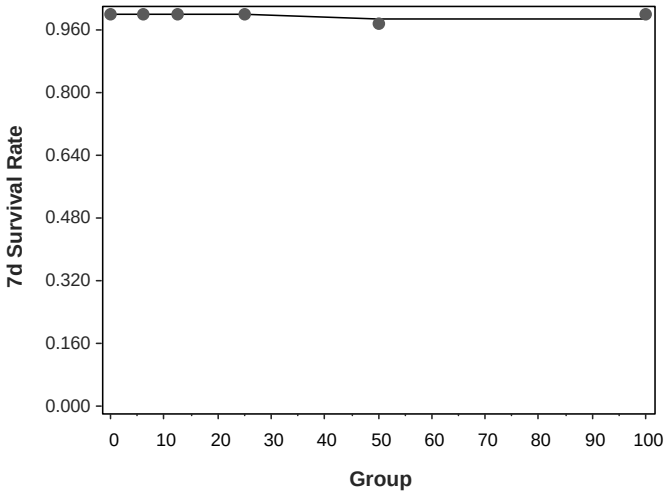
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	9/10
100		10/10	10/10	10/10	10/10

CETIS Analytical Report

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

Analysis ID:	20-7710-6655	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	E14882138D4B69827DBD8720EF96E868	**Editor ID:**	008-848-998-5

Graphics



CETIS Analytical Report

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

Analysis ID:	16-7989-3090	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	51983B09E366FAC70298DB2B1EB88D9C	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Untransformed	C > T	100	>100	---	---	0.03578	8.86%

Dunnett Multiple Comparison Test

Control	vs	Group	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Dilution Water		6.25	6	-0.5045	2.407	0.03578	CDF	0.9402	Non-Significant Effect
		12.5	6	-0.2356	2.407	0.03578	CDF	0.8933	Non-Significant Effect
		25	6	-2.136	2.407	0.03578	CDF	0.9994	Non-Significant Effect
		50	6	-1.648	2.407	0.03578	CDF	0.9974	Non-Significant Effect
		100	6	-0.5046	2.407	0.03578	CDF	0.9403	Non-Significant Effect

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.4037	0.25	<<	Yes	Passes Criteria
PMSD	0.08862	0.12	0.3	Yes	Below Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0032072	0.0006414	5	1.452	0.2541	Non-Significant Effect
Error	0.0079541	0.0004419	18			
Total	0.0111613		23			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	1.744	15.09	0.8833	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9487	0.884	0.2544	Normal Distribution

Mean Dry Biomass-mg Summary

Group	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	D	4	0.4037	0.3562	0.4513	0.418	0.359	0.42	0.01493	7.39%	0.00%
6.25		4	0.4112	0.3855	0.437	0.413	0.392	0.427	0.008095	3.94%	-1.86%
12.5		4	0.4073	0.3765	0.438	0.4035	0.39	0.432	0.009655	4.74%	-0.87%
25		4	0.4355	0.4122	0.4588	0.4365	0.417	0.452	0.007309	3.36%	-7.86%
50		4	0.4283	0.3948	0.4617	0.4335	0.399	0.447	0.0105	4.90%	-6.07%
100		4	0.4113	0.3767	0.4458	0.4055	0.394	0.44	0.01084	5.27%	-1.86%

Mean Dry Biomass-mg Detail

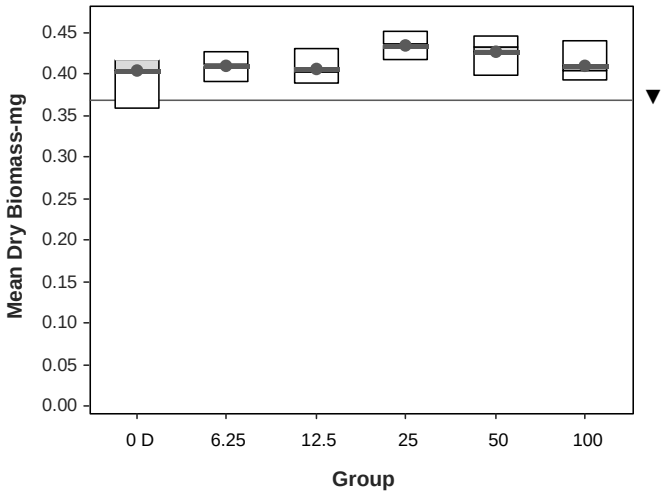
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.419	0.359	0.417	0.42
6.25		0.422	0.392	0.427	0.404
12.5		0.394	0.432	0.39	0.413
25		0.44	0.417	0.433	0.452
50		0.447	0.399	0.428	0.439
100		0.394	0.395	0.416	0.44

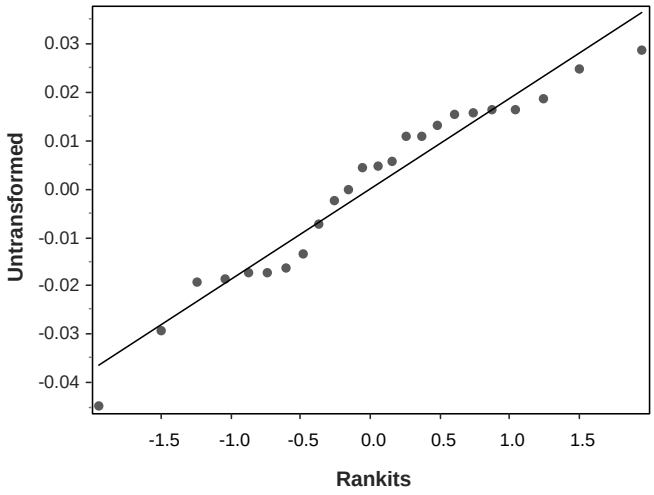
CETIS Analytical Report

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

Analysis ID:	16-7989-3090	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	51983B09E366FAC70298DB2B1EB88D9C	**Editor ID:**	008-848-998-5

Graphics





CETIS Analytical Report

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

Analysis ID:	04-2136-3371	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	51983B09E366FAC70298DB2B1EB88D9C	**Editor ID:**	008-848-998-5

Batch ID:	19-1924-0677	**Test Type:**	Growth-Survival (7d)	**Analyst:**		
Start Date:	19 May-23 13:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Receiving Water	
Ending Date:	26 May-23 13:33	**Species:**	Pimephales promelas	**Brine:**	Not Applicable	
Test Length:	7d 0h	**Taxon:**	Actinopterygii	**Source:**	In-House Culture	**Age:** <24

Sample ID:	11-6790-3992	**Code:**	459CCCF8	**Project:**	
Sample Date:	18 May-23 09:00	**Material:**	WWTF Effluent	**Source:**	West Valley Demonstration Project (N
Receipt Date:	19 May-23 08:08	**CAS (PC):**		**Station:**	
Sample Age:	28h	**Client:**	Eurofins		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1740540	200	Yes	Two-Point Interpolation

Test Acceptability Criteria

		TAC Limits			
Attribute	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
Control Resp	0.4037	0.25	<<	Yes	Passes Criteria

Point Estimates

Level		95% LCL	95% UCL
IC25	>100	---	---
IC50	>100	---	---

Mean Dry Biomass-mg Summary

			Calculated Variate						Isotonic Variate	
Group	**Code**	**Count**	**Mean**	**Median**	**Min**	**Max**	**CV%**	**%Effect**	**Mean**	**%Effect**
0	D	4	0.4037	0.418	0.359	0.42	7.39%	0.00%	0.4172	0.00%
6.25		4	0.4112	0.413	0.392	0.427	3.94%	-1.86%	0.4172	0.00%
12.5		4	0.4073	0.4035	0.39	0.432	4.74%	-0.87%	0.4172	0.00%
25		4	0.4355	0.4365	0.417	0.452	3.36%	-7.86%	0.4172	0.00%
50		4	0.4283	0.4335	0.399	0.447	4.90%	-6.07%	0.4172	0.00%
100		4	0.4113	0.4055	0.394	0.44	5.27%	-1.86%	0.4113	1.41%

Mean Dry Biomass-mg Detail

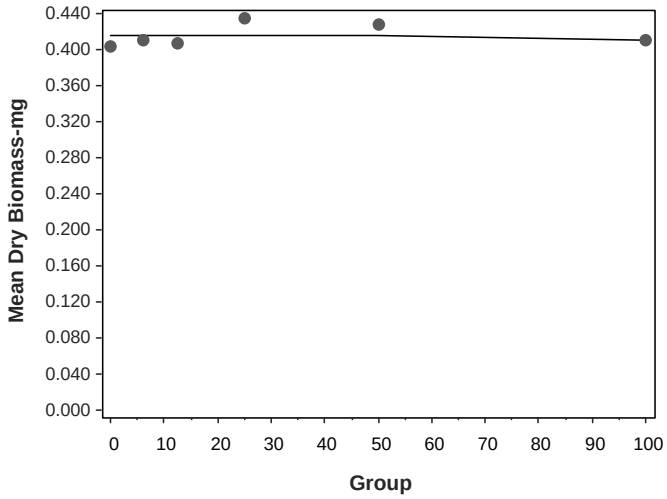
Group	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.419	0.359	0.417	0.42
6.25		0.422	0.392	0.427	0.404
12.5		0.394	0.432	0.39	0.413
25		0.44	0.417	0.433	0.452
50		0.447	0.399	0.428	0.439
100		0.394	0.395	0.416	0.44

CETIS Analytical Report

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

Analysis ID:	04-2136-3371	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv2.1.4
Analyzed:	04 Jun-23 16:01	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	04 Jun-23 15:59	**MD5 Hash:**	51983B09E366FAC70298DB2B1EB88D9C	**Editor ID:**	008-848-998-5

Graphics



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		*Pimephales promelas*	
DILUTION WATER SOURCE:	Moderately Hard Synthetic				START DATE:		5/19/23 TIME:	1308
NEB Lab Synthetic Diluent	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	25.1	25.2	24.5	25.3	*	25.3	25.1	
D.O. mg/L Initial	8.2	8.2	8.4	8.3	*	8.2	8.2	
pH s.u. Initial	7.8	7.9	8.0	8.0	*	7.7	7.9	
Conductivity µS Initial	320	324	319	319	*	321	320	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.5	25.2	25.4	25.6	25.5	25.5	25.3	
D.O. mg/L Final	7.5	7.1	7.2	7.2	6.8	7.4	7.1	
pH s.u. Final	7.8	7.7	7.8	7.6	7.5	7.6	7.4	
Conductivity µS Final	346	344	347	342	365	343	342	
6.25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	25.1	25.2	24.5	25.2	*	25.2	25.1	
D.O. mg/L Initial	8.3	8.3	8.4	8.4	*	8.3	8.2	
pH s.u. Initial	7.8	7.9	7.9	7.9	*	7.7	7.9	
Conductivity µS Initial	395	395	393	387	*	391	395	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.2	25.0	25.4	25.4	25.2	25.2	25.1	
D.O. mg/L Final	7.7	7.2	7.3	7.2	6.8	7.4	7.1	
pH s.u. Final	7.9	7.8	7.9	7.7	7.5	7.6	7.5	
Conductivity µS Final	424	417	421	417	444	416	424	
12.5%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	25.0	25.2	24.6	25.1	*	25.2	25.1	
D.O. mg/L Initial	8.4	8.3	8.4	8.4	*	8.3	8.3	
pH s.u. Initial	7.8	7.9	7.9	7.9	*	7.7	7.9	
Conductivity µS Initial	433	444	435	433	*	432	431	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.5	24.9	25.6	25.5	25.4	25.4	25.1	
D.O. mg/L Final	7.4	6.9	7.3	7.1	6.7	7.4	7.1	
pH s.u. Final	7.8	7.7	7.9	7.7	7.6	7.6	7.6	
Conductivity µS Final	460	467	464	460	485	456	456	

*Sample not renewed because there was not enough effluent due to shipping delay. DB 5-23-23

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		*Pimephales promelas*	
DILUTION WATER SOURCE:	Moderately Hard Synthetic				START DATE:		5/19/23 TIME:	1308
25%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	25.0	25.1	24.6	25.1	*	25.1	25.1	
D.O. mg/L Initial	8.6	8.5	8.4	8.6	*	8.4	8.4	
pH s.u. Initial	7.8	7.9	8.0	7.9	*	7.7	7.8	
Conductivity µS Initial	557	561	554	554	*	559	555	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.5	25.1	25.6	25.6	25.5	25.3	25.1	
D.O. mg/L Final	7.6	7.0	7.2	7.1	6.8	7.4	7.1	
pH s.u. Final	7.9	7.8	7.9	7.7	7.6	7.7	7.6	
Conductivity µS Final	587	582	582	579	603	583	579	
50%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	24.9	25.0	24.7	24.9	*	25.0	24.9	
D.O. mg/L Initial	9.1	8.8	8.5	9.0	*	8.9	8.7	
pH s.u. Initial	7.9	7.9	8.0	7.9	*	7.7	7.7	
Conductivity µS Initial	802	817	797	801	*	808	804	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.0	25.1	25.2	25.2	25.2	25.1	25.1	
D.O. mg/L Final	7.8	7.2	7.2	7.3	6.8	7.5	7.2	
pH s.u. Final	8.1	8.0	8.0	7.9	7.8	7.9	7.8	
Conductivity µS Final	839	844	836	830	864	839	832	
100%	1	2	3	4	5	6	7	Remarks
Tech Initials Initial	TS/PD	TS/PD	TS/PD	SM	DB	IR/AG	GP	
Temp °C Initial	24.5	24.8	24.9	24.4	*	24.6	24.6	
D.O. mg/L Initial	10.6	9.8	8.6	10.0	*	10.1	9.8	
pH s.u. Initial	7.9	7.8	8.1	7.9	*	7.7	7.6	
Conductivity µS Initial	1,287	1,302	1,292	1,288	*	1,294	1,285	
Tech Initials Final	TS/PD	GP/PD	IR/AG	SM	IR/AG	SK	SK	
Temp °C Final	25.0	25.1	25.2	25.3	25.2	25.0	25.2	
D.O. mg/L Final	7.9	7.6	7.3	7.2	6.8	7.5	7.4	
pH s.u. Final	8.2	8.2	8.3	8.1	8.0	8.0	8.0	
Conductivity µS Final	1,332	1,333	1,337	1,321	1,370	1,329	1,322	

Table of Random Permutations of 16 **P.promelas Test ID#** 23-888

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

reps

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
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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

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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
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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
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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
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6	9	7	14	9	14	10	11	15	11	12	1	12	12	14	16	3	11	11	8
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4	10	3	16	2	11	7	9	6	9	1	8	4	11	5	2	16	10	12	4
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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	5/19/23		5/24/23			
SAMPLE TYPE:	EFF #1	BROOK #1	EFF #2	BROOK #2	EFF #3	BROOK #3
COC #	C43-2877	C43-2878	C43-2928	C43-2929		
pH (SU)	7.5	7.4	7.7	7.5		
Temperature (°C)	1.1, 0.4, 0.4	1.0, 0.9	5.8, 5.6	1.8		
Dissolved Oxygen (mg/L)	12.2	12.4	11.1	10.3		
Conductivity (µmhos)	1,304	253	1,282	255		
Salinity (ppt)	<1	<1	<1	<1		
TRC - DPD (mg/L)	0.028	0.052	0.082	0.091		
TRC - Amperometric (mg/L)	N/A	< 0.05	< 0.05	< 0.05		
Hardness (mg/L as $CaCO_3$)	152	100	150	102		
Alkalinity (mg/l as $CaCO_3$)	152	90	146	89		
Tech Initials	SK/AG	SK/AG	DB	DB		

NOTE: NA = NOT APPLICABLE

Data Reviewed By: Kimberly Wills Date Reviewed: 6/21/23

NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

Sample set# 1

EFFLUENT

Sampler: C Roesch
Title: Environmental Scientist
Facility: West Valley

RECEIVING WATER

Sampler: C Roesch
Title: Environmental Scientist
Facility: West Valley

Sampling Method: X **Composite**
Sample ID: Outfall 001
Start Date: 5-17-23 Time: 0945
End Date: 5-19-23 Time: 0900

Sampling Method: X Grab
Sample ID: Erdman Brook
Date Collected: 5-18-23
Time Collected: 0730

Sample Type:
___ Prechlorinated
___ Dechlorinated
/ Unchlorinated
___ Chlorinated

Ended Early for Shipping Purposes

Effluent Sampling Location and Procedures: WNSP001 EM-2

Receiving Water Sampling Location and Procedures: WNERB53 EM-2

Requested Analysis: X Chronic and modified acute

Sample Shipment

Method of Shipment: UP Next Day Air

Relinquished By:		Date: 5-18-23	Time:
Received By:	Shannon Ruffel UB	Date: 5-19-23	Time: 0808
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: 1.1, 0.4 °C
Temperature of Receiving Water Upon Receipt at Lab: 1.0, 0.9 °C

Effluent COC# C43 - 2577
Receiving Water COC# C43 - 2578

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: SPDES

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID: / Work Order:
Test America	CH-007532	WV03.IN.01.01.01.02.01	1374	1	10 Days	230501-07 / SP-Discharge

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
WNSP001	2023-03455	05/18/23	09:00	1	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c,	NEB water for dilution for minnow. Receiving water for control., Receiving water for dilution for water flea. NEB water for control.

Project Notes: Initial sample, Erdman Brook also included in shipment

Signature Rel: Date/Time [signature] 5-18-23 0930 Signature Rec: Date/Time Shannon Kuffel NEB 0806	Signature Rel: Date/Time Signature Rec: Date/Time
Signature Rel: Date/Time Signature Rec: Date/Time	Signature Rel: Date/Time Signature Rec: Date/Time
Signature Rel: Date/Time Signature Rec: Date/Time	Sample Receipt at Lab: Cool? YES NO Temp: C Signature Rec: Date/Time YES NO

NEW ENGLAND BIOASSAY - CHAIN-OF-CUSTODY

Sample set# 2

EFFLUENT

Sampler: C. Rossi
Title: Environmental Scientist
Facility: West Valley

Sampling Method: X **Composite**
Sample ID: Outfall 001
Start Date: 5-21-23 Time: 0730
End Date: 5-22-23 Time: 0730

Sample Type:
___ Prechlorinated
___ Dechlorinated
X Unchlorinated
___ Chlorinated

RECEIVING WATER

Sampler: J Zientek
Title: Engineer
Facility: West Valley

Sampling Method: X Grab
Sample ID: Erdman Brook
Date Collected: 5-22-23
Time Collected: 0750

Received
ON ICE

Effluent Sampling Location and Procedures: WNSP001 EM-2

Receiving Water Sampling Location and Procedures: WNERB53 EM-2

Requested Analysis: X Chronic and modified acute

Sample Shipment

Method of Shipment: UPS Next Day Air

Relinquished By:	CJR	Date: 5-22-23	Time: 0830
Received By:	Devin Burke NEB	Date: 5-24-23	Time: 0809
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: 5.8,5.6 °C
Temperature of Receiving Water Upon Receipt at Lab: 8.0,8.8 °C
Effluent COC# C43-2928
Receiving Water COC# C43-2929

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: SPDES

Electronic Disk - YES

External Lab Destination	Purchase Order Number	Charge Number	Release Number	Report Format Level	Priority	OrderID: 230501-07 Work Order: SP-Discharge
Test America	CH-007532	WV03.IN.01.01.01.02.01	1374	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
WNSP001	2023-03456 C43-2928	05/22/23	07:30	1	Cool	wet_du_a, wet_du_c, wet_pr_a, wet_pr_c, wet_pr_uv_a, wet_pr_uv_c,	NEB water for dilution for minnow. Receiving water for control., Receiving water for dilution for water flea. NEB water for control.

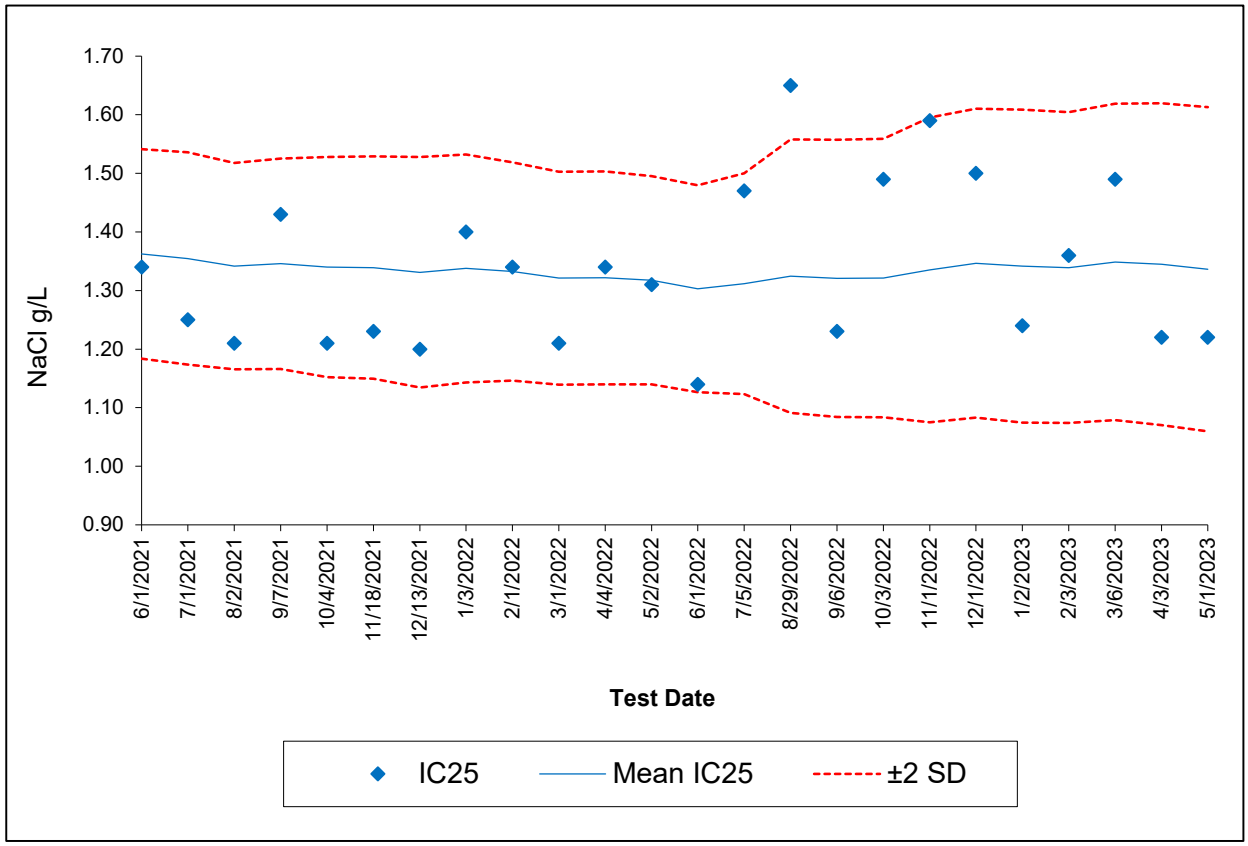
Project Notes: Re-freshing sample, Erdman Brook also included in shipment

Signature Rel: Date/Time 5-22-23 0830	Signature Rel: Date/Time
Signature Rec: Date/Time Dan Bellows NEB 5-24-23 0809	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 Temp: C
Signature Rec: Date/Time	Signature Rec: Date/Time YES NO

REFERENCE TOXICANT CHARTS

New England Bioassay

Reference Toxicant Data: Sodium chloride (NaCl) *Pimephales promelas* 7-day Chronic Growth IC_{25}



Test ID	Date	IC_{25}	Mean IC_{25}	STD	-2STD	+2STD	Avg. CV	Growth PMSD (%)	Avg. PMSD (%)
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
22-2069	11/1/2022	1.59	1.34	0.13	1.07	1.60	0.10	7.02	11.51
22-2224	12/1/2022	1.50	1.35	0.13	1.08	1.61	0.10	5.38	11.43
23-3	1/2/2023	1.24	1.34	0.13	1.07	1.61	0.10	5.48	11.15
23-165	2/3/2023	1.36	1.34	0.13	1.07	1.60	0.10	18.13	11.65
23-372	3/6/2023	1.49	1.35	0.13	1.08	1.62	0.10	7.92	11.63
23-547	4/3/2023	1.22	1.35	0.14	1.07	1.62	0.10	7.36	11.55
23-732	5/1/2023	1.22	1.34	0.14	1.06	1.61	0.10	8.94	11.53

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

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2024
Issued April 01, 2022
Revised March 30, 2023

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

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

NY Lab Id No: 12157

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2016) for the category ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Aquatic Toxicity

Fathead minnow-Pimephales promelas	EPA 1000.0
	EPA 2000.0
Opossum shrimp-Americamysis bahia	EPA 1007.0
	EPA 2007.0
Sheephead minnow-Cyprinodon varie	EPA 1004.0
	EPA 2004.0
Water flea-Ceriodaphnia dubia	EPA 1002.0
	EPA 2002.0

Serial No.: 66816