

CH2MHILL • BWXT West Valley, LLC

West Valley Demonstration Project

Ms. Bridget M. Purdy, Contracting Officer
U. S. Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, New York 14171-9799

AC-PRES
WD:2017:0897
September 18, 2017

SUBJECT: Contract No. DE-EM0001529, Section J-3, Item 127, State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR)

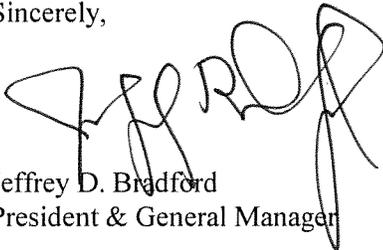
Dear Ms. Purdy:

This letter is submitted for Contracting Officer Representative's approval to inform you that the SPDES DMR for the reporting period August 1 through August 31, 2017 has been submitted electronically. A copy of this submittal is attached as well as a copy of the email confirmation from the New York State Department of Environmental Conservation (NYSDEC).

Also attached are the results of the Whole Effluent Toxicity (WET) testing completed in July 2017.

If you have any questions, please contact William Kean at extension 4865 or Janice Williams at extension 2913.

Sincerely,



Jeffrey D. Bradford
President & General Manager

JDB:WNK:bnj

Attachments: A) SPDES DMR for August 1 – August 31, 2017
B) WET Testing Summary Pages
C) Email Confirmation from NYSDEC

cc: B. C. Bower, DOE-WVDP
S. A. Anderson, CHBWV
J. J. Baker, CHBWV
J. L. Casper, CHBWV
C. Dayton, CHBWV (Public Reading Room)
N. Feher, CHBWV
L. K. Hollfelder, CHBWV
W. N. Kean, CHBWV
C. B. Lee, CHBWV
L. J. Ortega, CHBWV
D. H. Pritchard, CHBWV
J. E. Wangelin, CHBWV
J. D. Williams, CHBWV
Letter Log (B. Jeffery), CHBWV
CHBWV OITS #1630332

Attachment A
SPDES DMR

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 08/01/17 to 08/31/17					DMR Due Date:	09/28/17					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 Code	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type		
				Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
70295	Solids, total dissolved Z - Instream Monitoring	0	--	Sample														
				Permit Req.								Req Mon MO AVG <=	500 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:	william.kean@chbvw.com					Date/Time:	2017-09-18 08:58 (Time Zone: -04:00)											
Name:	William Kean																	
E-Mail:	william.kean@chbvw.com																	

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 08/01/17 to 08/31/17	DMR Due Date:	09/28/17	Status:	NetDMR Validated
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Considerations for Form Completion

Principal Executive Officer

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

No Data Indicator (NODI)

Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type							
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3	Units					
00056	Flow rate	1 - Effluent Gross	0	--	Sample																			
					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 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:	william.kean@chbwv.com	Date/Time:	2017-09-18 08:58 (Time Zone: -04:00)
Name:	William Kean		
E-Mail:	william.kean@chbwv.com		

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User: william.kean@chbwv.com

Date/Time:

2017-09-18 08:58 (Time Zone: -04:00)

Name: William Kean

E-Mail: william.kean@chbwv.com

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 08/01/17 to 08/31/17	DMR Due Date:	09/28/17	Status:	NetDMR Validated

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

No Data Indicator (NODI)					
Form NODI:	--				

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration						# of Ex.	Frequency of Analysis	Sample Type				
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3				Units			
00154	Sulfate [as S]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG	Req Mon DAILY MX	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00181	Oxygen demand, ultimate	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	22 DAILY MX	19 - mg/L	02/BA - Twice Per Batch	CA - CALCTD
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample						>=	3 MINIMUM							Req Mon MAXIMUM	19 - mg/L	02/BA - Twice Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	10 DAILY MX	19 - mg/L	02/BA - Twice Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00400	pH	1 - Effluent Gross	0	--	Sample						>=	6.5 MINIMUM							<= 8.5 MAXIMUM	12 - SU	01/BA - Once Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample								<=	30 MO AVG	<=	45 DAILY MX	19 - mg/L				02/BA - Twice Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00545	Solids, settleable	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.3 DAILY MX	25 - mL/L	02/BA - Twice Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00556	Oil & Grease	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	15 DAILY MX	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00615	Nitrogen, nitrite total [as N]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.1 DAILY MX	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00620	Nitrogen, nitrate total [as N]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG	Req Mon DAILY MX	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00625	Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG	Req Mon DAILY MX	19 - mg/L	02/BA - Twice Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00746	Sulfide, dissolved, [as S]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.4 DAILY MX	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00978	Arsenic, total recoverable	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.15 DAILY MX	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00979	Cobalt, total recoverable	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.005 DAILY MX	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
00981	Selenium, total recoverable	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG <=	.004 DAILY MX	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	
01045	Iron, total [as Fe]	1 - Effluent Gross	0	--	Sample													Req Mon MO AVG	Req Mon DAILY MX	19 - mg/L	02/BA - Twice Per Batch	24 - COMP24
					Permit Req.													C - No Discharge	C - No Discharge			
					Value NODI																	

ATTACHMENT

SPDES DISCHARGE MONITORING REPORT - AUGUST 1 THROUGH AUGUST 31, 2017
NET IRON EFFLUENT CONCENTRATION CALCULATION
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT NO. NY-0000973

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

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

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

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

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

Note: Raw water from the reservoir system is no longer used for process water since the site installed two groundwater wells. This eliminated the need to collect raw water samples on a weekly basis and altered the iron discharge concentration equation as the mass of iron entering the system is no longer necessary.

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

Attachment B
Whole Effluent Toxicity (WET)
Testing Summary Pages

NEW ENGLAND BIOASSAY, A DIVISION OF GZA EPA TEST SUMMARY SHEET

Facility Name: West Valley Demonstration Project Test Start Date: 7/14/17
 NPDES Permit Number: NY0000973 Pipe Number: 001

<u>Test Type</u>	<u>Test Species</u>	<u>Sample Type</u>	<u>Sample Method</u>
<input type="checkbox"/> Acute	<input type="checkbox"/> Fathead Minnow	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input checked="" type="checkbox"/> Ceriodaphnia	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified	<input type="checkbox"/> Daphnia Pulex	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flowthru
(chronic reporting acute values)	<input type="checkbox"/> Mysid Shrimp	<input type="checkbox"/> Chlorinated on site	<input type="checkbox"/> Other
<input type="checkbox"/> 24hr screening	<input type="checkbox"/> Sheepshead	<input checked="" type="checkbox"/> Unchlorinated	
	<input type="checkbox"/> Menidia		
	<input type="checkbox"/> Sea Urchin		
	<input type="checkbox"/> Champia	TRC: <u>0.015</u> mg/L	
	<input type="checkbox"/> Selenastrum		

Dilution Water

receiving water collected at a point upstream of or away from the discharge, free from toxicity or other sources of contamination; (Receiving water name: Erdman Brook)
 alternate surface water of known quality and a hardness, etc. to generally reflect the characteristics of the receiving water; (Surface water name: _____)
 synthetic water prepared using either Millipore Mill-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water;
 or artificial sea salts mixed with deionized water;
 deionized water and hypersaline brine; or

Effluent sampling date (s): 7/12-13/17 7/16-17/17

Effluent concentrations tested (in%): 0 6.25 12.5 25 50 100
 * Permit limit concentration: TUa < 0.3, TUc < 1.0

Was effluent salinity adjusted? No

Actual effluent concentrations tested after salinity adjustment (%): 0 6.25 12.5 25 50 100

Reference Toxicant test date: 7/5/17

Test Acceptability Criteria

Mean Control Survival: 100% Mean Control Reproduction: 23.1 young/female
 Mean Diluent Survival: 100% Mean Diluent Reproduction: 34.3 young/female

	<u>Limits</u>		<u>Results</u>
LC50	<u>N/A</u>	LC50	<u>>100%</u>
		Upper Value	<u>±∞</u>
		Lower Value	<u>100%</u>
		Data Analysis	
		Method Used	<u>Graphical</u>
TUa	<u>0.3</u>	TUa	<u>0.3</u>
A-NOEC	<u>N/A</u>	A-NOEC	<u>100%</u>
C-NOEC	<u>N/A</u>	C-NOEC	<u>50%</u>
		LOEC	<u>100%</u>
TUc	<u>1.0</u>	TUc	<u>2.0</u>
IC25	<u>N/A</u>	IC25	<u>58.5%</u>
IC50	<u>N/A</u>	IC50	<u>>100%</u>

NEW ENGLAND BIOASSAY, A DIVISION OF GZA EPA TEST SUMMARY SHEET

4

Facility Name: West Valley Demonstration Project Test Start Date: 7/14/17
 NPDES Permit Number: NY0000973 Pipe Number: 001

<u>Test Type</u>	<u>Test Species</u>	<u>Sample Type</u>	<u>Sample Method</u>
<input type="checkbox"/> Acute	<input checked="" type="checkbox"/> Fathead Minnow	<input type="checkbox"/> Prechlorinated	<input type="checkbox"/> Grab
<input type="checkbox"/> Chronic	<input type="checkbox"/> Ceriodaphnia	<input type="checkbox"/> Dechlorinated	<input checked="" type="checkbox"/> Composite
<input checked="" type="checkbox"/> Modified	<input type="checkbox"/> Daphnia Pulex	<input type="checkbox"/> Chlorine Spiked in Lab	<input type="checkbox"/> Flowthru
(chronic reporting	<input type="checkbox"/> Mysid Shrimp	<input type="checkbox"/> Chlorinated on site	<input type="checkbox"/> Other
acute values)	<input type="checkbox"/> Sheepshead	<input checked="" type="checkbox"/> Unchlorinated	
<input type="checkbox"/> 24hr screening	<input type="checkbox"/> Menidia		
	<input type="checkbox"/> Sea Urchin		
	<input type="checkbox"/> Champia	TRC: <u>0.015</u> mg/L	
	<input type="checkbox"/> Selenastrum		

Dilution Water

receiving water collected at a point upstream of or away from the discharge, free from toxicity or other sources of contamination; (Receiving water name: Erdman Brook)
 alternate surface water of known quality and a hardness, etc. to generally reflect the characteristics of the receiving water; (Surface water name: _____)
 synthetic water prepared using either Millipore Mill-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water;
 or artificial sea salts mixed with deionized water;
 deionized water and hypersaline brine; or

Effluent sampling date (s): 7/12-13/17 7/16-17/17

Effluent concentrations tested (in%): 0 6.25 12.5 25 50 100
 * Permit limit concentration: TUa < 0.3, TUc < 1.0

Was effluent salinity adjusted? No

Actual effluent concentrations tested after salinity adjustment (%): 0 6.25 12.5 25 50 100

Reference Toxicant test date: 7/5/17

Test Acceptability Criteria

Mean Control Survival: 85% Mean Control Weight: 0.633 mg
 Mean Diluent Survival: 95% Mean Diluent Weight: 0.672 mg

	<u>Limits</u>		<u>Results</u>
LC50	<u>N/A</u>	LC50	<u>>100%</u>
		Upper Value	<u>±∞</u>
		Lower Value	<u>100%</u>
		Data Analysis	
		Method Used	<u>Graphical</u>
TUa	<u>0.3</u>	TUa	<u>0.3</u>
A-NOEC	<u>N/A</u>	A-NOEC	<u>100%</u>
C-NOEC	<u>N/A</u>	C-NOEC	<u>100%</u>
		LOEC	<u>>100%</u>
TUc	<u>1.0</u>	TUc	<u>1.0</u>
IC25	<u>N/A</u>	IC25	<u>>100%</u>
IC50	<u>N/A</u>	IC50	<u>>100%</u>