

CH2MHILL • BWXT West Valley, LLC

West Valley Demonstration Project

Ms. Angela M. Cooney, Contracting Officer
U. S. Department of Energy
250 East 5th St., Suite 500
Cincinnati, OH 45202

AC-PRES
WD:2019:0502
June 20, 2019

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

Dear Ms. Cooney:

This letter is submitted for Contracting Officer Representative's approval to inform you that the SPDES DMR for the reporting period May 1 through May 31, 2019 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).

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

Sincerely,



Scott A. Anderson
President & General Manager

SAA:WNK:bnj

Attachments: A) SPDES DMR for May 1 – 31, 2019
B) Email Confirmation from NYSDEC

cc: T. Taggart, DOE-EMCBC
B. C. Bower, DOE-WVDP
C. Chun, CHBWV
L. K. Hollfelder, CHBWV
W. N. Kean, CHBWV
L. J. Ortega, CHBWV
J. T. Pillittere, CHBWV (Public Reading Room)
J. D. Rendall, CHBWV
J. E. Wangelin, CHBWV
J. D. Williams, CHBWV
Letter Log (B. Jeffery), CHBWV
CHBWV OITS #1830332

Attachment A
SPDES DMR

ATTACHMENT

**SPDES DISCHARGE MONITORING REPORT - MAY 1 THROUGH MAY 31, 2019
NET IRON EFFLUENT CONCENTRATION CALCULATION
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT NO. NY-0000973**

$$\begin{aligned} \text{OUTFALL 001} &= M1 = \frac{(X1 + X2) V1}{2} = 638173.19 \text{ mg/month} \\ X1 &= 0.076 \text{ mg/L} \\ X2 &= 0.095 \text{ mg/L} \\ V1 &= 7464013.87 \text{ L/month} \end{aligned}$$

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

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.

$$\text{IRON DISCHARGE CONCENTRATION} = \frac{M1 + M7 - MRW}{V1 + V7} = 0.086 \text{ mg/L}$$

ATTACHMENT (Cont'd)

**SPDES DISCHARGE MONITORING REPORT - MAY 1 THROUGH MAY 31, 2019
TOTAL DISSOLVED SOLIDS (TDS) CONCENTRATION CALCULATION - MONITORING POINT 116
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT No. NY-0000973**

Date: May 8, 2019

$$\begin{aligned} C4 &= ((Q1)(C1)+(Q2)(C2)+(Q3)(C3))/Q4 \\ &= ((0.248 \text{ MGD})(732 \text{ mg/L})+(0.364 \text{ MGD})(213 \text{ mg/L})+(0.324 \text{ MGD})(89 \text{ mg/L}))/0.936 \text{ MGD} \\ &= 308 \text{ mg/L} \end{aligned}$$

Date: May 15, 2019

$$\begin{aligned} C4 &= ((Q1)(C1)+(Q2)(C2)+(Q3)(C3))/Q4 \\ &= ((0.248 \text{ MGD})(734 \text{ mg/L})+(0.364 \text{ MGD})(177 \text{ mg/L})+(0.324 \text{ MGD})(79 \text{ mg/L}))/0.936 \text{ MGD} \\ &= 291 \text{ mg/L} \end{aligned}$$

-
- Q1 = Flow at Outfall 001, million gallons per day (MGD).
- C1 = Total Dissolved Solids (TDS) concentration at Outfall 001, mg/L.
- Q2 = Flow in Franks Creek, MGD (without Outfall 001), measured at WNSP006 just prior to, and shortly after the discharge event.
- C2 = TDS concentration in Franks Creek measured at WNSP006 just prior to, and shortly after the discharge event.
- Q3 = Flow of augmentation water, MGD, if required.
- C3 = TDS concentration in augmentation water, MGD.
- Q4 = Q1 + Q2 + Q3, MGD (Flow in Franks Creek, including Outfall 001).
- C4 <= 500 mg/L (calculated TDS concentration at 116 in Franks Creek, which includes Outfall 001).

01105	Aluminum, total [as Al]	1 - Effluent Gross	0	--	Sample						<	0.06	<	0.06	19 - mg/L	01/BA - Once Per Batch	24 - COMP24
					Permit Req.						<=	2 MO AVG	<=	4 DAILY MX	19 - mg/L 0	01/BA - Once Per Batch	24 - COMP24
					Value NODI												
01128	Vanadium, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.0015	<	0.0015	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.						Req Mon MO AVG	<=	.014 DAILY MX	19 - mg/L 0	01/BA - Once Per Batch	GR - GRAB	
					Value NODI												
34726	Nitrogen, ammonia, total [as NH3]	1 - Effluent Gross	0	--	Sample						=	0.013	=	0.016	19 - mg/L	02/BA - Twice Per Batch	24 - COMP24
					Permit Req.						<=	1.5 MO AVG	<=	2.1 DAILY MX	19 - mg/L 0	02/BA - Twice Per Batch	24 - COMP24
					Value NODI												
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample	=	0.248	=	0.378	03 - MGD						02/BA - Twice Per Batch	CN - CONTIN
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD					0	02/BA - Twice Per Batch	CN - CONTIN
					Value NODI												
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample						=	0.03	=	0.03	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.						Req Mon MO AVG	<=	.1 DAILY MX	19 - mg/L 0	01/BA - Once Per Batch	GR - GRAB	
					Value NODI												
70295	Solids, total dissolved	1 - Effluent Gross	0	--	Sample						=	733	=	734	19 - mg/L	02/BA - Twice Per Batch	GR - GRAB
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L 0	02/BA - Twice Per Batch	GR - GRAB	
					Value NODI												
71900	Mercury, total [as Hg]	1 - Effluent Gross	0	--	Sample						=	2.7	=	2.7	3M - ng/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.						<=	50 MO AVG		Req Mon DAILY MX	3M - ng/L 0	01/BA - Once Per Batch	GR - GRAB
					Value NODI												
81646	Surfactants [linear alkylate sulfonate]	1 - Effluent Gross	0	--	Sample						=	0.013	=	0.013	19 - mg/L	01/BA - Once Per Batch	GR - GRAB
					Permit Req.						Req Mon MO AVG	<=	.04 DAILY MX	19 - mg/L 0	01/BA - Once Per Batch	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

Please note that the average results reported for Ultimate Oxygen Demand; BOD; Settling Solids; Nitrite (as N) and Nitrate (as N) were flagged "R" unreliable during the data validation process due to sample holding time failures encountered with our contract laboratory. This issue is being tracked and addressed by a CHBWV Supplier Noncompliance Report (SNR).

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User: william.kean@chbwv.com
 Name: William Kean
 E-Mail: william.kean@chbwv.com
 Date/Time: 2019-06-18 13:43 (Time Zone: -04:00)

Report Last Signed By

User: janice.williams@chbwv.com
 Name: Janice Williams
 E-Mail: janice.williams@chbwv.com
 Date/Time: 2019-06-19 13:46 (Time Zone: -04:00)

DMR Copy of Record

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

Report Dates & Status			
Monitoring Period:	From 05/01/19 to 05/31/19	DMR Due Date:	06/28/19
Status:	NetDMR Validated		

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

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration						# of Ex.	Frequency of Analysis	Sample Type
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3			
00181	Oxygen demand, ultimate	1 - Effluent Gross	0	--	Sample						Req Mon MO AVG <=	22 DAILY MX	19 - mg/L				01/30 - Monthly	CA - CALCTD
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample						>=	3 MINIMUM	19 - mg/L				02/30 - Twice Per Month	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				02/30 - Twice Per Month	24 - COMP24
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
00400	pH	1 - Effluent Gross	0	--	Sample						>=	6.5 MINIMUM	12 - SU				02/30 - Twice Per Month	GR - GRAB
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample						<=	30 MO AVG	19 - mg/L				02/30 - Twice Per Month	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				02/30 - Twice Per Month	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				02/30 - Twice Per Month	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				01/30 - Monthly	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				01/30 - Monthly	24 - COMP24
					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				02/30 - Twice Per Month	24 - COMP24
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
34726	Nitrogen, ammonia, total [as NH3]	1 - Effluent Gross	0	--	Sample						<=	1.49 MO AVG	19 - mg/L				02/30 - Twice Per Month	24 - COMP24
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample						Req Mon MO AVG	Req Mon DAILY MX	03 - MGD				01/30 - Monthly	CN - CONTIN
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample						Req Mon MO AVG <=	.1 DAILY MX	19 - mg/L				01/30 - Monthly	GR - GRAB
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
70295	Solids, total dissolved	1 - Effluent Gross	0	--	Sample						Req Mon MO AVG	Req Mon DAILY MX	19 - mg/L				02/30 - Twice Per Month	GR - GRAB
					Permit Req.						C - No Discharge	C - No Discharge						
					Value NODI													
71900	Mercury, total [as Hg]	1 - Effluent Gross	0	--	Sample						Req Mon MO AVG <=	50 DAILY MX	3M - ng/L				01/30 - Monthly	GR - GRAB
					Permit Req.						C - No Discharge	C - No Discharge						
					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

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User: william.kean@chbwv.com
Name: William Kean
E-Mail: william.kean@chbwv.com
Date/Time: 2019-06-18 13:57 (Time Zone: -04:00)

Report Last Signed By

User: janice.williams@chbwv.com
Name: Janice Williams
E-Mail: janice.williams@chbwv.com
Date/Time: 2019-06-19 13:46 (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 05/01/19 to 05/31/19	DMR Due Date:	06/28/19	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@chbvw.com
 Name: William Kean
 E-Mail: william.kean@chbvw.com
 Date/Time: 2019-06-18 13:58 (Time Zone: -04:00)

Report Last Signed By

User: janice.williams@chbvw.com
 Name: Janice Williams
 E-Mail: janice.williams@chbvw.com
 Date/Time: 2019-06-19 13:46 (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 05/01/19 to 05/31/19		DMR Due Date:	06/28/19				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						=		300	=	307	19 - mg/L		02/DS - Twice Per Discharge	CA - CALCTD
				Permit Req.								Req Mon MO AVG <=		500 DAILY MX	19 - mg/L	0	02/DS - Twice Per Discharge	CA - CALCTD
				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																		
Attachments																		
											Name	Type	Size					
											WVDP_May_2019_TDS_Calulation.pdf	pdf	276785					
Report Last Saved By																		
U.S. DEPT OF ENERGY																		
User:	william.kean@chbvw.com																	
Name:	William Kean																	
E-Mail:	william.kean@chbvw.com																	
Date/Time:	2019-06-18 13:59 (Time Zone: -04:00)																	
Report Last Signed By																		
User:	janice.williams@chbvw.com																	
Name:	Janice Williams																	
E-Mail:	janice.williams@chbvw.com																	
Date/Time:	2019-06-19 13:46 (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 05/01/19 to 05/31/19				DMR Due Date:	06/28/19				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 Code	Monitoring Location	Season #	Param. NODI	Sample Permit Req. Value 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			
01045	Iron, total [as Fe] 2 - Effluent Net	0	--							=	0.086			=	0.086	19 - mg/L		01/30 - Monthly	CA - CALCTD
										Req Mon MO AVG	<=	1	DAILY MX		19 - mg/L	0		01/30 - Monthly	CA - CALCTD
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_May_2019_Net_Iron_Calculation.pdf	pdf	242031					
Report Last Saved By																			
U.S. DEPT OF ENERGY																			
User:	william.kean@chbwv.com																		
Name:	William Kean																		
E-Mail:	william.kean@chbwv.com																		
Date/Time:	2019-06-18 14:04 (Time Zone: -04:00)																		
Report Last Signed By																			
User:	janice.williams@chbwv.com																		
Name:	Janice Williams																		
E-Mail:	janice.williams@chbwv.com																		
Date/Time:	2019-06-19 13:46 (Time Zone: -04:00)																		