

CH2MHILL • BWXT West Valley, LLC

West Valley Demonstration Project

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

AC-PRES
WD:2021:0156
February 18, 2021

ATTENTION: Moira Maloney

SUBJECT: Contract No. DE-EM0001529, Section J-3, Item 127, State Pollutant Discharge Elimination System (SPDES) Discharge Monitoring Report (DMR) for the Period January 1 through January 31, 2021

Dear Ms. Cooney:

This letter is submitted for Contracting Officer Representative's approval to inform you that the SPDES DMR for the reporting period January 1 through January 31, 2021 has been submitted electronically. A copy of this submittal is attached.

If you have any questions, please contact William Kean at (716) 942-4865 or Elizabeth Lowes at (716) 942-2641 or cell phone (716) 481-0429.

Sincerely,

Approval Obtained Electronically

John D. Rendall
President & General Manager

JDR:WNK:bnj

Attachment: SPDES DMR for January 1 - 31, 2021

cc: B. C. Bower, DOE-WVDP
L. K. Hollfelder, CHBWV
W. N. Kean, CHBWV
D. P. Klenk, CHBWV
E. A. Lowes, CHBWV
J. T. Pillittere, CHBWV (Public Reading Room)
R. W. Platt, CHBWV
M. A. Rodges, CHBWV
K. A. Wooley, CHBWV
Letter Log (B. Jeffery), CHBWV
CHBWV OITS #2030348

**Attachment
SPDES DMR**

ATTACHMENT

SPDES DISCHARGE MONITORING REPORT - JANUARY 1 THROUGH JANUARY 31, 2021
NET IRON EFFLUENT CONCENTRATION CALCULATION
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT NO. NY-0000973

$$\text{OUTFALL 001} = M1 = \frac{(X1 + X2) V1}{2} = 452962.60 \text{ mg/month}$$

$$X1 = 0.0445 \text{ mg/L}$$

$$X2 = 0.0753 \text{ mg/L}$$

$$V1 = 7561980.02 \text{ L/month}$$

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

$$X1 = 0.00 \text{ mg/L}$$

$$X2 = 0.00 \text{ mg/L}$$

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

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

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

$$X1 = 0.00 \text{ mg/L}$$

$$X2 = 0.00 \text{ mg/L}$$

$$X3 = 0.00 \text{ mg/L}$$

$$X4 = 0.00 \text{ mg/L}$$

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

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.

$$\text{IRON DISCHARGE CONCENTRATION} = \frac{M1 + M7 - \text{MRW}}{V1 + V7} = 0.060 \text{ mg/L}$$

ATTACHMENT (Cont=d)

**SPDES DISCHARGE MONITORING REPORT - JANUARY 1 THROUGH JANUARY 31, 2021
TOTAL DISSOLVED SOLIDS (TDS) CONCENTRATION CALCULATION - MONITORING POINT 116
WEST VALLEY DEMONSTRATION PROJECT, SPDES PERMIT No. NY-0000973**

Date: January 6, 2021

$$\begin{aligned} C4 &= ((Q1)(C1) + (Q2)(C2) + (Q3)(C3)) / Q4 \\ &= ((0.271 \text{ MGD})(957 \text{ mg/L}) + (0.687 \text{ MGD})(297 \text{ mg/L}) + (0.418 \text{ MGD})(90 \text{ mg/L})) / (1.375 \text{ MGD}) \\ &= 364 \text{ mg/L} \end{aligned}$$

Date: January 12, 2021

$$\begin{aligned} C4 &= ((Q1)(C1) + (Q2)(C2) + (Q3)(C3)) / Q4 \\ &= (0.271 \text{ MGD})(1020 \text{ mg/L}) + (0.364 \text{ MGD})(203 \text{ mg/L}) + (0.418 \text{ MGD})(104 \text{ mg/L}) / 1.052 \text{ MGD} \\ &= 374 \text{ mg/L} \end{aligned}$$

-
- 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).

DMR Copy of Record

Permit

Permit #:

NY0000973

Major:

Yes

Permittee:

U.S. DEPT OF ENERGY

Permittee Address:

1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585

Facility:

WEST VALLEY DEMONSTRATION PROJ

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 01/01/21 to 01/31/21

DMR Due Date:

02/28/21

Status:

NetDMR Validated

Considerations for Form Completion

Principal Executive Officer

First Name:

Bryan

Last Name:

Bower

Title:

Director

Telephone:

716-942-4368

No Data Indicator (NODI)

Form NODI:

--

DMR Copy of Record

Permit

Permit #:
Major:

NY0000973
Yes

Permittee:
Permittee Address:

U.S. DEPT OF ENERGY
1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585

Facility:
Facility Location:

WEST VALLEY DEMONSTRATION PROJ
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 01/01/21 to 01/31/21

DMR Due Date:
02/28/21

Status:
NetDMR Validated

Considerations for Form Completion

Principal Executive Officer

First Name:
Last Name:

Bryan C.
Bower

Title:

Director

Telephone:

716-942-4368

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														01/30 - Monthly	CA - CALCTD
					Permit Req.									Req Mon MO AVG	<=	22.0 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	GR - GRAB
					Permit Req.						>=	3.0 MINIMUM				Req Mon MAXIMUM	19 - mg/L			
					Value NODI							C - No Discharge				C - No Discharge				
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	10.0 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
00400	pH	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	GR - GRAB
					Permit Req.						>=	6.5 MINIMUM			<=	8.5 MAXIMUM	12 - SU			
					Value NODI							C - No Discharge				C - No Discharge				
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	24 - COMP24
					Permit Req.								<=	30.0 MO AVG	<=	45.0 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
00545	Solids, settleable	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	GR - GRAB
					Permit Req.									Req Mon MO AVG	<=	0.3 DAILY MX	25 - mL/L			
					Value NODI									C - No Discharge		C - No Discharge				
00556	Oil & Grease	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	GR - GRAB
					Permit Req.									Req Mon MO AVG	<=	15.0 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
00615	Nitrogen, nitrite total [as N]	1 - Effluent Gross	0	--	Sample														01/30 - Monthly	24 - COMP24
					Permit Req.									Req Mon MO AVG	<=	0.1 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
00625	Nitrogen, Kjeldahl, total [as N]	1 - Effluent Gross	0	--	Sample														01/30 - Monthly	24 - COMP24
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
01045	Iron, total [as Fe]	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	24 - COMP24
					Permit Req.									Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
34726	Nitrogen, ammonia, total [as NH3]	1 - Effluent Gross	0	--	Sample														02/30 - Twice Per Month	24 - COMP24
					Permit Req.								<=	1.49 MO AVG	<=	2.1 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	0	--	Sample														01/30 - Monthly	CN - CONTIN
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD										
					Value NODI		C - No Discharge		C - No Discharge											
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample														01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon MO AVG	<=	0.1 DAILY MX	19 - mg/L			
					Value NODI									C - No Discharge		C - No Discharge				

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.																				
					Value NODI																				

71900	Mercury, total [as Hg]	1 - Effluent Gross	0	--	Sample											Req Mon MO AVG	<=	50.0 DAILY MX	3M - ng/L			01/30 - Monthly	GR - GRAB		
					Permit Req.																				
					Value NODI																				

Submission Note

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

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

U.S. DEPT OF ENERGY

User:

Name:

E-Mail:

Date/Time:

ELIZABETH.LOWES@CHBWV.COM

Elizabeth Lowes

elizabeth.lowes@chbwv.com

2021-02-18 11:50 (Time Zone: -05:00)

Report Last Signed By

User:

Name:

E-Mail:

Date/Time:

ELIZABETH.LOWES@CHBWV.COM

Elizabeth Lowes

elizabeth.lowes@chbwv.com

2021-02-18 11:51 (Time Zone: -05:00)

DMR Copy of Record

Permit

Permit #:

NY0000973

Major:

Yes

Permittee:

U.S. DEPT OF ENERGY

Permittee Address:

1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585

Facility:

WEST VALLEY DEMONSTRATION PROJ

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 01/01/21 to 01/31/21

DMR Due Date:

02/28/21

Status:

NetDMR Validated

Considerations for Form Completion

Principal Executive Officer

First Name:

Bryan

Last Name:

Bower

Title:

Director

Telephone:

716-942-4368

No Data Indicator (NODI)

Form NODI:

--

Submission Note

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Attachments

No attachments.

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U.S. DEPT OF ENERGY

User:

ELIZABETH.LOWES@CHBWV.COM

Name:

Elizabeth Lowes

E-Mail:

elizabeth.lowes@chbwv.com

Date/Time:

2021-02-18 11:50 (Time Zone: -05:00)

Report Last Signed By

User:

ELIZABETH.LOWES@CHBWV.COM

Name:

Elizabeth Lowes

E-Mail:

elizabeth.lowes@chbwv.com

Date/Time:

2021-02-18 11:51 (Time Zone: -05:00)

DMR Copy of Record

Permit

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NY0000973
Yes

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Permittee Address:

U.S. DEPT OF ENERGY
1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585

Facility:
Facility Location:

WEST VALLEY DEMONSTRATION PROJ
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 01/01/21 to 01/31/21

DMR Due Date:

02/28/21

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

Last Name:

Bower

Title:

Director

Telephone:

716-942-4368

No Data Indicator (NODI)

Form NODI:

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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								=	369.0	=	374.0	19 - mg/L	0	02/DS - Twice Per Discharge	CA - CALCTD
					Permit Req.									Req Mon MO AVG	<=	500.0 DAILY MX	19 - mg/L		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

As required in Title 6 of the New York State Codes, Rules, and Regulations 6NYCRR, Part 750-2(e)(3), the New York Environmental Laboratory Accreditation Program (NYELAP) identification numbers for Laboratories performing analysis for the WVDP DMR's are as follows: 1) TestAmerica: NY Lab No. 10026; 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 the CHBWV wastewater treatment plant operators is 0.01 mg/L. Attachments

Attachments

Name	Type	Size
WVDP_January_2021_TDS_Calculation.pdf	pdf	145010.0

Report Last Saved By

U.S. DEPT OF ENERGY

User:

ELIZABETH.LOWES@CHBWV.COM

Name:

Elizabeth Lowes

E-Mail:

elizabeth.lowes@chbvv.com

Date/Time:

2021-02-18 11:50 (Time Zone: -05:00)

Report Last Signed By

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Date/Time:

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Major:

Yes

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1000 INDEPENDENCE AVE SW
WASHINGTON, DC 20585

Facility:

WEST VALLEY DEMONSTRATION PROJ

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 01/01/21 to 01/31/21

DMR Due Date:

02/28/21

Status:

NetDMR Validated

Considerations for Form Completion

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First Name:

Bryan

Last Name:

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Title:

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Telephone:

716-942-4368

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Form NODI:

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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								=	0.06	=	0.06	19 - mg/L	0	01/30 - Monthly	CA - CALCTD
					Permit Req.									Req Mon MO AVG	<=	1.0 DAILY MX	19 - mg/L		01/30 - Monthly	CA - CALCTD
					Value NODI															

Submission Note

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Edit Check Errors

No errors.

Comments

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Attachments

Name	Type	Size
WVDP_January_2021_Net_Iron_Calculation.pdf	pdf	123286.0

Report Last Saved By

U.S. DEPT OF ENERGY

User:

ELIZABETH.LOWES@CHBWV.COM

Name:

Elizabeth Lowes

E-Mail:

elizabeth.lowes@chbwv.com

Date/Time:

2021-02-18 11:50 (Time Zone: -05:00)

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Elizabeth Lowes

E-Mail:

elizabeth.lowes@chbwv.com

Date/Time:

2021-02-18 11:51 (Time Zone: -05:00)