

October 20, 2016

Compliance Coordinator Nevada Division of Environmental Protection Bureau of Water Pollution Control 901 South Stewart Street, Suite 4001 Carson City, Nevada 89701-5249

### Subject: Groundwater Discharge Permit NEV2001515 Discharge Monitoring Report – 3rd Quarter 2016

Dear Compliance Coordinator:

The Nevada Environmental Response Trust (NERT or Trust) maintains Groundwater Discharge Permit #NEV2001515 (Permit), which covers the synthetically double-lined ponds GW-11 and AP-5 at the NERT site in Henderson, Nevada. During the 3rd quarter 2016, no water was discharged directly to a receiving water body from either GW-11 or AP-5. Treated water from a groundwater extraction and treatment system (GWETS) at the NERT Site, which treats extracted groundwater for perchlorate, is discharged to Las Vegas Wash pursuant to NPDES Permit #NV0023060. The GWETS is operated by Envirogen Technologies Inc. (ETI).

#### AP-5

The Trust is in the process of decommissioning the AP-5 Pond. Activities related to decommissioning are overseen by the Nevada Division of Environmental Protection (NDEP), Bureau of Industrial Site Cleanup. In the interim, water is periodically added to keep the pond solids moist (Table 1b). Liquid was detected in the pond's leak detection well during the 3<sup>rd</sup> quarter 2016 but did not exceed 125 gallons/acre/day during the reporting period.

#### GW-11

Liquid was detected in two of four GW-11 corner leak detection wells during the 3rd quarter 2016, specifically the northeast and northwest corner wells. The southeast and southwest wells detected no leakage during the quarter. The leakage rate for the pond did not exceed 125 gallons/acre/day during the reporting period.

Attachment 1 provides July, August, and September 2016 Discharge Monitoring Reports (DMRs). Attachment 2 provides pond monitoring tables with water balance and leak detection monitoring information.

Please contact me at (702) 966-8340 or kyle.hansen@tetratech.com for any questions regarding this report.

Sincerely,

Tetra Tech, Inc.

Hyled. Hansen

Kyle Hansen, CEM Field Operations Manager/Geologist CEM 2167, exp. 9/18/18 Overnight Mail

Attachments:	Attachment 1: Discharge Monitoring Reports Attachment 2: Pond Monitoring Results
cc:	James Dotchin, Bureau of Corrective Actions, NDEP Weiquan Dong, Bureau of Corrective Actions, NDEP Nikita Lingenfelter, Bureau of Water Pollution Control, NDEP Nevada Environmental Response Trust Tanya O'Neill, Foley and Lardner LLP Todd Webster, Envirogen Technologies, Inc. Michael Delvecchio, Envirogen Technologies, Inc. Allan J. DeLorme, Ramboll Environ John Pekala, Ramboll Environ Derek Amidon, Tetra Tech, Inc.

### Discharge Permit NEV2001515 – 3rd Quarter 2016 DMR CEM Certification

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.

Hyled. Hansen

Kyle S. Hansen CEM 2167, expires 9-18-18

# **ATTACHMENT 1**

## **Discharge Monitoring Reports**

July 2016

August 2016

September 2016

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PAGE 1 OF 1

(Reference all attachments here)

COMMENT AND EXPLANATION OF ANY VIOLATIONS Ponds GW-11 and AP-5

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PAGE 1 OF 1

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# **ATTACHMENT 2**

## **Pond Monitoring Results**

3rd Quarter 2016

## **Pond Monitoring Results**

Date	Flow Into GW-11 <sup>1</sup> (MGD)	Pond Water Level <sup>2</sup> (vertical depth in feet)	Storage Volume (thousand gallons)	Discharge to FBRs (million gallons)	Water Balance <sup>1</sup> (million gallons)			
7/5/16		12.61	43,105	1.96 (07/01/16 - 07/16/16)				
7/19/16	0.14	12.05	40,779	0.00 (07/16/16 - 07/31/16)	-1.8			
8/11/16	0.74	12.19	41,332	0.37 (08/01/16 - 08/16/16)	0.2			
8/23/16	0.74	12.56	42,881	18.69 (08/16/16 - 08/31/16)	0.2			
9/6/16	0.60	13.40	46,469	15.08 (09/01/16 - 09/15/16)	5.0			
9/27/16	0.69	13.79	48,172	0.22 (09/15/16 - 09/30/16)	- 5.2			

MGD = million gallons per day

FBR = fluidized bed reactor

<sup>1</sup>The pond water levels and storage volumes represent discrete biweekly measurement and calculations. The water balance represents the aggregated monthly change.

<sup>2</sup>Due a Boatman bug outbreak in GW-11, extraction well flows bypassed GW-11 and were directed to the FBRs from July 3 to July 31; August 1 to August 14; and September 13 to September 30, 2016.

Date	Flow Into AP-5 <sup>1</sup> (MGD)	Pond Water Level <sup>2</sup> (vertical depth in feet and inches)	Storage Volume (thousand gallons)	Discharge to FBRs (gallons)	Water Balance (million gallons)
7/5/2016	0.00	4'0"	362.7	0	0.04
7/20/2016	0.06	3'11"	350.3	0	-0.01
8/11/2016	0.45	3'8"	313.7	0	0.00
8/25/2016	0.15	3'10"	338.0	0	0.02
9/7/2016	0.00	4'10"	490.8	0	0.07
9/23/2016	0.00	4'5"	425.8	0	-0.07

<sup>1</sup>The AP-5 pond is in the process of being decommissioned. There is no routine flow into or out of AP-5 except to keep the pond solids moist. The flow into AP-5 has been expressed as a rate, per the requirements of Table 1 of the permit.

<sup>2</sup>The depth includes pond solids and added water. The units in feet and inches reported here are specific to the AP-5 Pond and reflect the log and chart used to determine depth. Water added to the AP-5 Pond on August 26, 2016 is associated with the September 2016 pond water level increase.

Dates	Volume in Detection Wells
Dales	(gallons) <sup>1</sup>
07/05/16 - 07/07/16	NW – 19
"	NE – 1124
"	SW – 0
"	SE – 0
07/20/16 - 07/22/16	NW – 0
"	NE – 919
"	SW – 0
ű	SE – 0
08/11/16 - 08/13/16	NW – 309
ű	NE – 2691
ű	SW – 0
"	SE – 0
08/25/16 - 08/27/16	NW – 118
ű	NE – 2634
"	SW – 0
ű	SE – 0
09/07/16 - 09/09/16	NW – 5
"	NE – 1322
"	SW – 0
"	SE – 0
09/21/16 - 09/23/16	NW – 0
"	NE – 579
ű	SW – 0
"	SE – 0

Table 2a – GW-11 Pond Leak Detection Monitoring

<sup>1</sup>Twice monthly pumping activities occurred over a 3-day period to evaluate the leakage rates in GW-11, in accordance with procedures specified in a letter to NDEP-BWPC, dated May 28, 2015. The procedure is comprised of the following: days 1 and 2 consist of pumping the well contents dry. Day 3 provides the monitoring day for the gallons per day recharge rate. The value reported here represents the cumulative volume pumped during all 3 days. During the reporting period, the leakage rate did not exceed 125 gallons/acre/day.

### Table 2b – AP-5 Pond Leak Detection Monitoring

Dates	Volume in Detection Well (gallons) <sup>1</sup>							
07/05/16 - 07/07/16	190							
07/20/16 – 07/22/16	214							
08/11/16 – 08/13/16	230							
08/25/16 - 08/27/16	124							
09/07/16 - 09/09/16	257							
09/21/16 - 09/23/16	20							
Twice monthly pumping activities occurred over a 3-day period to evaluate the leakage rates in AP-5. The 3-day								
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evaluation is consistent with the method used for the GW-11 Pond: days 1 and 2 consist of pumping the well contents dry. Day 3 provides the monitoring day for the gallons per day recharge rate. The value reported here represents the cumulative volume pumped during all 3 days. During the reporting period, the leakage rate did not exceed 125 gallons/acre/day.