



October 27, 2015

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 Reports  
3rd Quarter 2015**

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 3rd quarter 2015, no water was discharged directly to a receiving water body from either GW-11 or AP-5. Treated water from the perchlorate treatment system at the NERT site is discharged to Las Vegas Wash pursuant to NPDES Permit #NV0023060. The groundwater extraction and treatment system (GWETS) at the NERT site is operated by Envirogen Technologies, Inc. (ETI).

**AP-5**

The Trust is in the process of decommissioning the AP-5 pond. In the interim, water is periodically added to keep the pond solids moist. Approximately 0.16 million gallons of water were added to the AP-5 pond in 3rd quarter 2015. Activities related to decommissioning are overseen by the Nevada Division of Environmental Protection (NDEP), Bureau of Industrial Site Cleanup.

The AP-5 pond's top liner has evidenced a tear near the top edge of the pond. The tear has been secured with sandbags to prevent wind from lifting the edges of the tear. The sandbagged tear and several additional minor tears are being closely monitored. No leakage rate testing in the leak detection sump was conducted during the 3rd quarter 2015. NERT temporarily suspended leakage rate testing in the leak detection sump until new equipment is installed to ensure that future leakage rate tests can be conducted safely, as described in a letter from the Trust to the NDEP Bureau of Water Pollution Control, dated July 24, 2015.

**GW-11**

Liquid was detected in each of the four GW-11 corner detection wells during the 3<sup>rd</sup> quarter 2015. Currently, pumps do not reach the bottoms of the northeast and southeast detection wells, which Tetra Tech is addressing with alternatives that avoid inadvertently compromising the detection well HDPE and pond liners. Separately, Tetra Tech conducted a tracer test to determine if the secondary pond liner is leaking. The results of the test conducted to date indicate that no leakage of the liner is occurring.

GW-11 was offline from September 4, 2015 to October 8, 2015 when a high population of boatman bugs thriving in the GW-11 pond caused the automatic strainers to plug. ETI bypassed GW-11 during this period, which resulted in lower than usual discharges to the fluidized bed reactors.

Attachment 1 provides July, August, and September 2015 Discharge Monitoring Reports (DMRs). Attachment 2 provides pond monitoring tables with water balance and leak detection monitoring information.

Please contact Kyle Hansen at (702) 966-8340 or [kyle.hansen@tetrattech.com](mailto:kyle.hansen@tetrattech.com) for any questions regarding this report.

Sincerely



Kyle S. Hansen, CEM  
Field Operations Manager/Geologist  
CEM 2167, exp. 9/18/16  
Overnight Mail

Overnight Mail

Attachments:

Attachment 1: Discharge Monitoring Reports  
Attachment 2: Pond Monitoring Results

cc: Greg Lovato, Bureau of Corrective Actions, NDEP  
James Dotchin, Bureau of Corrective Actions, NDEP  
Weiquan Dong, Bureau of Corrective Actions, 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  
Frank Johns, Tetra Tech, Inc.  
Derek Amidon, Tetra Tech, Inc.

**Discharge Permit NEV2001515 – 3rd Q 2015 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.



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Kyle S. Hansen  
CEM 2167, expires 9-18-16

# **ATTACHMENT 1**

## **Discharge Monitoring Reports**

**July 2015**

**August 2015**

**September 2015**

PERMITTEE NAME/ADDRESS:

NAME: Nevada Environmental Response Trust  
 ADDRESS: c/o Envirogen Technologies  
 510 Fourth Street  
 Henderson, NV 89015

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

**DISCHARGE MONITORING REPORT (DMR)**

NEV2001515  
 PERMIT NUMBER

001  
 DISCHARGE NUMBER

FACILITY: Nevada Environmental Response Trust  
 LOCATION: Henderson, NV  
 ATTN: Kyle Hansen

**MONITORING PERIOD**

FROM: 15 | 01 | 07 TO: 15 | 31 | 07

NO DISCHARGE:

NOTE: Read instructions before completing this form.

PARAMETER	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	30 Day Ave (mg/l)	7 Day Ave (mg/l)	30 Day Ave (lb/day)	UNIT			
<b>Flow</b> Influent	SAMPLE MEASUREMENT	Please see attached Table 1		MGD	-----	-----	-----		0	Monthly	Flow Meter
	PERMIT REQUIREMENT	Monitor and Report			----	----	----				
<b>Leak Detection Information</b>	SAMPLE MEASUREMENT	Please see attached Table 2a and 2b		gallons	-----	-----	-----		0	Bi-Monthly	Discrete-Field Measurement
	PERMIT REQUIREMENT	Monitor and Report			----	----	----				
<b>Pond Water Level</b>	SAMPLE MEASUREMENT	Please see attached Table 1		feet	-----	-----	-----		0	Bi-Monthly	Discrete-Field Measurement
	PERMIT REQUIREMENT	Monitor and Report			----	----	----				
<b>Storage Volume</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Bi-Monthly	Calculation
	PERMIT REQUIREMENT	-----	GW-11: 76,100,000 AP-5: 1,817,000		----	----	----				
<b>Discharge to FBR</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Bi-Monthly	Flow Meter
	PERMIT REQUIREMENT	Monitor and Report			----	----	----				
<b>Water Balance Information</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Monthly	Calculation
	PERMIT REQUIREMENT	Monitor and Report			----	----	----				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME / TITLE PRINCIPAL EXECUTIVE OFFICER  
**Kyle Hansen**  
 CEM 2167, exp 9-18-16  
 TYPED OR PRINTED

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 THE 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.

*Kyle S. Hansen*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: 702-966-8340  
 DATE: 15 | 10 | 27  
 AREA CODE NUMBER: 702  
 YEAR MO DAY

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

(Reference all attachments here)

PERMITTEE NAME/ADDRESS:

NAME: Nevada Environmental Response Trust  
 ADDRESS: c/o Envirogen Technologies  
 510 Fourth Street  
 Henderson, NV 89015

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

**DISCHARGE MONITORING REPORT (DMR)**

NEV2001515  
 PERMIT NUMBER

001  
 DISCHARGE NUMBER

FACILITY: Nevada Environmental Response Trust  
 LOCATION: Henderson, NV  
 ATTN: Kyle Hansen

MONITORING PERIOD  
 FROM: 15 | 01 | 08 TO: 15 | 31 | 08

NO DISCHARGE:

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
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	PERMIT REQUIREMENT	Monitor and Report			----	----	-----				
<b>Pond Water Level</b>	SAMPLE MEASUREMENT	Please see attached Table 1		feet	-----	-----	-----		0	Bi-Monthly	Discrete-Field Measurement
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	PERMIT REQUIREMENT	-----	GW-11: 76,100,000 AP-5: 1,817,000		----	----	-----				
<b>Discharge to FBR</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Bi-Monthly	Flow Meter
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	PERMIT REQUIREMENT	Monitor and Report			----	----	-----				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME / TITLE PRINCIPAL EXECUTIVE OFFICER  
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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: 702-966-8340  
 DATE: 15 | 10 | 27  
 AREA CODE NUMBER: 702  
 YEAR MO DAY: 15 | 10 | 27

Forms by WindowChem(707)864-0845;prn11090;v5.01:4/1/96

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

(Reference all attachments here)

PERMITTEE NAME/ADDRESS:

NAME: Nevada Environmental Response Trust  
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 510 Fourth Street  
 Henderson, NV 89015

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

**DISCHARGE MONITORING REPORT (DMR)**

NEV2001515  
 PERMIT NUMBER

001  
 DISCHARGE NUMBER

FACILITY: Nevada Environmental Response Trust  
 LOCATION: Henderson, NV  
 ATTN: Kyle Hansen

**MONITORING PERIOD**

FROM: 15 | 01 | 09 TO: 15 | 30 | 09

NO DISCHARGE:

NOTE: Read instructions before completing this form.

PARAMETER	SAMPLE MEASUREMENT / PERMIT REQUIREMENT	QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
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<b>Discharge to FBR</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Bi-Monthly	Flow Meter
	PERMIT REQUIREMENT	Monitor and Report			----	----	-----				
<b>Water Balance Information</b>	SAMPLE MEASUREMENT	Please see attached Table 1		gallons	-----	-----	-----		0	Monthly	Calculation
	PERMIT REQUIREMENT	Monitor and Report			----	----	-----				
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

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**Kyle Hansen**  
 CEM 2167, exp 9-18-16  
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COMMENT AND EXPLANATION OF ANY VIOLATIONS  
 Ponds GW-11 and AP-5

(Reference all attachments here)

## **ATTACHMENT 2**

### **Pond Monitoring Results**



## Pond Monitoring Results

**Table 1a – GW-11 Pond Level and Storage Volume**

Date	Flow Into GW-11 (MGD)	Pond Water Level (vertical depth in feet)	Storage Volume (thousand gallons)	Discharge to FBRs (million gallons)	Water Balance (million gallons)
7/9/15	1.27	13.7	47,944	20.03 (07/1/15 - 07/16/15)	-0.7
7/30/15		13.4	46,357	18.80 (07/16/15 - 07/31/15)	
8/13/15	1.35	13.2	45,568	21.36 (08/1/15 - 08/16/15)	-1.0
8/27/15		13.4	46,638	20.08 (08/16/15 - 08/31/15)	
9/8/15	0.12	13.2	45,793	3.5 (09/1/15 - 09/15/15)	-0.5
9/18/15		13.2	45,455	.23 (09/15/15 - 09/30/15)	
MGD = million gallons per day					

**Notes:**

1. During 3<sup>rd</sup> quarter 2013, ENVIRON reviewed the volume calculations for GW-11 to verify its storage volume. Table 1 of the Permit, "Holding Pond Limitations for AP-5 and GW-11," indicates that the maximum storage volume of GW-11 is 70,000,000 gallons. However, ENVIRON determined that the maximum storage volume is approximately 76,100,000 gallons. In a letter to NDEP on September 12, 2013, ENVIRON requested a minor modification of the permit to reflect the revised GW-11 maximum storage volume. In a letter dated October 7, 2013, NDEP concurred with the maximum volume of 76,100,000 gallons at 0 feet of freeboard and indicated that the maximum volume corresponds to an operating volume of 62,400,000 gallons at 3.0 feet of freeboard. A modification to the permit based on the revised GW-11 volume calculations will be addressed during the permit renewal process in 2016.
2. GW-11 was offline from September 4, 2015 to October 8, 2015 when a high population of boatman bugs thriving in the GW-11 pond caused the automatic strainers to plug. ETI bypassed GW-11 during this period, which resulted in low discharges to the fluidized bed reactors.

**Table 1b – AP-5 Pond Monitoring Information**

Date	Flow Into Pond <sup>1</sup> (MGD)	Pond Level <sup>(2)</sup> (vertical depth in feet and inches)	Storage Volume (thousand gallons)	Discharge to FBRs (gallons)	Water Balance (million gallons)
7/9/15	0.007	3'4"	265.8	0	0.06
7/30/15		3'9"	325.8	0	
8/13/15	0.004	3'9"	325.8	0	0.09
8/27/15		4'4"	413.0	0	
9/8/15	0.002	4'3"	400.3	0	-0.03
9/18/15		4'2"	382.9	0	

Notes:  
<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 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.

**Table 2a – GW-11 Pond Leak Detection Monitoring**

Dates <sup>1</sup>	Volume in Detection Wells (gallons)
7/16/15 – 7/18/15	NW – 36
“	NE – 38
“	SW – 1556
“	SE – 89
7/29/15 – 7/31/15	NW – 4
“	NE – 0
“	SW – 1029
“	SE – 111
8/11/15 – 8/13/15	NW – 0
“	NE – 0
“	SW – 0
“	SE – 102
8/27/15 – 8/27/15	NW – 3
“	NE – 3
“	SW – 0
“	SE – 75
9/10/15 – 9/12/15	NW – 0
“	NE – 0
“	SW – 187
“	SE – 49
9/22/15 – 9/24/15	NW – 0
“	NE – 0
“	SW – 182
“	SE – 231

<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.

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

Date	Volume in Detection Well (gallons)
7/9/15	NA <sup>1</sup>
7/30/15	NA <sup>1</sup>
8/13/15	NA <sup>1</sup>
8/27/15	NA <sup>1</sup>
9/8/15	NA <sup>1</sup>
9/18/15	NA <sup>1</sup>

<sup>1</sup> No leakage rate testing in the leak detection sump were conducted in the 3rd quarter 2015. NERT temporarily suspended leakage rate testing in the AP-5 sump until new equipment is installed to ensure that future leakage rate tests can be conducted safely, which was documented in a letter to NDEP-BWPC, dated July 24, 2015.