

April 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

RE: Groundwater Discharge Permit NEV2001515 Discharge Monitoring Reports – 1st Quarter 2015

Dear Compliance Coordinator:

The Nevada Environmental Response Trust (NERT or the Trust) maintains Groundwater Discharge Permit #NEV2001515 (the Permit), which covers the synthetically double-lined ponds GW-11 and AP-5 at the NERT site in Henderson, Nevada (the NERT Site). During 1st quarter 2015, no water was discharged directly to a receiving water body from either GW-11 Pond or AP-5 Pond. Treated water from the perchlorate treatment system at the NERT Site is discharged to the 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 Pond**

The Trust is in the process of decommissioning the AP-5 Pond. The water was removed from the pond during 2<sup>nd</sup> quarter 2013; however, water has occasionally been added since that time to keep the pond solids moist. Approximately 186,300 gallons of water was added to the AP-5 Pond on January 18, 2015. Activities related to the decommissioning are ongoing under the purview of Nevada Department of Environmental Protection (NDEP) Bureau of Corrective Actions. A Phase II Work Plan presenting Tetra Tech's evaluation for the removal of pond solids and all material, dated March 13, 2015, was approved by NDEP on March 24, 2015. The AP-5 Pond is a synthetically double-lined pond. The AP-5 pond's primary liner has a tear at the top edge of the pond. The split top liner has been sandbagged to prevent a strong breeze from lifting the edges. The sandbagged tear and several additional identified minor tears are being closely monitored. Liquid was detected in the AP-5 detection well during each of the six leak detection monitoring events conducted in the 1st quarter (Attachment 2). The detected liquid was transferred to GW-11 Pond. There is no evidence that the underlying liner has been compromised.

The Trust will be seeking a modification to Authorization to Discharge Permit No. NEV2001515 by May 15, 2015 to reflect changes in permit conditions associated with the plan's implementation.

### **GW-11 Pond**

On March 27, 2014, the GW-11 Pond began operating as an equalization basin for the treatment plant. The use of the GW-11 Pond as an equalization basin temporarily ceased by diverting inflows directly to the treatment plant, twice during the 1<sup>st</sup> Quarter 2015, as summarized below:

- January 1 On January 5, 2015 inflows into the GW-11 Pond were temporarily stopped to finish installing a new filtration system; and
- January 29 On February 4, 2015 inflows into the GW-11 Pond were temporarily stopped to perform modifications on the new filtration system.

In a letter dated March 19, 2015 to Ms. Nikita Lingenfelter of Bureau of Water Pollution Control (BWPC), the Trust provided background information and informed BWPC of implemented and planned corrective actions related to the GW-11 Pond leak detection system. This letter was submitted in response to notification from BWPC to the Trust in October 2014 of a possible anomaly regarding previous DMRs submitted by Veolia and ETI on behalf of the Trust. As indicated in the Trust's response, pump installation depths were established by video surveys and the pumps were re-installed to corrected depths in the southwest, southeast, and northwest leak detection sumps. Video survey of the northeast leak detection sump could not be completed due to a separated joint in the sump pipe. On behalf of the Trust, Tetra Tech is currently evaluating how to repair the pipe so that the correct pump depth can be determined for the northeast sump. It was noted that the timeline for the repair may be lengthy due to the on-going use of the GW-11 Pond.

At the request of the Trust, Tetra Tech is evaluating the integrity of the GW-11 Pond liner by: (i) collecting liner samples to assess the remaining useful life of the primary and secondary GW-11 Pond liner systems; and (ii) installing piezometers in the down gradient north berm to evaluate if GW-11 Pond water is leaking through the secondary liner. The investigation field work is planned to be completed in May, 2015, and a written summary report will be submitted to NDEP BWPC in June 2015.

## Closing

Attachment 1 includes the January, February, and March 2015 Discharge Monitoring Reports (DMRs). Attachment 2 includes the pond monitoring tables, which provide water balance and leak detection monitoring information. Attachment 3 includes an updated Nevada Certified Environmental Manager designation letter.

Should you have any questions concerning this report, please contact Kyle Hansen at (702) 966-8340 or kyle.hansen@tetratech.com. Thank you.

Sincerely

Kyle S. Hansen, CEM

Field Operations Manager/Geologist

CEM 2167, exp. 9/18/16

Hyled. Hansen

Overnight Mail



### Attachments:

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

Attachment 3: Updated CEM Designation Letter

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, ENVIRON International Corporation
John Pekala, ENVIRON International Corporation
Kimberly Schmidt Kuwabara, ENVIRON International Corporation



## Discharge Permit NEV2001515 - 1st 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.

Kyle S. Hansen

CEM 2167, expires 9-18-16

Hyled. Hansen



## **ATTACHMENT 1**

# Discharge Monitoring Reports



January 2015



February 2015



**March 2015** 

**ADDRESS** 

FACILITY:

ATTN:

LOCATION:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

Nevada Environmental Response Trust

c/o Envirogen Technologies

Henderson, NV

Kyle Hansen

510 Fourth Street Henderson, NV 89015 **DISCHARGE MONITORING REPORT (DMR)** 001

NEV2001515

PERMIT NUMBER

DISCHARGE NUMBER

Nevada Environmental Response Trust

MONITORING PERIOD TO: FROM: 15 01 01 15 NOTE: Read Instructions before completing this form

NO DISCHARGE: X

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Storage Volume	SAMPLE MEASUREMEN	Please see attach	ee attached Table 1a and 1b		gallons				0	Bi-Monthly	Calculation
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

Ponds GW-11 and AP-5

**ADDRESS** 

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

Nevada Environmental Response Trust

DISCHARGE MONITORING REPORT (DMR)

NEV2001515

001

PERMIT NUMBER

DISCHARGE NUMBER

FACILITY: Nevada Environmental Response Trust

c/o Envirogen Technologies

510 Fourth Street

Henderson, NV 89015

LOCATION: Henderson, NV ATTN: Kyle Hansen

 MONITORING PERIOD

 FROM:
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 TO:
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 28

NOTE: Read Instructions before completing this form

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

Ponds GW-11 and AP-5

**ADDRESS** 

FACILITY:

ATTN:

LOCATION:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

Nevada Environmental Response Trust

Nevada Environmental Response Trust

c/o Envirogen Technologies

Henderson, NV

Kyle Hansen

510 Fourth Street Henderson, NV 89015 DISCHARGE MONITORING REPORT (DMR)

NEV2001515

001

PERMIT NUMBER

DISCHARGE NUMBER

 MONITORING PERIOD

 FROM:
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 TO:
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NO DISCHARGE: X

NOTE: Read Instructions before completing this form

ATTN. Tyle Hansen								, , , ,			
	QUANTITY OR LOADING			_		ENTRATION			NO. FREQUENCY	SAMPLE	
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Storage Volume	SAMPLE MEASUREMEN	Please see attached Table 1a and 1b		gallons					0	Bi-Monthly	Calculation
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Discharge to FBR	SAMPLE MEASUREMEN	Please see attached Table 1a and 1b		gallons					0	Bi-Monthly	Flow Meter
	PERMIT REQUIREMENT	Monitor a	Monitor and Report								
	SAMPLE MEASUREMEN	T Please see attach	Please see attached Table 1a and 1b  Monitor and Report						0	Monthly	Calculation
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

Ponds GW-11 and AP-5

## **ATTACHMENT 2**

# Pond Monitoring Results





GW-11 & AP-5 Pond Data



## **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)
1-19-15	4.05	13.6	47,432	10.98 (01/1/15 - 01/15/15)	0.00
1-30-15	1.25	13.6	47,489	18.58 (01/15/15 - 01/31/15)	0.06
2-11-15	4.45	13.8	48,286	13.56 (02/1/15 - 02/15/15)	4.44
2-26-15	1.45	14.1	49,427	19.98 (02/15/15 - 02/28/15)	1.14
3-14-15	4.40	14.2	49,772	18.36 (03/1/15 - 03/15/15)	0.47
3-26-15	1.42	14.1	49,599	22.59 (03/15/15 - 03/31/15)	-0.17

#### Notes:

MGD = million gallons per day

Note: During 3rd 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 zero 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. The Permit modification associated with the work at AP-5 will include the revised GW-11 volume calculations.



<sup>(1)</sup> The reported January and February flows into GW-11 are not sufficient to account for the increase in pond volume during that month. ETI indicated that the equalization tanks (TK-101 tanks) that regulate the flow of water to the FBR treatment plant from on-site and off-site well fields may have backflowed into GW-11 in January and February, which may have caused the increase in the pond volume.

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

Date	Flow Into Pond <sup>(1)</sup> (MGD)	Pond Level (2) (vertical depth in feet and inches)	Storage Volume (thousand gallons)	Discharge to FBRs (gallons)	Water Balance (million gallons)
01-16-15		3'7"	301.6	0	0.00
01-30-15		4'11"	504.0	0	0.20
02-11-15		4'10"	490.8	0	0.04
02-20-15		4'10"	490.8	0	-0.01
03-14-15		4'7"	451.1	0	0.00
03-27-15		4'4"	413.0	0	-0.08

#### Notes:

<sup>&</sup>lt;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. In 1<sup>st</sup> quarter 2015, no water was added to AP-5, except rainfall. The flow into AP-5 has been expressed as a rate, per the requirements of Table 1 of the Permit.

<sup>(2)</sup> Depth is measured from the top of the standing pond water to the liner below the accumulated solids.

Table 2a - GW-11 Pond Leak Detection Monitoring

	Volume in Detection Wells
Date	(gallons)
1-16-15	NW – 1920
"	NE – 830
"	SW – Dry
"	SE – Dry
1-30-15	NW – 1575
u	NE –2930
u	SW – Dry
ш	SE – 3000
2-11-15	NW – 235
u	NE – 2915
и	SW - 50
u	SE – 1540
2-26-15	NW - 588
и	NE – 2799
и	SW - 305
<i>u</i>	SE – 207
3-14-15	NW – 375
<i>u</i>	NE – 1340
и	SW - 450
u	SE – 750
3-26-15	NW – 1560
и	NE – 5640
и	SW - 600
ш	SE – 150

Table 2b - AP-5 Pond Leak Detection Monitoring

Date	Volume in Detection Well (gallons)
1-07-15	75
1-21-15	65
2-04-15	100¹
2-18-15	100¹
3-04-15	100¹
3-18-15	100¹

<sup>&</sup>lt;sup>1</sup> During the leak detection measurement, some amount of liquid remained in the vault after the removal of 100 gallons.

## **ATTACHMENT 3**

## **Updated CEM Designation Letter**

## OFFICE OF THE NEVADA ENVIRONMENTAL RESPONSE TRUST TRUSTEE

Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee
35 East Wacker Drive - Suite 1550
Chicago, Illinois 60611

Tel: (312)498-2800

April 27, 2015

Compliance Coordinator Nevada Division of Environmental Protection Bureau of Water Pollution Control 2030 E. Flamingo Rd, Suite 230 Las Vegas NV 89119

RE: Letter of Authorization and Change of CEM Designation Groundwater Discharge Permit #NEV2001515

Dear Compliance Coordinator:

The Nevada Environmental Response Trust (the "Trust") maintains Groundwater Discharge Permit #NEV2001515 which regulates the synthetically double-lined ponds GW-11 and AP-5.

This letter serves as a written Letter of Authorization to authorize Tetra Tech, Inc. as the Trust's consultant and authorized representative, to submit and sign monitoring reports and other submittals associated with the subject Groundwater Discharge Permit on behalf of the Trust.

This letter also serves as the written Change of Certified Environmental Manager (CEM) Designation from Kimberly Kuwabara (Nevada CEM 2353, exp. 3/20/2017) and John Pekala (Nevada CEM 2347, exp. 9/20/2016) of ENVIRON International Corporation, to Kyle Hansen (Nevada CEM 2167, exp. 9/18/2016) of Tetra Tech, Inc., as the primary CEM.

Please feel free to contact the undersigned at (312) 498-2800 or <u>andrew.steinberg@lepetomaneinc.com</u> if you have any questions regarding this letter.

Office of the Nevada Environmental Response Trust

By:

Andrew W. Steinberg not individually but solely as Vice-President of Operations for Le Petomane, Inc., not individually but solely as Agent of the Nevada Environmental Response Trust.

cc: Jay Steinberg, as President of the Nevada Environmental Response Trust Trustee and not individually

Steven Clough, Nevada Environmental Response Trust Greg Lovato, NDEP Bureau of Corrective Actions James Dotchin, NDEP Bureau of Corrective Actions

Weiquan Dong, NDEP Bureau of Corrective Actions

Nikita Lingenfelter, NDEP Bureau of Water Pollution Control

John Pekala, ENVIRON International Corp. Tanya C. O'Neill, Foley & Lardner LLP

Michael Delvecchio, ETI