OFFICE OF THE NEVADA ENVIRONMENTAL RESPONSE TRUST TRUSTEE

Le Petomane XXVII, Inc., Not Individually, But Solely as the Nevada Environmental Response Trust Trustee
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April 4, 2017

Mr. Russ Land
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 S. Stewart St., Suite 4001
Carson City, NV 89701

RE: Notification under Long-term UIC General Permit GU07RL-51056
Nevada Environmental Response Trust
Henderson, Nevada

Dear Mr. Land:

The Nevada Environmental Response Trust (NERT) maintains Long-term Underground Injection Control (UIC) General Permit GU07RL-51056, issued on August 16, 2016, for the NERT site in the Black Mountain Industrial Complex in Henderson, Nevada. The permit supports groundwater remediation being performed at the direction of the Nevada Division of Environmental Protection, Bureau of Industrial Site Cleanup (BISC). This letter provides notification to the Bureau of Water Pollution Control of new discharges to currently permitted injection wells. Notification complies with Section II.B.1 of the permit, which requires notice to the permit issuing authority for new discharges that do not violate limitations specified in the permit.

The new discharges consist of the activities described in the work plan for an in-situ chromium treatability study, approved by the BISC on June 28, 2016. The injection wells to support the in-situ chromium treatability study were part of the long-term forecast number of injection wells in NERT's July 2, 2016, Notice of Intent (NOI) application for a UIC permit, at Attachment 4, Table 1, of the NOI. Consistent with Attachment 4 of the NOI, this next phase of remediation work will consist of multiple tasks implemented to evaluate the in-situ treatment of contaminated groundwater within the Ammonium Perchlorate (AP) Area boundary shown on Figure 1 in the July 2, 2016 NOI and repeated on Figure 1 attached to this notification.

As part of the in-situ chromium treatability study, electron donors will be injected into approximately six injection wells with new downgradient monitoring wells used to assess the effectiveness of biological treatment for hexavalent chromium and other parameters, including perchlorate. The location of the in-situ chromium treatability study injection area is shown inside the AP Area boundary on Figure 1 (attached). Injections are anticipated to begin in April 2017 and are consistent with the limitations in UIC Permit GU07RL-51056 as described in Table 1, below.

Table 1. New Discharge Compliance with Terms of UIC Permit GU07RL-51056

Parameter	Current Permit Limitation	Compliance with Permit Limitation
In-situ chromium treatability study	Authorization for up to 252 injection wells	Approximately six injection wells are forecast to support the in-situ chromium treatability study portion of long-term remediation activity within the AP Area boundary.

Parameter	Current Permit Limitation	Compliance with Permit Limitation
Injection area	Within AP Area boundary	Injection will occur in an existing retention basin, labeled In-Situ Chromium Treatability Study Area, inside the AP Area boundary (Figure 1).
Injection well construction	Quaternary Alluvium and Upper Muddy Creek Formation	Quaternary Alluvium and Upper Muddy Creek Formation
Injection rate	Maximum 260 gallons per minute	*Less than 260 gallons per minute*
Injection pressure	***Maximum 35 psi***	*Less than 35 psi*
Injectate[1]	**Water, electron donors, sulfate or polysulfide, nutrients, sodium bisulfate, tracer dyes**	*Water, electron donor[2], nutrients, sodium bisulfite, tracer dyes.*

[1] The July 2, 2016 NOI, Attachment 5 – Proposed Injection Program, listed electron donors with injection either continuous or pulsed at an estimated volume of 50,000 gallons over a 2-year period. The amount and type will vary based on results of bench-scale testing, field testing, and perchlorate concentrations. Based on preliminary bench-scale testing results and site-specific hydrologic parameters, NERT is planning to inject electron donors for the in-situ chromium treatability study during not more than six batch injection events over a 6- month period, with not more than 15,000 gallons of electron donor injected during each batch injection event.

[2] Electron donors may include the following, or a mixture of, molasses, industrial sugar water, and EOS, which is a water-mixable vegetable oil-based organic source of carbon for in-situ remediation.

NERT will submit a summary of all injection activity under UIC General Permit GU07RL-51056 as part of the next semi-annual report, due no later than August 15, 2017. If you have questions regarding this permit notification, please contact Dan Pastor, Tetra Tech Project Manager, at (303) 447-1823 or myself at (702) 960-4309 or at steve.clough@nert-trust.com.

Office of the Nevada Environmental Response Trust

Stephen R. Clough

Stephen R. Clough, P.G., CEM
Remediation Director
CEM Certification Number: 2399, exp. 3/24/19

Cc (via NERT Sharefile Distribution):

James Dotchin, NDEP Bureau of Industrial Site Cleanup
Carlton Parker, NDEP Bureau of Industrial Site Cleanup
Weiquan Dong, NDEP Bureau of Industrial Site Cleanup
Christa Smaling, NDEP Bureau of Industrial Site Cleanup
Jay Steinberg, as President of the Nevada Environmental Response Trust Trustee and not individually
Andrew Steinberg, as Vice President of the Nevada Environmental Response Trust Trustee and not individually
Tanya C. O'Neill, Foley and Lardner, LLP
Derek Amidon, Tetra Tech
Dan Pastor, Tetra Tech
Allan DeLorme, Ramboll Environ
John Pekala, Ramboll Environ

WARM SPRINGS RD
N BOULDER HWY
GROUNDWATER HOLDING POND (GW-11)
WC-WEST POND
WC-EAST POND
GROUNDWATER TREATMENT PLANT (CHROMIUM TREATMENT)
FLUIDIZED BED REACTOR (PERCHLORATE TREATMENT)
AP AREA
AP-6 POND
AP-5 POND
INITIAL SOIL FLUSHING AREA
IN-SITU CHROMIUM TREATABILITY STUDY AREA
Mn-1 POND
LHOIST NORTH AMERICA
BORON PRODUCTION FACILITY
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
EASTGATE ROAD
LAKE MEAD PKWY

LEGEND

- NERT SITE BOUNDARY
- GROUNDWATER BARRIER WALL
- AP AREA BOUNDARY
- INITIAL SOIL FLUSHING IRM BOUNDARY
- IN-SITU CHROMIUM TREATABILITY STUDY AREA
- 3,000-FOOT RADIUS
- BUILDING/STRUCTURE
- INTERCEPTOR WELL FIELD (IWF)

N

APPROXIMATE SCALE IN FEET

0 600 1,200

NOTES:

1. "LAS VEGAS, NV." MAP. GOOGLE EARTH PRO. GOOGLE, 22 MAR. 2015.
2. ALL LOCATIONS ARE APPROXIMATE.

FACILITY / SITE LAYOUT

NEVADA ENVIRONMENTAL RESPONSE TRUST HENDERSON, NEVADA

PREPARED BY:
TETRA TECH, INC.
1489 WEST WARM SPRINGS ROAD, SUITE 110
HENDERSON, NEVADA 89014
Phone (702) 966-8340

PROJECT NUMBER	APPROVED BY	DRAWN BY	DATE	FIGURE
87600001	MC	JRL	JAN 2017	1

P:\87600008-NERT-K01\CAD\Affidavit - UIC Permit\Soil Flushing IRM\FIGURE 1 - FACILITY SITE LAYOUT.dwg Jan 05, 2017 - 3:19pm joel.lagade