

Via Electronic Mail

Dr. Weiquan Dong, PE
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**SMP-REQUIRED NOTIFICATIONS AND CONTINGENCY PLAN FOR
TRACER TESTING AND CPT PROFILING AS PART OF THE BARRIER
WALL INTEGRITY EVALUATION
NEVADA ENVIRONMENTAL RESPONSE TRUST SITE
HENDERSON, NEVADA**

Dear Dr. Dong:

September 26, 2018

On behalf of the Nevada Environmental Response Trust ("NERT" or the "Trust"), Ramboll US Corporation (Ramboll) is pleased to present this notification and contingency plan for upcoming well drilling, cone penetration testing (CPT), and fluorescent dye tracer testing work to be performed as part of the barrier wall integrity evaluation in progress at the NERT site in Henderson, Nevada. The work will be conducted by Ramboll and its subcontractors and is scheduled to take place in late September through October 2018. This document has been prepared in accordance with the Site Management Plan (SMP), Revision 4, dated March 22, 2018 ("SMP"; Ramboll 2018), which was approved by NDEP on March 29, 2018. The Trust has been advised of and approves this document. Approval of this document by the Nevada Division of Environmental Protection (NDEP) is required prior to initiating the work described herein.

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This document addresses the following notifications and requirements of the SMP:

- Section 4.3 describes contingency actions for encountering previously unknown contaminated soil.
- Section 4.7 describes notifications and procedures to follow in the event of an emergency project related to an accidental spill or release.
- Section 5.3 requires notification to and approval from NDEP and the Trust for work to be performed within 50 feet of any on-site groundwater extraction and treatment system (GWETS) component or monitoring well.
- Section 5.7 requires submittal of a contingency plan to NDEP and the Trust for approval, describing actions to be taken in case of accidental release of untreated groundwater due to damage to any GWETS component.

Please note that the activities and locations described in this letter are not within excavation control areas (ECAs). The planned activities are expected to be situated adjacent to, but outside of an ECA (ECA D4).

BACKGROUND INFORMATION

The previously completed trenching activities identified the location of the barrier wall. It is now proposed to install six wells for the purposes of conducting a tracer test to evaluate the integrity of the wall. Locations of the proposed wells are shown in Figure 1a and 1b and are labeled as BWTR-1 through BWTR-6. It is also proposed to perform a fluorescent dye tracer test in these wells and to conduct CPT profiling of the wall in two areas near the locations identified by trenching.

This work will be conducted in general accordance with the Barrier Wall Integrity Field Evaluation Work Plan (Ramboll Environ 2017a), which was approved by NDEP on October 3, 2017 and was developed as part of the NERT Remedial Investigation and Feasibility Study (RI/FS). The work will follow the NDEP-approved Sampling and Analysis Plan, Revision 1 (SAP) for the site. The SAP is comprised of the Field Sampling Plan ("FSP"; ENVIRON 2014a), Health and Safety Plan ("HASP"; ENVIRON 2014b), and the Quality Assurance Project Plan ("QAPP"; Ramboll Environ 2017b).

ANTICIPATED ACTIVITIES

Three wells will be installed in two clusters. One well upgradient of the wall and two wells downgradient of the wall. The upgradient well will be installed 5 feet from the wall. One downgradient well will be installed 5 feet from the wall, and the other 15 feet from the wall. Ramboll will use stabilized Lake Mead water from the on-site water supply for well development or other drilling needs. Ramboll will work directly with Envirogen Technologies, Inc. (ETI), the GWETS operator, to evaluate each location for potential subsurface utilities prior to drilling. Ramboll will also utilize air vacuum (air knife) technology, as needed, to "daylight" underground components of the GWETS system to ensure an accurate utility locate. The subsurface work will also follow the SMP, accordingly.

Tracer testing will be conducted using the six newly installed wells and two existing downgradient monitoring wells. Injection of a fluorescent dye will be conducted in the newly installed upgradient well followed by five well casing volumes of stabilized Lake Mead water from the on-site water supply. Monitoring will be conducted following the injection activity in each of the newly installed downgradient wells, and one existing well downgradient of the injection in each cluster. A sample will also be collected from the east manifold and the west manifold of the GWETS system to monitor dye uptake by the extraction system. Ramboll will work directly with ETI to determine the best procedures for obtaining a sample.

CPT profiles will be collected in two areas. Each area will be near the locations where the barrier wall has been identified during the earlier trenching activities. CPT tools will be pushed into the wall to explore the continuity of the wall. A series of CPT profiles will be taken from points aligned nearly perpendicular to the wall. Ramboll will work directly with ETI to evaluate each location for potential subsurface utilities prior to drilling. Ramboll will also utilize air vacuum (air knife) technology, as needed, to "daylight" underground components of the GWETS system to ensure an accurate utility locate. This subsurface work will also follow the SMP, accordingly.

CONTINGENCY PLAN

Per Sections 5.3 and 5.7 of the SMP, this document serves as notification of work to be performed within 50 feet of on-site GWETS components or monitoring wells and a Contingency Plan to NDEP and the Trust regarding field activities that have the potential for release of untreated groundwater. The purpose of the

Contingency Plan is to describe the action to be take in case of accidental release of untreated groundwater while performing activities described herein.

Precautions

Ramboll and subcontractor personnel will implement the following precautions and procedures during implementation of the field activities:

- Daily health and safety "tailgate" meetings will be held prior to the start of field work. In addition to discussions of health and safety hazards and prevention, the names and mobile phone numbers for all field staff and subcontractors will be confirmed. Clear lines of communication will be established each day to ensure a swift and coordinated response to a release.
- ETI will be advised of work that may impact their operations (i.e. work within 50 feet of any GWETS component).
- Ramboll will work directly with ETI to evaluate each proposed monitoring well location and CPT location prior to beginning drilling activities.
- Drilling and CPT activities that will occur near the GWETS system components will be preceded by utility locating using air knife technology to "daylight" underground components of the system before work proceeds.

Spill Response Procedures

- The primary response action for a release of untreated groundwater during field activities will be to shut down and contain any uncontrolled flow. Pumping, vacuum and containment equipment will be available as needed.
- A spill response kit will be readily available during field activities and utilized in the event of a release of untreated groundwater.
- As described in the SMP, if release of untreated groundwater occurs, Ramboll will immediately notify Steve Clough of the Trust at (702) 960-4309, who will then notify Weiquan Dong of NDEP at (702) 486-2850, extension 252. If any GWETS components are shut down due to damage from the release of groundwater, Ramboll will provide NDEP, the Trust and ETI with a written explanation for the shutdown.
- The release of untreated groundwater due to field activities will be reported to the NDEP 24-hour Spill Notification line, if required by NAC 445A.345 to 445A.348.

PREVIOUSLY UNKNOWN CONTAMINATED SOIL

In the event that previously unknown contaminated soil is encountering during the activities described in this letter, the contingency actions described in Section 4.3 of the SMP will be followed.

EMERGENCY PROJECTS

In the event of accidental spill or release that could qualify as an emergency project, Ramboll will prepare an Emergency Project notification for approval by the Trust and NDEP. Upon approval of the Emergency Project status by NDEP, a work plan for cleanup will be prepared and submitted in general accordance with Section 4.7 of the SMP.

REQUEST FOR APPROVAL

These notifications and contingency plan provide information required by the SMP for implementation of the above described activities to be performed as part of the barrier wall integrity evaluation at the NERT Site. Your approval of the notifications and contingency plan is requested and appreciated.

We would appreciate your prompt review of this document. Please contact Kimberly Kuwabara at (510) 420-2525 or kkuwabara@ramboll.com if you have any comments or questions concerning the notifications or contingency plan.

Sincerely,



Kimberly Kuwabara, MS
Senior Managing Consultant

CEM #2353, expires 3/20/2019



John M. Pekala, PG
Principal

CEM #2347, expires 9/20/2020

Ec: James Dotchin, NDEP-BISC
Nevada Environmental Response Trust
Tanya O'Neill, Foley & Lardner LLP
Wendy Prescott, ETI

FIGURES:

- Figure 1a - Barrier Wall Tracer Study - West Side Injection and Monitoring Locations
- Figure 1b - Barrier Wall Tracer Study - East Side Injection and Monitoring Locations

REFERENCES:

ENVIRON, 2014a. Field Sampling Plan, Revision 1; Nevada Environmental Response Trust Site; Henderson, Nevada. July 18. NDEP approved August 1, 2014.

ENVIRON, 2014b. Health and Safety Plan for Remedial Investigation and General Site Activities, Revision 1; Nevada Environmental Response Trust Site; Henderson, Nevada. July 18. NDEP approved August 1, 2014.

Ramboll Environ, 2017a. Barrier Wall Integrity Field Evaluation Work Plan; Nevada Environmental Response Trust Site; Henderson, Nevada. September 8. NDEP approved October 3, 2017.

Ramboll Environ, 2017b. Quality Assurance Project Plan, Revision 2; Nevada Environmental Response Trust Site; Henderson, Nevada. October 26. NDEP approved November 8, 2017.

Ramboll, 2018. Site Management Plan (SMP), Revision 4; Nevada Environmental Response Trust Site; Henderson, Nevada. March 22. NDEP approved March 29, 2018.

FIGURES



Barrier Wall Tracer Study - West Side Injection and Monitoring Locations

Nevada Environmental Response Trust
Henderson, Nevada

FIGURE
1a



Barrier Wall Tracer Study - East Side Injection and Monitoring Locations

Nevada Environmental Response Trust
Henderson, Nevada

FIGURE
1b

**SMP-Required Notifications and Contingency Plan
For Tracer Testing and CPT Profiling as part of the Barrier Wall Integrity
Evaluation**

**Nevada Environmental Response Trust Site
(Former Tronox LLC Site)
Henderson, Nevada**

Nevada Environmental Response Trust (NERT) Representative Certification

I certify that this document and all attachments submitted to the Division were prepared at the request of, or under the direction or supervision of NERT. Based on my own involvement and/or my inquiry of the person or persons who manage the system(s) or those directly responsible for gathering the information or preparing the document, or the immediate supervisor of such person(s), the information submitted and provided herein is, to the best of my knowledge and belief, true, accurate, and complete in all material respects.

Office of the Nevada Environmental Response Trust

Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Signature: Jay A Steinberg, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee *as President*

Name: Jay A. Steinberg, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Title: Solely as President and not individually

Company: Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Date: 9-26-18

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Integrity Evaluation**

**Nevada Environmental Response Trust
Site (Former Tronox LLC Site)
Henderson, Nevada**

Responsible Certified Environmental Manager (CEM) for this Project

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.



**John M. Pekala, PG
Principal**

9/26/2018

Date

Certified Environmental Manager
Ramboll
CEM Certificate Number: 2347
CEM Expiration Date: September 20, 2020