

# MEMO

Date **October 28, 2019**  
To **Nevada Environmental Response Trust**  
From **John Pekala, Scott Warner, and Chris Ritchie**  
Copy to **Nevada Division of Environmental Protection**  
**United States Environmental Protection Agency**  
Subject **Las Vegas Wash ZVI-Enhanced Bioremediation Treatability**  
**Study Monthly Progress Report**

## **TASK PROGRESS UPDATE: SEPTEMBER 2019**

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Ramboll US Corporation (Ramboll) has prepared this memorandum which summarizes Ramboll's progress during September 2019 toward successfully implementing the Las Vegas Wash Zero-Valent Iron (ZVI)-Enhanced Bioremediation Treatability Study, formerly known as the Galleria Drive ZVI-Enhanced Bioremediation Treatability Study. Treatability study laboratory testing is performed at the University of Nevada, Las Vegas (UNLV) via subcontract with Ramboll on behalf of NERT.

## **TASK M18 – LAS VEGAS WASH ZVI-ENHANCED BIOREMEDIATION TREATABILITY STUDY**

- Task Leaders – Scott Warner / Chris Ritchie
- Current Status
  - As previously reported, Phase 1 of the treatability study was completed in June 2019. Phase 2 (design and implementation of a field test) is planned to be completed in the vicinity of Las Vegas Wash Transect 1A (Transect 1A) pending completion of a data gap evaluation as described in more detail in the following sections.
  - A modification to the treatability study work plan (Treatability/Pilot Study Modification No. 9) was prepared in September 2019 to: (1) conduct limited characterization activities in Transect 1A to address pre-design data gaps; and (2) perform additional streamlined and limited bench-scale testing to evaluate the performance of ZVI under subsurface biogeochemical conditions unique to Transect 1A.
- Schedule and Progress Updates
  - Treatability/Pilot Study Modification No. 9 will be submitted to NDEP in October 2019.
  - Field activities and bench-scale testing associated with the implementation of Treatability/Pilot Study Modification No. 9 are anticipated to commence in November 2019, pending NDEP approval of Treatability/Pilot Study Modification No. 9.
  - A Stakeholder Roundtable is anticipated to be scheduled in second quarter 2020 to present Phase 1 field and laboratory/bench-scale data and Phase 2 details of the treatability study.

- Health and Safety
  - There were no safety incidents during September 2019.

## Las Vegas Wash ZVI-Enhanced Bioremediation Treatability Study Progress Update

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

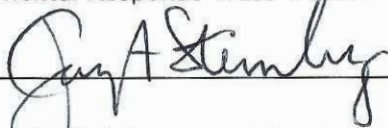
#### Nevada Environmental Response Trust (NERT) Representative Certification

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:**

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**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:**

\_\_\_\_\_ 10/24/19 \_\_\_\_\_

## **Las Vegas Wash ZVI-Enhanced Bioremediation Treatability Study Progress Update**

### **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.



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**John M. Pekala, PG**  
**Principal**

October 28, 2019

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**Date**

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