

MEMO

Date **September 11, 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: JULY 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 July 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
 - Phase 1 of the treatability study was completed in June. Phase 2 (design and implementation of a field test) is on hold pending submission of a treatability study modification as described in more detail in the following sections.
 - As previously reported, the Trust indicated uncertainty with respect to land ownership of BRC-owned parcels along Galleria Drive due to developer interest. After evaluating various candidate locations for the relocation of Phase 2 of the treatability study, the proposed field test site has been relocated to the area previously designated as Las Vegas Wash Transect 1A. Due to this change, this treatability study is now termed the Las Vegas Wash ZVI-Enhanced Bioremediation Treatability Study.
 - A modification to the treatability study work plan (Treatability/Pilot Study Modification No. 9) is currently being prepared to: (1) conduct limited characterization activities in Transect 1A to address pre-design data gaps; and (2) perform additional focused bench-scale testing to evaluate the performance of ZVI under subsurface biogeochemical conditions present at Transect 1A.
- Schedule and Progress Updates
 - A modification to the treatability study work plan is anticipated to be submitted in September 2019.

- Pending approval and completion of the modification, a work plan addendum is anticipated to be submitted in first quarter 2020 to present Phase 2 details of the treatability study.
- Health and Safety
 - There were no safety incidents during July 2019.

Las Vegas Wash ZVI-Enhanced Bioremediation Treatability Study Progress Update

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

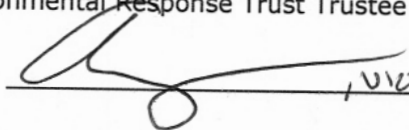
Nevada Environmental Response Trust (NERT) Representative Certification

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:

 JAY A. STEINBERG, PRESIDENT NERT, ON BEHALF OF

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:

9/10/19

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.



John M. Pekala, PG
Principal

September 11, 2019

Date

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