

TECHNICAL MEMORANDUM

To: Nevada Environmental Response Trust

Cc: Nevada Division of Environmental Protection
United States Environmental Protection Agency

From: Dan Pastor and Dana Grady, Tetra Tech, Inc.

Date: December 20, 2018

Subject: **Las Vegas Wash Bioremediation Pilot Study Monthly Progress Report**

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech, Inc. (Tetra Tech) has prepared this memorandum which summarizes Tetra Tech's progress during October 2018 toward successfully implementing the Las Vegas Wash Bioremediation Pilot Study.

Task Progress Update: October 2018

Task M19 – Las Vegas Wash Pilot Study

- Task Leader – Dana Grady/Dan Pastor
- Current Status
 - Phase 1 pre-design field activities continue to be performed during this reporting period to gather relevant data and information required to optimize the final pilot study locations and design (targeted treatment interval and depth, contaminant concentrations, etc.). Based on the data collected thus far, a Treatability/Pilot Study Modification No. 2 – Las Vegas Wash Bioremediation Pilot Study (referred to herein as Modification No. 2) was submitted and approved by NDEP in August 2018. Following implementation of this modification, the Phase 1 findings and resulting Phase 2 pilot study design will be presented to NDEP, EPA and the NERT Stakeholders, followed by a third-party cost evaluation and submittal of the Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum.
 - The Phase 1 pre-design field activities described in the Las Vegas Wash Bioremediation Pilot Study Work Plan began in March 2018 and were completed in July 2018. Additional Phase 1 pre-design work as part of Modification No. 2 began on August 27, 2018 and includes installation of additional soil borings and monitoring wells, soil and groundwater sampling, slug testing, borehole dilution testing, and nuclear magnetic resonance (NMR) logging. Drilling associated with this modification began on August 27, 2018 and is on-going. Results from soil and groundwater sampling performed as part of this Modification No. 2 will be provided as they become available.

- **Schedule and Progress Updates**
 - Field work associated with the Modification No. 2, which includes drilling, well installation, soil and groundwater sampling, and aquifer testing, began on August 27, 2018 and is expected to continue through November 2018. All work will be performed as expeditiously as possible to minimize overall schedule impacts.
 - The Las Vegas Wash Bioremediation Pilot Study Work Plan Addendum will summarize the Phase 1 findings and present the final Phase 2 design. The Work Plan Addendum will be submitted in the first quarter of 2019.
- **Health and Safety**
 - There were no safety incidents related to Task M19 during October 2018.

CERTIFICATION

Las Vegas Wash Bioremediation Pilot Study Monthly Progress Report

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 systems(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, not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

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

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: 12/20/18

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 prepared 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. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

Description of Services Provided: Las Vegas Wash Bioremediation Pilot Study Monthly Progress Report, Nevada Environmental Response Trust Site, Henderson, Nevada.



December 20, 2018

Kyle Hansen, CEM

Date

Field Operations Manager/Geologist
Tetra Tech, Inc.

Nevada CEM Certificate Number: 2167

Nevada CEM Expiration Date: September 18, 2020