

TECHNICAL MEMORANDUM

To: Nevada Environmental Response Trust

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

From: Arul Ayyaswami and Dan Pastor

Date: February 19, 2018

Subject: Unit 4 Source Area Bioremediation Treatability Study Progress Update

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech, Inc. (Tetra Tech) has prepared this memorandum that summarizes Tetra Tech's progress made through January 2018 toward successfully implementing the Unit 4 Source Area In-Situ Bioremediation Treatability Study.

Task Progress Update: January 2018

Task M21 – Unit 4 Source Area In-situ Bioremediation Treatability Study

- Task Leader – Arul Ayyaswami
- Current Status
 - The University of Nevada – Las Vegas (UNLV) continues microcosm testing with a combination of soil and groundwater collected from boring locations M-251 (located within the Unit 4 Building basement) and M-253 (located to the east of the Unit 4 Building basement). Activities at UNLV are currently expected to continue through April 2018, consistent with the approved Unit 4 Source Area In-Situ Bioremediation Treatability Study Bench-Scale Work Plan. The final duration will depend on progress towards achieving study objectives.
 - Comments received from the Nevada Division of Environmental Protection (NDEP) on the Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan are being addressed.
 - In advance of work plan approval, preparation and submittal of Tronox ground breaking permit applications are in progress at the direction of the Trust.
- Schedule and Progress Updates
 - UNLV microcosm testing will continue in February 2018.
 - The revised Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan is under development and will be submitted along with a response to comments letter by February 5, 2018.

- UIC and water appropriation permit applications will be prepared and submitted following approval of the Revised Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan.
 - The proposed route for the extracted groundwater pipeline from the Unit 4 Building basement to the Chromium Treatment Plant will be discussed with Tronox, Envirogen Technologies, Inc., and the Trust in February.
 - Preparation of a Contingency Plan in accordance with the Site Management Plan will be initiated following approval of the Revised Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan.
- Health and Safety
 - There have been no health and safety incidents related to Task M21 during January.

CERTIFICATION

Unit 4 Source Area 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 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:  _____, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

not individually but solely 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: _____ *2/15/18*

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: Unit 4 Source Area Bioremediation Treatability Study Progress Update, Nevada Environmental Response Trust Site, Henderson, Nevada.



2/19/2018

Kyle Hansen, CEM
Field Operations Manager/Geologist
Tetra Tech, Inc.

Date

Nevada CEM Certificate Number: 2167
Nevada CEM Expiration Date: September 18, 2018