

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: November 27, 2017

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 October 2017 toward successfully implementing the Unit 4 Source Area In-Situ Bioremediation Treatability Study. Bench-scale testing work is being conducted as outlined in the Unit 4 Source Area In-Situ Bioremediation Treatability Study Bench-Scale Work Plan (Work Plan).

Task Progress Update: October 2017

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

- Task Leader – Arul Ayyaswami
- Current Status
 - Soil collected from borings M-251 (located within the Unit 4 Building basement) and M-253 (located immediately east of the Unit 4 Building basement) was transferred to the University of Nevada – Las Vegas (UNLV) for testing. UNLV is performing physical analyses and chemical analyses (perchlorate, chlorate, chromium, nitrate, and chloroform) on the soils to determine the appropriate soil samples to use for the bench-scale studies. Evaluation of the results is ongoing.
 - Following well development activities, groundwater was collected from monitoring wells M-251-100 and M-253-100 and transferred to UNLV for testing. UNLV is performing chemical analyses on the groundwater, which will then be used for the bench-scale studies. Evaluation of the results is ongoing.
- Schedule and Progress Updates
 - Bench-scale tests will continue in November.
 - The Draft Unit 4 Source Area In-Situ Bioremediation Treatability Study Work Plan is under development and will be submitted in November.
- Health and Safety
 - There have been no health and safety incidents related to Task M21 during October.

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

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

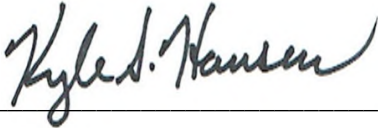
Company: Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Date: _____

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: Prepared Unit 4 Source Area Bioremediation Treatability Study Progress Update.



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

November 27, 2017

Date

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