

MEMO

Date **August 30, 2018**
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 **In-Situ Bioelectrochemical Laboratory-Scale Treatability
Study Monthly Progress Report**

TASK PROGRESS UPDATE: JULY 2018

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 2018 toward successfully implementing the In-Situ Bioelectrochemical Laboratory-Scale Treatability Study.

TASK M24 – IN-SITU BIOELECTROCHEMICAL LABORATORY-SCALE TREATABILITY STUDY

- Task Leaders – Scott Warner / Chris Ritchie
- Current Status
 - An electrochemical batch reactor was constructed and instrumented for groundwater testing.
 - Electrochemical batch tests were performed to assess hydrogen generation, organic carbon generation, and pH dynamics at various inorganic carbon loadings and voltages. The data from these batch tests will be used to inform operational parameters for the subsequent column testing.
 - Site soils were prepared for use in flow-through column tests and for related microbiological tests.
 - A test column has been constructed to perform initial exploratory analyses including perchlorate reduction kinetics under dynamic site-simulated conditions.
- Schedule and Progress Updates
 - This task remains on schedule.
- Health and Safety
 - There were no safety incidents during July 2018.

**In-Situ Bioelectrochemical Laboratory-Scale 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 *not individually, but solely as Pres. J.A.*

Signature: *Jay A. Steinberg*, 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: 8/30/18

In-Situ Bioelectrochemical Laboratory-Scale 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 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 In-Situ Bioelectrochemical Laboratory-Scale Treatability Study Progress Update, Nevada Environmental Response Trust Site, Henderson, Nevada



August 30, 2018

John M. Pekala, PG

Date

Principal

Certified Environmental Manager
Ramboll Environ US Corporation
CEM Certificate Number: 2347
CEM Expiration Date: September 20, 2018