

TECHNICAL MEMORANDUM

To: Nevada Environmental Response Trust

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

From: Dana Grady

Date: October 24, 2019

Subject: **Galleria Drive Bioremediation Treatability 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 September 2019 toward successfully implementing the Galleria Drive Bioremediation Treatability Study.

Task Progress Update: September 2019

Task M17 – Galleria Drive Bioremediation Treatability Study

- Task Leader – Dana Grady/Dan Pastor
- Current Status
 - Treatability/Pilot Study Modification No. 8 was submitted to NDEP on July 30, 2019 to summarize a proposed new location and describe the minimal scope of work (referred to as Phase 2a activities) required to confirm the new area is appropriate for relocation of the treatability study. This memorandum was approved on August 2, 2019.
 - Field work associated with Phase 2a activities described in Treatability/Pilot Study Modification No. 8 was conducted from September 9, 2019 through September 24, 2019. Field activities included installation and development of four monitoring wells, collection of groundwater samples, groundwater gauging, and slug testing. During advancement of the four soil borings, soil samples were collected on approximate 10-foot intervals from the depth of the first saturated material to total depth of the soil boring at 100 feet below ground surface (bgs). All soil samples were analyzed for perchlorate. Following installation and development of monitoring wells in each of the four soil borings, groundwater samples were collected and analyzed for perchlorate, chlorate, nitrate, sulfate, total dissolved solids, and total organic carbon. The location of the four new monitoring wells installed during Phase 2a activities is shown on Figure 1. Well construction details are provided in Table 1. Soil and groundwater analytical results will be presented in a forthcoming treatability/pilot study modification, which will also formally request relocation of the study.

- Schedule and Progress Updates
 - Following analysis of the results from the Phase 2a field activities, a treatability/pilot study modification will be submitted to present the results and present the location and layout of the Phase 2 treatability study.
- Health and Safety
 - There were no safety incidents related to Task M17 during September 2019.

CERTIFICATION

Galleria Drive Bioremediation Treatability Study Monthly Progress Report

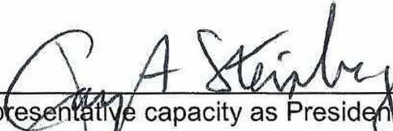
**Nevada Environmental Response Trust Site
(Former Tronox LLC Site)
Henderson, Nevada**

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: , not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Not Individually, but Solely
as President of the 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: 10/24/19

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 Galleria Drive Bioremediation Treatability Study Monthly Progress Report.



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

October 24, 2019

Date

Nevada CEM Certificate Number: 2167
Nevada CEM Expiration Date: September 18, 2020

Figures


Legend

- ⊗ Existing Monitoring Well
 - ⊙ Phase 2a Monitoring Well
- Land Ownership / Jurisdiction**
- City of Henderson
 - Basic Environmental Company
 - Weston Hills Subdivision



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Imagery Source: Esri World Map, May 2017.

 TETRA TECH www.tetratech.com 150 S. 4th Street, Unit A Henderson, Nevada 89015 Phone: (702) 854-2293	NEVADA ENVIRONMENTAL RESPONSE TRUST MONTHLY STATUS UPDATE GALLERIA DRIVE BIOREMEDIATION TREATABILITY STUDY	Project No.: 117-7502019 Date: OCTOBER 02, 2019 Designed By: ES
	PHASE 2A LAYOUT	Figure No. 1

Tables

Table 1
Phase 2a Monitoring Wells
 Galleria Drive Bioremediation Treatability Study

Monitoring Well/Borehole ID	Northing	Easting	Ground Surface Elevation	Top of Casing Elevation	Well Diameter	Borehole Diameter	Borehole Total Depth	Well Total Depth	Top of Screen	Bottom of Screen	Nominal Screen Length	Slot Size
			feet amsl	feet amsl	inches	inches	feet bgs	feet bgs	feet bgs	feet bgs	feet	inches
Newly Installed Phase 2a Monitoring Wells (Septemer 2019)												
GRTS-MW06	26728366.18	832650.57	1627.02	1626.82	2	6	100	75.3	55.2	74.8	20	0.010
GRTS-MW07	26728199.68	833052.36	1631.05	1630.85	2	6	100	80.3	60.2	79.8	20	0.010
GRTS-MW08	26728052.54	833330.01	1635.41	1635.29	2	6	100	75.3	55.2	74.8	20	0.010
GRTS-MW09	26728435.77	833180.42	1627.68	1627.59	2	6	100	75.3	55.2	74.8	20	0.010

Notes:

amsl - above mean sea level

bTOC - below top of casing

bgs - below ground surface

- Not Available