

March 13, 2013

TECHNICAL MEMORANDUM

To: Andy Steinberg
Nevada Environmental Response Trust

From: ENVIRON International Corporation

Subject: Recommendations for Disposal of Leak Check Water from Tronox Pond MN-2

ENVIRON International Corporation (ENVIRON) was asked by the Nevada Environmental Response Trust (NERT) to provide a recommendation regarding the disposal of approximately 2.2 million gallon (MG) of stabilized Lake Mead water, currently stored in Pond MN-2 at the NERT site in Henderson, Nevada. ENVIRON understands that Tronox recently constructed Pond MN-2, and filled the pond with stabilized Lake Mead water in order to check the pond's synthetic liner for leaks. ENVIRON further understands that leak testing has been successfully completed, and that Tronox has requested permission from NERT to dispose of the water on-site. In the remainder of this memorandum, ENVIRON provides a recommended method for on-site disposal of the stored water.

Permitting

Tronox should apply for a temporary discharge permit from the Nevada Division of Environmental Protection (NDEP), Division of Water Pollution Control, pursuant to NRS 445A.485. A copy of the permit application is attached to this memorandum. The recommendations discussed below regarding the method of discharge and monitoring requirements are contingent on Tronox's receipt of a temporary discharge permit.

Discharge Method

ENVIRON recommends that stabilized Lake Mead water currently stored in MN-2 be discharged to the specified location within the Northern Retention Basin (see Figure 1) in accordance with the following:

- The discharge rate to the northern retention pond shall not exceed 300 gallons per minute (gpm).
- In order to avoid significant infiltration before reaching the northern retention basin, the water shall be conveyed to the northern retention basin through a hard conveyance (e.g., flexible hose or pipeline).
- Appropriate measures should be taken to minimize erosion to the retention basin. If erosion does occur, Tronox shall be responsible for repairing the damage.

Monitoring

Tronox shall reimburse NERT for all costs associated with groundwater monitoring, as detailed below.

- At the two locations shown in Figure 1, temporary wells shall be installed. The wells shall be screened across the water table. Prior to beginning the discharge to the northern retention basin, water levels shall be measured in the temporary wells and groundwater samples shall be collected. The samples shall be analyzed for perchlorate, chromium, and total dissolved solids (TDS). This same program of water level gauging and groundwater sampling shall be repeated monthly for two months after the discharge is completed. In addition, a pressure transducer shall be installed in the southern well and water levels measured on an hourly basis for three days prior to initiating discharge, continuing during the discharge, and for two months following the discharge or until water levels stabilize (whichever is longer).
- After sampling is complete, the two temporary wells shall be abandoned consistent with NDEP policy.

A rough estimate of the cost of installing, monitoring, and abandoning the two temporary wells is \$15,000 to \$20,000.

All activities completed by Tronox shall be reported to the Trust in accordance with the Landlord Tenant Construction Agreement (LTCA).



Path: H:\LePetomane\NERT\Soil Excavation\GIS\Maps\Other Figures\NERT_MN2Pond.mxd



2200 Powell St., Suite 700,
Emeryville, CA 94608

Recommended Discharge Area and Monitoring Well Locations for MN-2 Pond Water Disposal
 Nevada Environmental Response Trust Site, Henderson, Nevada

Drafter: EA Date: 3/13/2013 Contract Number: 21-32100GC

Figure
1

Attachment

LIST OF REQUIREMENTS FOR TEMPORARY PERMIT APPLICATION

A temporary permit may be issued for a maximum of a 180 day (6 month) period of time, pursuant to NRS 445A.485, after which time the discharge shall cease or the discharger shall have applied for and received a Permanent Discharge Permit. A \$250.00 fee is due at the time of application.

I. Owner Information

Name: _____
Address: _____
City: _____ County: _____
State: _____ Zip Code: _____
Telephone Number: (____) _____ Fax Number: (____) _____
Contact Person: _____

II. Facility/Site Information

Facility Name: _____
Facility Address: _____
City: _____ County: _____
State: _____ Zip Code: _____
Telephone Number: (____) _____ Fax Number: (____) _____
Contact Person: _____

Latitude: _____ Longitude: _____
Township: _____ Range: _____
Section: _____

III. Receiving Water Name

If the discharge enters a separate storm water drainage or other system, please provide the following information:

- a. The name of the owner of the drainage
- b. The name of the receiving water into which the drainage system discharges; and
- c. A copy of the permit, license, or equivalent written approval granted by the owner of the system for such a discharge or connection to the system

IV. **A narrative description** of the site & activities that require the discharge permit. Describe any treatment system and/or Best Management Practices to be used at the facility.

V. **Water Quality Analysis** (must use a Nevada State Certified Lab) to include the potential contaminants/pollutants in the discharge.

VI. **Quantity of discharge:** Flow (gallons per day) _____

VII. Attach a topographic map and a site map showing the location of the potential discharge and a line drawing showing the general route taken by water in the facility from intake to discharge.

VIII. Existing Environmental Permits

NPDES Permit (Discharges to Surface Water) _____
NEV Permit (Discharges to Ground Water) _____

IX. I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Printed Name of Person Signing

Title

Signature of Applicant

Date Application Signed

LIST OF REQUIREMENTS FOR A TEMPORARY PERMIT APPLICATION



A temporary permit is issued for a maximum of a 180 day (6 month) period of time, after which time the discharge shall cease or the discharger shall have applied for and received a Permanent Discharge Permit.

- A. A narrative description of the site to include the following items if they apply to the discharge:
 - a. the type of contamination and source,
 - b. the type of treatment system to be installed,
 - c. the location and address of the site,
 - d. the discharge point and conveyance,
 - e. the Latitude and Longitude

- B. A topographic map with the site delineated and the discharge point outlined.

- C. Water Quality Analysis (must use a Nevada State Certified Lab) to include the contaminants/pollutants in the discharge.

- D. The estimated flow rate in GPM for each discharge point and total for the site.

- E. A copy of the Letter of Authorization or Encroachment permit authorizing the discharge to the conveyance from the City or the County with jurisdiction over the land use.

- F. FEES: \$250.00 for a Temporary Permit to discharge, and