MEMORANDUM



environmental management, inc.

From: Deni Chambers, Northgate Date: September 27, 2010

Josh Otis, Northgate

To: Shannon Harbour, NDEP

RE: Disposition of Monitoring Wells in Proposed Excavation Areas, Tronox Facility,

Henderson, Nevada

In a conference call on August 11, 2010, the Nevada Division of Environmental Protection (NDEP) requested that Tronox LLC (Tronox) provide a proposal for the disposition of monitoring wells located within excavation areas, as detailed in the *Excavation Plans for Remediation Zones B* – E (EPs; Northgate 2010). In addition, NDEP has provided comments on the EPs requesting information and suggesting discussion of the disposition of the monitoring wells at the Henderson, Nevada facility (the Site). In response to NDEP's requests, Tronox has prepared this memorandum which presents Tronox's recommendations for wells located in excavation areas.

The attached Table 1 lists the wells that Tronox anticipates will be impacted by the soil excavation and identifies the proposed disposition for each well. The table categorizes wells according to the proposed disposition:

- Category 1: Wells that have already been adjusted or plugged and abandoned;
- Category 2: Wells that are proposed to be protected or plugged and abandoned now and replaced following the completion of excavation and grading activities; and
- Category 3: Wells that are proposed to be plugged and abandoned and not replaced.

The first category generally consists of wells that were impacted by excavation and off-haul of the Manganese tailings material; have either been plugged, abandoned, and replaced; or have had the surface completions adjusted to match the new grades. The second category consists of wells located in excavation areas where it is intended to protect the well during the excavation activity, or wells that Tronox proposes to replace following completion of excavation and grading activities. The third category consists of wells that Tronox believes are redundant to the groundwater monitoring program at the Site (i.e., there are existing wells up- and downgradient that can be utilized to monitor the groundwater plumes) and are not proposed for replacement following excavation activities. Tronox recognizes that six of these wells (M-18 and M-84

through M-88) are required under the consent agreements between Tronox and NDEP, but believes that the monitoring objectives of these wells can be achieved with a smaller number of wells. Following the completion of excavation and grading activities in the area, Tronox proposes to replace these six wells with three monitoring wells spaced along the same transect (downgradient of the recharge trenches). Proposed locations for these replacement wells will be submitted to NDEP for approval prior to their construction. The replacement wells will be monitored with the same frequency and for the same constituents as the wells currently proposed for abandonment.

After NDEP's review of this memorandum, Tronox will be available to meet and discuss specific well disposition recommendations at NDEP's convenience, if appropriate.

Attachment:

Table 1 – Disposition of Wells in Excavation Areas

