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To: Shannon Harbour, PE
Nevada Division of Environmental Protection

RE: Discharges of Stabilized Lake Mead Water at Tronox Facility

COMMENTS:

In response to a recent request from the Nevada Division of Environmental Protection (NDEP), Northgate has prepared this summary describing the discharge of stabilized Lake Mead water from two pipelines in the vicinity of remediation zones.

Leak in RZ-C-45B / RZ-D-21C

On-site discharge of stabilized Lake Mead water was initiated on December 30, 2010 as part of a repair response for a leaking 18-inch-diameter steel water supply pipeline located in RZ-C-45B. This discharge was required to drain the water distribution system to enable repairs on the 18-inch line. Stabilized Lake Mead water continued to drain from the 18-inch line, as the valve for isolating the 18-inch line could not be closed completely. LVP installed a temporary bypass to serve the Tronox steam plant, an area originally served by the 18-inch line needing repair, so that during the repair process an adequate water supply was provided to Tronox's steam plant. The final 18-inch pipeline repair was completed January 6, 2011. A concrete thrust block was then installed at the repair location. The pipeline was recharged as soon as the thrust block concrete met the required strength requirements. Tronox ended the bypass and resumed normal supply flow paths on January 12, 2011. This eliminated the discharge in RZ-D-21C.

The flow rate of discharged stabilized Lake Mead water was approximately 2.5 gallons per minute or less. Based on the flow rate and duration, the estimated discharge volume was 47,000 gallons or less. The stabilized Lake Mead water was discharged into a clean (i.e. already excavated and partially backfilled excavation area) and infiltrated into adjacent clean excavation areas. The attached figure indicates the stabilized Lake Mead water discharge point within RZ-D-21C and the flow path to accumulation and infiltration areas in the adjacent clean excavation areas.

Although allowed by NPDES Discharge Permit NV0000078, the discharged stabilized Lake Mead water did not leave the site. In addition, the discharged water did not enter excavation areas that had not been remediated, and did not impact any adjacent surface water bodies.



With these considerations, the incident was considered a non-reportable event. Regardless, the NDEP representative was provided with a verbal summary regarding this issue.

Leak in RZ-B-17

On January 13, 2011, an on-site stabilized Lake Mead water supply line between Unit Buildings 1 and 2 (on 6th Street) was found leaking 4-feet beneath the ground surface in remediation zone RZ-B-17. The water line was isolated with existing valves and repaired on January 17, 2011. Prior to the repair, approximately 250-gallons of stabilized Lake Mead water leaked from the water line to the adjacent subsurface. Please note the water leak and percolation into the adjacent soil was beneath the 0.33-foot excavation limits.

Site Wide Review

Both Tronox and NGEM initiated site review to detect locations which may have leaking stabilized Lake Mead water supply lines. At this time no other water lines appear to be leaking, however we will continue to review the site and respond to leaks found. If NDEP or their contractors see signs of water leaking from underground water supply lines, please contact us immediately. Please feel free to contact us if you have additional questions.



