MEMORANDUM



environmental management, inc.

From:	Deni Chambers, Principal-in-Charge Derrick Willis, Project Manager Josh Otis, Project Manager	Date:	January 5, 2011
То:	Shannon Harbour, PE Nevada Division of Environmental Protection (NDEP)		
RE:	Environmental Conditions Assessment, Groundwater Treatment and Capture Zone Evaluation Monthly Status Memorandum and Schedule Update, December 2011, Tronox Facility, Henderson, Nevada		

Activities Completed During Last Period December 2010

PHASE B ECA PROGRAM

Deliverables

- Response to NDEP Comments on Technical Memorandum: Response to Request for Description of Slope Cutting in the Vicinity of the PRP (Inlet/Outlet) Water Lines, dated November 29, 2010, and NDEP-TRX-NGEM Webex to discuss Environmental Covenants and PRP Pipe Lines, December 2, 2010, dated and submitted December 2, 2010
- Environmental Conditions Assessment, Groundwater Treatment and Capture Zone Evaluation Monthly Status Memorandum and Schedule Update, November 2010, dated and submitted December 6, 2010
- Response to NDEP's November 29, 2010 Comments on Excavation Plan for Phase B Soil Remediation of RZ-E, dated November 3, 2010; Errata pages for RZ-E Excavation Plan, dated November 4, 2010; Conference Call Minutes, dated November 9, 2010; and Errata to RZ-E Excavation Plan: Figure 1 and Table 1; dated November 15, 2010, dated and submitted December 7, 2010
- Response to NDEP's November 30, 2010 Comments on RZ-D Western Property Line Cut Slope Material, dated November 17, 2010, dated and submitted December 7, 2010
- Response to Nevada Division of Environmental Protection Request for Data for Review of Mn Tails Excavation Plan, email dated December 16, 2010, dated and submitted December 10, 2010
- Response to NDEP letter RE: Pond AP-5, dated November 30, 2010, dated and submitted December 10, 2010
- Closure and Post-Remediation Screening Health Risk Assessment Report for Parcels C, D, F, G, and H, dated and submitted December 10, 2010
- *Memorandum: Subsurface Demarcation of Residual Contaminated Soil,* dated and submitted December 15, 2010
- *Memorandum: Remediation Zone C Excavation of Perchlorate-Impacted Soils,* dated and submitted December 16, 2010
- *Memorandum: Remediation Zone E VOC and Asbestos,* dated and submitted December 17, 2010



- Environmental Risk Management Plan, dated and submitted December 20, 2010
- RZ-B and RZ-D Data Tables, dated and submitted December 29, 2010

Field Activities

- Remediation Zone D Excavation, Transportation, and Disposal
- Remediation Zone B Excavation, Transportation, and Disposal
- Remediation Zone C Excavation, Transportation, and Disposal
- Remediation Zone E Excavation, Transportation, and Disposal

LEACHING/GROUNDWATER PROGRAM

Deliverables

- Capture Zone Evaluation Report, dated and submitted December 3, 2010
- Revised Capture Zone Evaluation Report, dated and submitted December 10, 2010
- Response to Nevada Division of Environmental Protection (NDEP) letter dated November 30, 2010: Re AP-5 dated December 10, 2010

Meetings

• All Companies Groundwater Meeting, December 8, 2010: It was noted that groundwater remedial action study (RAS) decisions are targeted for 2011.

Field Activities

- Monitoring extraction wells and monitoring wells downgradient of barrier wall
- Installing pumps and piping for extraction wells I-W, I-X, I-Y, I-AA, I-AB, I-AC, and I-AD at the Interceptor Well Field
- Soil and groundwater sampling for in situ bioremediation laboratory bench-scale tests

GROUNDWATER SYSTEM OMM

Field Activities

• Monthly groundwater monitoring for December, 2010

Activities to be Completed During Next Period January 2011 (and anticipated submittal dates)

PHASE B ECA PROGRAM

Deliverables

- Response to NDEP's Request for information regarding status of remedial activities for each Polygon (January 5)
- Data Validation Summary Tables (January 18)

Meetings

- Conference call regarding status of remedial activities in each polygon (January 4, 2010)
- Meeting to discuss contracts and work scope moving forward after effective date (January 10, 2010)

Field Activities

- Remediation Zone D Excavation, Transportation, and Disposal (visually impacted areas, revised excavation areas, and utility corridors within pond embankments only).
- Remediation Zone D Backfill
- Remediation Zone B Excavation, Transportation, Disposal, and Backfill
- Remediation Zone C Excavation, Transportation, Disposal, and Backfill (includes visually impacted areas)
- Remediation Zone E ACM Abatement
- Remediation Zone E Excavation, Transportation, Disposal, and Backfill (includes visually impacted areas)

LEACHING/GROUNDWATER PROGRAM

Deliverables

- Underground Injection Control semiannual submittal (January 28)
- Discharge Monitoring Reports (DMRs) (January 28)
- Groundwater treatment plant and pipeline optimization study (January 31)

Meetings

• Discussions with NDEP and the Trust regarding groundwater remedial strategy and system optimization.

Field Activities

- Complete electrical upgrade and Interceptor well hook-ups
- Schedule and permit installation of UMCf well cluster near Mn-Tailings remediation area
- Initiate installation of pump, plumbing to connect extraction well PC-150 to Athens Road Well Field.
- Complete in situ bioremediation laboratory bench-scale testing

GROUNDWATER SYSTEM OMM

- GWETS evaluation
- Monthly groundwater monitoring for January 2011