EXHIBIT A

EXHIBIT A

STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E. Director
Colleen Cripps, Ph.D., Administrator

MEMORANDUM

DATE: July 21, 2011

SUBJECT: **Action Memorandum: Removal Actions, Nevada Environmental Response Trust Site, Clark County, Nevada (NDEP No.: H-000539)**

FROM: Shannon Harbour, Staff Engineer III, Special Projects Branch, BCA, NDEP

TO: Jim Najima, Bureau Chief, BCA, NDEP

THROUGH: William Knight, Supervisor, Special Projects Branch, BCA, NDEP

I. PURPOSE

The purpose of this memorandum is to document approval of the following removal actions described herein for the Nevada Environmental Response Trust (NERT) site, located outside of the City of Henderson, Clark County, Nevada, as defined in the NERT Settlement Agreement ("Henderson Property"):

1. The groundwater extraction and treatment system for the treatment of chromium and perchlorate and
2. Excavation of soil impacted with perchlorate, dioxins/furans, hexachlorobenzene, pesticides, metals, and/or other contaminants.

II. SITE CONDITIONS

History of Facility Production. The Henderson Property comprises approximately 452 acres located within the Black Mountain Industrial (BMI) complex in unincorporated Clark County and is surrounded by the city of Henderson, Nevada. The BMI complex was first developed by the U.S. government in 1942 as a magnesium plant for World War II operations. After the war, the portion of the BMI complex that now comprises the Henderson Property was leased to Western Electrochemical Company (WECCO). Pursuant to a contract with the U.S. Navy, WECCO constructed a facility in the early 1950's and the facility produced manganese dioxide, sodium chlorate, sodium perchlorate, and other perchlorates, in addition to ammonium perchlorate for the Navy for two decades.

WECCO merged with American Potash and Chemical Company (AP&CC) in 1956. In 1967, AP&CC merged with Kerr-McGee Corporation and began producing boron chemicals in early 1976 as well as continuing to produce ammonium perchlorate. Kerr-McGee Corporation operated onsite under the subsidiary and related entities.

Kerr-McGee Chemical Corporation, and Kerr-McGee Chemical, LLC (collectively, KMCC). The production processes utilized by KMCC included elemental boron, boron trichloride, and boron tribromide. The production of boron tribromide was discontinued in 1994 and the production of sodium chlorate and ammonium perchlorate was discontinued in 1997 and 1998, respectively. KMCC reclaimed perchlorate at the site until 2002 using on-site equipment. In 2004, Kerr-McGee Corporation spun off its chemical business into an entity named Tronox LLC (Tronox). Tronox continued to produce electrolytic manganese dioxide, elemental boron, boron trichloride, and boron fibers.

History of Environmental Response. During the 1970s, the U.S. Environmental Protection Agency (USEPA), the State of Nevada, and Clark County investigated potential environmental impacts from atmospheric emissions, groundwater and surface water discharges, and soil discharges from the various BMI companies. From 1971 to 1976, lined surface impoundments were constructed to recycle and evaporate industrial wastewater generated from the KMCC manufacturing processes. Zero discharge status was achieved for industrial wastewater in 1976. In 1980 USEPA issued a Clean Water Act Section 308 letter requesting information from the BMI companies regarding manufacturing and waste management practices. Commencing in 1981, KMCC began investigating potential source areas and extent of chromium contamination in the shallow water bearing zone. In 1987, the chromium groundwater treatment system commenced operation. KMCC completed a Phase I site Assessment in 1993, which was submitted to the NDEP. In 1994, NDEP issued a Letter of Understanding (LOU) to KMCC, which identified 69 areas that required some specified level of environmental investigation (Appendix B, Figures 16 and 17). A Phase II Site Assessment was completed in 1996 in accordance with a NDEP-approved Phase II Work Plan.

Based on sampling conducted by the Southern Nevada Water Authority and others in the Lower Colorado River system, the occurrence of perchlorate in the Lower Colorado River Basin system was determined to have originated in the Las Vegas Wash, and KMCC and former PEPCON facilities were suspected as the sources. NDEP and the Nevada Attorney General's Office responded by requiring soil and groundwater investigation for perchlorate commencing in 1999 with the signing of the July 26, 1999 Consent Agreement between KMCC and NDEP. Perchlorate loadings of up to 1,000 pounds per day were shown to be entering the Colorado River system during this time. In 1998, KMCC installed an on-site well field and constructed an 11-acre groundwater impoundment, GW-11. In 1999, KMCC began collecting groundwater from a seep discovered near the Las Vegas Wash, in which perchlorate had been detected. Additionally that year, KMCC constructed a temporary ion exchange system adjacent to the seep area for the treatment of the perchlorate-impacted groundwater. In 2001, KMCC constructed a subsurface slurry wall on-site for additional containment and enhanced capture of the on-site perchlorate plume and two off-site well fields were installed: Athens Road Well Field and Seep Well Field. After a failed remediation effort using ionic separation perchlorate destruction module, KMCC expanded the temporary once-through ion exchange system in 2002. By the end of 2004, KMCC had constructed a fluidized

bed reactor (FBR) system for biological destruction of perchlorate and had completed transitioning from the temporary ion exchange system to the new FBR system. In 2006, Tronox expanded the FBR system by adding an additional reactor to manage the decommissioning of Pond AP-5. This expansion allowed for an increase in the treatment capacity of the treatment system. The hydraulic loading was held constant at 1,000 gallons per minute causing the retention time in each bioreactor to increase, thus allowing for the treatment of higher mass loading. The mass loading prior to the additional bioreactor was approximately 22,400 pounds per month and after the additional bioreactor became operational, the mass loading could be increased to 48,000 pounds per month.

In 2006, Tronox conduct a focused Phase A soil characterization effort consisting of 27 borings in select potential source areas throughout the site. In 2009, Tronox conducted a large soil, groundwater, and soil gas sampling effort in order to characterize potential source areas consisting of over 150 sampling locations as part of a NDEP-approved Phase B Sampling and Analysis Plan. In 2010, Tronox reported the resulting data to the NDEP and this data combined with previous investigation data indicated wide-spread and varied soil contamination throughout the site. Contaminants identified include those listed in paragraph A.4. In response to the analytical results and Tronox's protracted schedule, NDEP issued a Finding of Alleged Violations and Order to Tronox on December 14, 2009 requiring source control by December 31, 2010. Tronox began excavation of contaminated soils at the site in August 2010 in accordance with four NDEP-approved Excavation Plans for Remediation Zones B through E (2010B – 2010H, NGEM).

Tronox filed for Chapter 11 bankruptcy in the Southern District of New York in January, 2009. Reorganized Tronox emerged from bankruptcy on February 14, 2011 with their environmental liabilities discharged. Through the bankruptcy, the Nevada Environmental Response Trust (NERT) was established to address these legacy environmental liabilities at the BMI Tronox facility. At the same time, the NERT assumed ownership of the site. Reorganized Tronox leased back the operations portion of the site and continues to operate the production processes for manganese dioxide, elemental boron, boron trichloride, and boron fibers. As of February 14, 2011, the NERT has assumed management of operations of the FBR system as well as assuming all soil excavation activities related to the legacy liabilities. The NERT is continuing the overall site remedial process under NDEP oversight and has scheduled a focused feasibility study (FFS) to address groundwater remediation.

A. Site Description

1. Removal site evaluation

Please see Appendix C for a table listing the 69 LOU Potential Source Areas identified by NDEP. NDEP identified an additional area during the Phase B Sampling and Analysis Plan planning in 2008. These potential source areas were investigated to characterize any soil and/or groundwater impacts.

Historic investigations focused on hexavalent chromium and perchlorate in groundwater.

The historic investigations prompted the removal action of construction of a groundwater treatment system for the removal of hexavalent chromium with following investigations prompting the construction of an additional groundwater treatment system (FBR system) for the removal of perchlorate. The Phase B Investigation prompted the excavation of over 500,000 cubic yards of impacted soils and tailings as well as the removal of the on-site Hazardous Waste Landfill.

2. **Physical location**

The Henderson Property (NDEP #: H-000539) is approximately 452 acres and is located approximately 13 miles southeast of the city of Las Vegas in an unincorporated area of Clark County, Nevada in Township 22 S, Range 62 E, Sections 1,12, and 13. This site is located within the Black Mountain Industrial (BMI) complex, which is surrounded by the City of Henderson, Nevada. The population of Henderson, NV is approximately 258,000 with the area immediately surrounding the site being industrial and commercial with some nearby residences. The dissolved perchlorate plume originating from the Henderson Property is impacting the Las Vegas Wash, which is located approximately 3.5 miles to the north. The Las Vegas Wash is a tributary to the Lake Mead and the Colorado River system, which affects approximately 15,000,000 end water users in Nevada, Arizona, and California.

3. **Site characteristics**

A portion of the site continues to be operated by Reorganized Tronox, now as a tenant of the Henderson Property, for the production of elemental boron, boron trichloride, and manganese dioxide. Another smaller portion of the site houses the groundwater treatment system and supporting components and On-site Well Field. Three lined surface impoundments currently exist on-site: GW-11 Pond associated with the groundwater treatment system for the storage of extracted groundwater as needed, WC-East and WC-West Ponds associated with the Tronox production processes. The remainder of the property is predominately unused.

4. **Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

The following contaminants have been observed in soils at concentrations greater than the established applicable or relevant and appropriate requirements (ARARs) and, if left in place and uncontrolled, would exceed 10^{-4} incremental lifetime cancer risk (ILCR) and a hazard index (HI) of 1 (2008A, ENSR):

- Dioxins/Furans
- SVOCs
    - Hexachlorobenzene
    - Benzo(a)pyrene
    - Benzo(b)fluoranthene
    - Dibenzo(a,h)anthracene
- VOCs
    - Benzene
    - Chloroform
- Pesticides
    - 4,4-DDE
    - 4,4-DDT
    - Aldrin
    - Alpha-BHC
    - Beta-BHC
- PCBs
- Perchlorate
- Asbestos
- Metals
    - Arsenic
    - Chromium
    - Cobalt
    - Lead
    - Magnesium
    - Manganese

The following metals have been observed in soils at concentrations that may pose a leaching concern and potential to affect groundwater at concentrations above acceptable leaching soil screening levels (LSSLs) (2010I, NGEM):

- Antimony
- Arsenic
- Boron
- Cadmium
- Chromium VI
- Copper
- Magnesium
- Manganese
- Nickel
- Uranium
- Zinc

The following contaminants have been observed in groundwater at concentrations above USEPA drinking water Maximum Contaminant Levels (MCLs), BCLs, or Las Vegas Wash Beneficial Use Standards (2010I, NGEM):

- Pesticides
  - Aldrin
  - Alpha-BHC
  - Beta-BHC
  - Gamma-BHC (Lindane)
  - Heptachlor epoxide
  - Toxaphene
- SVOCs
  - 1,4-Dioxane
  - Benzo(a)anthracene
  - Benzo(b)fluoranthene
  - bis(2-Ethylhexyl)Phthalate
  - dibenzo(a,h)anthracene
  - Indeno(1,2,3-cd)pyrene
- VOCs
  - 1,1-Dichloroethane
  - 1,1-Dichloroethene
  - 1,2,3-Dichloropropane
  - 1,2,4-Dichlorobenzene
  - 1,2-Dichlorobenzene
  - 1,2-Dichloroethane
  - 2,2-Dichloropropane
  - Benzene
  - Bromodichloromethane
  - Bromoform
  - Carbon tetrachloride
  - Chlorobenzene
  - Chloroform
  - Dibromochloromethane
  - Hexachlorobutadiene
  - Methylene chloride
  - Tetrachloroethene
  - Trichloroethene
- Perchlorate
- Cyanide
- Metals
  - Arsenic
  - Boron
  - Chromium VI
  - Iron
  - Magnesium
  - Manganese
  - Strontium
  - Uranium
- Ammonia

The following contaminants have been identified as exceeding the upper screening limits for the EPA version of the Johnson and Ettinger Model for indoor air vapor intrusion based on soil gas sampling results (2010I, NGEM):

- Carbon tetrachloride
- Chloroform
- Tetrachloroethene
- Trichloroethene

5. Maps, pictures and other graphic representations

The following Maps and Figures are found in Appendix B of this document.

B1. "Site Location Map" – Figure 1 from Site Management Plan (2011, ENVIRON)

B2. "Site Features" – Figure 2 from Site Management Plan (2011, ENVIRON)

B3. "Tronox Sale Parcels" – Figure 3 from Site Management Plan (2011, ENVIRON) – contains all Assessor Parcel Numbers for the site

B4. "Tronox Due Diligence Henderson Facility Site Map" – Drawing A-00-1-169 from Single Tenant Industrial Lease between Le Petomane XXVII, Inc. and Tronox LLC (2011, Lease)

B5. "Remediation Zone A" – Figure 2 from Errata to Revised Human Health Risk Assessment for Remediation Zone A Tronox LLC Henderson, Nevada (2010B, NGEM) – illustrates soil remediation zones

B6. "Remediation Zone A Soil Sample Locations – Figure 3 from Errata to Revised Human Health Risk Assessment for Remediation Zone A Tronox LLC Henderson, Nevada (2010, NGEM)

B7. "RZ-B Excavation Areas and Nature and Extent of Contamination" – Figure 1 from Errata to RZ-B and RZ-D Figures Tronox Facility, Henderson, Nevada (2010, NGEM)

B8. "Remediation Zone C-West and -South Excavation" – Figure 2a from Revised Excavation Plan for Phase B Soil Remediation of RZ-C Tronox LLC Henderson, Nevada (2010, NGEM)

B9. "Remediation Zone C-North Excavation" – Figure 2b from Revised Excavation Plan for Phase B Soil Remediation of RZ-C Tronox LLC Henderson, Nevada (2010, NGEM)

B10. "Remediation Zone C-East Excavation" – Figure 2c from Revised Excavation Plan for Phase B Soil Remediation of RZ-C Tronox LLC Henderson, Nevada (2010, NGEM)

B11. "RZ-D Excavation Areas and Nature and Extent of Contamination" – Figure 1 from Errata to RZ-B and RZ-D Figures Tronox Facility, Henderson, Nevada (2010, NGEM)

B12. "RZ-E Excavation Area and Nature and Extent of Contamination" – Figure 1 from Excavation Plan for Phase B Soil Remediation of RZ-E, Addendum to the Removal Action Work Plan Tronox LLC Henderson, Nevada (2010, NGEM)

B13. "Groundwater Perchlorate Map Shallow Water-Bearing Zone, Second Quarter 2010" – Plate 7 from Annual Remedial Performance Report for Chromium and Perchlorate, July 2009 – June 2010, Tronox LLC, Henderson, Nevada (2010A, NGEM)

B14. "Groundwater Perchlorate Map, Shallow Water-Bearing Zone, Second Quarter 2002" – Plate 7a from Annual Remedial Performance Report for Chromium and Perchlorate, July 2009 – June 2010, Tronox LLC, Henderson, Nevada (2010A, NGEM)

B15. "Groundwater Total Chromium Map Shallow Water-Bearing Zone Second Quarter 2010" – Plate 6 from Annual Remedial Performance Report for Chromium and Perchlorate, July 2009 – June 2010, Tronox LLC, Henderson, Nevada (2010A, NGEM)

B16. "Phase B Area I LOUs" – Figure 3 from Phase B Source Area Investigation Work Plan Area I (Northern LOUs), Tronox LLC Facility, Henderson, Nevada (2008A, ENSR)

B17. "Phase B Area IV LOUs" – Figure 3 from Phase B Source Area Investigation Work Plan Area IV (Western and Southern LOUs), Tronox LLC Facility, Henderson, Nevada (2008D, ENSR)

B. Other Actions to Date

1. Previous actions

Perchlorate in groundwater: KMCC operated a temporary ion exchange system for the removal of perchlorate from 1999 through 2004. KMCC attempted to operate a full-scale ion separation-perchlorate destruction module system but after several attempts the perchlorate destruction module would not operate as designed and reverted back to the temporary ion exchange system. (2002A, ENSR; 2010D, NGEM)

2. Current actions

Groundwater: Chromium VI in groundwater is treated at the Athens Road and Seep Well Fields with ferric chloride to precipitate chromium out of solution as well as an on-site chromium groundwater treatment system. Perchlorate is removed via biological reduction in fluidized bed reactors from groundwater collected from the On-Site (aka Interceptor), Athens, and Seep Well Fields. (2010A, NGEM)

Soils: Any contaminants that exceeded the established action levels have been scheduled for removal through excavation and disposal off-site (2010C, NGEM). Over 500,000 cubic yards of on-site contaminated soil has been removed based on exceedance of an ARAR or risk-based screening criteria.

III. THREATS TO PUBLIC HEALTH OR WELFRE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

Groundwater: Perchlorate originating from what is now the Henderson Property has been observed in the Lower Colorado River Basin system, which affects the drinking water supply of approximately 15,000,000 people in Nevada, Arizona, and California. To date, USEPA has not promulgated a MCL for perchlorate; however, perchlorate has historically and is currently present in the Las Vegas Wash at concentrations greater than the NDEP provisional action level of 18 µg/L. Historical surface water sampling in the Las Vegas Wash demonstrated that 850 – 1,000 pounds of perchlorate per day were moving through the Las Vegas Wash and into Lake Mead Recreational Area and the rest of the downstream Colorado River system.

Chromium VI originating from what is now the Henderson Property has been detected in groundwater both on-site and off-site at concentrations greater than the MCL for total chromium of 100 µg/L and had the potential to migrate into the Las Vegas Wash and the Lower Colorado River Basin system; thereby, potentially impacting the drinking water supply of approximately 15,000,000 people, recreationalists in the Lake Mead Recreational Area and other downstream uses, such as irrigation, in the Lower Colorado River Basin system in Southern Nevada, Arizona, and Southern California.

Soil: Contaminants in surface and near-surface on-site soils that exceeded their respective BCLs were scheduled for excavation per a NDEP-approved series of Phase B Excavation Plans. These soils had the potential of becoming air-born dust and impacting nearby workers and residents. Additionally, these soils had the potential to impact site construction and utility workers.

B. Threats to the Environment

Groundwater: Historically detected perchlorate groundwater contamination had migrated to the Las Vegas Wash and was impacting the Lower Colorado River Basin system. Additionally historically detected chromium VI groundwater

contamination had the potential to reach the Las Vegas Wash, which would have lead to the contamination of the downstream Colorado River system.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of pollutants and contaminants from this site, if not addressed by implementing the response actions selected in this Action Memorandum, may have presented an imminent and substantial endangerment to public health, or welfare, or the environment.

V. SELECTED ACTIONS

B. Selected Actions

1. Selected action description

Groundwater: Based on the historic surface water (Las Vegas Wash) and groundwater sampling, KMCC constructed a FBR treatment system to treat extracted groundwater for perchlorate from one on-site and two off-site well fields. The FBR treatment system was added to the existing chromium groundwater treatment system. An additional reactor was later added to the FBR system to increase hydraulic and mass loading capacities of the treatment system. In 2004, Tronox took over operations of the groundwater treatment system. Upon the emergence of Reorganized Tronox from bankruptcy, the NERT assumed operations of the groundwater treatment system on February 14, 2011. The groundwater treatment system currently operates under NPDES permit NV0023060 (*for the discharge of the effluent from the groundwater treatment system*), zero discharge permit NEV2001515 (*for the operation of GW-11*), and UIC permit UNEV94218 (*for operation of the onsite recharge trenches*).

Installation and operation of the FBR treatment system greatly reduced the mass loading to the Las Vegas Wash from a historic high of 1,000 pounds per day in 1999 to approximately 70 pounds per day in 2011. This decreased the intake of perchlorate in the drinking water supply for the residents of Southern Nevada, Arizona, and Southern California.

Further pilot testing and optimization studies will be needed to determine whether additional treatment systems will be necessary. Such efforts will be pursued as part of the FFS process for groundwater.

Extent of contamination will be monitored on a regular schedule to ensure capture and extent of perchlorate and chromium VI plumes.

NDEP has established a procedure for any groundwater extraction / dewatering permitting that includes a map and database search for any known LUST and Corrective Action sites in the vicinity of the permit request. The

project officer(s) for the identified site(s) is contacted for comment and input for monitoring, sampling, and disposal of the extracted groundwater.

Soil: Based on contaminant concentration results from the Phase B sampling as reported in the Removal Action Work Plans for Remediation Zones A through E, excavation of soil with contaminant concentrations greater than respective BCLs was approved and commenced during 2010. Excavation depth was predetermined based on the Phase B sampling results. Additional pre-confirmation sampling was conducted to further refine the planned extent of excavation. Visually impacted soil was discovered in several excavations and in some cases the visually impacted soil continued past the predetermined excavation limits. Sampling and excavation of these visually impacted soils was conducted. Excavation of the visually impacted soils has greatly increased the original scope of soil removal and, to date, is still ongoing. Excavation of these impacted soils greatly reduced the risks to site workers and nearby residents from exposure via inhalation and direct contact. Additional soil characterization will need to be conducted to fully assess residual risks and inform the site FS. Leaching and soil gas evaluations may also be indicated depending on the results of the remaining soil characterization subsequent to the ongoing soil removal.

2. **Contribution to remedial performance**

While the final remedy has not been selected for this site, the groundwater and soil removal actions will, at a minimum, greatly contribute to the long-term effectiveness of the final remedy selected.

3. **Applicable or relevant and appropriate requirements (ARARs)**

Federal ARARs determined to be practicable for this site are as follows:

- Safe Drinking Water Act (SDWA)
- Toxic Substances Control Act (TSCA)

State and local ARARs determined to be practicable for this site are as follows:

- NAC 445A.200 – 201 (Las Vegas Wash Beneficial Use Standards for Confluence of Las Vegas Wash with Lake Mead to Telephone Line Road).
- NAC 445A.226 – 22755 (Action Levels for Contaminated Sites)
    - Basic Comparison Levels (BCLs): These values are risk-based media concentrations to provide for an initial screening evaluation to assist in risk assessment components such as the evaluation of data usability, determination of extent of contamination, identification of chemicals of potential concern, and identification of preliminary remediation goals. The BCL

values are derived as specified in NAC 445A.2272 and using equations from U.S. Environmental Protection Agency (USEPA) guidance, USEPA toxicity criteria, and USEPA exposure factors.

- NAC 459.970 – 9729 (Certification of Certain Consultants and Contractors)
- NAC 445A.228 – 263 (Discharge Permits)
- NAC 444.965 – 976 (Disposal of Asbestos)
- NAC 445A.810 – 925 (Underground Injection Control)
- NRS 533.437 – 4377 (Groundwater Appropriations – Environmental Permits)
- NRS 535 (Dams and Other Obstructions)
- NAC 534 (Underground Water and Wells)
- Clark County Air Quality Regulations

4. Project schedule

Groundwater: the chromium treatment system was constructed and operational in 1987. The fluidized bed reactor system for the treatment of perchlorate was constructed and operational in 2004 and, to date, continues to operate.

Soils: excavation of soils greater than ARARs or BCLs commenced in August 2010 and is on-going at the time of this action memo. Excavation is expected to be complete by August 2011.

VI. EXPECTED CHANGE IN THE SITUATION IF ACTION HAD BEEN DELAYED OR NOT TAKEN

Groundwater: Chromium and perchlorate groundwater contamination would have continued to migrate unimpeded. Perchlorate concentrations in the Colorado River system and the drinking water of approximately 15,000,000 persons may have been impacted at greater than existing ARARs.

Soil: Site workers and nearby residents would have continued to be potentially exposed to contaminants in excess of the ARARs in the surficial and near-surface soils of the site through inhalation of wind-blown dust and direct contact with these soils during construction and/or utility work.

VII. OUTSTANDING POLICY ISSUES

- EPA promulgation of a perchlorate maximum contaminant level (MCL): the timing and value of a perchlorate MCL is unknown at the finalization of this action memorandum.

- EPA promulgation of a chromium VI MCL: the timing and value of a chromium VI MCL is unknown at the finalization of this action memorandum.

VIII. ENFORCEMENT

The potentially responsible parties (PRPs) have been identified for this site. At the time of finalization of this action memorandum the PRPs are the Nevada Environmental Response Trust (NERT) and the Department of Defense (perchlorate contamination only). Reorganized Tronox's obligations for legacy liabilities have been discharged through the bankruptcy, effective February 14, 2011. There is a pending lawsuit to determine what, if any, responsibility for the costs of remediation KMCC and its parent company, Anadarko, have for these legacy liabilities.

IX. RECOMMENDATIONS

This memorandum documents NDEP's decision to compel the above-described groundwater and soil removal actions for the Henderson Property, in Clark County, Nevada, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the site located in the NDEP-Las Vegas Office.

Soil and groundwater conditions at the site meet the NCP section 300.415(b)(2) criteria for a removal and I recommend approval of the removal actions that have been and are currently being implemented as described in this action memorandum.

☑ **Approval** ☐ **Disapproval**

August 4, 2021
Date

Jim Najima
Bureau Chief
Bureau of Corrective Actions
Nevada Division of Environmental Protection

APPENDIX A

REFERENCES

(1985, KMC) Geohydrological Investigation Kerr-McGee Chemical Corporation Henderson Facility, Kerr-McGee Corp. (July 1985)

(1985, NDEP) "Enforcement Action for Failure to Complete Approved Site Remediation Activities, and Show Cause Meeting, Tronox LLC, (Tronox) Henderson, Nevada, NDEP Facility ID Number 8-000539." NDEP Letter. (December 14, 2009).

(1987, KMC) Chromium Mitigation Program Performance Report, Kerr-McGee Corp. Engineering Services (November 18, 1987).

(1993, KMC) Groundwater Interception System Evaluation Report, Chromium Mitigation Program Kerr-McGee Chemical Corporation Henderson, Nevada, Kerr-McGee Corp. (September 15, 1993).

(1994, NDEP) "Phase II Letter of Understanding Between NDEP and Kerr-McGee Chemical Corporation (KMCC)", NDEP Letter. (August 15, 1994).

(1997, ENSR) Phase II Environmental Conditions Assessment, Kerr-McGee Chemical Corporation, Henderson, Nevada, ENSR International. (August 1997).

(1998A, KMC) Phase II Groundwater Perchlorate Investigation Report, Kerr-McGee Chemical LLC Henderson, Nevada Facility, Kerr-McGee Chemical LLC. (July 15, 1998).

(1998B, KMC) Preliminary Report on a Hydrogeologic Investigation of Channel-Fill Alluvium at the Pittman Lateral, Henderson, Nevada, Kerr-McGee Safety and Environmental Affairs Division. (October 19, 1998).

(1999, ENSR) Work Plan for the Long-Term Groundwater Perchlorate Removal Action Henderson, Nevada, ENSR. (September 1999).

(2001, KMC) Seep Area Groundwater Characterization Report Kerr-McGee Chemical LLC Henderson Nevada Facility, Kerr-McGee Chemical LLC. (January 18, 2001).

(2001, ENSR) Supplementary Phase II Environmental Conditions Assessment Located at Kerr-McGee Chemical LLC, Henderson, Nevada, ENSR. (April 2001).

(2002, ENSR) Dye Injection Study of the Las Vegas Wash, Nevada, ENSR International, Inc. (March 2002).

(2005, ENSR) Conceptual Site Model, Kerr-McGee Facility, Henderson, Nevada, ENSR International. (February 2005).

(2007A, ENSR) Phase A Source Area Investigation Results, Tronox Facility, Henderson, Nevada, Report Figures, Tables, and Plates (2 Volumes), ENSR International. (September 2007).

(2007B. ENSR) Phase B Source Area Investigation Soil Gas Survey Work Plan, Tronox LLC Facility Henderson, Nevada, ENSR Corp. (March 2007).

(2008A. ENSR) Phase B Source Area Investigation Work Plan Area I (Northern LOUs), Tronox LLC Facility, Henderson, Nevada, ENSR International, Inc. (April 2008).

(2008B, ENSR) Phase B Source Area Investigation Work Plan Area II (Central LOUs), Tronox LLC Facility, Henderson, Nevada, ENSR International, Inc. (June 2008).

(2008C, ENSR) Phase B Source Area Investigation Work Plan Area III (Eastern LOUs), Tronox LLC Facility, Henderson, Nevada, ENSR International, Inc. (June 2008).

(2008D, ENSR) Phase B Source Area Investigation Work Plan Area IV (Western and Southern LOUs), Tronox LLC Facility, Henderson, Nevada, ENSR International, Inc. (May 2008).

(2008E, ENSR) Revised Documents for Phase B Area IV Work Plan Tronox LLC, Henderson, Nevada, ENSR International. (July 11, 2008)

(2010A, NGEM) Annual Remedial Performance Report for Chromium and Perchlorate, July 2009 – June 2010, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (August 27, 2010).

(2010B, NGEM) Errata to RZ-B and RZ-D Figures Tronox Facility, Henderson, Nevada, Northgate Environmental Management, Inc. (November 29, 2010).

(2010C, NGEM) Excavation Plan for Phase B Soil Remediation of RZ-E, Addendum to the Remedial Action Work Plan Tronox LLC Henderson, Nevada, Northgate Environmental Management, Inc. (November 3, 2010).

(2010D, NGEM) Removal Action Work Plan for Phase B Soil Remediation of Remediation Zones RZ-B through RZ-E, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (May 4, 2010).

(2010E, NGEM) Revised Excavation Plan for Phase B Soil Remediation of RZ-B, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (August 20, 2010).

(2010F, NGEM) Revised Excavation Plan for Phase B Soil Remediation of RZ-C, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (September 1, 2010).

(2010G, NGEM) Revised Excavation Plan for Phase B Soil Remediation of RZ-D, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (August 31, 2010).

(2010H, NGEM) Revised Excavation Plan for Phase B Soil Remediation of RZ-E, Tronox LLC, Henderson, Nevada, Northgate Environmental Management, Inc. (November 3, 2010).

(2010I, NGEM) "Site-Wide Data Meeting (provided draft data and figures)," Northgate Environmental Management, Inc. (February 5, 2010).

(2011, ENVIRON) Site Management Plan (SMP) Nevada Environmental Response Trust Site, Henderson, Nevada, ENVIRON International Corp. (March 2011).

(2011, Lease) "Single Tenant Industrial Lease", Le Petomane XXVII, Inc. and Tronox LLC. (February 14, 2011).

APPENDIX B

FIGURES

APPENDIX C

TABLES

LOU Identification and Associated Contaminants		
LOU #	**Name**	**Identified Potential Contaminants**
1	Trade Effluent Settling Ponds	Muriatic acid Hydrochloric acid VOCs (benzene derivatives) SVOCs DDT Hexavalent Chromium Perchlorate Chlorate Ammonia Specific composition unknown waste streams acidic and caustic process liquors solids from waste neutralization processes hydrochloric acids liquid wastes metal containin liquid wastes
2	Open area south of Trade Effluent Settling Ponds area	Specific composition unknown acidic and caustic process liquors solids from waste neutralization processes hydrochloric acids liquid wastes metal containin liquid wastes
3	Air emissions associated with industiral processes	Not identified
4	Hardesty Chemical Company site	Muriatic acid Hydrochloric acid Sulfuric acid VOCs (benzene derivatives) SVOCs Arsenic DDT
5	On-Site portion of Beta Ditch + diversion ditch north of Pond C-1	Metals Hexavalent chromium Perchlorate Cyanide Sulfates Carbonates Phosphates Chloride Sulfide Ammonia Organochlorine pesticides
6	Unnamed drainage ditch segment	Not identified
7	Old Pond P-2 and associated conveyance facilities	Hexavalent chromium Chloride Chlorate Perchlorate Ammonia
8	Old P-3 Pond and associated conveyance facilities	Hexavalent chromium Chloride Chlorate Perchlorate Ammonia

LOU #	Name	Identified Potential Contaminants
9	New P-2 and associated piping	Hexavalent chromium Chloride Chlorate Perchlorate Ammonia
10	On-Site Hazardous Waste Landfill	Sulfuric acid Metals Hexavalent Chromium Boron Manganese Chloride Chlorate Perchlorate Sodium hexametaphosphates Ammonia
11	Sodium chlorate filter cake holding area	Hexavalent chromium
12	Hazardous Waste Storage Area	Hexavalent chromium
13	Pond S-1	Metals Hexavalent chromium Boron Manganese Chlorate Perchlorate Ammonia Sodium hexametaphosphates Sulfuric acid
14	Pond P-1 and associated conveyance piping	Metals Hexavalent chromium Boron Manganese Chlorate Perchlorate Ammonia Sodium hexametaphosphates Sulfuric acid
15	Platinum drying unit	Metals Platinum Hexavalent chromium Chlorate Perchlorate Ammonia
16 / 17	Ponds AP-1, AP-2, and AP-3 and associated transfer lines	Metals Hexavalent chromium Magnesium Sulfates Carbonates Sulfide Perchlorate Chlorate Ammonia

LOU #	Name	Identified Potential Contaminants
18	Pond AP-4	Metals Hexavalent chromium Magnesium Sulfates Carbonates Sulfide Perchlorate Chlorate Ammonia
19	Ponds AP-5 & AP-6	Metals Hexavalent chromium Perchlorate Chlorate Ammonia
20	Pond C-1 and associated piping	Metals Hexavalent chromium Boron VOCs SVOCs Chlorate Perchlorate Phosphates Sulfates Carbonates Borates Boron trichloride Boron tribromide
21	Pond Mn-1 and associated piping	Metals Magnesium Manganese Manganese dioxide Boron Hexavalent chromium Perchlorate Chlorate Sodium hexametaphosphate
22	Pond WC-W and associated piping	Metals Magnesium Manganese Manganese dioxide Boron Hexavalent chromium Perchlorate Chlorate Sodium hexametaphosphate Hypochlorite

LOU #	Name	Identified Potential Contaminants
23	Pond WC-E and associated piping	Metals Magnesium Manganese Manganese dioxide Boron Hexavalent chromium Perchlorate Chlorate Sodium hexametaphosphate Hypochlorite
24	Leach beds, associated conveyance facilities and Mn tailings area	Metals Manganese Trace heavy metals
25	Process hardware storage area	Metals Hexavalent chromium Chlorate residue Perchlorate residue Ammonia residue
26	Trash storage area	Metals Chlorate Perchlorate Ammonia
27	PCB storage area	PCBs
28	Hazardous Waste Storage Area	Metals Hexavalent chromium Perchlorate VOCs SVOCs
29	Solid waste dumpsters	Metals Perchlorate
30	AP Plant area - Pad 35	Hexavalent chromium Perchlorate Chlorate Ammonia
31	Drum recycling area	Metals Perchlorate Chlorate
32	Groundwater remediation unit	Metals Hexavalent chromium Total chromium Iron Perchlorate
33	Sodium perchlorate platinum by-product filter	Metals Chromium Platnium Perchlorate Chlorate Ammonia

LOU #	Name	Identified Potential Contaminants
34	Former Mn tailings area	Metals Manganese Heavy metals Sulfuric acid
35	Truck emptying/dumping site	Unknown - reportedly "inorganic wastes"
36	Former satellite accumulation point - Maintenance Shop	Metals Acid wastes VOCs Caustics
37	Former satellite accumulation point - Unit 6 Maintenance Shop	Metals VOCs SVOCs
38	Former satellite accumulation point - AP Change House & Laboratory	Metals Hexavalent chromium Perchlorate Chlorate Ammonia Acids Caustics VOCs Alcohols Dilute formaldehyde titrant
39	Satellite accumulation point - AP maintenance shop	Metals Perchlorate VOCs
40	PCB transformer spill	PCBs VOCs SVOCs
41	Unit 1 tenant stains	VOCs SVOCs
42	Unit 2 salt conveyor	Sodium chloride
43	Unit 4 and old Sodium Chlorate Plant decommissioning	Metals Hexavalent chromium Manganese Boron Perchlorate Chlorate Ammonia
44	Unit 6 basement	Metals Manganese Sodium hexametaphosphate
45	Diesel storage tanks	Metals VOCs SVOCs

LOU #	Name	Identified Potential Contaminants
46	Former old main cooling tower and recirculation lines	Metals Manganese Hexavalent chromium Boron Sulfates Carbonates Phosphates Chloride Sulfide Perchlorate Chlorate Ammonia
47	Leach Plant area Mn ore piles (current & historic)	Metals Manganese
48	Leach Plant analyte tanks	Manganese sulfate Manganese dioxide Sulfuric acid
49	Leach Plant area sulfuric acid storage tanks	Sulfuric acid Acid solutions
50	Leach Plant area leach lines	Metals
51	Leach Plant area transfer lines	Metals Acid solutions
52	AP Plant area Screening Building, Dryer Building, and associated sump	Metals Hexavalent chromium Perchlorate Chlorate Ammonia
53	AP Plant area Tank Farm	Metals Hexavalent chromium Perchlorate Chlorate Ammonia Caustics
54	AP Plant area Change House / laboratory spetic tank	Metals Perchlorate Ammonia Chlorate
55	Area affected by July 1990 fire	
56	AP Plant area old builing D-1 washdown	Perchlorate
57	AP Plant area transfer lines to sodium chlorate process	Metals Hexavalent chromium Iron Perchlorate Ammonia
58	AP Plant area New D-1 Building washdown	Perchlorate

LOU #	Name	Identified Potential Contaminants
59	Storm sewer system	Metals Hexavalent chromium Magnesium Platinum Barium Zinc Nickel Lead Manganese Perchlorate Chlorate Ammonia Sodium Borate Sulfide Sulfuric acid
60	Acid drain system	Magnesium Hexavalent chromium Boron Barium Arsenic Cadmium Lead Selenium Sodium hydroxide Hydrochloric acid Sulfuric acid Boric acid Chlorides Phosphates Hexametaphosphates Sodium Sulfite ions Borate ions Borax Soda ash Pickle liquor (iron sulfate) Chlorides Perchlorate Ammonia Chlorate Sulfates
61	Unit 5 basement & old Sodium Chlorate Plant decommission	Metals Hexavalent chromium Boron Manganese Perchlorate Chlorate Ammonia

LOU #	Name	Identified Potential Contaminants
62	State Industries, Inc site	Metals Iron Total chromium Barium Lead VOCs SVOCs Sulfuric acid (spent) Borax Soda ash Phosphate chemicals cyanide (spent)
63	J.B. Kelley Trucking Inc. site	Metals Barite Magnesium VOCs SVOCs Soda ash Lime Magnesium chloride brine Ferric chloride Hydrochloric acid Sodium hydrosulfide Sodium hydroxide Titanium tetrachloride
64	Koch Materials Company site	Metals VOCs SVOCs
65	Nevada precast concrete products, Green Ventures International, Buckles Construction Company, and Ebony Construction sites	Metals Barite Magnesium VOCs SVOCs Soda ash Lime Magnesium chloride brine Ferric chloride Hydrochloric acid Sodium hydrosulfide Sodium hydroxide Titanium tetrachloride
66	Above-ground diesel storage tank leased by Flintkote Company on Chemstar property	VOCs SVOCs
67	Delbert Madsen and estate of Delbert Madsen site	Not identified
68	Southern Nevada Auto Parts site	Not identified
69	Dillon Potter site	Not identified

LOU #	Name	Identified Potential Contaminants
70	US Vanadium Leasehold	Metals Tungsten Alluminum Molybdenum Iron Boron Cobalt Ammonia Acids

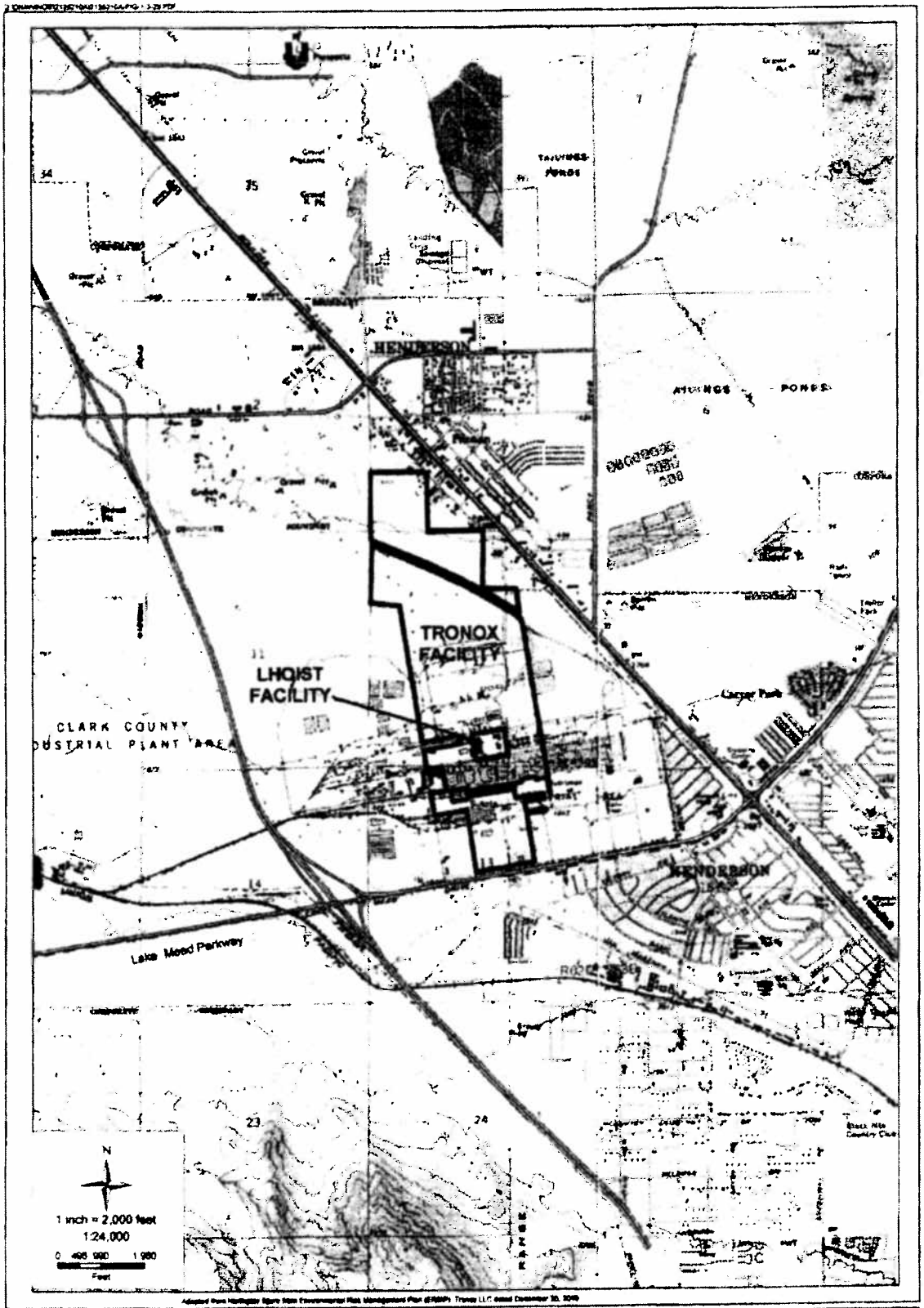
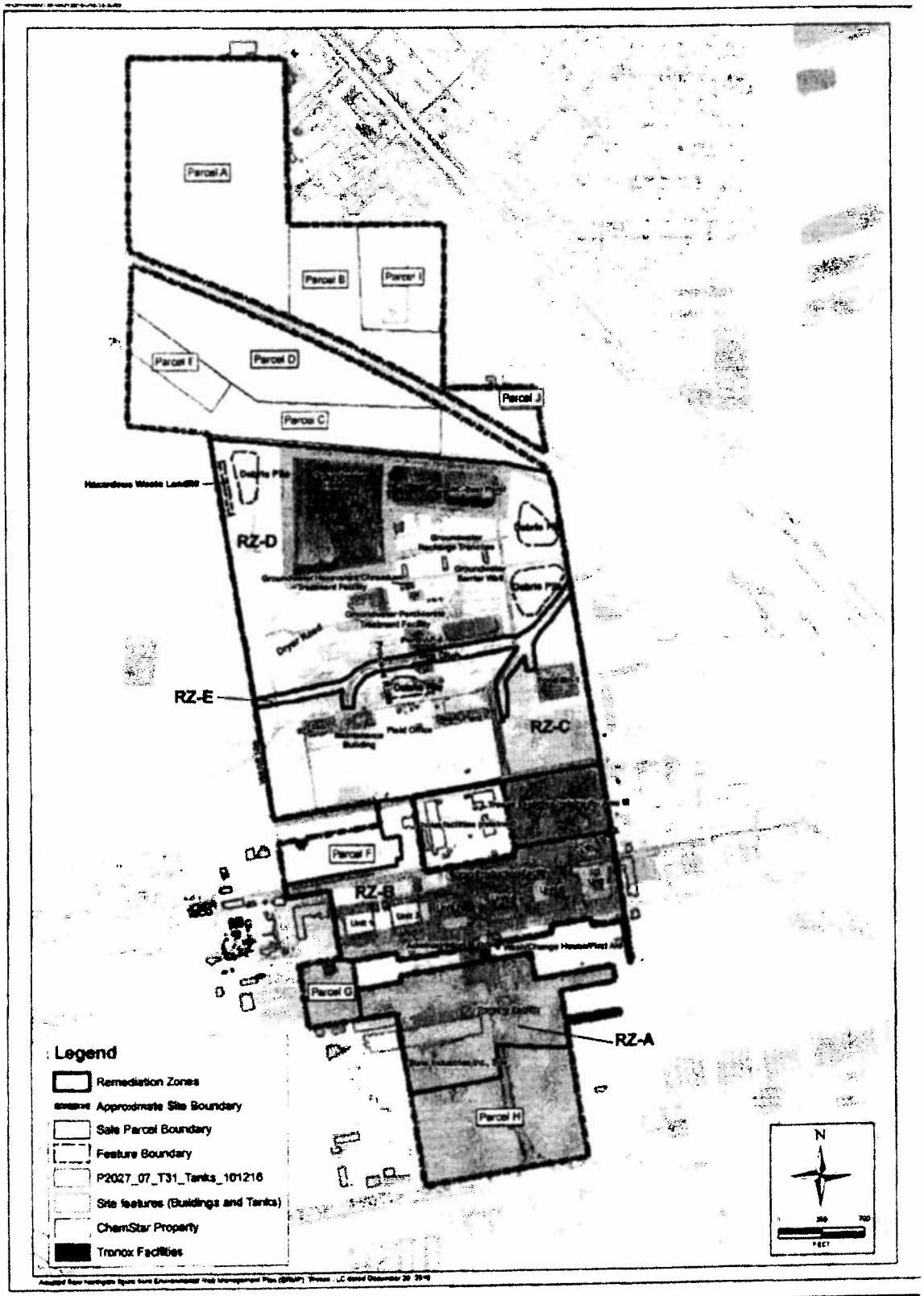


FIGURE NUMBER	SITE LOCATION MAP		
1	Site Management Plan		
SHEET NUMBER	Nevada Environmental Response Trust		
1	Henderson, Nevada		
SCALE	DATE	PROJECT NUMBER	
1:24,000	12/17/2010	21-28210A	

DRAWN BY	NO.	DESCRIPTION	DATE	BY
JA				
CHECKED BY				
GR				
APPROVED BY				
AB				

ENVIRON

R1



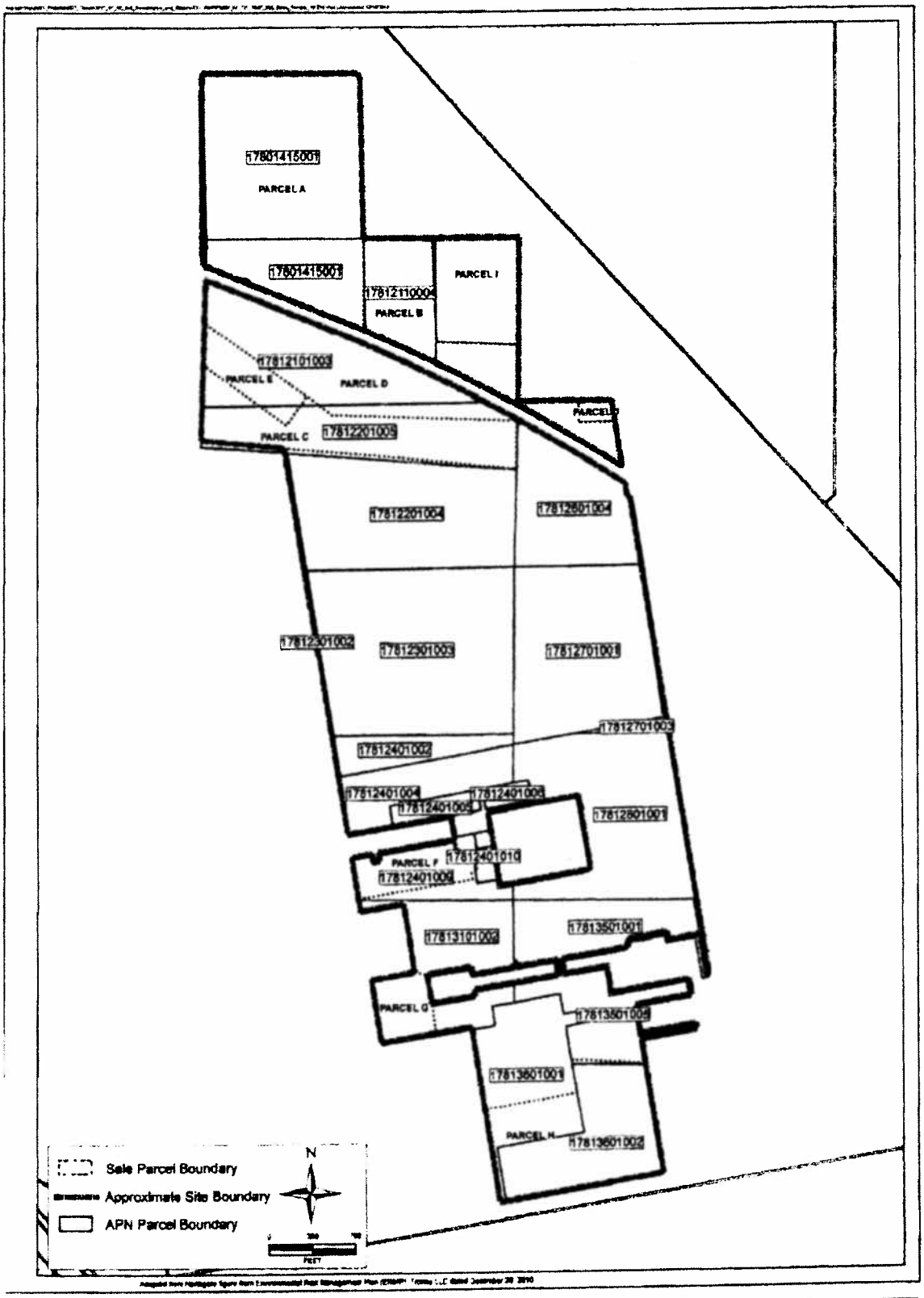
SITE FEATURES

Site Management Plan

Nevada Environmental Response Trust

Henderson, Nevada

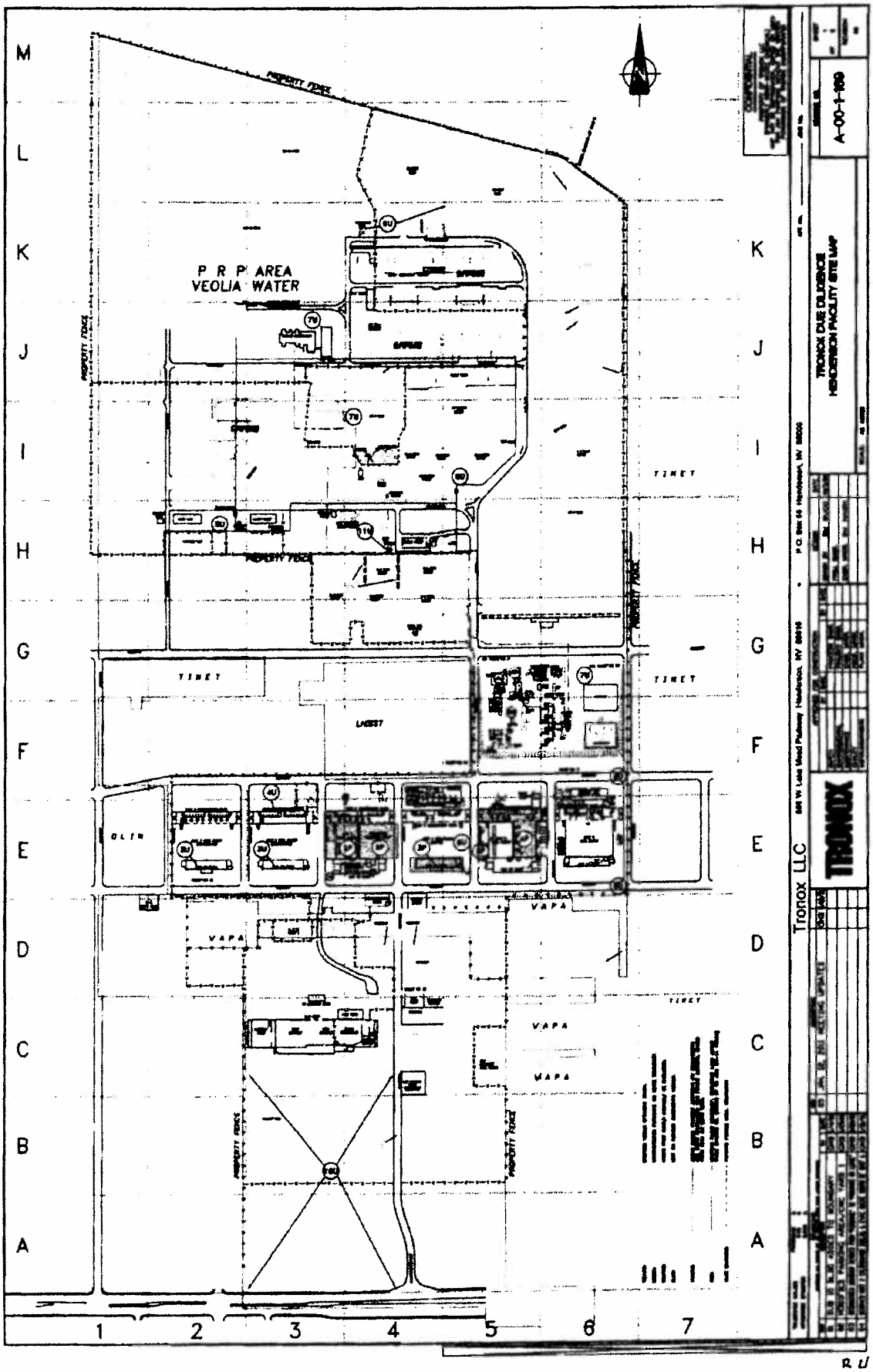
ENVIRON



TRONOX SALE PARCELS
Site Management Plan
Nevada Environmental Response Trust
Henderson, Nevada

SCALE	DATE	PROJECT NUMBER
1 in = 700 ft	12/10/2010	21-28210A

ENVIRON


P R P AREA
VEOLIA WATER
PROPERTY FENCE
TINEY
LIGET
OLIN
VAPA
M
L
K
J
I
H
G
F
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D
C
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A
1
2
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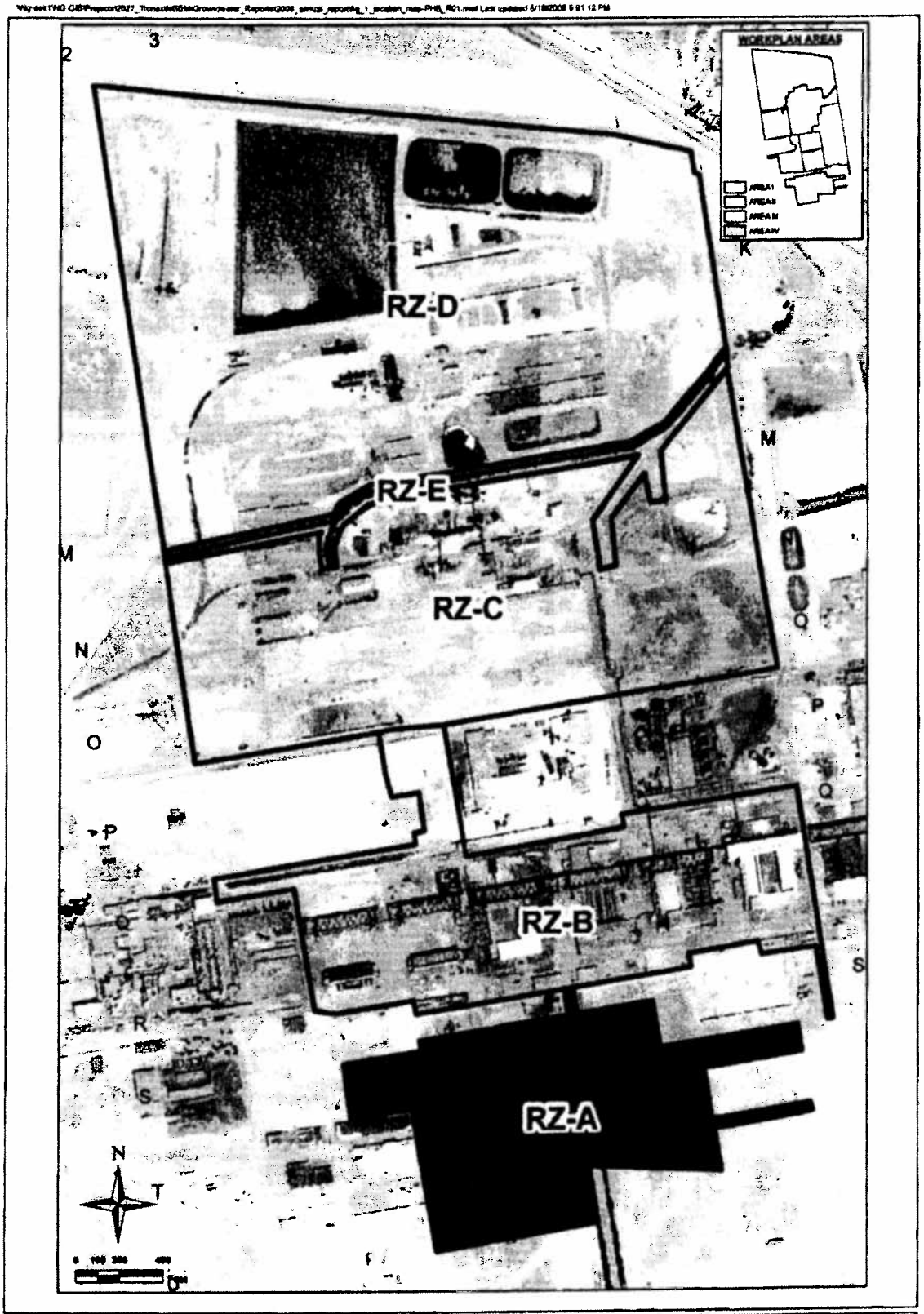
7
Tronox LLC
TRONOX DUE DILIGENCE
HENDERSON FACILITY SITE MAP
A-00-1-100

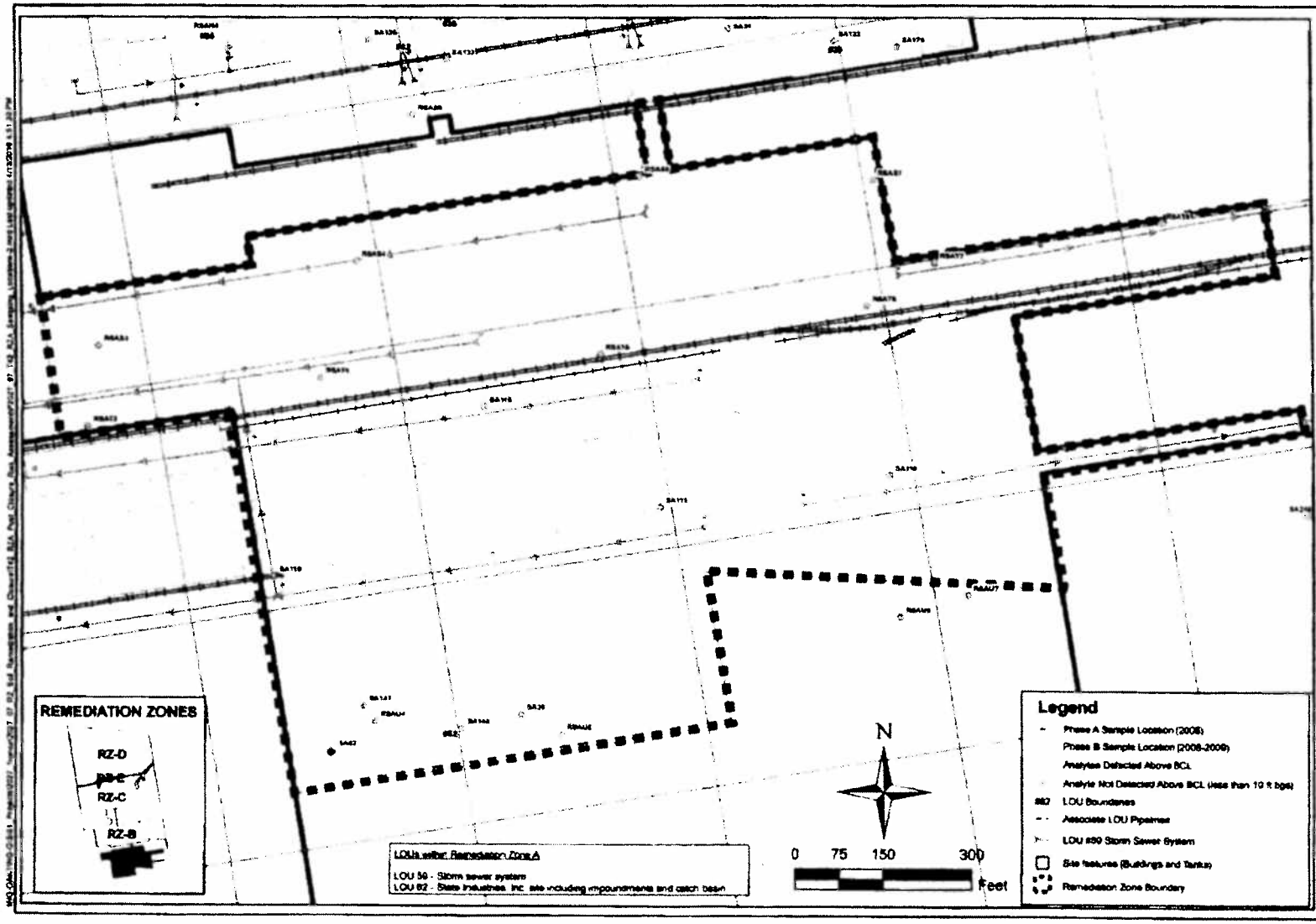


REMEDIATION ZONE A
Tronox LLC
Henderson, Nevada

1 inch 400 feet | 08/17/10 | 2027.07

northgate
environmental management inc.
TRONOX

B5



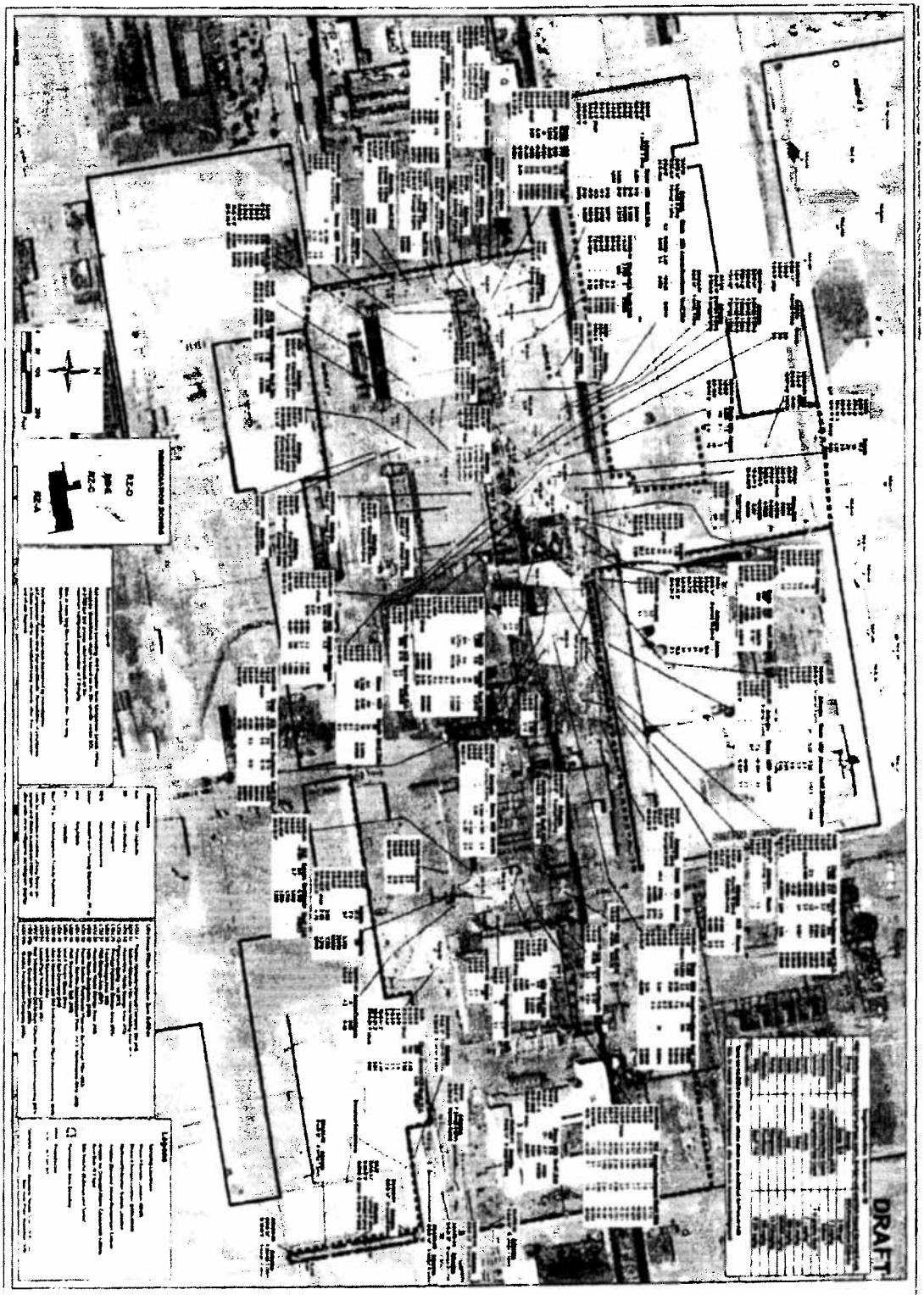
northgate
environmental management, inc.
TRONOX
http://www.ngem.com

REMEDIATION ZONE A SOIL SAMPLE LOCATIONS
Tronox LLC
Henderson Nevada

SCALE	DATE	PROJECT NUMBER
1 in = 150 ft	06/17/10	2027 07

FIGURE NUMBER
3
SHEET NUMBER
1

B6



RZ-B EXCAVATION AREAS AND
NATURE AND EXTENT OF CONTAMINATION
RZ-B Excavation Plan
Tronox LLC
Henderson, Nevada

SCALE	DATE	PROJECT NUMBER
1 in = 100 ft	11/24/10	2027.01 T90

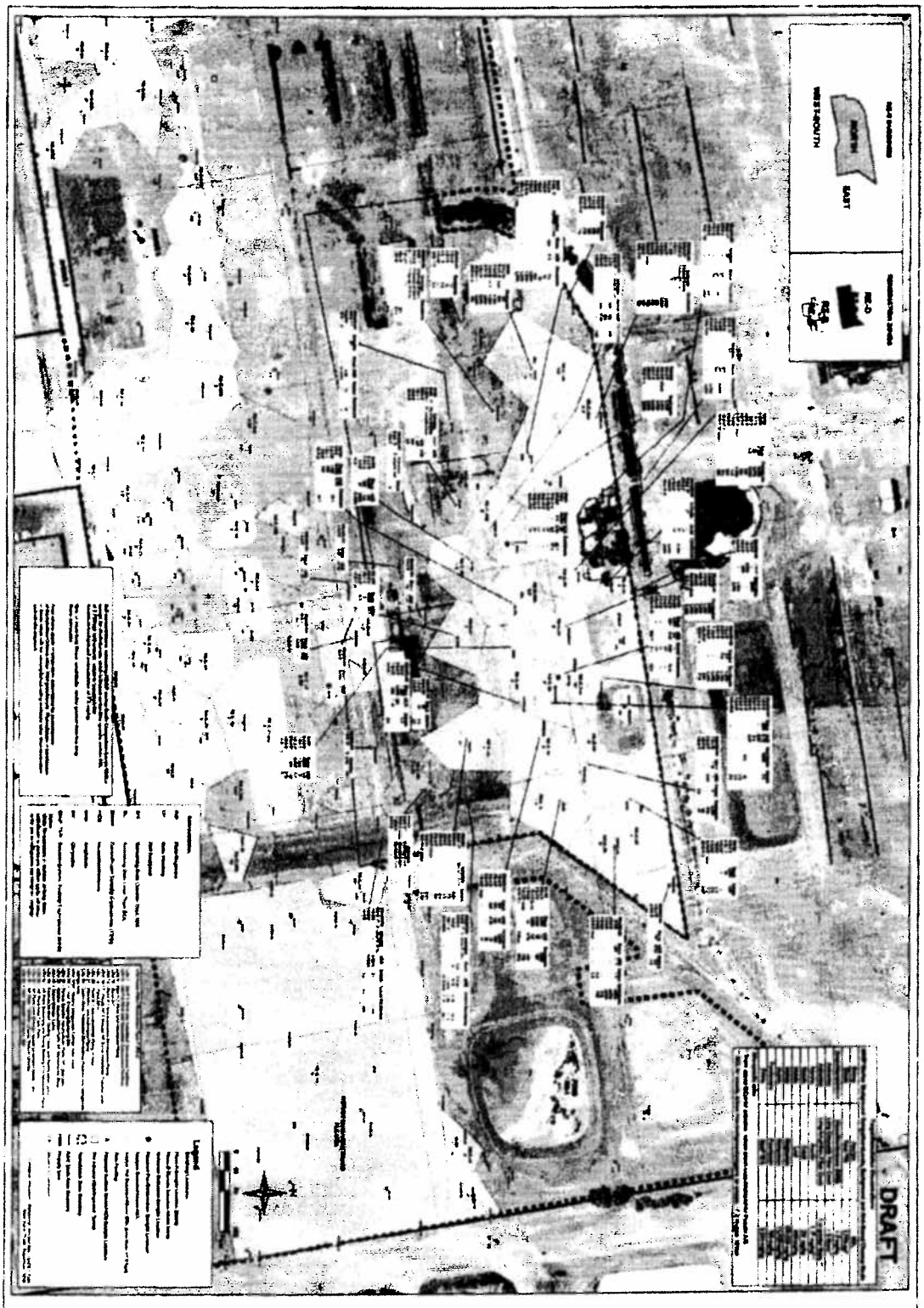
REVISIONS BY	NO	DESCRIPTION	DATE	BY
NDF M				
DESIGNED BY				
CB				
DRAWING BY				
NDEM				
LANGUAGES BY				
NDEM				

northgate
environmental management, inc
TRONOX
www.ngem.com

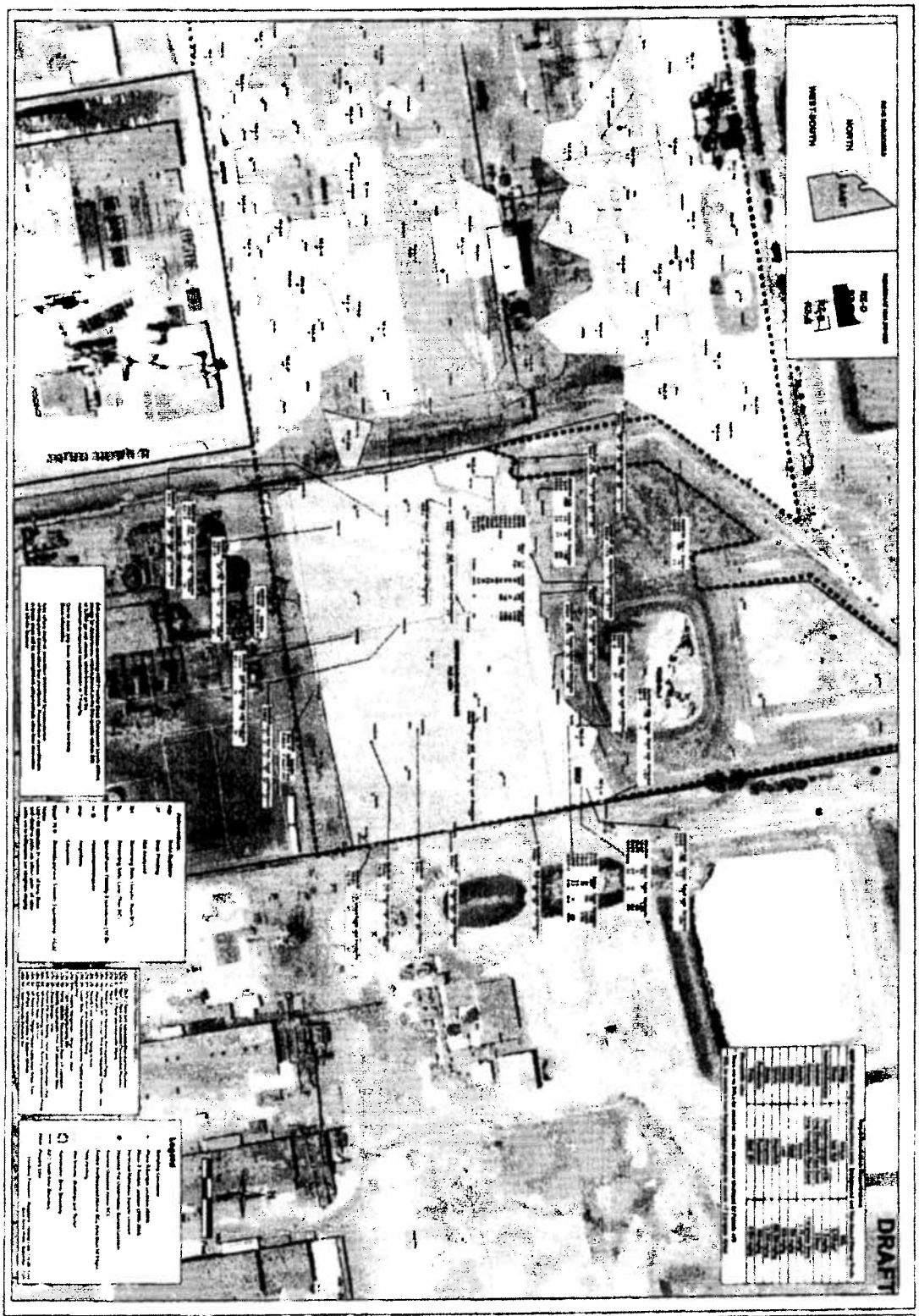
B7

2a	REMEDIATION ZONE C-WEST AND -SOUTH EXCAVATION RZ-C Excavation Plan Tronox LLC Henderson, Nevada	DESIGNED BY: NGEN DRAWN BY: GS CHECKED BY: NGEN APPROVED BY: NGEN	NO. DESCRIPTION DATE BY
	SCALE: 1 in = 80 ft	DATE: 10/12/10	PROJECT NUMBER: 2027.01.T90

northgate environmental management, inc.
TRONOX www.ngem.com



2b	REMEDIATION ZONE C-NORTH EXCAVATION RZ-C Excavation Plan Tronox LLC Henderson, Nevada		DESIGNED BY NGEM DRAWN BY DB CHECKED BY NGEM APPROVED BY NGEM	REVISIONS NO DESCRIPTION DATE BY	northgate environmental management, inc. TRONOX www.ngem.com
	SCALE 1 in = 80 ft	DATE 10/12/10	PROJECT NUMBER 3027.01 T90		



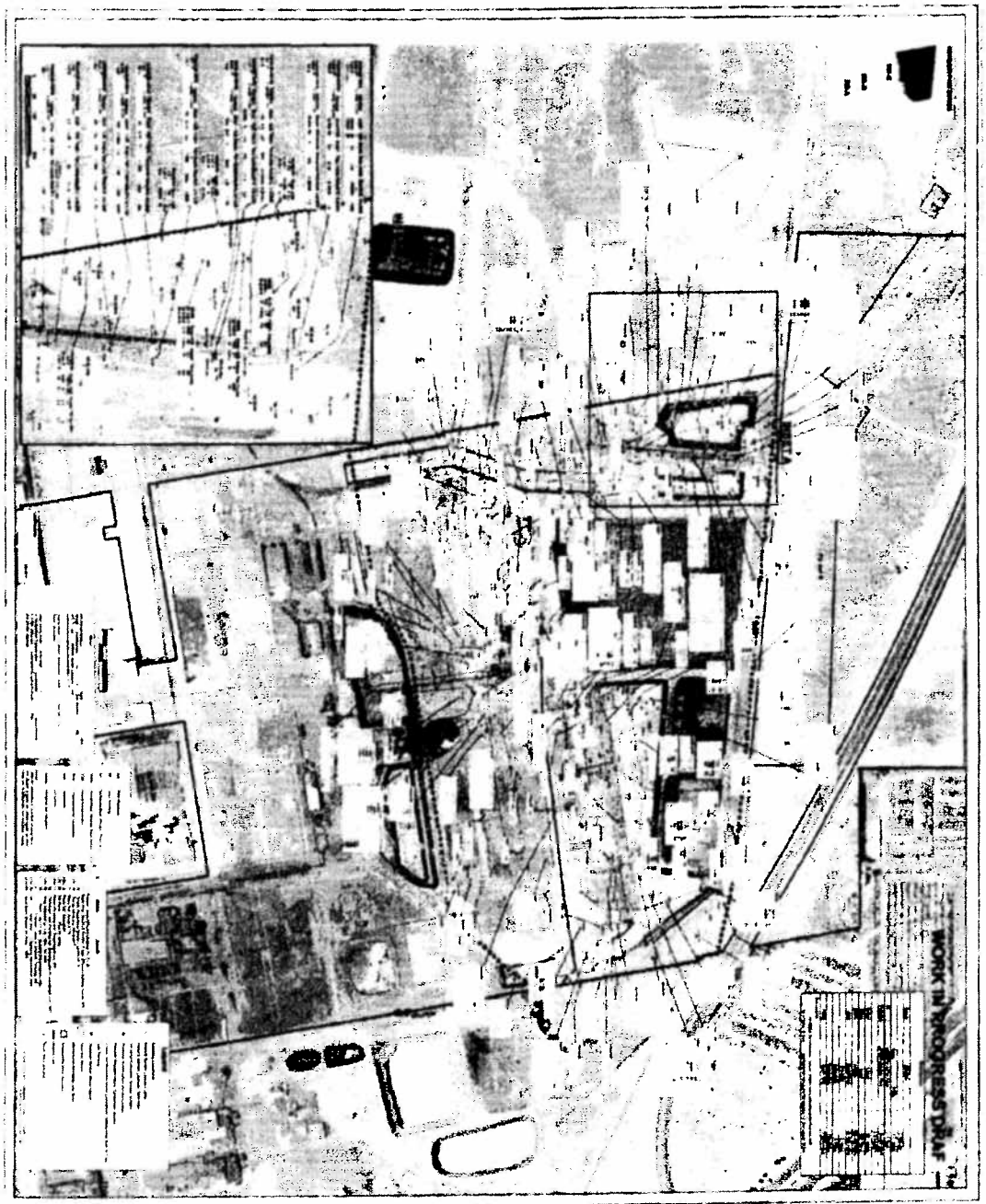
REMEDIATION ZONE C-EAST EXCAVATION RZ-C Excavation Plan Tronox LLC Henderson, Nevada		
SCALE: 1 in = 80 ft	DATE: 10/12/10	PROJECT NUMBER: 2027.01.T90

DESIGNED BY: NGEM	NO	DESCRIPTION	DATE
DRAWN BY: DB			
CHECKED BY: NGEM			
APPROVED BY: NGEM			

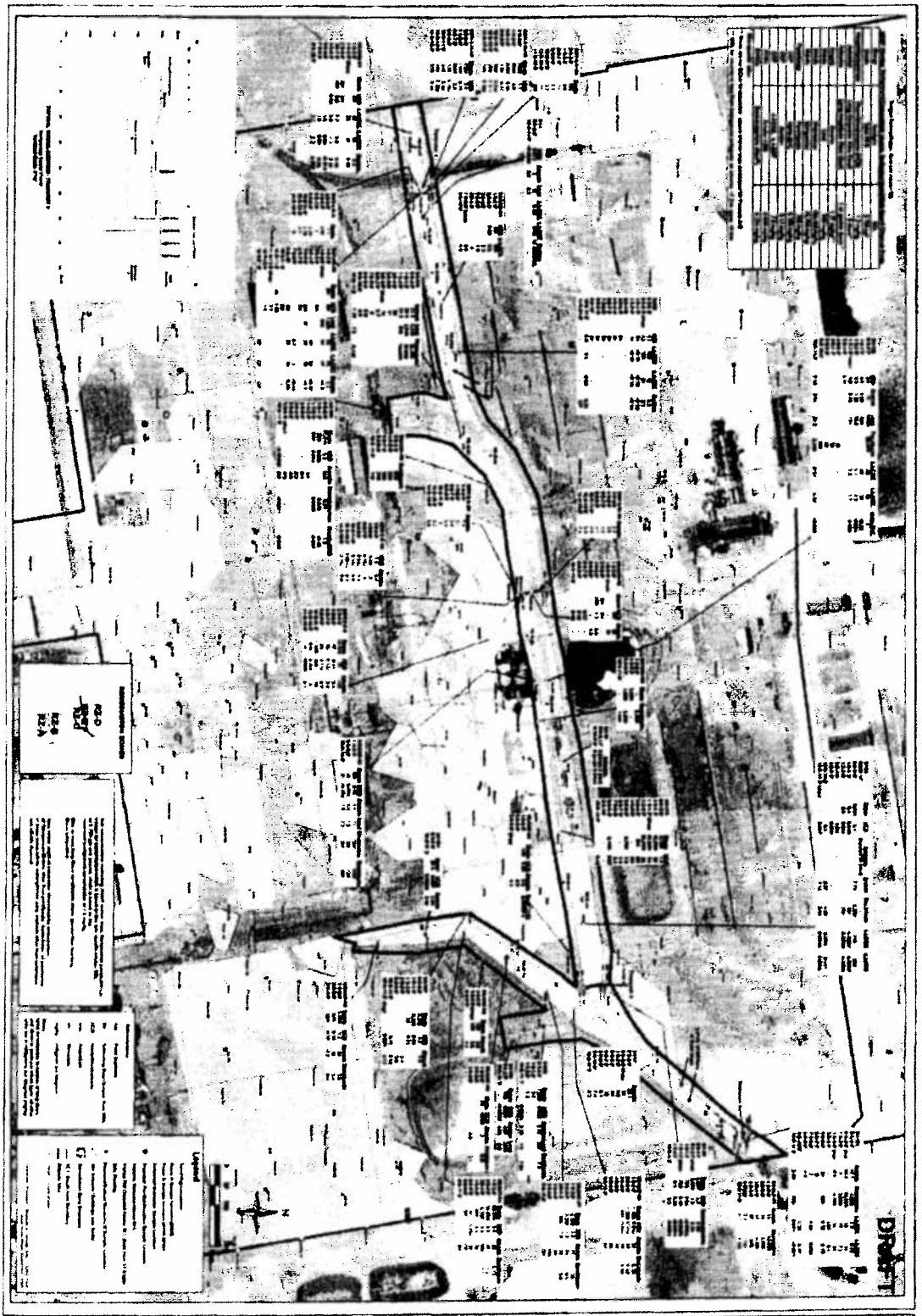
northgate environmental management, inc.
TRONOX
www.ngem.com

2c

B10


RZ-D EXCAVATION AREAS AND
NATURE AND EXTENT OF CONTAMINATION
RZ-D Excavation Plan
Tronox LLC
Henderson Nevada
1 in = 150 ft
11/29/10
202 01 T90
TRONOX
www.nge
WORK IN PROGRESS.DWF

B11



RZ-E EXCAVATION AREA AND
NATURE AND EXTENT OF CONTAMINATION
RZ-E Excavation Plan
Tronox LLC
Henderson, Nevada

SCALE	DATE	PROJECT NUMBER
1 in = 100 ft	11/03/10	2027.01.T90

DESIGNED BY	REVISIONS			
NGEM	NO	DESCRIPTION	DATE	BY
DRAWN BY				
DS				
CHECKED BY				
NGEM				
APPROVED BY				
NGEM				

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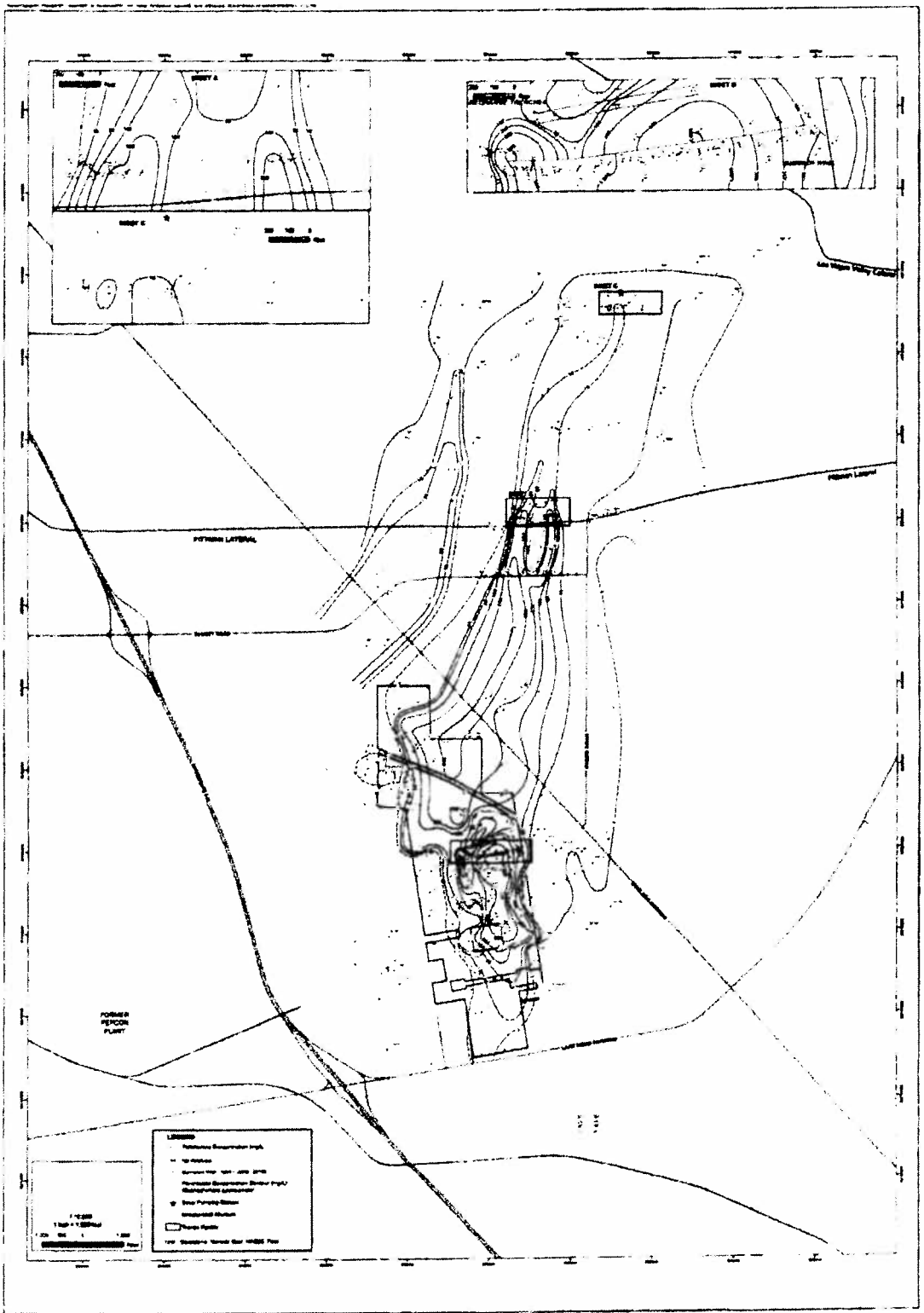
environmental management, inc
TRONOX
www.ngem.com

B12



GROUNDWATER PERCHLORATE MAP
SHALLOW WATER-BEARING ZONE
SECOND QUARTER 2016
Annual Performance Report
Tronox Facility
Henderson, Nevada

SCALE	DATE	PROJECT NUMBER
1" = 1,000'	08/29/16	2027.02.19

NO	DESCRIPTION	DATE	BY

northgate environmental management, inc.

TRONOX

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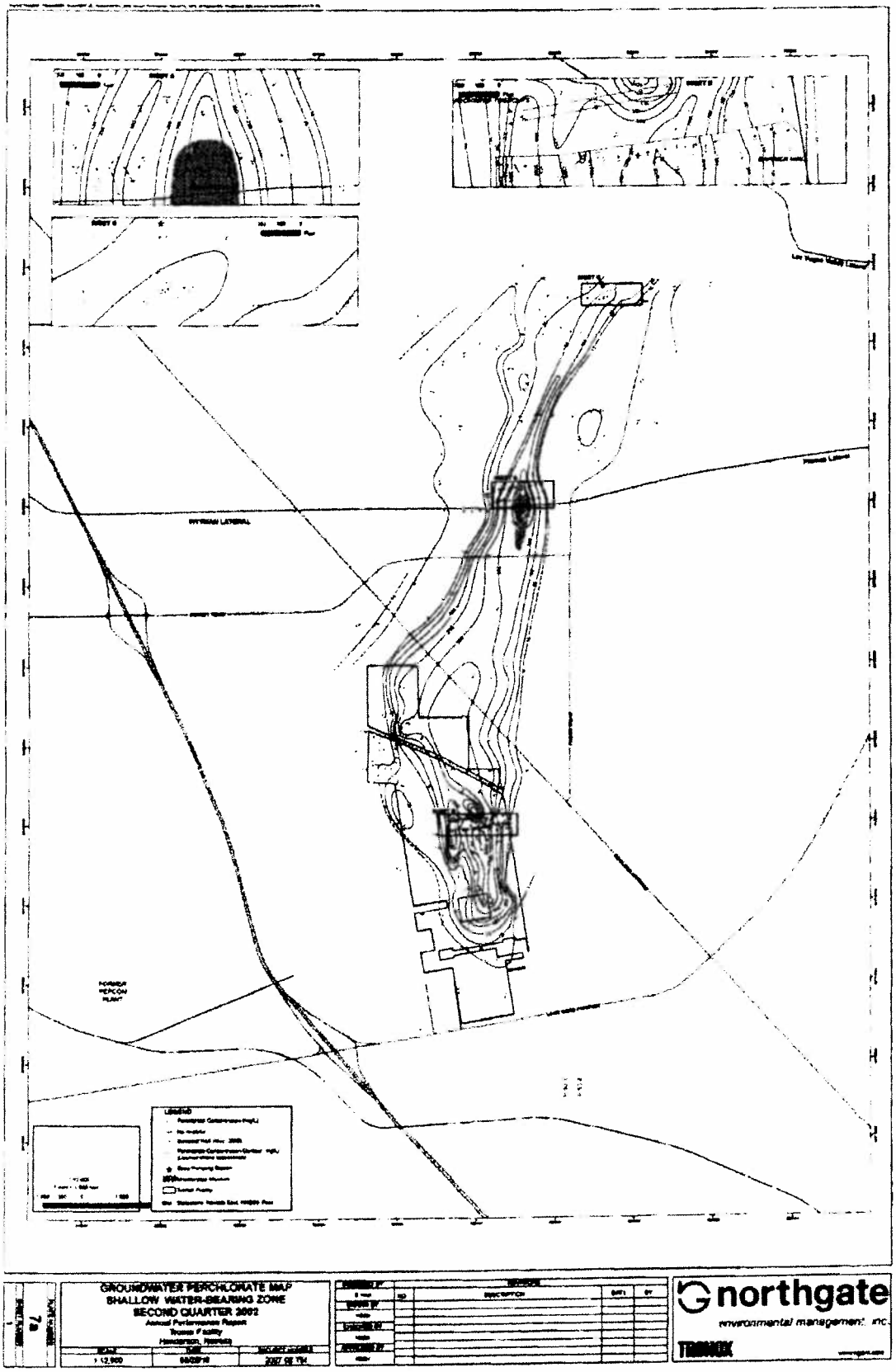

GROUNDWATER PERCHLORATE MAP
SHALLOW WATER-BEARING ZONE
SECOND QUARTER 2002
Annual Performance Report
Texaco P facility
Henderson, Nevada
northgate
environmental management, inc.
TRINITY

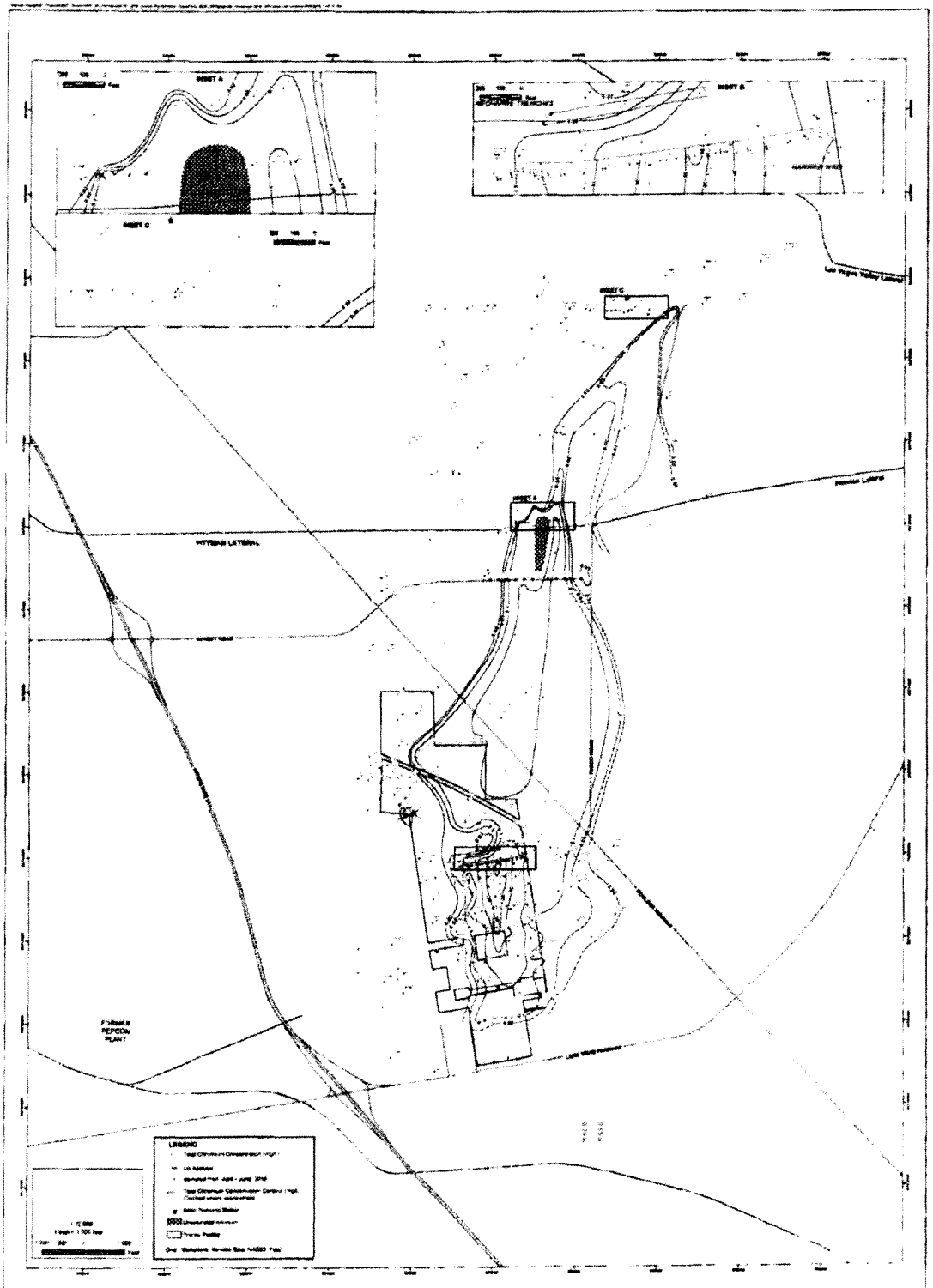
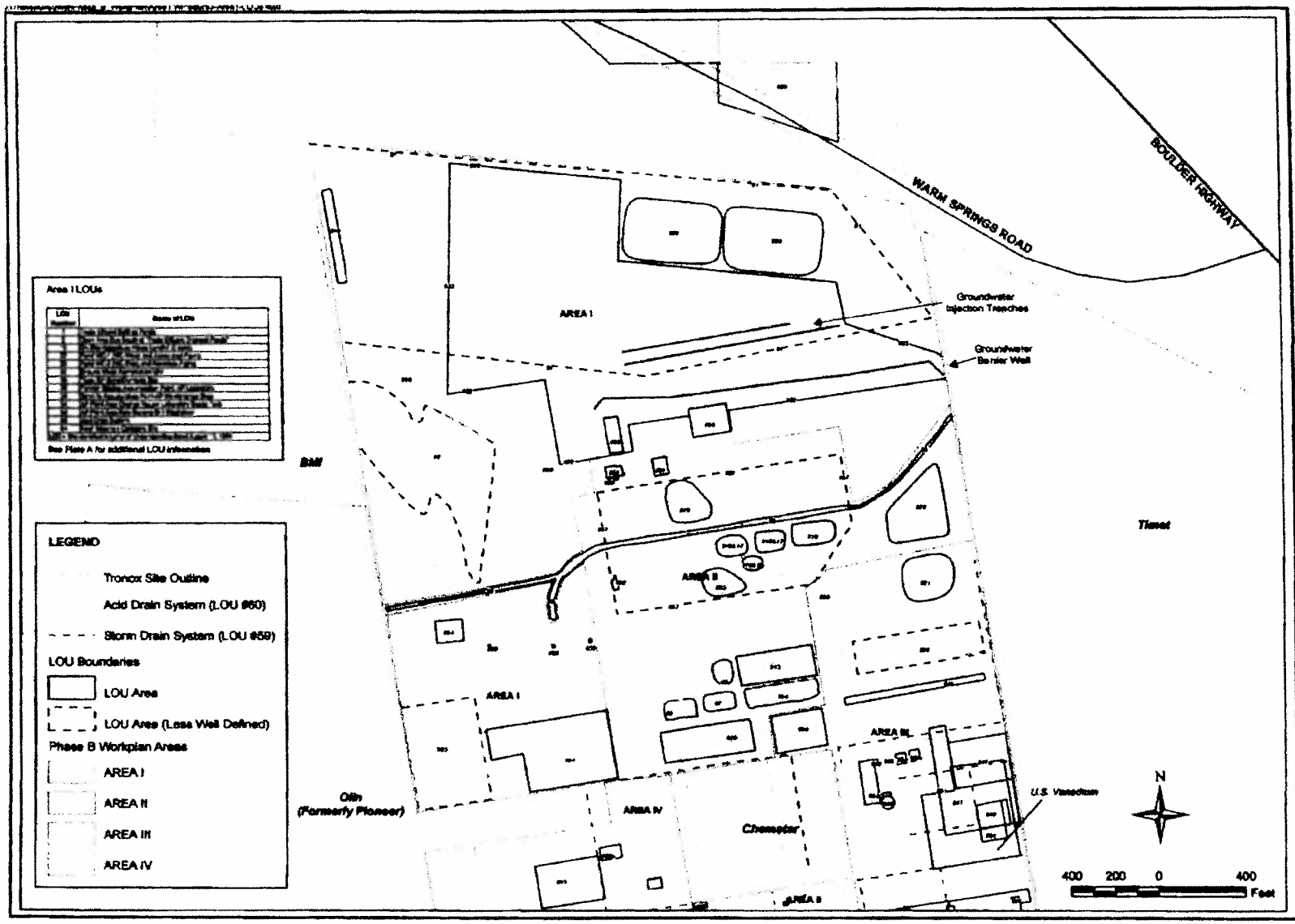


PLATE NUMBER 6	GROUNDWATER TOTAL CHROMIUM MAP SHALLOW WATER-BEARING ZONE SECOND QUARTER 2010 Annual Performance Report Tronox Facility Henderson, Nevada			DESIGNED BY	REVISIONS		
				E. Nash	NO	DESCRIPTION	DATE	BY
				DRAWN BY				
				HDSN				
				CHECKED BY				
				HDSN				
				APPROVED BY				
	SCALE	DATE	PROJECT NUMBER	HDSN				
	1:12,000	08/28/10	2027.02.T01					

northgate
environmental management, inc.
TRONOX

B15



DESIGNED BY	MF
DRAWN BY	TM
CHECKED BY	X
APPROVED BY	X
REVISIONS	NO / DESCRIPTION / DATE / BY

ENSR

ENSR CORPORATION
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577
WEB: HTTP://WWW.ENSR.AECOM.COM

PHASE B AREA I LOUs
AREA I WORKPLAN
PHASE B SOURCE AREA INVESTIGATION
TRONOX FACILITY
HENDERSON, NEVADA

SCALE	DATE	PROJECT NUMBER
AS SHOWN	4/2/2008	04020-023-430

FIGURE NUMBER
3

SHEET NUMBER
X

R17

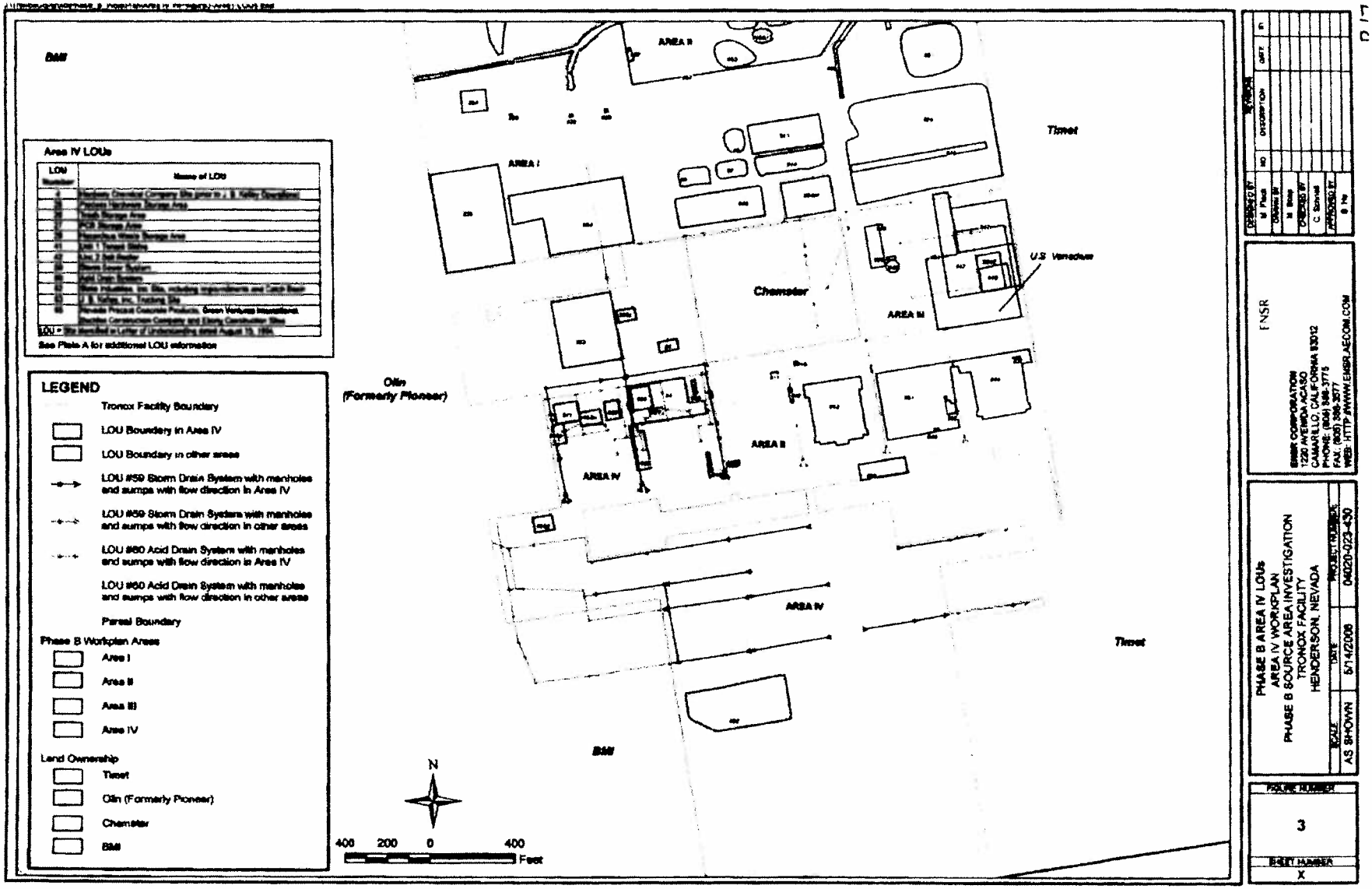

Area IV LOUs
See Plate A for additional LOU information
LEGEND
Tronox Facility Boundary
LOU Boundary in Area IV
LOU Boundary in other areas
LOU #59 Storm Drain System with manholes and sumps with flow direction in Area IV
LOU #59 Storm Drain System with manholes and sumps with flow direction in other areas
LOU #60 Acid Drain System with manholes and sumps with flow direction in Area IV
LOU #60 Acid Drain System with manholes and sumps with flow direction in other areas
Parcel Boundary
Phase B Workplan Areas
Area I
Area II
Area III
Area IV
Land Ownership
Tronox
Olin (Formerly Pioneer)
Chemstar
BMI
AREA I
AREA II
AREA III
AREA IV
Tronox
Chemstar
U.S. Vanadium
Olin
(Formerly Pioneer)
BMI
N
400 200 0 400
Feet
PHASE B AREA IV LOUs
AREA IV WORKPLAN
PHASE B SOURCE AREA INVESTIGATION
TRONOX FACILITY
HENDERSON, NEVADA
FNSR
ENSR CORPORATION
1220 AVENIDA ACASO
CAMARILLO, CALIFORNIA 93012
PHONE: (805) 388-3775
FAX: (805) 388-3577
WEB: HTTP://WWW.ENSR.AECOM.COM
AS SHOWN
5/14/2008
04020-023-430
3
X

EXHIBIT B

EXHIBIT B

Exhibit B

Nevada Environmental Response Trust Site

Interim Consent Agreement Scope of Work

Consent Agreement Activities Schedule – this schedule will identify the activities and relationships between those activities for completion of Trust Work as well as milestone dates for submittal of the following listed Scope of Work (SOW) Deliverables, including any interim Deliverables that may be necessary to complete the SOW Deliverables. Monthly (or as otherwise approved by NDEP) updates of this schedule will be submitted to NDEP showing progress on Trust Work and Deliverables as it compares to the most current, approved baseline schedule. Deliverable submittal deadlines will be proposed in the first schedule submittal and once approved by NDEP, a Deliverable submittal deadline may not be changed without written approval from NDEP per Section IX (Deliverables Requiring Division Approval) of the Interim Consent Agreement. Prior to December 7, 2011, the Trust shall complete the soil excavation activities, consistent with Section IV of the Consent Agreement, including preparation of the Site Management Plan and the Interim Soil Removal Actions Completion Report. The remainder of the Trust Work shall be included in a schedule to be submitted to NDEP by January 13, 2012.

Annual Remedial Performance and Groundwater Monitoring Report – this report should at a minimum include an evaluation of current groundwater and contaminant mass flux capture (including any necessary numerical groundwater modeling) at each extraction well field for groundwater remediation; an estimation of contaminant mass bypassing the Seep Area well field and entering the Las Vegas Wash; an evaluation of system performance at each soil and groundwater remediation system in terms of contaminant mass flux capture or destruction and bypass; and presentation and evaluation of annual groundwater conditions and quality with corresponding maps and figures. Data Validation Summary Reports ("DVSRs") for all groundwater sampling results should be submitted in conjunction with this report.

Interim Soil Removal Actions Completion Report – this report will be submitted to document the soil removal actions at the Henderson Property. At a minimum, this report will include final grade elevations; post-excavation and post-final grading figures; pre-confirmation, post-excavation, and any other sampling results associated with the soil removal actions; and figures showing all sampling results associated with the soil removal. DVSRs for all data not previously validated and approved by NDEP should be submitted in conjunction with this report.

Site Management Plan – this plan will present the procedures that will be required for any soil or groundwater disturbance at the Henderson Property to ensure personal safety and environmental protectiveness. This plan establishes procedures for soil and groundwater disturbances and includes procedures for NERT and NDEP notification, Deliverable submittal, contingency plans for previously undiscovered soil and/or groundwater contamination, required analyses and frequency of sampling based on location within the Henderson Property. The Site Management

Plan also designates Excavation Control Areas, which are areas where soil contamination is known to have been left in place above NDEP's Basic Comparison Levels (BCLs) or has not been properly characterized for potential contamination. Implementation of this plan will be required of all Site Occupants and their contractors. This plan will incorporate reference to anticipated or completed Environmental Covenants for the Henderson Property.

Site-wide Groundwater Sampling and Analysis Plan – this plan will establish location and frequency for required groundwater monitoring and sampling. Additionally, this plan will specify contaminant analyses required for each sampling location and will be based on the Phase B Sampling and Analysis Plan groundwater sampling results as well as include any permit-required groundwater sampling.

Community Relations Plan – this plan will present how community outreach will be conducted, including public data and file access, site fact sheet development and periodic updates, stakeholder communications, community meetings, and NDEP and NERT points of contact.

Groundwater Extraction and Treatment System Optimization Work Plan – this plan will present how the current interim groundwater treatment system and associated well fields will be evaluated in order to determine the most efficient and cost-effective removal of contaminant mass and reduction of contaminant flux migration.

Groundwater Extraction and Treatment System Optimization Report – this report will present the results and recommendations from implementing the Groundwater Extraction and Treatment System Optimization Work Plan.

Technology Screening Report and Remedial Investigation / Feasibility Study Work Plan – this plan will identify a screened list of potentially feasible technologies that are believed to be capable of meeting the preliminary remedial action objectives for the Henderson Property. These identified technologies will be retained for analysis and, where appropriate, bench or field-scale treatability testing and analysis in the Feasibility Study. Additionally, the plan will include a description and mapping of current site characterization and monitoring data with the identification of any data gaps to be addressed by additional field sampling and chemical analysis; any necessary Sampling and Analysis Plans; updated Site Safety and Health Plan; and Baseline Human Health Risk Assessment plan.

Treatability Study Work Plans – these plans will propose methodologies for conducting any bench or pilot-scale treatability studies identified in the Technology Screening Report recommendations; the results of which will be used in the Remedial Investigation and Feasibility Study.

Remedial Investigation and Feasibility Study – this report will include a baseline risk assessment consistent with 40 C.F.R. § 300.430(d), compile the historic and current information related to the Henderson Property, update the property's Conceptual Site Model, and present the results of

any additional investigation performed as a result of identified data gaps in the available information. The report will also present and utilize the results of recommended and approved treatability studies and will be consistent with the requirements of 40 C.F.R. 300.430(e). The recommendation(s) from this study will be used to determine Final Remedy Selection for the Henderson Property, which will be implemented under a future Phase III Consent Agreement.

EXHIBIT C

EXHIBIT C

October 7, 2010

Mr. Mark Paris
Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011

Mr. Matt Paque
Tronox LLC
3301 NW 150th
Oklahoma City, OK 73134

Mr. Curt Richards
Olin Corporation
3855 North Ocoee Street, Suite 200
Cleveland, TN 37312

Mr. Joe Kelly
Montrose Chemical Corp of CA
600 Ericksen Ave NE, Suite 380
Bainbridge Island, WA 98110

Mr. Brian Spiller
Stauffer Management Co LLC
1800 Concord Pike
Wilmington, DE 19850-6438

Mr. Craig Wilkinson
Titanium Metals Corporation
PO Box 2128
Henderson, NV 89009

Re. **BMI Plant Sites and Common Areas Projects, Henderson, Nevada**
NDEP Personnel Changes
Requirements for submittal of Deliverables to NDEP
Distribution of Deliverables to other Companies

Dear Sirs:

The parties listed above shall be referred to as "the Companies" for the purposes of this letter.

As you may be aware, NDEP staff assigned to the BMI Plant Sites and Common Areas Projects has recently changed. Overall supervision of the cases with the NDEP Bureau of Corrective Actions, Special Projects Branch, and case oversight for the TIMET and WAPA sites will now be the responsibility of William Knight who will also retain the Olin Plant Site (including Stauffer Management Company and Montrose Chemical Corporation of CA)(H-000536 and H-000540). Direct case oversight of the BMI Common and Exclusion Areas (H-000688) will remain with Greg Lovato. Direct case oversight and primary point of contact for the Tronox Plant Site (H-000539) will remain assigned to Shannon Harbour. For Facility H-000537 (TIMET), this notification serves as the Companies' official notice of the NDEP Project Coordinator.

As a result of this change, Attachment A provides general requirements for submittal of all Deliverables to the NDEP effective immediately. Pleases note that the position of "BMI Compliance Coordinator" has been eliminated, so mailing lists should be revised to reflect this change. Attachment B provides appropriate methods for distributing Deliverables that are submitted to the NDEP and to the remainder of the Companies listed above (and their designees). The Companies are requested to provide all Deliverables submitted to the NDEP simultaneously to all other Companies to facilitate the efficient transfer and use of this information.

NDEP looks forward to continuing work with each of the Companies individually and collectively on these significant projects.

Please contact the undersigned with any questions at 702-486-2850 ext.252 or wknight@ndep.nv.gov.

Sincerely,

William Knight, P.E.
Supervisor, special Projects Branch
Bureau of Corrective Actions

WCK:s

ec: Jim Najima, NDEP, BCA, Carson City
Shannon Harbour, NDEP, BCA, Carson City
Greg Lovato, NDEP, BCA, Carson City
Todd Croft, NDEP, BCA, Las Vegas
Barry Conaty, Holland & Hart LLP
Brenda Pohlmann, City of Henderson
Mitch Kaplan, U.S. Environmental Protection Agency
Ebrahim Juma, Clark County Clean Water Team
Joe Leedy, Clark County Clean Water Team
Kathryn Hoffmann, Clark County Clean Water Team
Ranajit Sahu, BRC
Lee Ferris, BRC
Kirk Stowers, Broadbent & Associates
Victoria Tyson, Tyson Contracting
George Crouse, Syngenta Crop Protection, Inc.
Michael Bellotti, Olin Corporation
Cindi Byrns, Olin Corporation
Nicholas Pogoncheff, PES Environmental, Inc.
Lynne Preslo, GeoEco
Andrew Barnes, Geosyntec
Ed Modiano, de maximis
Lee Erickson, Stauffer Management Company LLC
Mike Skromyda, Tronox LLC
Keith Bailey, Environmental Answers
Susan Crowley, Crowley Environmental LLC
Jeff Gibson, AMPAC
Paul Sundberg, Montrose Chemical Corporation
Deni Chambers, Northgate Environmental Management, Inc.
Dave Gratson, Neptune and Company
Paul Black, Neptune and Company, Inc.
Teri Copeland, 5737 Kanan Rd., #182
Paul Hackenberry, Hackenberry Associates
Kelly Black, Neptune and Company, Inc.
Kurt Fehling, The Fehling Group, LLC
Joanne Otani, 2160 Santa Cruz Avenue
Joe McGinley, McGinley and Associates
Brian Giroux, McGinley and Associates
Brian Rakvica, McGinley and Associates

cc: Robert Infelise, Cox Castle Nicholson, 555 California Street, 10th Floor, San Francisco, CA 94104-1513
Michael Ford, Bryan Cave, One Renaissance Square, Two North Central Avenue, Suite 2200, Phoenix, AZ 85004
Lee Erickson, Stauffer Management Company, P.O.Box 18890, Golden, Colorado 80402
Andrew Barnes, Geosyntec, 2100 Main Street, Suite 150, Huntington Beach, CA 92648
Lee Farris, BRC, 875 W. Warm Springs Road, Henderson, NV 89011

Attachment A
October 7, 2010 General Requirements for
Deliverables Submitted to the NDEP

Described below are Deliverable distribution requirements for all Deliverables submitted by the Companies to NDEP. Compliance with these procedures is mandatory and will facilitate timely and effective review by the NDEP and its contractors of all material provided to the NDEP. These requirements apply to all Deliverables and are separate from the Electronic Data Deliverable (EDD) requirements. EDD requirements are a specific part of the Deliverables and must also be complied with. These requirements are effectively immediately will remain in place until modified by the NDEP.

For file sizes under 4 MB, electronic copies of Deliverables requested in Electronic Copy shall be transmitted as attachments via e-mail to the addresses below. For files sizes 4 MB or greater, a notification shall be sent to the e-mail addresses below and access to electronic files shall be provided via a web based file exchange service. Alternately, a CD or DVD can be mailed to the parties listed below to satisfy the electronic copy requirements.

Deliverable Description	**Deliverable Recipients**		**Format**	
	Name	**Address**	**Hard Copy**	**Electronic Copy and E-mail Address**
All Companies All Deliverables (including Data Validation Summary Reports [DVSRs])	William Knight	2030 E. Flamingo Rd. Suite 230 Las Vegas, NV	Yes - 2 DVSRs – 1 only	Yes (via CD or DVD attached to hard copy, and e-mail/electronic transfer) wknight@ndep.nv.gov
All Companies All Deliverables (excluding DVSRs)	NDEP c/o McGinley and Associates	815 Maestro Drive Reno, NV 89511	Yes – 1	No
	NDEP c/o McGinley and Associates	8275 S. Eastern, Suite 220 Las Vegas, NV 89123	Yes - 1	Yes (via CD or DVD attached to hard copy, no e-mail or electronic transfer) brakvica@mcgin.com
All Companies Data Validation Summary Reports Only	David Gratson Neptune, Inc.	N/A	No	Yes dgratson@neptuneinc.org
H-000688	Greg Lovato	901 S. Stewart St, Ste 4001 Carson City, NV 89701-5249	No	Yes glovato@ndep.nv.gov
H-000539	Shannon Harbour	901 S. Stewart St, Ste 4001 Carson City, NV 89701-5249	Yes – 1 (excluding DVSRs)	Yes sharbour@ndep.nv.gov (including DVSRs)
	Greg Lovato		No	Yes glovato@ndep.nv.gov
Specific Deliverables	As specified in NDEP Correspondence regarding subject Deliverables, NDEP will direct that Deliverables be provided to other specific consultants to NDEP			

Attachment B
April 5, 2010 Guidelines
Distribution of Deliverables to All Companies

NDEP requests that the Companies provide access to electronic copies of all Deliverables to the following designated contacts for each of the Companies.

For file sizes under 4 MB, electronic copies of Deliverables requested in Electronic Copy can be transmitted as attachments via e-mail to the addresses below. For files sizes 4 MB or greater, a notification can be sent to the e-mail addresses below and access to electronic files shall be provided via a web based file exchange service. Alternately, a CD or DVD can be mailed to the parties listed below to satisfy the electronic copy requirements.

Company	Name	E-mail Address
BMI	Mark Paris	mparis@landwellco.com
	Ranajit Sahu	sahuron@earthlink.net
de maximis	Ed Modiano	edm@demaximis.com
Montrose	Joe Kelly	jkelly@montrosechemical.com
	Paul Sundberg	pvsmrs@pacbell.net
	Lynne Preslo	lpreslo@aol.com
	Brian Waggle	bwaggle@hargis.com
Olin	Curt Richards	cmrichards@olin.com
Stauffer	Lee Erickson	Lee.erickson@astrazeneca.com
	Nick Pogoncheff	npogoncheff@pesenv.com
Syngenta	George Crouse	george.crouse@syngenta.com
TIMET	Craig Wilkinson	craig.wilkinson@timet.com
	Kirk Stowers	kstowers@broadbentinc.com
	Victoria Tyson	victoria@tysoncontracting.com
Tronox	Matt Paque	Matt.Paque@tronox.com
	Susan Crowley	Susan.Crowley@tronox.com
	Keith Bailey	okbailey@flash.net
	Deni Chambers	deni.chambers@ngem.com

Additionally, NDEP requests that the Companies make available electronic copies of all Deliverables to Jeff Gibson of AMPAC at jegibson@apfc.com