



October 13, 2014

Mr. Weiquan Dong, PE
Bureau of Corrective Actions, Special Projects Branch
Nevada Division of Environmental Protection
2030 E. Flamingo Rd., Suite 230
Las Vegas, Nevada 89119

Mr. Jay A. Steinberg, not individually but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee
Nevada Environmental Response Trust
35 East Wacker Drive, Suite 1550
Chicago, Illinois 60601

**Re: Construction Mitigation Measures Plan for Implementation of Field Sampling Plan, Revision 1
Nevada Environmental Response Trust Site, Henderson, Nevada**

Dear Mr. Dong and Mr. Steinberg:

On behalf of the Nevada Environmental Response Trust (NERT or the Trust), ENVIRON International Corporation (ENVIRON) provides in this letter the Construction Mitigation Measures Plan (CMMP), which will be followed during implementation of the approved Field Sampling Plan, Revision 1 (FSP)¹ for the NERT site (the "site") in Henderson, Nevada. ENVIRON will provide oversight, project management, soil sampling, data analysis, and reporting activities for soil boring, groundwater well installation and sampling and trenching/test pit excavation activities both on and off the NERT site. ENVIRON's work, on behalf of the Trust, will be performed under the direction of a Nevada Certified Environmental Manager (CEM).

The purpose of this letter is to describe the proposed construction mitigation measures to be implemented during the remedial investigations described in the FSP that will take place on the NERT site, incorporating the applicable requirements for construction mitigation measures specified in the Site Management Plan, Revision 1 (SMP)² for the NERT site. Approval of this CMMP by the Nevada Division of Environmental Protection (NDEP) and the Trust is required prior to initiating the work described herein.

Project Description

As detailed in ENVIRON's *Remedial Investigation and Feasibility Study Work Plan, Revision 2* (RI/FS), dated June 19, 2014, the investigation will be conducted in various areas across the site, including within currently designated excavation control areas (ECAs). Based on the extensive investigations conducted to date, a Conceptual Site Model (CSM) for the site was developed and is described in Section 5.1 of the RI/FS. After a review of the existing data, areas were identified that require additional investigation to determine the nature and extent of chemicals of potential concern

¹ ENVIRON. 2014. Field Sampling Plan, Revision 1, Nevada Environmental Response Trust Site; Henderson, Nevada. July 18. Approved by NDEP on August 1, 2014.

² ENVIRON. 2013. Site Management Plan, Revision 1, Nevada Environmental Response Trust Site, Henderson, Nevada. October. Approved by NDEP on November 7, 2013.

(COPCs) in soil and groundwater. Many of these areas were previously identified by NDEP as areas requiring further study. The FSP provides specific details of sampling locations and procedures.

The most intensive construction-type activities to be performed during the FSP will be drilling, well installation, and excavation of test pits. Drilling and well installation activities will be conducted at various locations on and off the site. Three test pits will be excavated within the Debris Pile area of the site for characterization and sampling of materials in the subsurface in this area. In addition to drilling, well installations, and test pits, a limited amount of truck, loader or other heavy equipment activity will be necessary in order to coordinate various pickups of investigation derived waste (IDW) materials, drop-offs of materials needed for investigation activities, and dust suppression (water trucks). Planned investigation areas are shown on Figure 1.

Construction Mitigation Measures

As described in Section 4.4 of the SMP, measures must be implemented to mitigate the potential impacts of the following activities:

- Dust generation associated with soil excavation and loading activities, construction or transportation equipment traveling over on-site soil, and wind traversing COPC-containing soil stockpiles;
- Tracking of soil off the site with construction or transportation equipment; and
- Transporting of sediments from the site in surface water run-off.

Furthermore, as described in Section 5.1 of the SMP, mitigation measures must be implemented to minimize the potential of further impacts to groundwater.

ENVIRON and its contractors, National Drilling and Logistical Solutions, plan to implement the following mitigation measures to control the potential impacts of these activities.

Dust Mitigation and Monitoring

Dust Mitigation

Dust mitigation measures are designed to be in compliance with Sections 90-94 of the Clark County Air Quality Regulations, which are administered and enforced by the Clark County Department of Air Quality (DAQ). To ensure the overall effectiveness of dust control measures at the site, and to remain in compliance with Section 94 of the Clark County Air Quality Regulations, a contractor employee will be designated as the Dust Control Monitor and will be present for all potential dust generating activities. Dust control measures implemented by the contractor will include the following activities.

- Limit vehicle speeds on unpaved or off-road areas to 5 miles per hour;
- Control drilling and trenching activities and the pace or speed of work to minimize dust generation;
- Minimize drop heights during excavation or loading activities; and
- Utilize water trucks (or water tanks/sprayers mounted on support trucks) to conduct wet suppression at areas where work activities have the potential to generate significant dust.

Dust Monitoring

During all work an ENVIRON field technician will monitor potential dust producing conditions. If visible dust is being created, the field technician will perform work zone dust monitoring both upwind and downwind of active work areas (using a calibrated $pDR-1000AN$ or equivalent). Differential dust monitoring results in excess of $100 \mu\text{g}/\text{m}^3$ will be reported to the contractor to ensure that dust control measures are being implemented correctly or increased when necessary. The action level of 100

$\mu\text{g}/\text{m}^3$ of dust has been used during past soil remediation, excavation, and backfilling activities at the site. This action level is designed to prevent fugitive dust emissions from the site, as required by the DAQ. The action level is also designed to be protective of human health based on known impacts to soil at the site. It should be noted that due to the limited size and scope of the project with respect to potential dust-generating activities, a Dust Control Permit from Clark County is not required. However, field activities that have the potential to generate dust will include dust control best management practices (BMPs) and will be conducted in conformance with the County's regulations for prevention of fugitive dust emissions from the site.

Prior to beginning test pit activities, four perimeter dust monitoring stations will be set up at the north, south, east, and west sides of the test pit area. The perimeter dust monitoring stations will each consist of a Thermo Scientific 8530 DustTrak II or equivalent real-time passive dust monitor with datalogging capabilities positioned on a platform approximately three to five feet above the ground surface. The dust monitor instruments will be fully charged and zero-calibrated prior to beginning work each day and the datalogger of each instrument will be downloaded at the conclusion of work each day. Dust monitoring data will be examined after downloading and instances of differential airborne dust concentrations (i.e., downwind concentration minus upwind background concentration) exceeding $100 \mu\text{g}/\text{m}^3$ will be reported to the contractor to ensure that dust control measures are increased or more carefully implemented. Wind direction will be monitored and recorded by the ENVIRON field person overseeing the test pit activities. Test pit perimeter dust monitoring data will be included in the excavation completion report.

Dust monitoring is not expected to be necessary during drilling activities, which are not anticipated to significantly generate dust. However, a calibrated *p*D_R-1000AN or equivalent will be available for work zone dust monitoring if equipment movements or activities appear to be generating dust.

Track-Out Mitigation and Equipment Decontamination

When work is being conducted within an ECA, tracking of potentially contaminated soils outside of the ECA will be mitigated by equipment and vehicle decontamination. In general, dry decontamination methods will be used including brushing, scraping, or vacuuming of equipment wheels or treads, and vehicle tires. Scrapings will be maintained within the work area and/or soil staging area.

Close attention will be paid to the effectiveness of dry decontamination methods, and if dry methods are not effective (for example: due to wet or muddy conditions), wet decontamination methods including pressure washing or steam cleaning will be employed. Any wet decontamination will be performed within the work area or soil staging area, and rinse water will be contained within these areas.

Work areas and soil staging areas will receive a final surface scrape to ensure all potentially contaminated materials are removed and properly disposed.

Surface Water Run-Off Mitigation

According to NDEP storm water management requirements, due to the limited size of the investigation areas, and the lack of extensive excavation activities (only three test pits are anticipated to be excavated), a Storm Water Pollution Prevention Plan (SWPPP) is not required³. However, appropriate storm water control measures will be implemented at investigation sites in order to

³ U.S. Environmental Protection Agency (EPA) regulations (40 CFR 122.26(b)(14)(x) and 122.26(b)(15)) require National Pollutant Discharge Elimination System (NPDES) storm water discharge permit coverage for discharges from construction activities that disturb 1 or more acres. These nationwide regulations are implemented by general NPDES permits, which are issued by EPA and authorized State agencies such as NDEP.

control potential storm water, dust control water, and sediment run-off from the site. Control measures will include the following BMPs:

- Structural practices including silt fences, fiber rolls ("straw wattles"), earth dikes, or other erosion control measures, if applicable;
- Administrative practices including limiting dust control water spraying to the amount necessary for dust suppression;
- Placing of soil stockpiles on plastic sheeting within a bermed area;
- Covering of soil stockpiles with plastic sheeting when not actively being excavated or loaded; and
- Daily checks of weather forecast and communication of predicted rain events to the contractor.

Groundwater Mitigation Activities

Deep groundwater well installation has the potential to create conduits from shallow contaminated groundwater to deeper groundwater. As described in Section 5.1 of the SMP, mitigation measures must be implemented to minimize the potential groundwater impacts. As stated in Section 4.8.1 of the FSP, the sonic drilling method was selected to minimize the possibility of cross contamination from shallow soils and groundwater zones to deeper groundwater zones. By using rotary sonic drilling, isolation of shallower zones is accomplished by an outer drill casing. If methods other than rotary sonic are to be used for well installation in deeper water bearing zones, a conductor casing will first be installed through the shallower water-bearing zone(s) and cemented into place in order to seal off the shallow water-bearing zone and prevent cross-contamination between shallower and deeper water-bearing zones.

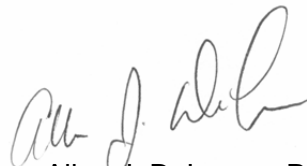
Closure

We would appreciate your prompt review and approval of this this CMMP. Please contact John Pekala at (602) 734-7710 or jpekala@environcorp.com if you have any comments or questions concerning this CMMP.

Sincerely,



John M. Pekala, PG
Senior Manager
Nevada CEM #2347, expires 9/20/2016



Allan J. DeLorme, PE
Principal

Attachments

cc: BMI Compliance Coordinator, NDEP, BCA, Las Vegas
NDEP c/o Kirk Stowers, Broadbent and Associates, Inc.

ec: James Dotchin, NDEP
Greg Lovato, NDEP
Alison Fong, USEPA
Katherine Baylor, USEPA
Nevada Environmental Response Trust
Tanya O'Neill, Foley & Lardner LLP
Derek Amidon, Tetra Tech
Kirk Stowers, Broadbent & Associates, Inc.
Kurt Fehling, The Fehling Group
Jeff Gibson, AMPAC
Mark Paris, BMI

Lee Farris, Landwell
Ranjit Sahu, BMI
Joe Kelly, Montrose
Paul Sundberg, Montrose
Curt Richards, Olin
David Share, Olin
Chuck Elmendorf, Stauffer
Nick Pogoncheff, Stauffer
George Crouse, Syngenta
Richard Pfarrer, TIMET
Enoe Marcum, WAPA

Figure

Additional Soil Investigation Areas

- 1 Additional Soil Investigation Area AP-5 Pond
- 2 Additional Soil Investigation Area Between AP-5 Pond and Debris Pile
- 3 Additional Soil Investigation Area Debris Pile
- 4 Additional Soil Investigation Area West of Mn-1 Pond
- 5 Additional Soil Investigation Area Category 3 Area #1
- 6 Additional Soil Investigation Area Category 3 Area #2
- 7 Additional Soil Investigation Area North of Lhoist and East of Mn-2 Pond
- 8 Additional Soil Investigation Area at Unit Buildings 4 and 5 and Leach Plant

Legend

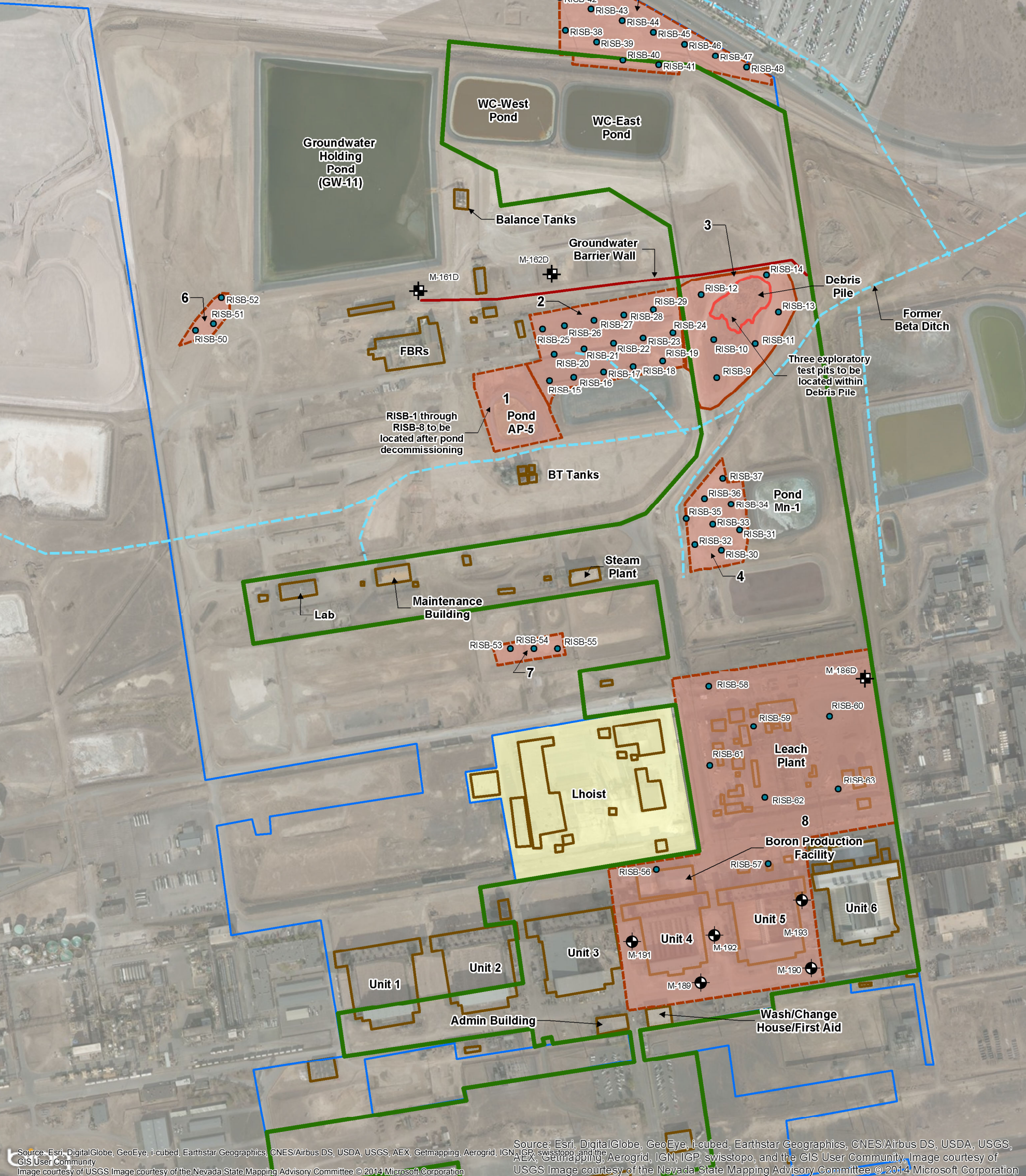
- Planned Soil Boring
- Planned Shallow Monitoring Well
- Planned Deeper Monitoring Well
- Groundwater Barrier Wall
- Ditches
- Tronox Operational Areas
- Additional Soil Investigation Area
- Debris Pile Site Features
- Approximate Site Boundary
- Site Features (Buildings and Tanks)

N

1:4,800

1 inch = 400 feet

0 200 400 Feet



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Image courtesy of USGS Image courtesy of the Nevada State Mapping Advisory Committee © 2014 Microsoft Corporation



Planned Soil Borings and New Monitoring Wells
Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
1

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