



June 27, 2013

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

**Re: Revised Work Plan
Planned Excavation of Beta Ditch at NERT-TIMET Property Line
Nevada Environmental Response Trust Site
Henderson, Nevada**

Dear Mr. Dong:

On behalf of the Nevada Environmental Response Trust (NERT or the Trust), ENVIRON provides in this letter the revised work plan for the excavation of the east end of the Beta Ditch at the property boundary between the NERT site and the TIMET site. Per requests from American International Group, Inc. (AIG) and the Nevada Division of Environmental Protection (NDEP), ENVIRON, on behalf of the Trust, plans to coordinate our soil excavation activities at the east end of the Beta Ditch with TIMET, adding the limited excavation area on the NERT side of the property boundary to the scope of the larger soil excavation project planned to take place on TIMET property. We anticipate working with TIMET's consultant, GEI Consultants, to implement the work, with the contractor selected by TIMET performing the soil excavation activities. ENVIRON will provide oversight, project management, soil sampling, data analysis, and reporting activities for soil excavation on 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 work for the soil removal activities to take place on Trust property, incorporating the applicable requirements for excavation and soil handling specified in the Site Management Plan (SMP) for the NERT site, dated April 2012 (with May 2012 Errata). The revised work plan addresses comments provided in your email dated June 24, 2013.

Project Location

The area of soil to be removed from the east end of the Beta Ditch on NERT property was originally identified as Polygon RZ-E-16B, and is also known as Excavation Control Area E3 (ECA E3). The planned excavation area is shown in map view and in cross-sections on Figure 1, with the original grade, existing grade, and base of planned excavation shown on the cross sections. As shown on the cross sections, and as described further in subsequent sections of this work plan, the planned excavation will range from approximately 2 to 5 feet deep below the current grade, which corresponds to 5 feet below the original grade. The excavation area is surrounded on the north, west, and south by a "buffer" area that will allow for a 2:1 safety slope to be utilized around the boundaries of the excavation. The eastern edge of the excavation area is at the NERT Site-TIMET property boundary. The excavation on NERT property will be performed to a depth of five feet up to the property boundary, and we understand TIMET will be excavating deeper on the eastern side of the property boundary. The eastern edge of our excavation area (at the property boundary) does not include the 2:1 safety slope, because adjacent soil to the east will also be excavated (by TIMET).

During the initial excavation program at the NERT site, the polygon was inaccessible for excavation due to an existing sandbag diversion structure, drainage culverts, the perimeter fence line, and an

elevated walkway structure. Due to the inaccessibility of the area as a result of all of these structures, the polygon was designated as ECA E3 in the SMP. In order to complete the proposed excavation, these structures will need to be removed. The structures are shown in an aerial view in Figure A-1, and with the approximate limits of the original Polygon RZ-E-16B superimposed on the image in Figure A-2 (See Attachment A).

The proposed excavation is designed to remove the remaining soil within the boundaries of the original excavation polygon, which was established by Northgate Environmental Management (NGEM) in 2010 based on the results of soil samples from soil boring SSAL8-02 and other nearby soil borings. The original polygon consisted of a triangular area with a depth of five feet below the grade surface at the time. NGEM's November 2010 *Excavation Plan for Phase B Soil Remediation of RZ-E, Addendum to the Removal Action Work Plan*, which describes the approach to soil remediation including the excavation polygons, was approved by NDEP in a letter dated November 29, 2010.

Because portions of surface soil within the polygon were removed during the remediation activities in 2011, the excavation depth across the area will range from approximately 2 to 5 feet below the current grade in order to excavate to a depth of 5 feet below the original grade. The current, previous, and proposed excavation grades are shown on the cross sections included on Figure 1. If discolored soil is encountered during this excavation, the discolored soil will be evaluated and the boundaries of the excavation can be revised to remove the impacted material.

In order to facilitate access to the excavation area from the TIMET side of the property boundary, the perimeter fence line in this area will be temporarily re-located to the west, such that the fence curves around the western edge of the planned excavation area. This will allow for contractor access from the TIMET site to the excavation area while maintaining perimeter security for the remainder of the NERT property.

Surveying of Property Boundary

The approximate location of the property boundary between NERT and TIMET property is provided on Figure 1. In order to clarify the exact location of the boundary, the property boundary will be surveyed prior to the start of excavation activities on or adjacent to NERT property.

Known Impacts to Soil in the Planned Excavation Area

During the initial phase of soil sampling performed to designate the boundaries of excavation polygons, borehole SSAL8-02 was advanced near the property boundary, to a depth of approximately nine feet below ground surface (bgs). Samples were collected at depths of 0, 1, 2, 3, and 8 feet bgs and analyzed for arsenic, manganese, and pesticides including hexachlorobenzene. As shown in Table 1, analytical results indicated the presence of arsenic above background concentrations¹ to a depth of five feet below the original grade surface. Manganese was also detected at a concentration above the NDEP Basic Comparison Level (BCL) for outdoor commercial/industrial workers (at the time polygons were established) in the sample from 1 to 2 feet below original grade. Pesticides were detected at concentrations below BCLs.

¹ An arsenic background concentration of 7.2 mg/kg has been approved by NDEP for use in soil remediation at NERT.

Table 1: Soil Concentrations Above BCLs (at the time polygons were established) and Arsenic Background Concentrations at SSAL8-02			
Depth (Feet Below Previous Grade)	Depth (Approximate, Feet Below Current Grade)	Arsenic (mg/kg)	Manganese (mg/kg)
1-2'	Surface	13	14,000
2-3'	0-1'	16	2,000
3-4'	1-2'	11	4,200
4-5'	3-4'	27	670
5-6'	4-5'	3.4	780
10-11'	8-9'	4.7	1,400

Concentrations in **bold** exceed BCLs at the time polygons were established.
mg/kg: milligrams per kilogram

During excavation of the adjacent area to the west, the ECA E3 area was observed to contain a layer of beige, fibrous soil and debris, as well as discolored soil, ranging between approximately 4 to 6 feet depth bgs. Five samples were collected from this layer and analyzed for bulk asbestos by polarized light microscopy (PLM). As shown in Table 2, three of the five samples were found to contain friable chrysotile-type asbestos ranging in concentration from 10% to 99%. These concentrations exceed the site asbestos criteria of one or more long fibers (amphibole) and/or greater than five long fibers (chrysotile). The soil layer with asbestos-containing material (ACM) was left in place and covered with plastic sheeting to demarcate the area, and further covered with approximately eight inches of backfill soil. The asbestos-impacted soil area, as shown in a profile photograph in Figure A-3 of Attachment A, will be removed during this soil excavation project.

Table 2: Results of Bulk Asbestos Analysis				
	Asbestos Amount/Type	Material	Color	Friability
BD-1	Trace	Soil	Brown	Friable
BD-2	ND	Debris	Off-white	Friable
BD-3	99% chrysotile	TSI	Beige	Friable
BD-4	10% chrysotile	TSI	Beige	Friable
BD-5	69% chrysotile	TSI	Beige	Friable

Notes:
Percentages in **bold** indicate asbestos concentration above site cleanup criteria.
ND: Not Detected
TSI: Thermal System Insulation

As identified in the SMP, chemicals of concern (COCs) associated with this area of the Beta Ditch (ECA E3) on the NERT site include asbestos, metals (including arsenic and manganese), hexavalent

chromium, cyanide, organochlorine pesticides, perchlorate, chlorate, ammonia, sulfates, carbonates, phosphates, chloride, and sulfide.

During the excavation of the area, observations of soil discoloration will be made and in general, any areas of soil with observable discoloration (including the ACM-impacted layer described above) will be excavated to the extent feasible based on access considerations. However, discolored soil may be sampled and analyzed for COCs in order to assess whether a discolored soil area is required to be removed based on comparison to BCLs.

Based on the available data presented herein and our understanding of original and current site grades in the excavation area, the approximate horizontal and vertical extent of excavation is shown on Figure 1 (in both map and cross-section views). Since the excavation is planned to be approximately 5 feet deep below the original site grade, the actual excavation depth, relative to current site grades, will vary from approximately 2 to 5 feet deep (Figure 1), or possibly deeper if discolored soil is observed and identified for removal.

Confirmation Sampling

Bottom and sidewall excavation confirmation samples, as well as stockpile samples (if needed), will be collected by ENVIRON after the excavation is completed, as required by the SMP. Samples will be analyzed for the COCs identified in the SMP that are associated with ECA E3 on a standard turnaround time (TAT), or rush TAT if needed. ENVIRON will be responsible for all soil sampling and coordination of analytical testing during the excavation project. In accordance with the SMP, confirmation and stockpile samples will be analyzed by a Nevada-certified analytical laboratory for the following analytes:

- Arsenic and Manganese by EPA Methods 6010/6020
- Hexavalent Chromium by EPA Method 7196A or 7199/3060A
- Cyanide by EPA Method 9012
- Perchlorate by EPA Method 314.0
- OCPs and PCBs by EPA Method 8081A/8082
- pH by EPA Method 9045
- Inorganic Ions by EPA Method 9056
- Sulfide by EPA Method 9034
- Asbestos by EPA Method 600/R-93-116

Profiling and Disposal of Excavated Soil

A waste disposal profile will be established using prior analytical data and, if required by the selected disposal facility, stockpile sample data from the excavated soil. Soil is expected to be disposed at Apex Regional Landfill in Clark County, Nevada. The transportation route will be through the TIMET facility, and transportation will be conducted in accordance with TIMET's Remedial Action Work Plan (RAWP).

Backfill and Compaction Requirements

Soil backfill and compaction requirements will be in accordance with the recommended specifications outlined in a letter from the geotechnical engineering firm Cesare, Inc. dated June 10, 2013, which is provided in Attachment B.

Compliance with Site Management Plan

The project will be conducted in compliance with soil risk management activities for ECA soils that are provided in the SMP. In addition to the steps described above, the following items described by the SMP will apply to this project:

Stockpile Management and Sampling

If soil will be stockpiled prior to loading, transport and disposal, stockpiles will be managed in the following manner:

- The stockpiles will be placed on a double layer plastic liner and will be covered with plastic sheeting at all times except when being handled.
- The top cover will be adequately secured, and berms will be constructed around the stockpile to control run-on and run-off in the event of precipitation.
- If sampling is required for disposal purposes (e.g., if existing characterization data are insufficient for landfill disposal), one composite sample will be collected from every 250 cubic yards for the first 1,000 cubic yards, and one composite sample will be collected from every 1,000 cubic yards thereafter.

Construction Impact Mitigation Measures

Measures will 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 site soils, and wind traversing COPC-containing stockpiles. Dust control measures will be implemented in accordance with Section 4.4.1 of the SMP.
- Tracking of soil off the site with construction or transportation equipment. Construction and transportation equipment will be decontaminated in accordance with Section 4.4.2 of the SMP.
- Transporting sediments from the site in surface water run-off. A Storm Water Pollution Prevention Plan (SWPPP) will be implemented, including best management practices (BMPs) and applicable controls in accordance with Section 4.4.3 of the SMP.

Prior to the start of field work, a Construction Impact Mitigation Measures Plan will be prepared, describing mitigation measures (e.g. dust control measures, decontaminating vehicles and construction equipment, storm water runoff controls, and the SWPPP) that will be implemented during excavation, sampling, and construction activities. It is anticipated that the mitigation measures will be consistent with those to be implemented by TIMET for excavation activities on their property.

Documentation of Remedial Actions Taken

The report prepared to document this excavation project will include the required information as described in Section 4.5 of the SMP:

- Excavation summary;
- Figure depicting the location of the remedial action;

- Surveyed coordinates for the limits of excavation within the ECA (if any), or due to discovered contaminated soils (if any);
- Summary of laboratory analytical results of stockpile sampling (if stockpiling is necessary) and post-excavation confirmation soil sampling, as well as a compilation of laboratory analytical reports and data validation reports;
- An estimate of the volume of excavated soil that exceeded soil screening levels;
- A summary of excavated soil transported to an off-site disposal facility, including the dates of transport and the estimated quantity of soil transported; and
- Proof of proper disposal of contaminated soil.

Contractor Requirements

The contractor retained to perform the work taking place on the NERT site will use field personnel who have completed 40-hour HAZWOPER training and all associated certificates for 8-hour HAZWOPER refresher training, annual respirator fit testing, and annual medical monitoring. The contractor will be required to operate in accordance with the following regulations:

U.S. Department of Labor, Occupational Safety and Health Standards for Construction (29 CFR 1926).

- *Hazardous Waste Operations and Emergency Response (29 CFR 1926.65)*
- *Hearing Protection (29 CFR 1926.101 and 29 CFR 1926.52)*
- *Eye and Face Protection (29 CFR 1926.102)*
- *Respiratory Protection (29 CFR 1926.103)*
- *Material Handling Equipment (29 CFR 1926.602)*

U.S. Department of Labor, OSHA Standards for General Industry (29 CFR 1910).

- *Hazardous Waste Operations and Emergency Response (29 CFR 1910.120)*
- *PPE General Requirements (29 CFR 1910.132)*
- *Eye and Face Protection (29 CFR 1910.133)*
- *Respiratory Protection (29 CFR 1910.134)*
- *Head Protection (29 CFR 1910.135)*
- *Foot Protection (29 CFR 1910.136)*
- *Hand Protection (29 CFR 1910.138)*
- *Medical Services and First Aid (29 CFR 1910.151)*
- *Portable Fire Extinguishers (29 CFR 1910.157)*
- *Hazard Communication Standard (29 CFR 1910.1200)*
- *Control of Hazardous Energy (LOTO) (29 CFR 1910.147)*

U.S. Department of Labor, Recording and Reporting Occupational Injuries and Illnesses, (29 CFR 1904).

The contractor used for removal and disposal of ACM will be a Nevada-licensed asbestos abatement contractor. In addition, a post-abatement visual assessment will be conducted by a Nevada-licensed asbestos project monitor to establish that asbestos removal was achieved.

Reporting

ENVIRON will prepare a letter report detailing the excavation areas, volumes of soil disposed, and results and locations of stockpile (if any) and confirmation soil samples in comparison with BCLs. The report will conform to the requirements of the SMP for documentation of remedial actions taken in an ECA, as described above.

Schedule

ENVIRON is prepared to initiate this project when TIMET's excavation program begins, currently anticipated to be July 8, 2013 and continuing through August 2013. The excavation on NERT property will be performed when it is convenient to do so, in consideration of active work areas and access considerations dictated by TIMET's excavation program. ENVIRON will work closely with TIMET to understand their excavation schedule.

Closure

Given TIMET's anticipated excavation schedule, we would appreciate NDEP's prompt review of this work plan. Please contact John Pekala at (602) 734-7710 or jpekala@environcorp.com if you have any comments or questions concerning this work plan.

Sincerely,

John M. Pekala, PG
Senior Manager
Nevada CEM #2347, expires 9/20/2014

Allan J. DeLorme, PE
Principal

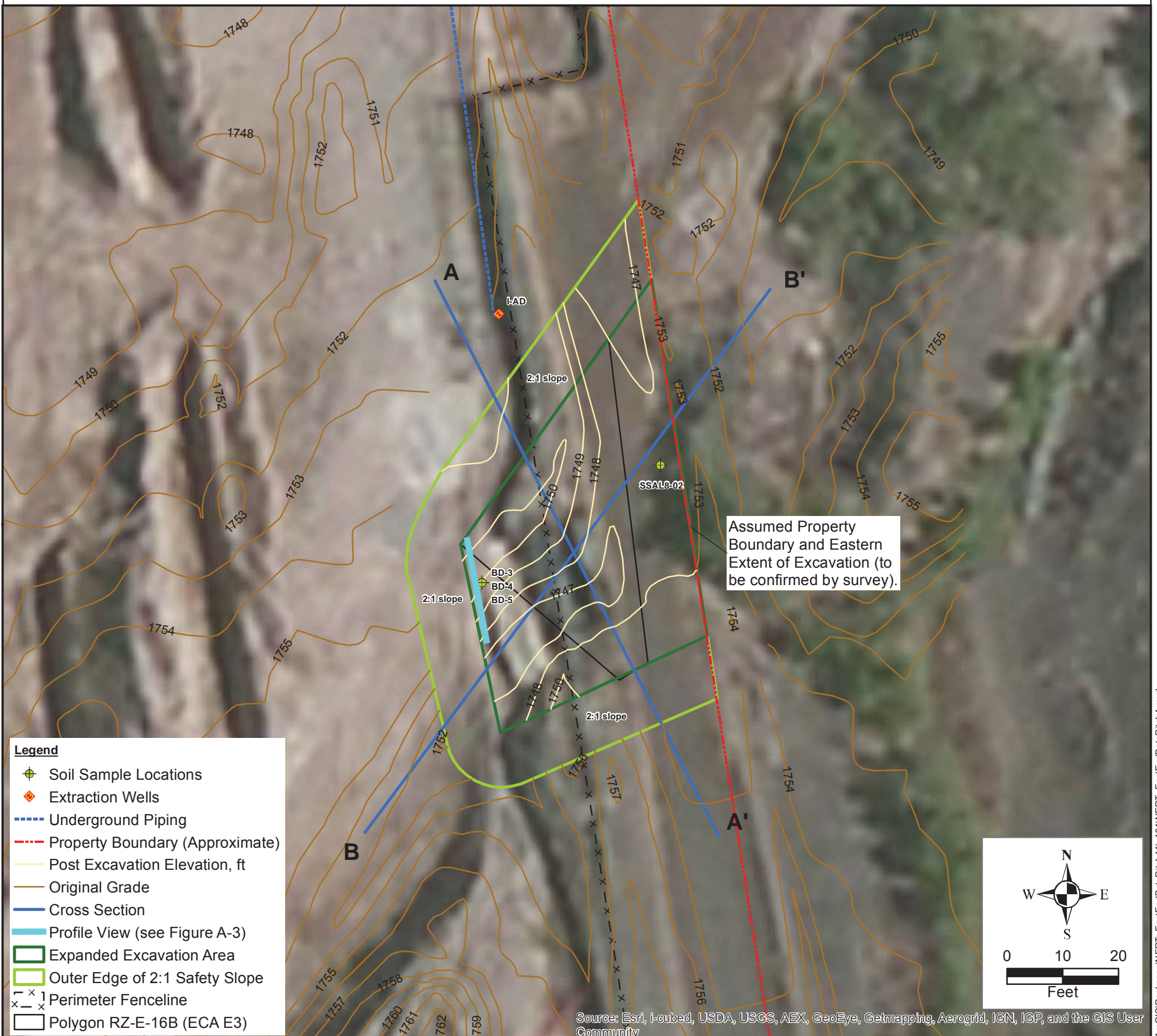
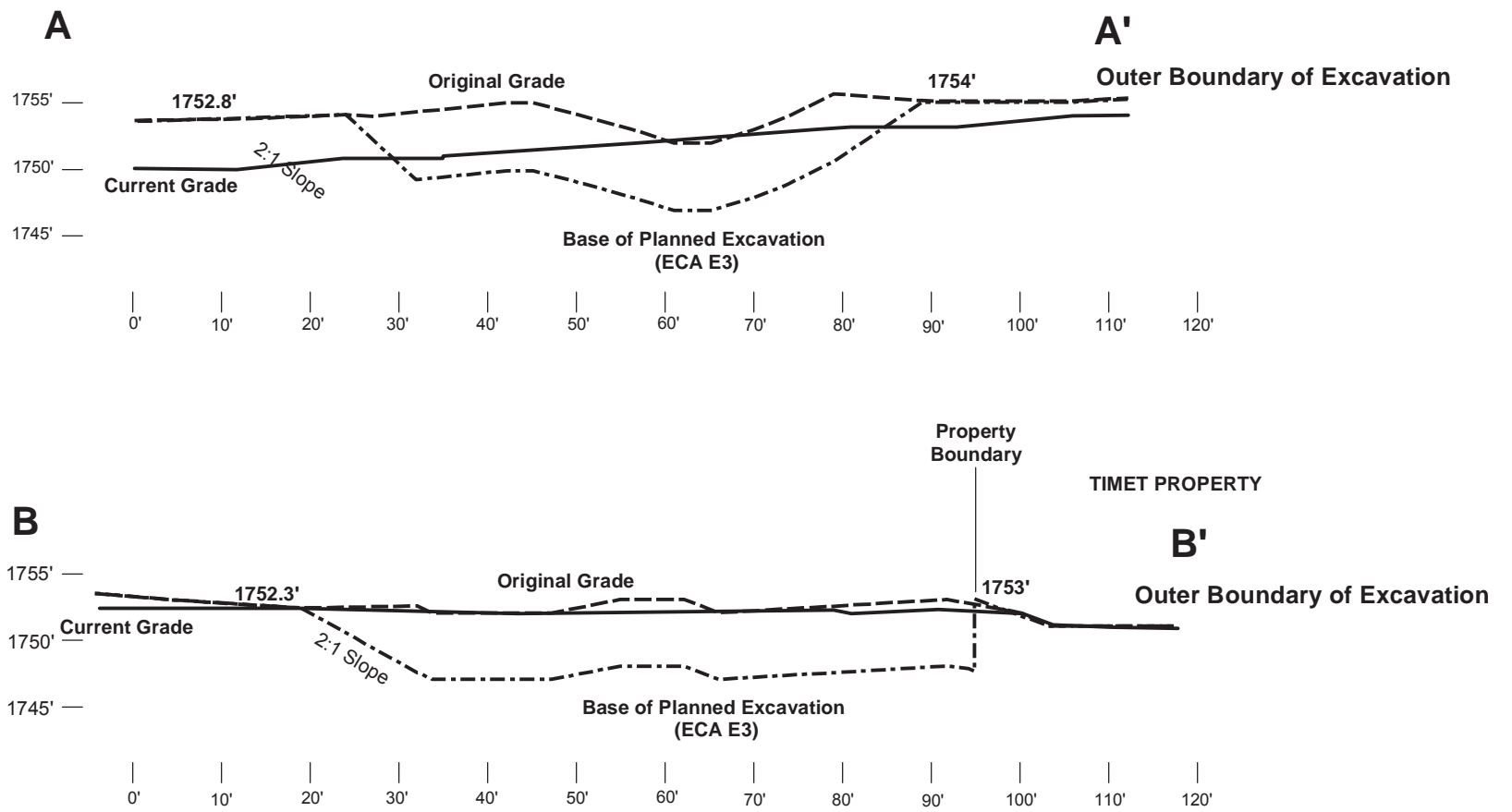
Attachments

cc: BMI Compliance Coordinator, NDEP, BCA, Las Vegas
Brian Rakvica, McGinley and Associates, Las Vegas
NDEP c/o McGinley and Associates, Reno
Michael Friend, NDEP

ec: James Dotchin, NDEP
Greg Lovato, NDEP
Stephen Tyahla, USEPA
Nevada Environmental Response Trust
Tanya O'Neill, Foley & Lardner LLP
Jeff Gibson, AMPAC
Mark Paris, BMI
Lee Farris, Landwell
Ranjit Sahu, BMI
Joe Kelly, Montrose
Paul Sundberg, Montrose

Curt Richards, Olin
Jay Gear, Olin
Ed Modiano, *de maximis, inc.*
Chuck Elmendorf, Stauffer
Nick Pogoncheff, Stauffer
George Crouse, Syngenta
David Hadzinsky, TIMET
Steve Sarandis, GEI Consultants
Kirk Stowers, Broadbent & Associates
Victoria Tyson, Tyson Contracting
Enoe Marcum, WAPA

Figure



- Legend**
- Soil Sample Locations
 - Extraction Wells
 - Underground Piping
 - Property Boundary (Approximate)
 - Post Excavation Elevation, ft
 - Original Grade
 - Cross Section
 - Profile View (see Figure A-3)
 - Expanded Excavation Area
 - Outer Edge of 2:1 Safety Slope
 - Perimeter Fenceline
 - Polygon RZ-E-16B (ECA E3)

East End of Beta Ditch Planned Excavation
 Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
1

C:\Users\gmiles\Documents\ArcGIS\Projects\NER_T\EastEndBetaDitch4.mxd

Attachment A

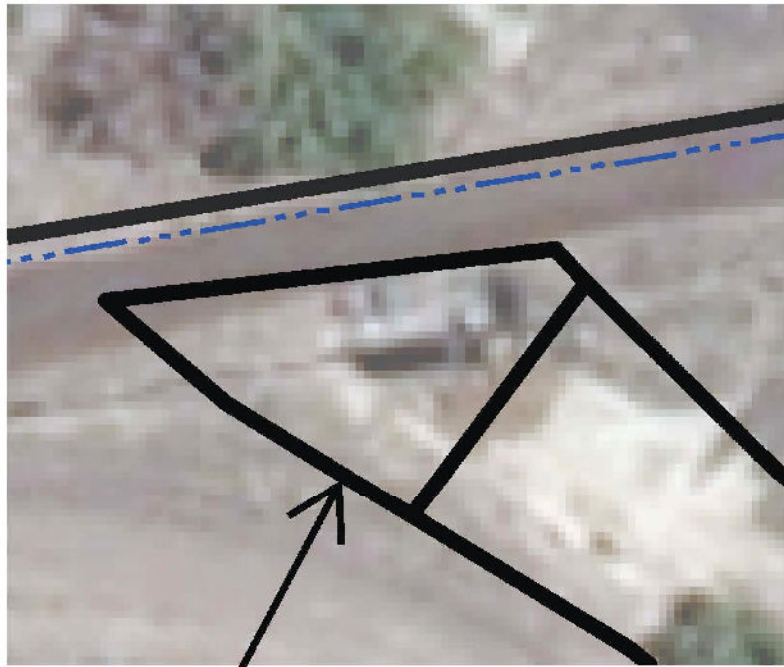
Figures A-1 through A-3, showing existing structures (to be removed) and asbestos-impacted soil layer within the planned excavation area



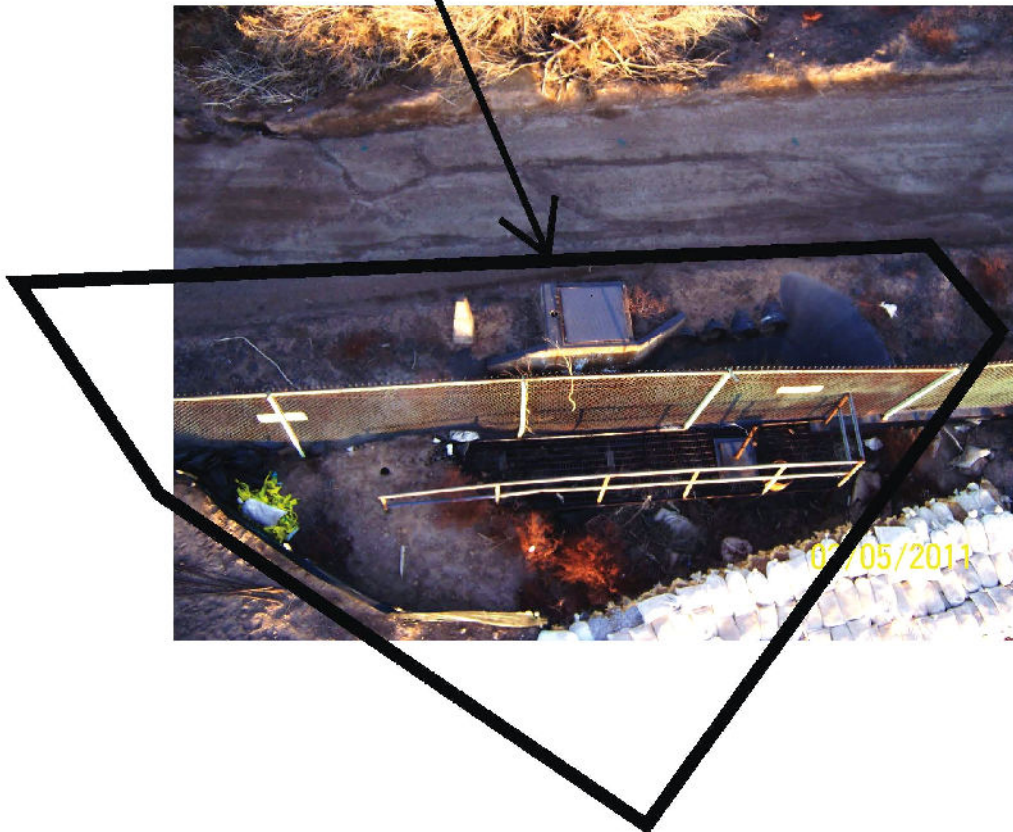
Aerial View of Structures at East End of Beta Ditch

Figure

A-1



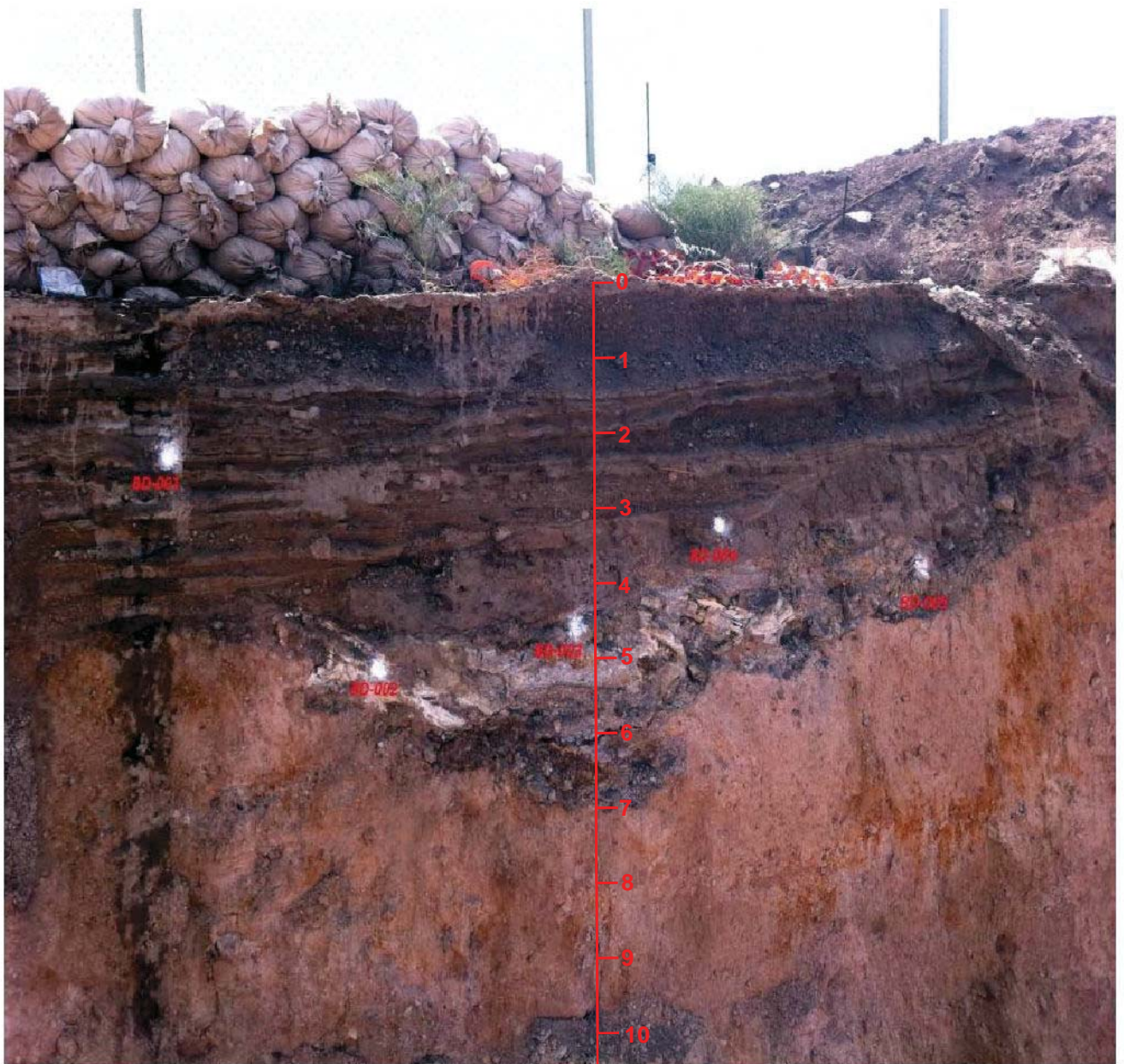
RZ-E-16B Depth of Excavation 5ft



**Position of Structures in Excavation
Polygon RZ-E-16B**

Figure

A-2



Notes:

1. Approximate vertical scale is presented in feet below ground surface.
2. Location of profile view is shown on Figure 1.



**Asbestos-Containing Soil Layer within
Planned Excavation Area**

Figure

A-3

Drafter: RS

Date: 5/7/2013

Contract Number: 21-32100E Phase E01

Approved:

Revised:

Attachment B

Letter dated June 10, 2013 from Cesare, Inc. providing recommended backfill and compaction requirements

June 10, 2013

Mr. Dan Clark
ENVIRON International Corporation
2200 Powell Street, Suite 700
Emeryville, California 94608

Subject: Grading Recommendations
East End of Beta Ditch Excavation
Nevada Environmental Response Trust Site
Henderson, Nevada
Project No: 13.1078

Dear Mr. Clark:

The purpose of this letter is to provide grading recommendations for the east end of the Beta Ditch excavation located on the Nevada Environmental Response Trust Site in Henderson, Nevada. ENVIRON International Corporation is the environmental consultant on the project and Cesare, Inc. is providing these recommendations as a geotechnical engineering consultant to ENVIRON. The east end of the Beta Ditch excavation is anticipated to be approximately 3700 square feet in area, 5 feet in depth, and is connected to an excavation project on the Timet property. The Timet project is planned to be excavated and backfilled in conjunction with the east end of the Beta Ditch excavation on the Nevada Environmental Response Trust Site.

We understand that there is no geotechnical report for the east end of the Beta Ditch excavation. The intent of backfilling the excavation is to restore the site to original site grades. There are no facilities planned for construction in this area of the Nevada Environmental Response Trust Site, other than to replace the property boundary fencing (standard chain link security fence) once the project is completed. Recommendations in this letter include subgrade preparation, backfill materials, fill placement and compaction, monitoring of fill placement, and slope recommendations.

SUBGRADE PREPARATION

After performing required excavations, the exposed soils should be observed for removal of all unsuitable deposits that include vegetation, organic material, debris and loose soils. The exposed soils in the bottom of excavations should be moisture conditioned as necessary and re-compacted. Fill materials should be placed as detailed in the Fill Placement and Compaction section of this letter.

BACKFILL MATERIALS

Granular soils should be used for backfill materials and may consist of on-site or imported soils that are free of all deleterious materials including organics and trash. Granular soils should be classified in accordance with the Unified Soil Classification System as SP, SW, SM or SC with a maximum particle size of 6-inches, less than 25 percent passing the number 200 sieve, a swell potential less than 4%, solubility less than 1.5%, and reasonably well graded from coarse to fine. The on-site materials that do not meet the requirements for use as granular soils can be blended with imported materials to meet the requirements of granular soils. Materials proposed for use as backfill soils should be tested by the geotechnical engineer prior to fill placement.

FILL PLACEMENT AND COMPACTION

Backfill materials should be moisture conditioned as required, evenly spread on a horizontal plane in 12-inch maximum loose lifts and compacted as follows:

- Granular backfill material should be compacted to a minimum 92 percent of maximum dry density and within 2 percent of optimum moisture content as determined by ASTM D1557, Method C.

MONITORING FILL PLACEMENT

The density and moisture content of compacted backfill materials should be determined by nuclear method, ASTM D6938, or sand cone method, ASTM D1556. Fill placement should be monitored and tested on a full time basis. Laboratory moisture density relationships of backfill soils should be determined in accordance with ASTM D1557, Method C at a minimum of every 25,000 cubic yards. Compaction tests should be performed on an approximate 100 foot grid with one compaction test performed every 10,000 square feet per lift of backfill area.

SLOPE RECOMMENDATIONS

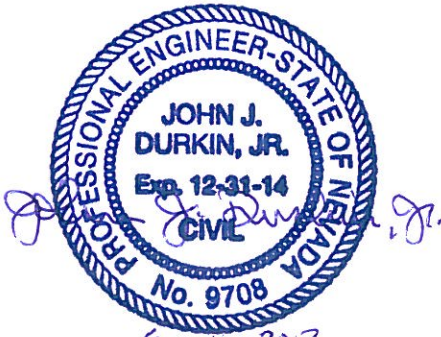
In general, native slopes should be cut back to a minimum of 1 Horizontal to 1 Vertical (1H:1V) or flatter. Vertical slopes are not OSHA safe if greater than 4 feet in height. No person should enter an excavation with slopes steeper than 1H:1V until the backfill reaches a level where the slope height is equal to 4 feet or less. Such excavations should follow OSHA standards and be backfilled immediately and in no case later than the day of excavation. A maximum 1:1 slope on temporary excavations would be the guideline for this construction. Permanent slopes should be no steeper than equivalent 3H:1V.

CLOSURE

Upon review of the Timet project backfill specifications provided to us by ENVIRON, these recommendations should generally be consistent with the GEI/Timet backfill specifications for the area adjacent to the Beta Ditch on the Timet property. ENVIRON is anticipated to provide environmental testing of soil materials as required for the east end of the Beta Ditch excavation. We understand the future use of the reclaimed areas on the site have not been determined. A site specific geotechnical investigation is recommended to be performed for any future development or improvements to determine site specific geotechnical recommendations.

We appreciate the opportunity to work with you on this project. If you have any questions concerning these recommendations, please call our office at 564-3331.

Sincerely,
CESARE, INC.



John J. Durkin, PE
Principal