

December 17, 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

Re: SMP-Required Notifications, Work Plan, Contingency Plan, and Construction Mitigation Measures Plan for the Property Line Grading / Storm Water Outfall Relocation Project Nevada Environmental Response Trust Site, Henderson, Nevada

Dear Mr. Dong:

On behalf of the Nevada Environmental Response Trust (“NERT” or the “Trust”), ENVIRON International Corporation (ENVIRON) is pleased to present these notifications and Work Plan, Contingency Plan, and Construction Mitigation Measures Plan for the planned soil-disturbing field activities to be performed by S&B Christ Consulting, LLC (SBCC) and their construction contractor, that will take place during the implementation of the approved Property Line Grading and Storm Water Outfall Relocation Project for the NERT site (the “site”) in Henderson, Nevada. This document has been prepared in accordance with the Site Management Plan, Revision 1 (SMP).¹ The Trust has been advised of and approves of this document. Approval of this document by the Nevada Division of Environmental Protection (NDEP) is required prior to initiating the work described herein.

This document addresses the following notifications and requirements of the SMP:

- Section 4.1 requires submittal of a work plan to NDEP and the Trust for approval when soil disturbing activities will be conducted within an excavation control area (ECA).
- Section 4.3 requires submittal of a contingency plan to NDEP and the Trust for approval, describing actions to be taken if previously unknown contaminated soil is encountered.
- Section 4.4 requires submittal of a Construction Mitigation Measures Plan to NDEP and the Trust for approval, describing mitigation measures to be followed to address potential construction-related impacts during earthwork or construction activities.
- Section 4.7 of the SMP describes notifications and procedures to follow in the event of an emergency project related to an accidental spill or release.
- Section 5.3 requires notification to and approval from NDEP and the Trust for work to be performed within 50 feet of any on-site groundwater extraction and treatment system (GWETS) component.
- Section 5.3.5 requires submittal of a contingency plan to NDEP and the Trust for approval, describing actions to be taken in case of accidental release of untreated groundwater due to damage to any GWETS component.

Background Information

During 2014, TIMET performed grading and fence relocation activities along the eastern Trust property line. To accomplish this work, TIMET retained Envirocon to move the property line fence to

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

the Trust-TIMET property line and complete grading and compaction activities on both TIMET and Trust property so that storm water would drain to their respective properties. The grading was to be performed in conformance with design drawings prepared by GEI Consulting Engineers and Scientists (GEI). On behalf of the Trust, ENVIRON retained SBCC to evaluate if Envirocon's grading and compaction efforts were performed in conformance with GEI's plans, and to evaluate the potential for future erosion of soil on Trust property. SBCC determined that several areas would require additional grading and compaction to reduce the potential for erosion on Trust property along the property line.

In addition, storm water from a portion of the Tronox facility around Unit Buildings 5 and 6 (and formerly from the neighboring TIMET facility) is conveyed through a subgrade pipe to Outfall 002, located along the Trust-TIMET property line. Storm water from both Trust and TIMET facilities has historically flowed from this outfall onto TIMET property where it has previously infiltrated. As conveyed to the Trust by NDEP, TIMET ceased using the conveyance along the property line and ceased discharge to Outfall 002. TIMET subsequently requested that the Trust direct storm water from Outfall 002 onto Trust property. During the past few months, SBCC has evaluated options for relocation of Outfall 002 and/or the redirection of the storm water onto Trust property. In consultation with NDEP Bureau of Corrective Actions (BCA), an option was chosen that included redirecting the outfall through a pipe onto Trust property, discharge to a new surface drainage channel, flow to an existing drainage channel, and discharge to the existing Northern Retention Basin on Trust property. Engineering design plans for the modification of the storm drainage system were requested by the NDEP Bureau of Water Pollution Control (BWPC) in a letter to the Trust dated August 21, 2014; the plans are currently under preparation by SBCC.

Anticipated Activities

Consistent with the scope of work previously approved by NDEP and under direction by SBCC, a construction contractor will implement a combined property line grading and storm water outfall relocation project. Property line grading will be performed to reduce the potential for erosion on Trust property, along the Trust-TIMET property boundary. The storm water outfall relocation project will be performed to direct storm water from the Tronox Unit 5/6 Building area to the Northern Retention Basin, on Trust property. The following two tasks will be conducted concurrently:

1. Fill material (soil, aggregate or rock mulch) will be compacted in areas where new slopes exceed GEI's design specifications. In areas with acceptable slopes and with poor compaction along the property line, additional compaction will be performed and additional fill materials will be added, if necessary. Improvements will also include placement and grading of rock mulch in areas with slopes greater than 15 percent and in areas that are currently showing signs of erosion. It is anticipated that this task will not require any excavation.
2. Pending NDEP BWPC approval of the engineering design drawings, a new storm water pipeline will tie into the existing storm water structure at Outfall 002. The new pipe will angle north toward the existing drainage channel and will transition to an open channel once the pipe daylights. The planned storm water system design along the property line will convey flow to the existing Northern Retention Basin. The current discharge location adjacent to the property line will be filled-in and graded smooth to match the adjacent grade. The existing overflow pipe that conveys flow onto the TIMET property will be permanently plugged. The excavation efforts are anticipated to extend down to 9.5 feet below ground surface (bgs); therefore, groundwater is not anticipated to be encountered during implementation of this project.

Work within Excavation Control Areas (ECAs)

Per Section 4.1 of the SMP, submittal of this document provides the required notification to NDEP and the Trust of potential soil disturbing activities within excavation control areas (ECAs). Two ECAs (D9 and D10) are present within the lateral extent of the work area, and one ECA (C17) is present adjacent to the work area, as shown in Attachment A (SBCC Figure E-1). ENVIRON also notes that one former ECA (E3) is present within the planned work area. A description of each ECA and related construction activities are as follows:

ECA D9

During excavation activities in 2011, discolored soils at a depth of approximately 9 to 10 feet bgs were encountered within portions of excavation polygons RZ-D-24, -25, and -25A. Discolored soils were removed, along with some additional deeper non-discolored soils. Following removal, confirmation soil samples were collected. Although the majority of chemical results for confirmation soil samples were below the soil screening levels, the dioxin toxicity equivalent quantity (TEQ) value in one confirmation sample (CS-D25A-2) was above the dioxin TEQ soil screening level. In addition, excavation extent samples EE-D25A-2 and duplicate EE-D25A-3 (located at the property boundary) were collected on August 3, 2011 at a depth of 11 feet bgs and analyzed for dioxins and arsenic. Results indicated that dioxin TEQ and arsenic were above soil screening levels. Approximately 10 feet of clean imported backfill material was placed in this area and orange snow fencing was used as a visual demarcation between the clean backfill material and impacted soils below. The clean backfill material provides an engineering control for ECA D9, preventing or greatly limiting the potential for contact with contaminated soil.

Since the property line grading activities are planned to occur above the current ground surface and in the clean backfill material above the impacted soils left in-place comprising ECA D9, it is anticipated that impacted soils within ECA D9 will not be disturbed during this project.

ECA D10

During excavation activities in 2011, discolored soils at an approximate depth of 1 to 3 feet bgs were discovered in the southwestern sidewall, near the southern end of excavation polygon RZ-D-25A. On May 18, 2011, excavation extent sample EE-D25A-1 was collected from the sidewall of the RZ-D-25A polygon excavation and analyzed for dioxins and arsenic. Results indicated that the concentration of arsenic was above the soil screening level. Due to the presence of an existing active groundwater extraction well and related piping, the discolored soils could not be excavated. Approximately 1 foot of native soils which are not discolored overlie the discolored soils. The native soils provide an engineering control for ECA D10, limiting the potential for contact with contaminated soil. Since the property line grading activities are planned to occur above the current ground surface and in the native soil backfill in the ECA D10 area, it is anticipated that ECA D10 will not be disturbed during this project.

ECA C17: MN-1 Pond

ECA C17 includes soil beneath the entire operating Tronox Facility MN-1 Pond area, including the pond, pond berms, and adjacent areas. Because of the MN-1 Pond obstruction, the area remains generally uncharacterized and most soils within the ECA cannot be excavated. The planned storm water outfall relocation construction activities are located adjacent to ECA C17 and the contractor will ensure that the MN-1 pond berms are not affected (graded, compacted, or excavated) during this project.

Former ECA E3: Facilities at East End of Beta Ditch

ECA E3 was remediated by ENVIRON in October 2013. Although the location of former ECA E3 is within the lateral extent of the construction activities, the impacted soils in ECA E3 were excavated and ECA E3 has been removed from the ECA list.²

If any work should need to be performed below the ground surface within the boundaries of an ECA, work will be stopped and the construction contractor will immediately contact ENVIRON. ENVIRON will evaluate the potential of disturbing soils at depth within the ECA which are either known to be or are potentially contaminated. If work must be performed in a portion of the ECA with known or potentially contaminated soils (i.e., deeper than clean backfill or native soils covering contaminated soils), ENVIRON will notify the Trust and NDEP. An amendment to this document will be prepared to include the new information and relevant procedures, including sampling and characterizing ECA soils as described in Section 4.2 of the SMP.

Contingency Plan for Work within 50 feet of a GWETS Component

Per Sections 5.3 and 5.3.5 of the SMP, this document serves as a notification and Contingency Plan to NDEP and the Trust that construction activities will be conducted within 50 feet of certain GWETS components. The purpose of the Contingency Plan is to describe the actions to be taken in case of accidental release of untreated groundwater due to damage to any GWETS component. The GWETS components within 50 feet of the work area include the Interceptor Well Field (IWF) pipeline; extraction wells I-K, I-AC, and I-AD; and monitoring wells M-74, M-132, M-133, M-165, M-177, M-68, M-180, M-181, M182 and M-19. Attachment A provides a figure which shows the locations of activities in relation to the 50-foot radii around on-site GWETS components.

Precautions

Construction personnel and subcontractors will implement the following precautions and procedures during implementation of the construction activities:

- Daily health and safety “tailgate” meetings will be held prior to the start of field work. In addition to discussions of health and safety hazards and preventions, the names and mobile phone numbers for all field staff and subcontractors will be confirmed. Clear lines of communication will be established each day to ensure a swift and coordinated response to a release.
- Envirogen Technologies, Inc. (ETI), which is the current operator of the GWETS, will be advised of work that may impact their operations (i.e., work within 50 feet of any GWETS component).
- Protective barriers (e.g., barricades, traffic cones/pylons, caution tape, etc.) will be used as necessary when activities that involve the use of heavy equipment (i.e., backhoes, excavators) are performed near exposed wells or other exposed GWETS infrastructure.
- A private utility locator will clear each excavation cut area for underground utilities and GWETS components prior to conducting any intrusive activities.
- Ground Breaking Permits will be obtained from Tronox prior to any excavation work commencement.
- SBCC will be on-site during mobilization of the grading and excavation activities to verify the location of GWETS components, including subsurface utilities, and to direct the subcontractor

² ECA E3 will be removed from the SMP during the next update of the SMP; anticipated to be during 2015.

to prevent accidental damage to GWETS components. SBCC will consult with ETI as necessary to identify locations of GWETS components (above and below ground surface).

- Soil excavation in the work area will not commence until utility clearance activities, including completion of a private utility locator survey, obtaining Tronox Ground Breaking Permits, and review of information available from ETI, are complete. Hand tools will be used for excavation and grading within six feet of any identified GWETS components or subsurface utilities.
- Work areas will be delineated and monitored as necessary to avoid unauthorized entry during construction work.

Spill Response Procedures

- The primary response action for a release of untreated groundwater during construction activities will be to shut down and contain any uncontrolled flow. ETI will be notified immediately by phone or in person of the need to shut down components of the GWETS due to uncontrolled flow. ETI personnel will have primary responsibility for shutting down the corresponding GWETS components.
- A spill response kit will be readily available during construction activities and utilized in the event of a release of untreated groundwater.
- As described in the SMP, if construction activities result in the release of untreated groundwater, the construction contractor will immediately notify ENVIRON and SBCC. ENVIRON will immediately notify Weiquan Dong of NDEP at (702) 486-2850, extension 252 and Andrew Steinberg of the Trust at (312) 498-2800 of the release and report on the status of the GWETS operation. If any GWETS components are shut down due to damage to the system(s) or to control the release of untreated groundwater, SBCC will provide NDEP, the Trust, and ETI with a written explanation for the shutdown.
- If the construction activity results in the release of untreated groundwater, the release will be reported to the NDEP 24-Hour Spill Notification Line, if required by NAC 445A.345 to 445A.348.

Construction Impact 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 soil stockpiles that potentially contain contaminants of potential concern;
- Tracking of soil off the site on the wheels or bodies of construction or transportation vehicles or equipment; and
- Transporting of sediments from the site in surface water run-off.

Under the direction of SBCC, the construction contractor will implement the following mitigation measures to control the potential impacts of these activities.

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). Because soil disturbing or construction activities will exceed 0.25 acres in overall area for this project, SBCC must obtain a Dust Control Permit, which must include a Dust Mitigation

Plan, from the DAQ, per Section 94 of the Clark County Air Quality Regulations. The Dust Control Permit, including the Dust Mitigation Plan, will be provided to the Trust and NDEP prior to field work commencement.

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, at a minimum:

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

Dust Monitoring

During all work, the construction contractor will monitor for 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 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) 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. A Dust Control Permit from Clark County is required and all permit requirements will be followed. All field activities that have the potential to generate dust will include dust control BMPs and will be conducted in conformance with the County's regulations for prevention of fugitive dust emissions from the site.

Track-Out Mitigation and Equipment Decontamination

Tracking of soils outside of the work area will be mitigated by equipment and vehicle decontamination. In general, dry decontamination methods will be used including brushing, scraping, or vacuuming of equipment bodies, wheels or treads, and vehicle tires. Scrapings will be maintained within the work 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, and rinse water will be contained within these areas.

Surface Water Run-Off Mitigation

U.S. Environmental Protection Agency (EPA) regulations [40 CFR 122.26(b) (15)] require National Pollutant Discharge Elimination System (NPDES) storm water discharge permit coverage for discharges from construction activities that disturb one or more acres. Since this construction project will affect an area greater than one acre, SBCC will submit to Notice of Intent (NOI) to NDEP for coverage under the Construction Storm Water General Permit NVR100000. As a requirement of the Construction Storm Water General Permit, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented during this project. The following best management practices (BMPs) are anticipated to be included in the SWPPP and implemented to control potential storm water, dust

control water, and sediment run-off from the site. Additional control measures may be included in the SWPPP.

- 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 clean fill dirt stockpiles and excavated clean soil stockpiles on plastic sheeting within a silt fence.
- Covering of soil stockpiles with plastic sheeting when not actively being excavated or loaded.
- If previously unknown contaminated soils are to be excavated, they will be loaded directly into a plastic lined roll-off bin and covered in plastic sheeting pending analytical testing. Characterization, management and disposal of previously unknown contaminated soil are described further in Section 4.3 of the SMP.
- Daily checks of weather forecast and communication of predicted rain events by the construction contractor.

Previously Unknown Contaminated Soil

Per Section 4.3 of the SMP, SBCC or the construction contractor will notify ENVIRON if any discolored, oily or odorous soil is encountered, and ENVIRON will call the NDEP 24-Hour Spill Notification Line. ENVIRON will notify the Trust and NDEP BCA within 24 hours, as required. If odorous soil is encountered, the contractor will stop work and inform ENVIRON of the situation. ENVIRON will field screen with a photoionization detector and will collect a sample(s) of any discolored or oily soil as needed to characterize the potentially impacted soil, as described in Section 4.3 of the SMP. Sampling and further characterization and handling of the potentially impacted soil will be managed as described in Section 4.3 of the SMP.

Emergency Projects

In the event of an accidental spill or release that could qualify as an emergency project, ENVIRON will prepare an Emergency Project notification for approval by NDEP. Upon approval of the Emergency Project status by NDEP, a work plan for clean-up will be prepared and submitted in general accordance with Section 4.7 of the SMP.

Request for Approval

This Work Plan, Contingency Plan, and Construction Mitigation Measures Plan provides information required by the SMP for implementation of the Property Line Grading and Storm Water Outfall Relocation Project at the NERT site. Your review and approval of this work plan is requested and appreciated. Please contact John Pekala at (602) 734-7710 or jpekala@environcorp.com with any comments or questions on this document. ENVIRON will address any concerns you have regarding the information herein, so that NDEP approval of this document can be provided prior to initiation of construction activities.

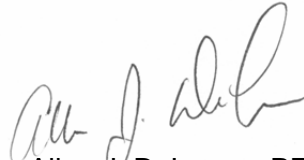
Closure

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

Sincerely,



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



Allan J. DeLorme, PE
Principal

Attachment A: SBCC Figure E-1

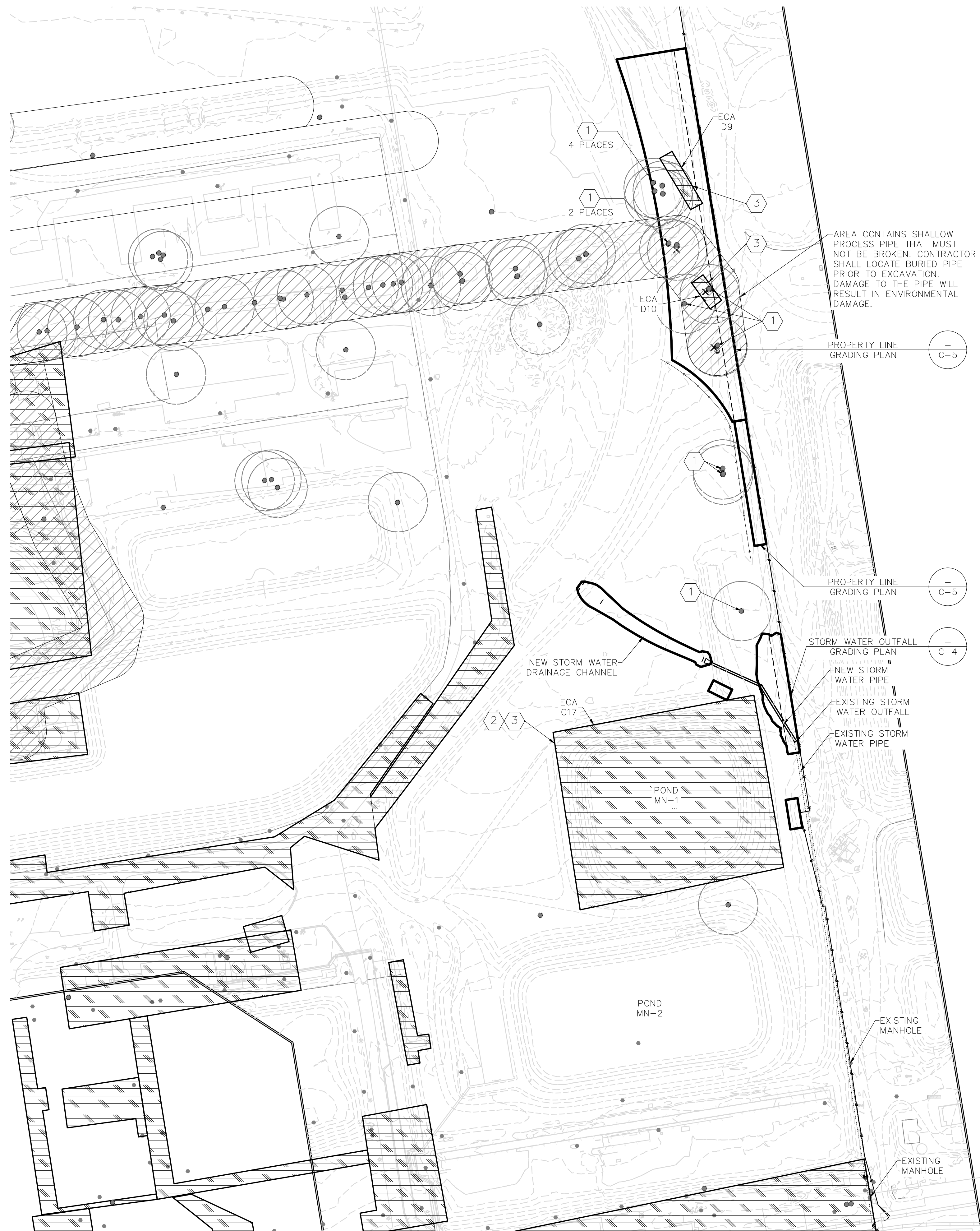
cc: BMI Compliance Coordinator, NDEP, BCA, Las Vegas

ec: James Dotchin, NDEP
Greg Lovato, NDEP
Wayne Klomp, NDEP
Nevada Environmental Response Trust
Tanya O'Neill, Foley & Lardner LLP
Derek Amidon, Tetra Tech



Attachment A

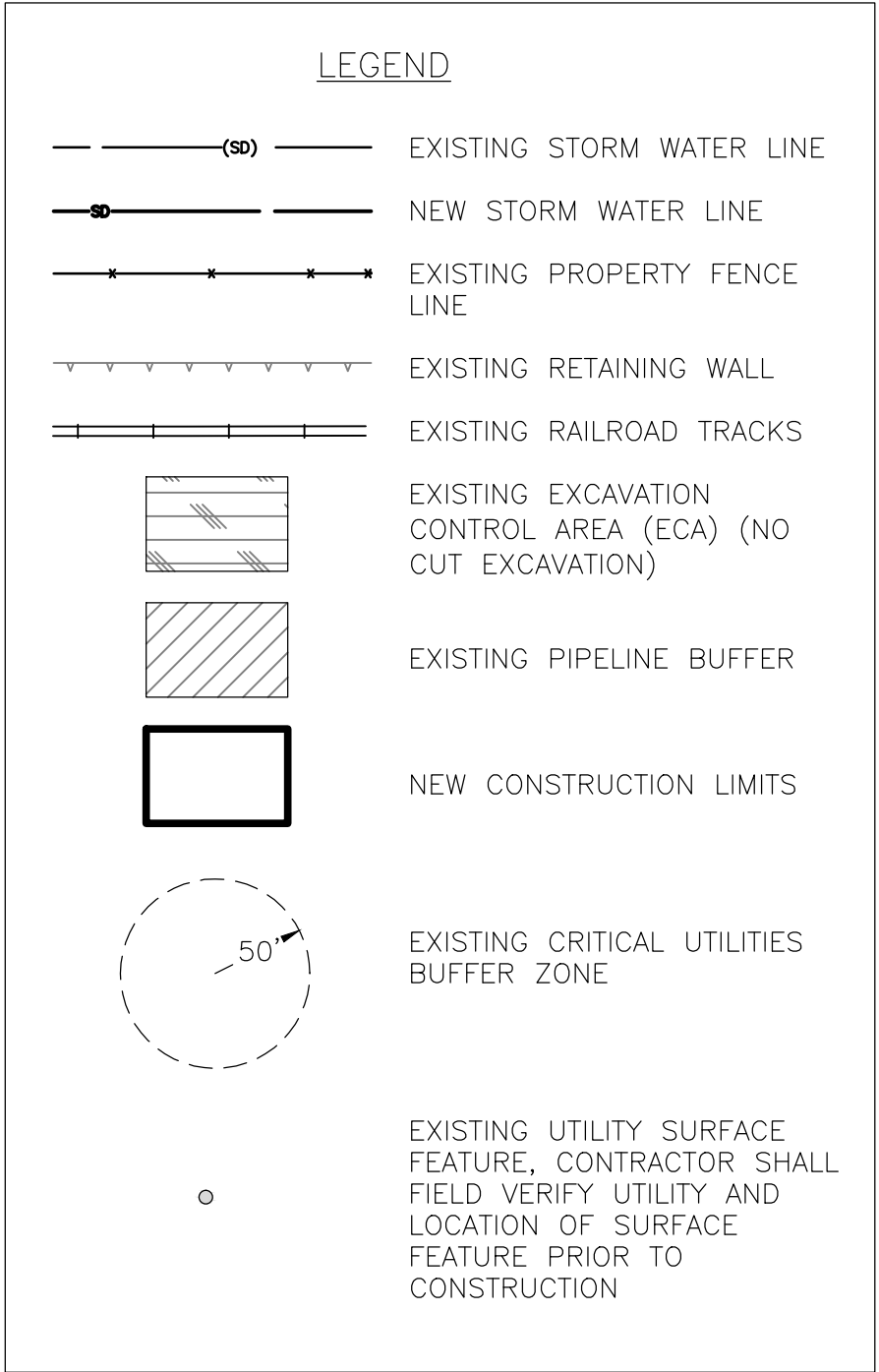
SBCB Figure E-1



- GENERAL NOTES:**
- CONTRACTOR SHALL DEVELOP A HEALTH AND SAFETY PLAN THAT COMPLIES WITH THE SMP.
 - CONTRACTOR SHALL IMPLEMENT DUST CONTROL REQUIREMENTS IN ACCORDANCE WITH CLARK COUNTY REQUIREMENTS AND THESE DESIGN REQUIREMENTS
 - CONTRACTOR SHALL IMPLEMENT SWPPP REQUIREMENTS IN ACCORDANCE WITH NDEP REQUIREMENTS AND THESE DESIGN REQUIREMENTS.
 - GROUNDWATER IS NOT ANTICIPATED, BUT IF ENCOUNTERED, CONTRACTOR SHALL NOTIFY ENGINEER AND ENVIRON AND PREPARE AND SUBMIT A DEWATERING PLAN TO ENGINEER FOR REVIEW. WATER SAMPLING AND A NDEP DISCHARGE PERMIT WOULD BE REQUIRED.
 - TRACK-OUT MITIGATION AND EQUIPMENT DECONTAMINATION. TRACKING OF SOILS OUTSIDE OF THE WORK AREA WILL BE MITIGATED BY EQUIPMENT AND VEHICLE DECONTAMINATION. DRY DECONTAMINATION WILL BE USED INCLUDING BRUSHING, SCRAPING, OR VACUUMING OF EQUIPMENT BODIES, WHEELS OR TREADS AND VEHICLE TIRES. SCRAPINGS WILL BE MAINTAINED WITHIN THE WORK AREA. CLOSE ATTENTION WILL BE PAID TO THE EFFECTIVENESS OF DRY DECONTAMINATION METHODS, AND IF DRY METHODS ARE NOT EFFECTIVE, WET DECONTAMINATION METHODS, INCLUDING PRESSURE WASHING OR STEAM CLEANING, WILL BE EMPLOYED. ANY WET DECONTAMINATION WILL BE PERFORMED WITHIN THE WORK AREA, AND RINSE WATER WILL BE CONTAINED WITHIN THESE AREAS.
 - CONTRACTOR SHALL SUPPLY ENGINEER WITH COPIES OF ALL PERMITS PRIOR TO CONSTRUCTION FOR INCLUSION IN WORK PLAN.
 - CONTRACTOR SHALL COMPLY WITH EXCAVATION NOTES ON SHEET G-3.
 - ORANGE SNOW FENCE IDENTIFIES KNOWN CONTAMINATED SOIL AREAS. HOWEVER, SNOW FENCE IS NOT PRESENT AT ALL CONTAMINATED SOIL AREAS.

CONSTRUCTION NOTES:

- PROTECT EXISTING WELLS IN PLACE. USE K-RAILS TO CREATE A 6' BUFFER COMPLETELY SURROUNDING THE WELLS. ALL GRADING WITHIN BUFFER TO BE HAND GRADED.
- LIMITS OF CONSTRUCTION SHALL NOT ENCR OACH UPON EXCAVATION CONTROL AREA C17. ALL TRENCHING, SPOILS STOCKPILING, AND GRADING ACTIVITIES TO REMAIN OUTSIDE OF EXCAVATION CONTROL AREA.
- CONTRACTOR SHALL NOT CUT OR REMOVE SOIL IN EXCAVATION CONTROL AREAS.



Project Title: **STORM WATER OUTFALL RELOCATION AND PROPERTY LINE GRADING**
 ENVIRON INTERNATIONAL CO.
 NEVADA ENVIRONMENTAL RESPONSE TRUST SITE
 510 4TH STREET, HENDERSON, NV

Sheet Title: **SMP COMPLIANCE PLAN**
 Civil Engineer: **S&B CHRIST CONSULTING, LLC**
 675 RESEARCH & CIVIL ENVIRONMENTAL ENGINEERING
 2500 S. HARRIS AVENUE, SUITE #130
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 OFFICE: (702) 202-6004
 S&B CHRIST CONSULTING.COM

Revisions:	#	Description	Date

Contract # 21-34800G-G10
 Designed by: D. Duranleau
 Drawn by: D. Duranleau
 Checked by: J. Tull
 Reviewed by: B. Christ
 Approved by: B. Christ
 Date: 2014 DEC 11
E-1
 Sheet 13 of 14

