

**REMEDIAL ACTION COMPLETION REPORT  
PHASE I REMEDIAL ACTION CONSTRUCTION ACTIVITIES  
CENTRAL FARMERS FERTILIZER FACILITY  
IN GEORGETOWN CANYON, IDAHO  
NU-WEST MINING, INC and  
NU-WEST INDUSTRIES, INC.**



January 28, 2010

Prepared by:



GLOBAL ENVIRONMENTAL TECHNOLOGIES L.L.C.

SALT LAKE CITY, UTAH



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Mitchell Hart, P.E.  
Manager, Mining Projects and Remediation

January 28, 2010

Mark Jeffers, P.G.  
Idaho Department of Environmental Quality  
1410 North Hilton  
Boise, Idaho 83706

Via E-Mail

Reference: Remedial Action Completion Report - Phase I Remedial Action Construction Activities, Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho dated January 28, 2010.

Dear Mark:

Nu-West Industries, Inc. is pleased to submit the Remedial Action Completion Report for the Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho. This submission is required by the Consent Judgment, Part V section 13.E.2. and is submitted in accordance with the 90-day period scheduled in the May 11, 2009 Draft Final Remedial Action Plan (RAP) that was approved by the Idaho Department of Environmental Quality (IDEQ) for the Phase I activities on July 7, 2009. Site remedial work during 2009 was carried out in accordance with the IDEQ RAP approvals and the approved specifications and engineered drawings provided by Norwest Corporation in June and July 2009. The Remedial Action Completion Report provides stamped as-built final construction drawings of the site remedial actions and remedy certification. The report details Phase I remedial site construction and provides the supporting documentation as required by the Consent Judgment. The entire report is also provided on CD for your reference.

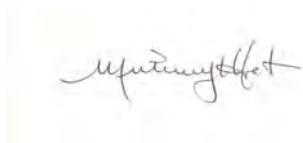
With the completion of Phase I construction, Nu-West will focus on monitoring and maintenance of Phase I remedial actions, and is proceeding with RAP Phase II design, construction and contracting. Phase II of the RAP includes rerouting Georgetown Creek from the corrugated metal pipe (CMP) beneath the site into an open bypass channel which is

scheduled to occur during 2010.

If you have any questions regarding our responses, please contact me at 208-547-3935, x13 or on my cell phone (303) 883-1184.

Sincerely,

**Nu-West Industries, Inc.**

A handwritten signature in black ink, appearing to read "Mitchell J Hart", is centered on a light-colored rectangular background.

Mitchell J Hart, P.E.  
Manager, Mining Projects and Remediation

cc:

Doug Tanner - IDEQ  
JB Brown, P.G. – GET  
Dean Miller – DGS Law  
James Williams – Nu-West  
Tracy Sizemore - Agrium  
Cindy Emmons - Norwest  
Kevin Ritter / Paul Kos, P.E. - Norwest



GLOBAL ENVIRONMENTAL TECHNOLOGIES L.L.C.

January 28, 2010  
Nu-West  
3010 Conda Road  
Soda Springs, Idaho 83276  
Attn: Mr. Mitchell J. Hart, P.E.

**RE: TRANSMITTAL: REMEDIAL ACTION COMPLETION REPORT - PHASE I  
REMEDIAL ACTION CONSTRUCTION ACTIVITIES CENTRAL FARMERS  
FERTILIZER FACILITY IN GEORGETOWN CANYON, IDAHO NU-WEST  
MINING, INC and NU-WEST INDUSTRIES, INC.**

Dear Mitch:

Please find transmitted the Remedial Action Completion Report for the Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho. This report addresses the requirements of the Consent Judgment, Part V section 13.E.2. and is being transmitted within the required 90-day period that was initiated at the time of construction completion.

The Remedial Action Completion Report provides the stamped as-built final construction drawings of the site remedial actions and includes the remedy certification. The report formally documents the accomplishment of Phase I remedial site construction and cleanup objectives in order to achieve goals specified in the approved Draft Final Remedial Action Plan (RAP). Completed work during 2009 was carried out in accordance with approvals from the Idaho Department of Environmental Quality (IDEQ) for the RAP and the engineered drawings provided by Norwest Corporation in June and July 2009. The RAP was submitted on May 11, 2009 and was approved by the IDEQ for Phase I construction on July 7, 2009.

Appendices to the report include: 1) photographic and daily documentation of the work, 2) documentation of QA/QC activities, 3) the results of analyses and testing during the remedial construction, 4) monitoring results, 5) a summary of investigation conducted during the RAP with detailed surveyed maps of those investigations, and; 6) site operation, maintenance and monitoring plan for the Phase I remedy to ensure long-term success.

We sincerely appreciate the opportunity to work with you on this project. If you have any questions regarding this transmittal, please contact us.

Very truly yours,  
Global Environmental Technologies, LLC

John S. Brown, P.G. Principal/Owner  
Enclosures – 8 hard report copies, 8 disk copies

**REMEDIAL ACTION COMPLETION REPORT PHASE I REMEDIAL ACTION  
CONSTRUCTION ACTIVITIES CENTRAL FARMERS FERTILIZER FACILITY  
IN GEORGETOWN CANYON, IDAHO NU-WEST MINING, INC and  
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## Certificate of Engineer

I, Paul J. Kos, certify that all the information presented in the following report and drawings are true and correct to the best of my knowledge and information.

| <b>Item</b> | <b>Date of Preparation</b> | <b>Title</b>   |
|-------------|----------------------------|--|
| Report      | January 29, 2010           | Remedial Action Completion Report Phase I<br>Remedial Action Construction Activities<br>Central Farmers Fertilizer Facility in<br>Georgetown Canyon, Idaho |
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Paul J. Kos, P.E. – State of Idaho P.E. No. 13611  
January 29, 2010

## 1.0 INTRODUCTION

### 1.1 General

The Remedial Action Completion Report (RACR) for the Central Farmers Fertilizer facility located in Georgetown Canyon, Idaho formally documents the accomplishment of remedial construction and cleanup objectives in order to achieve short term and long term goals specified in the approved Draft Final Remedial Action Plan (RAP) (GET, 2009) for the site. Completed work was carried out in accordance with the Idaho Department of Environmental Quality (IDEQ) approvals of the RAP and the engineered issue for bid (IFB) and issue for construction (IFC) drawings. These drawings were supplied to IDEQ following the RAP submittal at the completion of the Phase I engineering design for the site remedial actions. The RAP was submitted in May 2009 and approved by the Idaho Department of Environmental Quality (IDEQ) for Phase I construction on July 7, 2009. Phase I of the site remedial construction included:

- Site dewatering;
- Slurry pit closure;
- Furnace closure;
- Clarifier closure, and;
- Ore removal, site restoration and capping in Phosphoria Gulch.

During 2010, Phase II of the remedial activities at the site will include the construction of the CMP bypass stream channel. The Phase II construction activity will daylight and restore Georgetown Creek through the site at the surface and will address the abandonment of the 60/48-inch corrugated metal pipe culvert that currently conveys the creek beneath the site.

This RACR contains summary information about each of the specific site facilities that were closed under these actions, applicable remedy objectives required by the Consent Judgment, construction and dewatering activities carried out to achieve remediation

objectives, summary information on construction quality assurance (CQA), and a certification statement by a professional engineer registered in the state of Idaho. Document submittal and contents of the draft as-built report (RACR) was specified in the Consent Judgment and requested for delivery to the IDEQ following completion of the Phase I remedial actions within 90 days. Specifically, this document presents:

- Results of investigations and testing during the remedial actions;
- Detailed as-built drawings of the completed work, documentation of ore removed and fill volumes at the clarifier, slurry pit and furnace;
- Discussion of activities completed, including deviations from the RAP requirements;
- Detailed sample or materials testing information, including location, material types evaluated, analytical methods, Quality Assurance/Quality Control (QA/QC) results, conformance of the construction with CQA performance standards, and sample analytical results obtained;
- Documentation of work, including photographs, logs, and monitoring records; and
- Remedy certification by a professional engineer.

Ground and surface water results from the sampling events in October 2009 are not presented in this document. These results will be compared with previously collected data and will be presented in the annual comprehensive ground and surface water report in March 2010. Routine semiannual sampling of the site occurred during the 2009 remedial construction prior to completion, and therefore, it is not anticipated that the effects from remedial construction will be noted until subsequent sampling events are completed.

The Appendices to this report include:

- Appendix A - This appendix presents selected Photographic documentation of Phase I construction between June 29 and October 30, 2009;
- Appendix B - This appendix contains material submittals, material specifications, testing data, materials certifications, certificates of analysis, laboratory test

results, material delivery inspection and inventory checklists, packing checklists and bills of lading that were required by the RAP construction quality assurance (CQA) plan;

- Appendix C - This appendix includes compaction testing data summaries and results from the Troxler that was completed by Harper-Leavitt Engineers at the slurry pit, furnace, bulk fill north of the furnace, clarifier and ore cover;
- Appendix D - This appendix contains the required CQA data related to liner construction, including CQA certificates of acceptance of subsurface conditions and liner certificates of acceptance between the contractors to ensure that the required conditions were met to proceed with capping construction, liner panel placement forms, tensiometer peel calibration certificates, trial weld data, panel seaming forms, liner non-destructive testing forms, destructive testing forms and destructive testing results, and liner repair reports;
- Appendix E - This appendix presents the progress charts and reports that were transmitted to the IDEQ during construction and the supervisors daily reports that describe the day by day activities of the Phase I construction between July 6 and October 30, 2009;
- Appendix F - This appendix includes the documented daily air monitoring logs required by the site health and safety plan;
- Appendix G - This appendix includes the results from exploratory test pits at the slurry pit and ore cover areas that were completed during Phase I to ensure that the wastes in these areas were completely capped, and;
- Appendix H - This appendix presents the site operations, monitoring and maintenance plans for the actions completed for the Phase I construction.

As detailed in the RAP, a long-term O&M plan for site inspection, monitoring and maintenance will be provided following the completion of the Phase II work that includes the construction of the CMP bypass stream channel.

## 1.2 Site History

### 1.2.1 Regulatory Background

On September 19, 2001, the IDEQ conducted a site visit to the Georgetown Canyon property. Based on the findings of this site visit and other information provided to the agency, the IDEQ expressed concern that there may have been a potential for a release

from the former Central Farmers site to the environment. Potential contamination at the former Central Farmers Fertilizer Facility was alleged in a preliminary assessment completed by the IDEQ on September 19, 2001. This assessment is provided as an attachment to the initial site work plan (GET, 2004).

Nu-West Industries, Inc. and Nu-West Mining, Inc. (Nu-West) acquired ownership of the Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho as a result of bringing the Beker Industries assets out of bankruptcy. During 2002, Nu-West and IDEQ negotiated a Consent Judgment pursuant to Idaho Code § 39-101 *et seq.*, [Idaho Environmental Protection and Health Act (EPHA)], and Idaho Code § 39-4401 *et seq.*, [Idaho Hazardous Waste Management Act (HWMA)] enforceable under Idaho Code §§ 39-108 and 39-109, and the HWMA, Idaho Code §§ 39-4413 and 39-4414. Judge Harding of the Bear Lake County Court signed the Consent Judgment on May 28, 2003.

### 1.2.2 Historical Site Use

Ore processing operations at the Central Farmers Fertilizer Company plant took place approximately between 1957 and 1964. Figure 1-1 shows the site location. The site is located seven miles to the east of Georgetown in Bear Lake County, Idaho, as shown on Figure 1-1. The site is located within Georgetown Canyon, in the general areas of the NW ¼ Sec. 25 and the SW ¼ Sec. 24, T. 10 S., R. 44 E, in Bear Lake County.

Figure 1-2 shows the locations of where the site features were existing during plant operations and the local geological features. Building structures shown on this figure were removed prior to Phase I construction. Figure 1-3 is an aerial site view that shows many of the site features that were existing in 1965. Plant construction started with an electric furnace and kiln in 1957. The fertilizer plant facility consisted of a beneficiation plant, a 35,000 kW electric arc furnace, phosphoric acid plant, and fertilizer processing plant. A railroad spur was constructed from the main line near Georgetown to the processing facility in 1957. The plant was completed in May 1959.

Central Farmers Fertilizer Company mined phosphate ore in Georgetown Canyon during the operation of the fertilizer plant facility. A conveyor belt was used to move ore from the open pit to the processing plant. Open pit mining was initiated in June 1958 to the east of the plant facility. A new open pit was opened in 1960. Open pit mining continued until 1963. In 1964, ore production from the mine was halted. In July, 1964, the El Paso Natural Gas Products Company bought the Georgetown Canyon phosphate properties from the Central Farmers Fertilizer Company (Hansen, 1965) and in October, closed the plant facility and moved parts of the plant to Conda where the company was building a new phosphate processing plant (USGS, 2000).

The Georgetown Canyon Mine has not produced phosphate ore since 1964. Approximately 75,000 cubic yards of low-grade ore remained at the site prior to October 2008. About 22,500 yards of this ore was processed at a phosphate plant in Soda Springs, Idaho in 2008 and 2009. About 37,200 yards of ore were utilized in the Phase I remedial construction. The former facility property, including Georgetown Canyon Mine remains under the ownership of Nu-West.

### 1.3 Previous Cleanup Actions

During August 1996, two underground storage tanks (USTs) were removed from the site. In 1997, approximately 1,340 yards of petroleum-contaminated soils were removed from the tank excavation (GET, 2009). During the summer of 2001, Nu-West commenced and completed demolition of the remaining fertilizer plant buildings, tanks, and structures as part of complete site closure. Much of the material was scrapped and recycled. Some of the remaining construction and demolition waste was impounded and covered on site below the calcine bins. A number of concrete foundations remained on site, including those of the TSP storage building, maintenance shop, calcine bins, beneficiation building and kiln scrubber. The site surface was reclaimed using native soils to cover the plant surface soils and revegetated.

#### 1.4 Site Facility Closure History

Most of the facilities were dismantled and removed and covered prior to the site remediation. A number of the buildings were removed in 2001. Site features remaining that were addressed in the Phase I remedial construction are discussed below.

##### ***Slurry Pit***

The slurry pit received slurry from the furnace during the plant operations between about 1957 and 1964. The impoundment was covered when the operations were discontinued or at some time thereafter. The area of the slurry pit was originally estimated to be approximately 38,650 square feet prior to the site investigation (SI, GET 2006) although test pit investigations completed in August 2008 and again during the Phase I construction in July 2009 following site dewatering indicated the extent of the slurry waste was within a footprint of about 63,000 square feet.

Prior to Phase I remedial construction, the slurry pit cover was several feet above surrounding grade near the south end of the impoundment, sloping gently to the north and the east on the cover surface. The slurry pit cover contained sparse grasses, sweet clover, alfalfa, lupine and other native plants, willows, a number of aspen trees, and stockpiled armoring rock material and slag. The cover indicated ubiquitous signs of animal burrowing activity. Surface water was present immediately to the east of the facility throughout much of the year due to run-on from Tank Spring originating east of the facility. During the runoff period following snowmelt (prior to the Phase I remedial cover placement) leakage was noted from the west side of the slurry pit that resulted in localized discoloration of the soil. Past leakage from the impoundment cover suggested a low permeability on the bottom of the slurry pit and a cover of larger permeability.

Thickness of the original slurry pit cover was not determined prior to remedial construction. Elemental phosphorus was intercepted during the SI at shallow depth during drilling near the north end of the slurry pit, suggesting that the cover thickness

was less than one foot.

### ***Furnace***

During plant operations, the furnace produced the elemental phosphorus that was utilized in the production of the triple superphosphate fertilizer. The furnace building remained idle until it was removed in 2001. The remaining furnace feature (prior to Phase I remedial construction) was a circular reinforced conical flat-topped steel structure with blind flanged pipes on the top. The furnace structure is known to contain flammable elemental phosphorus. As a result, the furnace was filled approximately 80 percent with silica sand and all openings were welded shut during the demolition activities that occurred in 2001.

Approximately 11 feet of the steel structure was exposed between the elevations of approximately 6980 to 6991 feet amsl. Approximately 5,700 yards of soils that were surrounding the furnace prior to Phase I were placed in 2001. Preceding cover placement, the soils surrounding the furnace sloped away from the structure and indicated settlement and voids in a few locations adjacent to the furnace.

### ***Clarifier***

The clarifier was utilized in the plant operations to cool and settle sediments and received scrubbed wastes and other plant liquid obtained from the mineral beneficiation of phosphate ores in the process of making elemental phosphorus. Water was transported to the clarifier from above grade piping.

Just prior to closure, the clarifier remained a round open-topped tank with concrete walls and a clay floor that was partially filled by water, soil and sediment. The size of the clarifier structure was approximately 210 feet in diameter within the concrete ring, and approximately 9 to 10 feet in depth below the ring. Prior to site remedial construction in the spring of 2009, there was about 9 feet of water in the clarifier center.

Clarifier water elevations at that time were estimated to be about 6028 ft amsl.

No piping infrastructure was identified within the clarifier, either entering or exiting the structure. Surface water was not observed to either enter or exit the structure during the SI (GET, 2008) or during remedial construction. The bottom of the clarifier pond contained about 1 foot of extremely fine sediment. Analysis of this sediment by the Toxic Characteristic Leaching Procedure (TCLP) showed that the sediment metal content was not considered hazardous. However, the small amount of phosphorus that was noted during Phase I construction was found to be contained within the uppermost sediment layer. The bottom surface of the clarifier was constructed of smooth, and shaped clay that is curved down toward the center pivot point for the clarifier arms. Near the outer edges, the clarifier basin contained soils and ore, and wetland plants prior to construction of the Phase I cap.

### *Phosphoria Gulch*

The ore storage area was located within Phosphoria Gulch on the steep north side of the drainage. Lesser amounts of ore were present on the south side of the gulch. The bottom of Phosphoria Gulch contains between 6 inches to several feet of ore. An estimated volume of about 75,000 yards of ore were present on the north side of the drainage prior to Phase I remedial construction, based on the survey conducted in 2005. The ore was low grade (minimal phosphorus content), was indicated to be dispersive as the result of a larger percentage of the fine fraction, and was noted to erode and slump into Phosphoria drainage during runoff. The top elevation of the stockpile was about 7150 feet amsl, with the bottom elevation at about 7015 feet amsl near the mouth of the gulch. Overall slope profiles were approximately 1.7:1 or steeper. In 2008, Soda Springs Phosphate removed approximately 21,200 tons of ore finer than 3/8 inches for the production of organic fertilizer. Between July 18 and September 1, 2009 Soda Springs Phosphate removed 22,800 tons finer than 3/8-inches. Particles greater than 3/8-inches were returned to the site and used in 2009 during Phase I construction in accordance with compaction specifications contained in Appendix A of the RAP (GET, 2009).

The southeast end of the ore pile was observed to be an area with the most active slope movement. The majority of the slope movement appeared to be the result of erosion during snowmelt. The ore pile at this location was near vertical adjacent to the stream channel. The slope was noted to erode into the stream through close contact with the stream channel during the April to August runoff. Flows in Phosphoria Gulch are intermittent.

One exploratory test pit that was excavated during the SI (GET, 2006) revealed that elemental phosphorus was contained within the ore at the base of the stockpile at about the 7028-foot elevation. During August 2008, four additional exploratory test pits completed near the west end of the ore pile also indicated elemental phosphorus buried within the ore. The permanent closure of this small area was further addressed with additional test pits completed in 2009 and a geomembrane cover design for Phase I construction.

### *Site Springs*

Several site springs and surface flows that are located within the site boundary discharge to Georgetown Creek, the major hydrologic feature in the canyon. One of these intermittent flows is monitored at two locations in Phosphoria Gulch (GTSW-4, GTSW-5). Phosphoria Gulch generally dries in August. Between snowmelt and mid- to late-summer, discharge from the gulch is to the sediment pond basin (GTSW-6), which is located south of the fenced plant area. When the sediment pond is filled to capacity during peak runoff, water is diverted from the sediment pond into Georgetown Creek through the overflow CMP. The flow in Phosphoria Gulch was measured in 2006 through 2008 using a cutthroat flume and a digital Global Velocity Flow meter. Intermittent flow in Phosphoria Gulch ranged up to 0.77 cubic feet per second (cfs) (340 gpm) in early May 2006. Flows in 2007 and 2008 in Phosphoria Gulch were smaller and ranged from about 100 to 110 gpm. During late summer and fall, the flow in Phosphoria Gulch seeped into the alluvium above the ore storage area.

A second spring emanates from the draw immediately west of the north end of the fenced area. These collective springs issue from alluvial cover at an elevation of about 400 feet above the site from a suspected fault zone intersecting at high angle to the axial trace of the Georgetown Syncline. This spring area (Syncline Spring) was developed during historic site operations within piping and collection structures left behind in the draw. The flow in Syncline Spring was measured in 2006 using a cutthroat flume. Flows ranged from about 0.44 cfs (200 gpm) in early May 2006 to about 3 gpm in late summer and fall. Flow from this spring in 2007 was less than 30 gpm, but increased to 125 gpm in 2008. Discharge from Syncline Spring is into a drain prior to reaching the site. The drain is adjacent to the Forest Service road easement. Discharge water from the spring is currently conveyed beneath the Forest Service road easement into the CMP. This spring does not contribute to saturated conditions beneath the former plant site surface because the discharge is directly into the CMP that is conveying Georgetown Creek beneath the site.

The largest identified source of intermittent surface water on the site resulted from several locations both inside (Tank Spring) and from the north of the fenced facility area on the east side of the former plant site. Controlling intermittent surface water and near surface flows onto the former plant site was required in order to carry out the Phase I remedial actions near the furnace and the slurry pit areas because some of this area was under water. Site surface dewatering was required and included the diversion of the sources of surface water directly to the CMP during Phase I construction. Intermittent surface water on the site is of high quality, but indicates slightly elevated total phosphorus. Infiltration of clean surface water had the potential to impact the alluvial ground water system during migration through surface soils beneath the surface cover and through contact with soil pore space in vadose zone soils.

The largest contributor to surface water on the site was from intermittent Tank Spring. The flow in Tank Spring ranged from about 75 gpm in early May to nil by October 2006. Flows were about half this amount in 2007 and 2008. Tank Spring originates from the

hillside immediately east of the furnace and below the water tank. Flow issues along the contact between the lower Dinwoody Formation and the Phosphoria Formation. This contact is indicated to be a faulted contact within the site area. Tank Spring enters the fenced portion of the site to the north and east of the furnace building footprint, and created marsh-like conditions with some standing water prior to Phase I dewatering. This infiltrating surface water, estimated from site water balances in 2006, is between 30 and 50 gpm. These flows typically resulted in swampy surface conditions until mid-summer around the furnace, slurry pit and former shop buildings. During high runoff periods, surface water from Tank Spring flowed to the south fenced gate entrance and discharged into a drain within the old office foundation footprint, and eventually to Georgetown Creek. In order to prevent Tank Spring from flooding the site, Tank Spring was diverted during the Phase I construction such that the flow was discharged to the 60-inch CMP at a drop point (N. 316948, E. 900058). The drop inlet is located approximately 155 feet to the north of the slurry pit. This point served as a dewatering point prior to Phase I construction of the slurry pit.

### 1.5 Site Investigations

A site investigation (SI) work plan was submitted to the IDEQ on September 19, 2003. The SI work plan presented the approach that would be used to address concerns raised by the IDEQ in the Consent Judgment and outline the process to identify or fill gaps in existing data. A sampling and analysis plan (SAP) was submitted in early April 2004 (GET, 2004) and conditionally approved by the IDEQ in their correspondence of April 15, 2004. The SAP presented the detailed methodology of investigatory activities performed as part of the Central Farmers Fertilizer Facility SI.

In March 2005, Nu-West submitted a draft site investigation report that summarized the data and the findings of the 2004 investigations. Following IDEQ review of the report, on April 8, 2005 IDEQ requested follow up investigation and site characterization during the 2005 field season to fill data gaps and address concerns raised in a meeting held in March 2005. A final SI report was submitted to the IDEQ on August 16, 2006. The final SI report addressed previous IDEQ concerns. Investigations included:

- Drilling and sampling of twenty two soil borings;
- Physical testing in the laboratory of selected soil samples from the soil boring program in 2004 and from test pits for borrow materials in 2005;
- Collection of on-site surface soils, ore and sediment samples;
- Drilling and completion of seven shallow alluvial monitoring wells and one deep bedrock monitor well;
- Water level measurement in new and existing wells and measurement of pH, conductivity, and temperature following completion and development;
- Aquifer testing using the newly installed shallow and deep wells;
- Surface water quality sampling from Georgetown Creek, Phosphoria Gulch, the sediment pond and clarifier and flow measurements in Georgetown Creek at three locations, and;
- Collection of ground water samples from newly installed monitor wells and two sampling events from a preexisting deep well.

Results from the Site investigations are documented in the approved site investigations report (GET, 2006) and in the approved Draft Final RAP (GET, 2009). Borings, soil samples and monitoring wells installed during the investigations are shown on Figure 1-4.

Site investigation in 2008 included additional test pit excavations to define the areas of elemental phosphorus, and routine ground and surface water monitoring. Results are presented in Appendix G. These test pit investigations were performed to support the design and extent of cover construction.

Ground and surface water monitoring in 2008, additional to data used for the SI, provided baseline data for ground and surface water quality impacts from the site prior to construction. Ground water levels and flow direction results from 2008 are typical of previously measured conditions and indicated the following:

- Ground water levels drop or decrease between 9 and up to 30 feet after peak water season, leaving some wells nearly dry in later summer and fall.
- The predominant flow direction in the alluvial aquifer beneath the site is to the south or south-southeast, following the slope gradient of the canyon. During June 2008, some of the ground water continued down-canyon within the alluvium, while some ground water was lost to the Wells Formation to the southeast. The alluvial ground water gradient was greater towards southeast during September. The strong southeasterly flow component to ground water flow during September 2008 was likely the result of the loss to bedrock on the east side of the canyon.
- A vertically downward gradient is noted on site between the alluvial aquifer and the bedrock aquifer in the Dinwoody Formation. Water quality results obtained during the SI indicated little to no impact to the bedrock aquifer from the earlier site operations.
- Ground water flow in the bedrock aquifer, based on water levels in GT-7 and GT-Deep suggests a southerly direction in June and northerly direction following regional structure in September 2008.

Ground water quality\_results from 2008 indicated the following:

- Background water quality is a calcium-bicarbonate type. The wells vary slightly in composition across the site, increasing slightly in sodium, bicarbonate, magnesium, sulfate and chloride.
- Former site operations have impacted and continue to impact ground water quality on the site. Concentrations in well GT-2 are affected by the covered slurry pit. Other sites that indicate impacts to ground water include former operations near the acid plant and TSP plant. These sites represent the most significant source impacts to the ground water in well GT-5. As a result, concentrations of arsenic, antimony, iron, manganese, nitrate and orthophosphate and total phosphate are elevated over background at locations downgradient from these former facilities. Arsenic and nitrate exceed Idaho ground water quality standards.
- TDS concentrations were elevated in shallow wells GT-2, GT-3, GT-4, and GT-5. This is the area between the covered slurry pit, the acid plant and the beneficiation building.
- Nitrate + nitrite concentrations in ground water are elevated on site within an area that extends between wells GT-3 and GT-5. Nitrate + nitrite concentrations reached the highest concentrations during low water periods.
- Total phosphorus concentrations are elevated in an area that underlies the area of

the former TSP building and the former acid plant. Total phosphorus concentrations also demonstrate larger concentrations in low water periods in GT-5, demonstrating a similar seasonal trend to nitrate.

- Dissolved arsenic concentrations are largest in the central areas monitored by wells GT-2, GT-3 and GT-5. Concentrations drop to about 0.003 mg/l at downgradient well GT-6. Well GT-5 demonstrates increasing arsenic concentrations as water levels drop in the well.
- Concentrations of dissolved iron in ground water are largest in well GT-4. Iron in well GT-8 suggests an overall increasing trend with time. The increased iron concentrations on the site may affect the reduced selenium concentrations across the site.
- Manganese concentrations are elevated between wells GT-2 and GT-8 beneath the covered slurry pit and downgradient of these sites. Dissolved manganese concentrations indicate separate trends for each well, but an overall seasonality of the data are noted with increased concentrations at lower water level periods.
- Dissolved selenium concentrations exceeded the ground water standards (0.05 mg/l) at the upgradient well location GT-1. Selenium concentrations decrease across the site in a southerly direction. Selenium concentrations appear seasonal, and peak during periods of high water level elevations and periods of runoff. Antimony concentrations behave in a similar way to selenium, with largest concentrations occurring at well GT-5.

Surface water hydrology monitoring results from 2008 indicated the following:

- Results of previous years of analysis indicated net gains and losses through the CMP. Additional subsurface contributions from the site to the CMP were identified in 2008. Peak flows were not measured in 2008 but were estimated to be about 30 cfs.
- Surface water flows in Phosphoria Gulch (up to about 110 gpm on June 5, 2008) were collected in the sediment control pond. Discharge from Phosphoria went to the overflow within the sediment control pond in 2008 and discharged to the creek above GTSW-2.

Surface water quality monitoring results from 2008 indicated the following:

- Surface water is also a calcium bicarbonate water type. There is essentially no difference in the major ion composition between upgradient and downgradient locations on Georgetown Creek.

- Water quality in Georgetown Creek is of excellent quality. With the exception of small selenium concentrations that are increased in Georgetown Creek downstream of the site (0.001 to 0.002 mg/l increase), most metals dissolved concentrations are generally very low or less than the detection limits at the surface water locations. Slight increases in total metals are noted in the sediment pond.
- Water in the clarifier generally contains the largest surface water concentrations for many of the constituents analyzed in 2008. Concentrations of fluoride and some metals are elevated in the clarifier waters by comparison with other surface water sites, including antimony, arsenic, iron, selenium, vanadium and zinc.

## 1.6 Summary of Baseline Risk Assessment

### 1.6.1 General

The risk assessments that were presented in the SI (GET, 2006) and the Draft Final RAP (GET, 2009) identified elevated risks associated with media from site facilities including the exposure to sediments in the clarifier, the ore pile, the slurry pit area and within areas of surface soils and vadose soils. The largest risk is attributed to consumption of ground water. The following sections identify those risks.

### 1.6.2 Human Health Risk Assessment

The human health risk assessment evaluated the potential cancer risk that exceeded the  $1 \times 10^{-6}$  threshold for additional potential cancer to hypothetical adult and child residents, and the potential non-carcinogenic hazard to the child recreational user, hypothetical adult and child residents, and future construction workers (Waterstone, 2006). The following table summarizes these potential risks:

| Receptor            | Potential Carcinogenic Risk | Potential Non-Carcinogenic HQ |
|---------------------|-----------------------------|-------------------------------|
| Residential Child   | 6x10 <sup>-5</sup>          | 3.96                          |
| Residential Adult   | 7x10 <sup>-5</sup>          | 1.2                           |
| Recreational Child  | 1x10 <sup>-5</sup>          | 4.2                           |
| Construction Worker | 5x10 <sup>-6</sup>          | 4.5                           |

The potential carcinogenic risk to the child and adult resident was driven by arsenic in

ground water. Background ground water samples collected from monitoring well GT-1 are below the MCL for arsenic. Deep ground water at the site has not been adversely affected by site operations. The deep wells (GT-Deep and GT-7) are of drinking water quality, therefore the estimated risk is not above background levels. The proposed institutional controls will prohibit the placement of drinking water wells on the site, negating the potential risk from drinking the shallow ground water.

Non-carcinogenic hazard quotient (HQ) was driven by exposure to vanadium in the phosphate ore and soil (Waterstone, 2006). The hazard quotient was used to evaluate the potential for non-cancer health effects. The phosphate ore stockpile in Phosphoria Gulch covered approximately 3.4 acres. Since the total site is 87 acres, it was uncertain that the exposure point concentration calculated for the potential ore exposure was truly representative of the concentration a receptor would be exposed to at the site. However, based on the available data, the risk estimate to the hypothetical child recreational user and hypothetical child resident exposed to the phosphate ore exceeded acceptable hazard levels. However, the removal of the ore from Phosphoria Gulch by sale of ore and capping the remaining ore was posed to mitigate these risks to potential future receptors. The greatest potential for exposure to vanadium impacted soils existed in the ore in Phosphoria Gulch. As detailed in a section 4.3.5 in the RAP, ore within Phosphoria Gulch was removed and either moved off-site or used for fill on the designed caps. The ore used for fill was covered in place with either geomembrane covers or clean soil from non-impacted areas of the site. The ore in Phosphoria Gulch was capped and covered. Approximately 85 percent of the ore was removed from Phosphoria Gulch between 2008 and September 1, 2009 (end of the ore haul to clarifier). As a result of the remedial actions, potential exposure to vanadium impacted soils was greatly reduced. The remainder of the ore (8,270 yards) is projected for removal in 2010.

Most of the risk from the sediment exposure pathways was derived from potential exposure to sediment in the clarifier. Risk evaluation indicated that the clarifier was an attractive nuisance to human receptors and posed potential risk to those exposed to its

sediments. The clarifier was closed and capped as part of the Phase I remedial actions thus eliminating this exposure pathway. Creek sediments are not considered to be a potential risk based on concentration levels identified during the SI (GET, 1997).

The risk assessment indicated that there was a potential noncancerous hazard to the future construction worker from vanadium in subsurface soil through dermal contact. Remaining metals were screened out in the risk assessment analysis. VOC and SVOC are generally less than detection at the site, are greater than 10 feet below surface in soils, and were screened out in an IDEQ Tier 0 analysis. Metals driving the risk included cadmium, chromium, thallium and zinc.

Review of the EPA Region IX PRGs indicated that risk from the largest vanadium soil concentrations identified on the site (not including the ore or clarifier) was approximately  $5.5 \times 10^{-5}$  using the industrial exposure scenario. Mercury was also considered as a potential risk to the on-site construction worker due to the one-time analyzed concentration of 29.2 mg/kg, identified in the soil near the former acid plant. Analytical results showed that soil mercury concentrations in the remainder of the on-site soils were less than 1 mg/kg. Applying region IX PRGs for the highest mercury soil concentrations and using an industrial scenario, the risk from these soils would be approximately  $9.4 \times 10^{-8}$  which is an acceptable risk. Additionally the largest concentration of mercury in ground water was 1.4 ug/l, which is less than the MCL of 2 ug/l.

Aroclor 1260 was identified in soil samples near the boiler and shop building. The largest Aroclor concentrations were 620 mg/kg and 90 mg/kg, found at one foot or greater in depth. Using the Region IX industrial risk scenario for Aroclor 1260, the associated risk from these soils would be approximately  $8.3 \times 10^{-7}$  and  $1.2 \times 10^{-8}$  respectively. Aroclor has not been identified in the ground water at the site. Analytical results indicate that residual volatile and semi-volatile organic compound concentrations on the site are less than  $1 \times 10^{-6}$  risk using Region IX PRGs and considering an industrial risk scenario.

Institutional controls in the form of deed restrictions to prevent excavation and drilling (including drinking water wells) will prevent the property from being developed in the future. These restrictions would prevent exposure to contamination, thus eliminating the associated hazards posed from soils, sediment, and ground water to human health.

### 1.6.3 Ecological Risk Assessment Conclusions

The results of the ecological risk assessment suggest that a potential risk exists for some ecological receptor guilds. The following table from the risk assessment summarizes those species that have an HQ above 10 for one or more constituents (Waterstone, 2006).

| Analyte  | Hazard Quotients Based<br>on Mean Exposure Parameters |                   |            |                      |
|----------|---|-------------------|------------|----------------------|
|          | Northern<br>Bobwhite                                  | American<br>Robin | Deer Mouse | Spotted<br>Sandpiper |
| Cadmium  | 3.8   | 18.2              | 10.4       | 10.6                 |
| Chromium | 5.5   | 18.6              | 0.0        | 9.6                  |
| Thallium | NA  | NA                | 15.3       | NA                   |
| Zinc     | 14.9  | 58.9              | 1.9        | 28.6                 |

NA - No Toxicity Reference Value Available

The zinc HQs were primarily due to results from SI soil borings located in the slurry pit area. Two samples had concentrations of zinc that were an order of magnitude greater than any other location at the site. In addition, surface water and sediment concentrations for zinc, cadmium and chromium at the clarifier and sediment control runoff pond were also larger than elsewhere at the site. The sediment pond is currently being assessed for clean out of the ore in 2010, but the structure will remain in place to control sediment runoff from the Georgetown Mine located east of the site. The potential risk from thallium was related to the ore and the slurry pit, now covered by the Phase I construction.

Given the fact that environmental sampling at the site was biased towards areas of

suspected contamination and given the many conservative assumptions that are used in ecological risk assessments, the overall potential ecological risk at the site is relatively low. In addition, most of the risk was driven by soil concentrations in locations that have been covered by either caps or one to two feet of clean soil. Therefore, these exposures are not actually accessible to most ecological receptors. Remaining risks are those associated with the remaining ore, surface water concentrations in the sediment pond, and surface water concentrations in Georgetown Creek. Metals driving the risk are specific in this section, as summarized in the table above and include cadmium, chromium, thallium and zinc.

In addition, the surface water and sediment concentrations in the sediment control pond and the clarifier, while above screening values, do not, when considered in conjunction with other surface water and sediment locations at the site, pose an unacceptable risk for the higher trophic levels evaluated (HQ <10) for surface water and sediment, as represented by the mallard, raccoon, coyote and red-tailed hawk. Areas that pose a risk to ecologic receptors include the clarifier and slurry pit cover. Both sites were capped during the Phase I site remedial actions.

### 1.7 Remedial Action Objectives

The Remedial Action Objectives (RAO), that were implemented or will be implemented during Phase II construction at the site are designed to address the following:

*Prevent Consumption of Ground Water* – Consumption of ground water containing contaminants exceeding risk-based concentrations or MCLs will be prevented through implementation of institutional controls in 2010. Consumption of ground water has the greatest exposure potentially affecting the health of the hypothetical adult and child resident. Hydrogeologic conditions prevent the off-site migration of ground water through losses to the Wells formation. On-going semiannual monitoring indicates that downgradient wells GT-4 and GT-6 do not have ground water concentrations exceeding MCL. In fact, the ground water in well GT-6 that is representative of the water lost to

the Wells Formation is of drinking water quality. Impacted ground water identified beneath the site will not be at risk of being consumed.

*Prevent Direct Contact with Ore* – Non-carcinogenic HQs for human health exposure are driven by vanadium in the ore and soil. Direct exposure to the ore materials were reduced by decreasing the overall size of the ore pile during Phase I construction and encapsulation of ore during remedial construction closures of the clarifier, slurry pit cover and furnace. Remaining ore will be removed in 2010. Institutional controls will also be implemented to minimize exposure potentially affecting the health of the hypothetical adult and child resident and current adult and child recreational user.

*Prevent Direct Contact with Contaminated Sediment* - Direct contact with contaminated sediments in the clarifier were prevented in the Phase I construction by eliminating the clarifier as a source of contaminants that exceeded risk-based concentrations for both human health and ecological risk. Sediment in the clarifier presented the largest non-cancer exposure to the recreational user through dermal contact with vanadium and largest cancer risk due to exposure to arsenic by consumption of the clarifier water.

*Prevent Direct Exposure to Elemental Phosphorus* - Direct contact with shallow elemental phosphorous noted in the slurry pit area and in the ore pile were eliminated by construction of the armored caps using a low-permeability geomembrane and additional soil cover and rock armoring and through implementation of institutional controls during Phase II. Remedial actions at the ore pile and slurry pit following the Phase I construction will prevent future exposures to elemental phosphorus.

*Protect Ground Water* – Shallow site ground water may be affected through the infiltration of clean site surface water through the vadose zone in areas including the slurry pit and the central part of the site, the former shop UST site, the acid plant and TSP building. Ground water will be protected through Phase I capping the slurry pit, diversion of Tank Spring and dewatering the site, reducing overall site infiltration through the vadose zone.

*Protect Receptor Guilds* – The risk to potential ecologic receptors was protected through the closure and capping of the clarifier, thereby reducing exposure to cadmium, chromium and zinc in surface water and sediment. Capping the slurry pit is also protective and reduces the zinc exposure to sensitive bird and mammal species, which was identified in the soils on and near the slurry pit surface prior to capping.

Additional to the clean-up actions for the site that are intended for the protection of human health and the environment, a CMP bypass stream segment will be constructed in 2010. At a minimum, this channel will be designed to manage 100-year storm events through the site.

#### 1.8 Phase I Final Remedial Action Plan

The Phase I Final RAP was prepared in accordance with the May 28, 2003 Consent Judgment. RAP document revisions addressed the comments provided by IDEQ in official correspondence and comments and requests made by IDEQ in meetings held on four occasions in 2008 and on February 19, 2009. The draft final plan submitted on May 11, 2009 addressed comments to the original RAP plan, submitted on February 2, 2007, and two additional revisions submitted on March 28, 2008 and on December 11, 2008. Revisions to the final document reflected changes requested to both IDEQ and Forest Service comments. Written correspondence and summary meeting notes transmitted to IDEQ are attached to the draft Final RAP document in the Correspondence section, Appendix G. The draft final RAP included all IDEQ accepted changes to the documents, and design modifications made to the slurry pit cover, ore pile final design, furnace cover, dewatering plans, and the design of the conceptual CMP bypass stream channel designs for Georgetown Creek.

The Draft Final Remedial Action Plan described the remedial actions that were completed at the site of the former Central Farmers fertilizer plant. The objective of the RAP was to provide detailed information and conceptual plans to reclaim the site, reduce human exposures and to mitigate environmental impacts from historic industrial

operations in Georgetown Canyon, thereby achieving an acceptable cleanup level at the site that is protective of human health and the environment. The Draft Final RAP addressed:

- Closing and covering the clarifier with an impermeable geomembrane cap soil cover and to address regrading of the surrounding area to improve drainage patterns;
- Removal of a large amount of the phosphate ore pile in Phosphoria Gulch to eliminate dispersive ore material from entering into Phosphoria Gulch surface waters and reclaiming the slope beneath the former ore;
- Dewatering the site by capturing clean precipitation runoff and spring flows that were discharging onto the site and by diverting these surface water flows away from reclaimed site facilities to the creek;
- Closing and covering the furnace in place and providing a positive slope away from the furnace structure;
- Regrading the slurry pit to provide positive drainage away from the structure, and placement of a low permeability geomembrane cap system with soil cover and rock armoring;
- Construction of a stream bypass segment to manage 100-year storm events in Georgetown Creek following the closure of the 60"/48" corrugated metal pipe (CMP);
- Establishing institutional controls such as site security and deed restrictions at the site. The site security measures will include maintaining the existing fence around the former plant site, providing new fencing and conducting frequent routine inspections. Deed restrictions will be placed on the property limiting the use of ground water and restricting development of the property, and;
- Reclaiming surface areas disturbed by the remedial actions at the site.

Design changes presented in the draft Final RAP (GET, 2009) resulted from site investigations completed under the SI, investigations completed near the end of August 2008, design criteria from Idaho State codes, and from design changes requested by IDEQ. Engineering requests from IDEQ were reflected in the final changes made to the issue for bid (IFB) and issue for construction (IFC) drawings that were prepared by

Norwest Corporation of Denver, Colorado for final site remedial construction during June and July, 2009.

The draft final RAP included the following elements:

- **Site Background:** This section of the RAP described the physical setting of the site, the site history, and the background information on the site including regulatory background, historical site use, previous cleanup actions, site investigations and summaries of the human health and ecological risk assessment.
- **Hydrogeologic Characteristics of Site Aquifers:** This chapter of the RAP described the nature of the alluvial and bedrock aquifers at the site.
- **Clean-up Objectives - Human Health and Ecological Risk:** This chapter described remedial action objectives to mitigate risk, risk-based levels for media, short and long-term effectiveness for the proposed remedial actions, and evaluation of alternative methods for treatment of the elemental phosphorus.
- **Remedial Actions Proposed for Site:** This chapter of the RAP presented a description of the proposed remedial actions for the site, including dewatering, closure designs, institutional controls, design for the CMP bypass channel and final cover reclamation.
- **Schedule:** This section of the RAP presented the proposed schedule for completion of the remedial measures planned for the site through the remedial action completion report. The current schedule may be impacted by Federal and State permitting issues.
- **Appendices:** RAP appendices A through G included the results from the geotechnical testing, the construction quality assurance (CQA) plan for the proposed remedial actions, the surface water runoff modeling analysis for the 48/60 inch CMP and the site, the annual monitoring report, the results from the remedial action investigations completed in 2008, and official correspondence between Nu-West and IDEQ (parties to the Consent Judgment) since the submission of the initial Draft RAP on February 2, 2007.

## 1.9 Selected Site Remedy

Nu-West and IDEQ used the information generated during the site investigations, the development of the remedial action plan, and data collected during Phase I construction

to develop the selected remedy that is protective of human health and the environment. This remedy was presented in the Draft Final RAP (GET, 2009) that described the conceptual Phase I remedial actions that were completed at the site of the former Central Farmers fertilizer plant. The selected remedy and Phase I construction addressed the pathways of concern including the impacts to ground water, and exposures from the slurry pit, clarifier and ore. The selected remedy for the site included capping, elimination of surface water in the clarifier, rerouting Tank Spring to Georgetown Creek, and reuse of the ore pile for site remedial construction and for fertilizer production, and institutional controls.

The site remedy specifically included:

- Elimination of surface water infiltration from spring discharges onto the facility ground surface;
- Capping of the slurry pit, clarifier, furnace, and small cap in the ore pile area;
- Excavation and removal of the ore in Phosphoria Gulch for fertilizer production and for remedial cap construction with the remaining ore to be removed in 2010;
- Semi-annual ground water and surface water monitoring for a minimum of five years following Phase I construction to assess site conditions and determine the effectiveness of the remedial Phase I construction;
- Establishment of institutional controls in 2010 for affected areas of the site to prevent ingestion of ground water for as long as the ground water exceeds the state of Idaho ground water standards, and;
- Conceptual and engineered plans for day lighting Georgetown Creek through the site around capped facilities as part of a Phase II construction for the site remedy.

#### 1.10 Ground and Surface Water Monitoring and Institutional Controls

Monitor wells that were installed as part of the SI have been sampled on a semi-annual basis since July 2004. Data from each sampling event was validated and submitted to IDEQ along with an updated version of the ground water quality database. ACZ

Laboratories of Steamboat Springs, Colorado performs analyses of the ground water samples. Global Environmental Technologies performs data validation, prepares the validation reports and database updates, and provides annual comprehensive reviews. The Ground Water Sampling and Analysis Plan (SAP) submitted in April 2004 (GET, 2004) identifies sampling protocols.

Ground and surface water was sampled during the Phase I construction. Ground and surface water monitoring will continue semi-annually and an annual ground water analysis of the data will be submitted to IDEQ for a minimum of 5 years following completion of remedial construction.

In order to prevent the ingestion of ground water that does not meet RBCs, institutional controls will be implemented during the Phase II portion of the project to ban well drilling on the site. The impacted land areas are immediately beneath the former facility, owned by Nu-West. There are no domestic wells in the area because the site is surrounded by National Forest property.

## 2.0 REMEDIAL DESIGN / REMEDIAL CONSTRUCTION EVENTS

### 2.1 Schedule

The timeline detailing Phase I construction and supporting tasks that were required to dewater the site and construct the caps is presented on Figure 2-1. Progress reports and schedules detailing construction completion as specified in the Consent Judgment are contained in Appendix E. The following sections describe documents prepared and the chronology of the activities associated with the remedial construction at the site.

### 2.2 Deliverables

Several deliverable documents and drawings were generated during the remedial design phase of the project. These deliverables reports included the various iterations of the RAP documents that were reviewed by IDEQ between February 2007 and June 2009 and IFB drawings supplied by Norwest in June and July 2009 for the final remedial designs. Documents submitted included a number of changes to the remedial action plans and attachments contained in the appendices that included the results of subsequent investigations completed during 2007 and 2008. These additional investigations were necessary to develop:

- The final design of the slurry pit and ore caps;
- Task specifications that describe how particular aspects of the Phase I Remedial Action Construction activities would be implemented;
- Quality assurance documents;
- Documents detailing health and safety requirements and protocols, and;
- Hydrologic modeling of Georgetown Creek.

## 2.3 Phase I Remedial Design Tasks

A chronology and description of activities for the site remedial design are described in the following sections. Daily reports detailing the Phase I site activities are presented in Appendix E. Selected photographs of the Phase I remedial action capping and other activities that document the construction are presented in Appendix A to this report. Designs for Phase I construction were prepared to cover three types of materials identified through risk assessment, including the elemental phosphorus, clarifier sediment, and ore.

### 2.3.1 Elemental Phosphorus, Clarifier Sediment and Phosphate Ore Characterization Investigations

Materials capped during the Phase I remedial actions included elemental phosphorus, phosphate ore, and sediments in the clarifier. Prior to completion of these capping tasks, additional exploratory test pit investigations were conducted to fully define the phosphorus footprint at the slurry pit and ore pile.

#### *Elemental Phosphorus Investigation*

Elemental phosphorus is reactive in air and requires containment under water or in an oxygen-deficient environment. Elemental phosphorus was identified during the SI and in subsequent remedial action investigations in areas surrounding the slurry pit, at the ore pile and clarifier. The results and logs for the test pits are included in Appendix G.

The slurry pit contains elemental phosphorous. During the SI, boring GTB-2 could not be drilled as the result of spontaneous fire that occurred after encountering elemental phosphorous at the depth of about one foot. Nearby monitor well GT-7 at the north end of the slurry pit encountered elemental phosphorous within the first several feet while driving casing. No elemental phosphorous was noted below the 5-foot depth in monitor well GT-7. One exploratory test pit excavation during the SI revealed that elemental

white phosphorus was mixed in with the ore at the base of the stockpile in one test pit at about the 7028-foot elevation area near the mouth of Phosphoria Gulch.

During the development of the RAP, elemental phosphorus was noted in seven test pits during the investigation of the slurry pit in August 2008, as detailed in Appendix F of the Draft Final RAP (GET, 2009). A total of 21 exploratory test pits were excavated around the perimeter and on the slurry pit cover. Locations are shown on Figure 2-2. Logs of these pits are contained in Appendix G. Exploratory pits were typically excavated to a depth of six feet, but if too much water or elemental phosphorous was encountered, the depth was reduced.

Shallow surface water was noted to be present between test pits TP-7 and TP-13, on the north and east sides of the slurry pit, as shown on Figure F-1 of the Draft Final RAP (GET, 2009). Exploratory test pits TP-3 through TP-7 on the east side of the slurry pit indicated a very hard slag layer between about 1 to about 3 feet below grade. Air monitoring of vapor levels indicated the presence of phosphine and/or hydrogen cyanide gasses in about half of the test pits around the slurry pit (GET, 2009). Based on the results of the soil gas headspace analysis and phosphine measurement within the test pits, phosphine was detected above 0.1 ppm in eight of twenty-five exploratory pits. Test pit TP-9 had the largest phosphine concentration of 0.3 ppm. The levels of phosphine and hydrogen cyanide were most frequently detected and at largest concentration on the north and east sides of the slurry pit as noted on the logs in Appendix G. During 2009, test pits excavated around the north, east and south sides of the slurry pit, as discussed in Appendix G, resulted in the identification of the boundaries of elemental phosphorus in all directions. The permanent closure of the slurry pit area was addressed with an engineered cover design.

In August 2008, additional test pit investigations were completed in the ore pile to assess the extent of the elemental phosphorus that was buried within the bottom of the ore pile. Locations are shown on Figure 2-3. Logs of these pits are contained in Appendix G. Test pits indicated elemental phosphorus buried within the ore, but the

phosphorus extended north under the ore stored on the hillside. During 2009, test pits excavated north of the test pits completed in 2008, as discussed in Appendix G, resulted in the identification of the boundaries of elemental phosphorus beneath the removed ore from the hillside. The permanent closure of this area was addressed with an engineered cover design for the ore area.

During the Phase I remedial action construction, fifteen (15) additional test pits were excavated by CRA (Conestoga Rover Associates) along the east and south sides of the slurry pit to completely identify the limits to elemental phosphorus. Locations are shown on Figure 2-2. Air monitoring during the intrusive work was constantly monitored. Completion of the investigative work during Phase I remedial construction immediately followed site dewatering as the result of the presence of surface water to the east and to the south of the slurry pit. The additional 15 test excavations revealed the presence of elemental phosphorus in four of the test pits. Where elemental phosphorus was detected, a new test pit was dug approximately 10 feet away. This procedure was repeated until no phosphorus was encountered thus delineating the extents of the area to be covered. Results of the investigation expanded the footprint of the slurry pit from about 56,000 square feet to about 61,000 square feet for Phase I construction. Results of the Phase I test pits are presented in Appendix G to this report.

### *Clarifier Sediments*

During the SI, two composite sediment samples, GTSED-4 and GTSED-7 were obtained from within the clarifier. Analyzed metals during the SI showed the largest concentrations identified were from the fine sediment (GTSED-7) obtained from the bottom of the clarifier. Results of TCLP analyses of GTSED-7 during the SI indicated that the concentrations of the TCLP metals were one to three orders of magnitude smaller than the regulatory metals limits for hazardous waste. Phase I construction indicated that some elemental phosphorus was also present in the fine sediment. This elemental phosphorus was oxidized during the clarifier cap construction. Continuous air monitoring was performed during the construction and no phosphine or HCN was

detected. Results of the air monitoring are contained in Appendix F.

### *Phosphate Ore*

Samples collected for the SI for chemical characterization included three samples (GTORE-1 through GTORE-3) obtained from the phosphate “phos” ore in Phosphoria Gulch that were analyzed for metals and radionuclides. The range of metals, non-metals, and radionuclides that were detected in the phos ore are listed in the SI (GET, 2006) and included on average calcium (21 percent), chromium (1,090 mg/kg), copper (120 mg/kg), cadmium (87 mg/kg), iron (13,367 mg/kg), nickel (207 mg/kg), manganese (167 mg/kg), molybdenum (33 mg/kg), phosphorous (7.5 percent), radium 226 (28.5 pCi/g), radium-228 (10.1 pCi/g) total uranium (74 mg/kg), vanadium (1,060 mg/kg) and zinc (1177 mg/kg). The ore is not considered RCRA hazardous.

### 2.3.2 Slurry Pit and Ore Pile Capping Geotechnical Investigations

During October 2005, additional soils were collected to evaluate possible borrow sites for remedial design cover materials. Soil samples were obtained in bulk from both the ore pile and from Dud Hollow. A testing program was initiated to assess the geotechnical properties of the soils in support of the remedial construction activities. These activities included an evaluation of foundation fill (constructed of ore) and cover borrow materials (obtained from Dud Hollow alluvium) for the geomembranes and for final covers. Geotechnical samples obtained from the field investigation were tested in the IGES Inc. soils laboratory in Salt Lake City for compaction, sieve analysis, falling head permeability, re-molded falling head permeability, specific gravity, moisture and density. Results of the laboratory testing are presented in the draft Final RAP, (GET, 2009). Results of geotechnical testing of the ore during the SI (GET, 2007) indicated that the ore compacted to a maximum dry density of 121 pounds per cubic foot at an optimum moisture content of 14.7 percent. Approximately 45 percent of the material from the sample was finer than the 200-mesh sieve. Falling head permeability testing indicated that the material was of relatively low permeability, approximately  $4.5 \times 10^{-6}$

cm/sec. Geotechnical properties of the ore are contained in Appendix A of the Draft Final RAP (GET, 2009).

Results of geotechnical testing of the Dud Hollow borrow source during the SI indicated that the soil compacted to a maximum dry density of 121 pounds per cubic foot at an optimum moisture content of 10.5 percent. Approximately 58 percent of the sample material was finer than the 4-mesh sieve and approximately 25 percent of the material was finer than the 200-mesh sieve. Falling head permeability testing indicated that the material was of relatively low permeability, approximately  $2.7 \times 10^{-6}$  cm/sec.

### 2.3.3 Cap Designs

Following geotechnical investigations, estimates were made of the required borrow volumes and the amounts of ore and borrow materials that would be required to complete the Phase I remedial activities. Borrow materials were required to reshape the facility areas requiring caps, including the furnace, clarifier, slurry pit and ore pile and to supply the required materials on the final covers. The caps were designed using RCRA and CERCLA guidelines for earth construction and cover design.

### 2.3.4 Phase I Remedial Construction Components

General activities that took place during cap construction are presented on Figure 2-1 and detailed on a daily basis in Appendix E. The work consisted of:

- Removal of vegetation from areas to be capped (grubbing);
- On-site generation of soils for general fill, screen select 1/2-inch minus layers for geomembrane capping, soils for cover and road base, rock armor materials for capping and rip rap for stream channel improvements and construction;
- Dewatering, excavating, backfilling and compacting ore, capping and covering the clarifier with an impermeable cover system, installation of a drainage layer and soil cover and regrading the surrounding area to improve drainage patterns;

- Removal of the phosphate ore pile from Phosphoria Gulch for borrow material and regrading and reclaiming the slopes beneath the former ore pile and regrading the roads above the ore pile;
- Dewatering the site which included improvements to drainage channels and diversion of Tank Springs to a drop inlet manhole, trench excavation, trench dewatering and trench shoring and pumping, pipeline installation including connection of installed piping to the existing 60/48 inch CMP without disrupting the flow through the 60/48 inch CMP;
- Closing and covering the furnace in-place using ore and soil borrow generated by CRA at the site and providing a positive slope away from the furnace structure;
- Regrading the slurry pit with ore to provide additional grade to the surface and provide positive drainage away from the structure, placement of an geomembrane capping system of low permeability, placement of a drainage layer and generation of soil and rock armoring to complete cover, extension of three ground water monitoring wells through the cap;
- Regrading and capping the ore area containing elemental phosphorus, placement of geomembrane capping system of low permeability, placement of a drainage layer and generating graded earthen materials at the site and complete the covers with soil and rock armoring;
- Improving the Phosphoria drainage, and;
- Reclaiming surface areas disturbed by the remedial actions at the site.

Detailed descriptions of the construction and the as-built drawings are presented in Chapter 4 of this document.

### 3.0 PERFORMANCE STANDARDS

#### 3.1 Construction Quality Assurance

A Construction Quality Assurance (CQA) Plan was developed as Appendix B to the Draft Final RAP (GET, 2009) for use during the Phase I site remedial construction. The purpose of the CQA Plan was to establish work lines of authority and designate responsibilities in order to ensure that the completed Phase I work met design criteria, plans and specifications, and performance standards. The work addressed in the CQA Plan included all aspects of constructing the elements of the remedial design to meet the requirements of the remedial actions approved by the IDEQ for Phase I. Construction tasks that had separate CQA requirements included:

- Site survey;
- Materials submittals;
- Excavations, trenching, pipeline construction and testing;
- Placement of the ore materials;
- Ore compaction testing and grading;
- Survey of final grades;
- Installation, inspection and testing of GCL, 40-mil LLDPE and geocomposite geomembrane;
- Bulk select fill (3 inch minus) and topsoil grading, testing and placement on geocomposite;
- Final armor layer, cover soil and vegetative layer, and;
- Reclamation, drainage construction and placement of rip rap.

The principal organizations involved in designing and constructing the site remedial actions included:

- IDEQ;
- Nu-West Mining and Nu-West Industries (owner of the former Central Farmers fertilizer facility) who was responsible for instituting the construction quality assurance and Phase I remedial action construction for the site;
- Global Environmental Technologies LLC (performed site investigation and conceptual remedial designs for the site and CQA oversight);
- A certifying engineer (Paul Kos, P.E. of Norwest Corporation, completed issue for bid (IFB) and issue for construction (IFC) drawings and engineering design for the site based on the RAP and conceptual site designs);
- CQA personnel which included a project manager, a project quality assurance officer (PQAO), and a CQA construction manager (employees of Nu-West, GET, and Norwest);
- Qualified construction contractor including an earthwork contractor (CRA), a blasting subcontractor to generate rip rap materials (Superior Blasting) and a geomembrane installer subcontractor (Environmental Specialties International Inc (ESI) of Reno, Nevada)
- Professional engineering compaction services and soil compaction testing (Harper-Leavitt Engineering of Blackfoot, Idaho), and;
- Professional surveying services (Surveyor Scherbel, LTD of Afton, Wyoming (a professional licensed surveyor in Idaho) and Matt Baker PLS of Pocatello, Idaho), and;
- Independent quality assurance destructive testing of the 40-mil LLDPE seams by TRI Environmental of Austin, Texas.

The CQA team provided assurance that the work was completed in accordance with the Draft Final RAP, the Design Plans and Specifications, the Issue for Construction drawings and that unexpected changes or conditions encountered during the remedial construction would be detected, documented, and addressed during construction. The independent quality assurance contractors and certifying engineer reviewed documentation of the construction as it occurred and identified any deficiencies in the work that was not addressed prior to Phase I completion in October 2009. Reviews made by the certifying engineer during and following field construction are presented in Section 5 to this report. The overall responsibility of the CQA personnel was to perform

activities specified in the CQA plan including inspection, sampling, and documentation of the remedial action construction for the Phase I activities.

The PQAO and the CQA construction manager provided field documentation of site activities during the site investigations and Phase I remedial construction phase. CQA inspection activities included:

- Oversight of the removal, transport, placement and compaction of the ore from the initial location in Phosphoria Gulch to the slurry pit, the furnace and the clarifier in accordance with plans and specifications;
- Observation and documentation of all work as it pertained to the Phase I CQA Plan, and the design plans and specifications;
- Conducting and documenting all field testing required by the specifications, quality assurance and quality control programs;
- Performance of independent on-site inspection and surveying of the work in progress to assess compliance by the contractor with the design criteria, plans and specifications;
- Reporting to the contractor and subcontractors the results of all tests and observations as the work progressed;
- Reporting to the contractor the results of all inspections, including work that did not meet the required design specifications and CQA Plan criteria, and;
- Verifying that the equipment used in testing met the test requirements and that the tests were conducted according to the standardized procedures defined by the CQA Plan.

Documentation of the CQA activities are presented in Appendices B, C and D to this report. These appendices present material submittals, material specifications, testing data, materials certifications, certificates of analysis, laboratory test results, material delivery inspection and inventory checklists, packing checklists and bills of lading as required by the CQA plan.

## 3.2 Construction Quality Assurance Testing Results

### 3.2.1 Survey Performance

An initial base map was provided by Nu-West prior to site remedial design activities. Two survey parties were used for the project. Both Surveyor Scherbel LTD of Afton, Wyoming and Matt Baker, PLS of Pocatello, Idaho performed site surveys along established survey control points. Survey support was used to establish as-built construction of the remedial construction features. Surveying control was also used to meet IFC drawings grade control and to estimate the volume of compacted ore at each facility, volumes of bulk select fill (3 inch minus) and armor and topsoil placed on the caps, and critical elevations for all constructed components of the caps, including final ore elevations, anchor trench alignments, drainage excavations, geomembrane placements and soil and armor elevations.

The CQA surveyor (Matt Baker, PLS) checked final grades and elevations of the remedial design construction against the plans and specifications, and the work performed by CRA. It was the responsibility of the earthwork contractor (CRA) to meet the lines and grades of the IFC drawings and to provide as-built survey of the earthwork and caps during construction upon completion of all tasks that referenced grades and/or elevations. The contractor, CRA, provided cut and fill surveys using Surveyor Scherbel LTD during the shaping of the slurry pit cap, the furnace cover, the clarifier. These surveys were checked by Matt Baker, PLS during the work progress. Results between the surveys were evaluated by the PQAO, and were found to be within tolerance specifications and generally agreed within several percent or less for each of the checked surveyed locations. The surveys performed by both Scherbel and Matt Baker, PLS agreed with each other and are the basis for all as-built elevations on the subgrades, covers and drainages shown on the as-built drawings in Chapter 4 of this document.

### 3.2.2 Ore Contouring and Compaction

When ore and earthwork density testing was required, Harper Leavitt Engineering performed QA field moisture and density tests using a Troxler Gauge. Fourteen rounds of QA soil testing were performed on 1-foot lifts (except the furnace that was on every third lift) between the dates of July 16 September 11, 2009. Testing results indicated that nearly all of the ore materials achieved compaction specifications of 95 percent on the first test. Additional water and compaction was required where tests did not pass. Testing was also completed on soils in anchor trenches and on the fill area located to the north of the furnace. Testing results indicated that nearly all of the earthwork soils materials achieved compaction specifications of 95 percent. Problems encountered included excess moisture and the inability to compact within the anchor trench around the slurry pit. The PQAQO verified compaction efforts by performing multiple density tests per lift in each fill area on a frequency based on 16 tests per acre, as required by the specifications. In some cases, the PQAQO required the removal of placed soils and replacement and recompaction of soil lifts.

The phosphate ore was transported and compacted in one foot lifts to provide a structurally stable subgrade for the overlying geomembrane and soil layer components at the slurry pit, clarifier and ore pile covers. The phosphate ore was transported and compacted to provide a structurally stable subgrade for soil layer. Compaction was performed so that the covers would resist settlement, compression, and uplift resulting from internal or external pressures, thereby preventing distortion or rupture of overlying facility components (except the furnace where no geomembrane was used). Results of the ore compaction and moisture tests are summarized in Table C-1, Appendix C to this report. Compaction requirements were based on laboratory geotechnical testing results from the ore obtained in Phosphoria Gulch.

On July 28, approximately half of ore lift four on the slurry pit cover did not meet the compaction requirements. Results in Appendix C show that in 4 results, compaction ranged from 87 to 94 percent with lowered dry densities ranging from 102 to 106 pounds per cubic foot (pcf). One hundred percent compaction on the ore results in a

dry density of about 117 pcf. CQA corrective action measures taken are described in the problem identification and corrective measures report (PICMR), Appendix D to this document. Visual inspection indicated that a smaller percentage of native soil was mixing into the ore prior to truck loading from the slope in Phosphoria. Obtaining a representative sample of the mixture was not practical. Therefore, it was concluded that the ore curve used to assess compaction of lift four did not match the actual compacted material density. However, the lift appeared dense based on the difficulty in driving the Troxler stake and based on visual appearance while walking the surface. After discussions with the design engineer, to correct this problem, a water truck and compactor were continuously employed over this area on the following day. This remedy, as described in the PICM report, Appendix D was to ensure that increased moisture content and increased compaction efforts with the equipment ensured the maximum compacted results that could be achieved with the mixed ore and soil material. Another corrective measure included a requirement that no soil and ore mixing was allowed for cover construction.

Prior to any liner placement for all of the covers, an acceptance of the final grades were made by the PQAO based on blue top grade surveys of the compacted prepared surfaces. As required by the CAQ plan, a certificate of acceptance was prepared and signed off between the earthwork and liner contractors before any liner placement proceeded. Certificates of acceptance are contained in Appendix D to this document.

### 3.2.3 Documentation of Geosynthetic Clay Liner (GCL) Placement

The GCL manufacturer (CETCO) and ESI submitted certificates of compliance, material property sheets, panel layout and detail drawings required by the specifications to the PQAO prior to installation of the GCL cover. Documentation is contained in Appendix B. The GCL layer provides the equivalent to approximately two to three feet of compacted clay. The permeability of the CETCO GCL is about  $5 \times 10^{-9}$  cm/sec compared to  $1 \times 10^{-7}$  cm/sec of compacted clay. The GCL layer is a secondary barrier to meteoric infiltration should failure occur to the primary cover geomembrane barrier (overlying 40 mil LLDPE). Advantages of using the GCL during the Phase I

construction included ease of installation, quality control during manufacturing, high internal shear resistance on side slopes, ease of quality assurance testing during installation and reduced excavation as compared with a compacted clay layer. The GCL layer extended to the anchor trenches excavated outside of the slurry pit, clarifier basin and the ore cover to completely cover the ore. The GCL layers on these three caps terminated within the 12-inch width anchor trenches surrounding these facilities that were excavated to a depth of 30 inches. The panel layouts are discussed in Section 4 of this report. Material specs and QA testing of the GCL are contained in Appendix B and panel placement forms for the slurry pit, clarifier and ore covers are contained in Appendix C to this report.

The PQAO and the site construction manager reviewed quality assurance certificates for each roll when materials arrived to ensure that the materials met the design specifications. A list of the GCL rolls delivered to the site is summarized in Appendix B including the quality assurance certificates. The quality control certificates were reviewed by the PQAO to verify that a certificate had been received for each roll at the time of material delivery. Each roll of synthetic materials was inspected for damage caused by placement operations or by wind prior to, and after placement and prior to seaming overlap with a granular bentonite placement between seams.

The PQAO and the site construction manager reviewed the installation of the GCL on the slurry pit, clarifier and ore cover to ensure one foot of overlap on each panel placement. The granular bentonite placement between overlaps was also verified at the rate of one pound per 4 lineal feet of seam. No rain events occurred during the GCL panel placement. Photographs of the GCL panel placement are contained in Appendix A.

### 3.2.4 Documentation of 40-mil Flexible Membrane Cover (FMC) Placement

The FMC manufacturer (GSE) submitted certificates of compliance, material property sheets, panel layout and detail drawings required by the specifications and the CQA

plan to the PQAO prior to installation of flexible membrane cover. The plastic cover material used for the Phase I construction was an Ultra Flex textured geomembrane, a 40-mil linear low-density polyethylene (LLDPE) material that was textured on both sides. The panel layout is discussed in Section 4 of this report. Panel placement forms, panel seaming and testing for the FMC are documented and contained in Appendix D to this report.

The PQAO reviewed quality assurance certificates for each roll when materials arrived to ensure that the materials met the design specifications. A list of the 40-mil plastic rolls delivered to the site is summarized in Appendix B. The quality assurance certificates are also contained in Appendix B. The quality control certificates, QA testing data and certificates of analysis were reviewed by the PQAO or the construction manager to verify that the material had been properly tested and certificates were received for each roll at the time of material delivery. Each roll of synthetic materials was inspected for damage caused by placement operations or by wind prior to, and after placement and prior to seaming. All aspects of materials transport on site, placement, trial welding, non-destructive and destructive testing and repair of the FMC were overseen by the construction manager and/or the PQAO and are documented in Appendix D to this report. Photographs of the panel placements are contained in Appendix A.

### 3.2.5 Documentation of Geocomposite Placement

The geocomposite manufacturer (SKAPS Industries, Inc) and ESI submitted certificates of compliance, material property sheets, panel layout and detail drawings required by the CQA plan and the specifications to the PQAO or construction manager prior to installation of the drainage layer above the FMC. The geocomposite material was the SKAPS Transnet TN 220-2-8, an 8-ounce geocomposite HDPE material bonded on both sides with a non-woven geotextile comprised of 100 percent polypropylene fabric. Panel placement forms are contained in Appendix B.

The PQAO reviewed quality assurance certificates for each roll when materials arrived to ensure that the materials met the design specifications. A list of the geocomposite rolls delivered to the site is summarized in Appendix B. The quality assurance certificates are also contained in Appendix B. The quality control certificates were reviewed by the PQAO or the construction manager to verify that a certificate had been received for each roll at the time of material delivery. Each roll of geocomposite materials was inspected for damage caused by transport, placement operations or by wind prior to, and after placement.

### 3.2.6 Liner Seaming Field Testing Program

A rigorous field-testing program was implemented for the FMC seaming by the construction manager. The site construction manager verified that:

- The 40-mil LLDPE liner overlaps met requirements presented in the Final Design Plans and Specifications;
- Certificates of calibration for peel testing were obtained;
- The seaming area was clean of ore or soil materials;
- Seaming equipment available on site met the requirements presented in the ESI Quality Assurance (QA) Manual;
- Weather conditions for seaming were acceptable;
- Trial welds were completed as required;
- Seaming procedures were followed;
- Destruct samples were obtained at the frequency required (every 500 feet) by the design plans and specifications;
- The panels were properly positioned to minimize wrinkling and that wrinkled areas were seamed according to the procedures, and;
- Equipment for testing seams was available on site.

Trial seams were performed to verify that seaming conditions were adequate. Trial seams were conducted twice or more daily for each seaming machine used that day. Trial seams were 3 feet or greater in length. Specimens were cut from each end of the trial seam and tested on a field tensiometer for peel strength. Calibration certificates for

the ESI tensiometer are contained in Appendix D to this document. Documentation and results of the trial seaming is presented in Appendix D. Test results ranged from 58 pounds per inch (lbs/in) to 96 lbs/in. Passing value for the peel test is 53 lbs/in.

Either air pressure testing or a vacuum testing was performed to non-destructively test field seams over their full length. Each seam was numbered, and the location, date, test unit, name of tester, and outcome of all non-destructive testing was recorded. Results of the non-destructive testing are recorded on the Non-Destructive Testing Forms presented in Appendix D. A passing test was indicated when no more than 3 psi of pressure loss occurred during a 5-minute pressure test. All seams passed the non-destruct testing requirements.

#### 3.2.6.1 Laboratory Liner Testing Results

Destructive test samples were taken at a rate of one test per 500 linear feet of seaming. TRI Environmental of Austin, Texas tested the destructive samples. Results of the destructive testing from the lab are contained in Appendix D. Locations of destructive seam samples are documented in the destructive test logs contained in Appendix D. Passing requirements for the 40-mil LLDPE were 53 lbs/in peel strength and 60 lbs/in shear. Peels ranged from 58 to 97 lbs/in and shear tests ranged from 70 to 98 lbs/in. All destructive tests passed the required peel and shear required values.

#### 3.2.7 FMC LLDPE Repairs

All repairs made to the 40-mil LLDPE FMC were made in accordance with procedures described in the Final Design Plans and Specifications and the CQA plan. All seams and non-seam areas of the plastic were inspected for defects, holes, blisters, and any sign of contamination by foreign matter. Liner materials were repaired and tested as required by the Construction Quality Assurance Plan. Patching of the LLDPE plastic was performed as necessary to repair tears or pinholes in the FMC, and each repair was numbered. Patches were generally rectangular with rounded corners, made of the

same LLDPE material using LLDPE fusion welding rod materials, and extended to a minimum of 6 inches beyond the edge of defects.

Each repair to the FMC was non-destructively tested using the methods described in the specifications, that required less than 3 pounds of pressure loss within a 5-minute period. Tests that passed the non-destructive test were taken as an indication of an adequate repair. Failed tests were re-seamed and tested until passing test results. The number of each patch, date, location, patched and test outcome were recorded on the Repair Reports presented in Appendix D to this document. Locations of each repair are identified in the Repair Reports, contained in Appendix D. Thirty seven repairs were done on the slurry cover, sixteen repairs on the clarifier, and three repairs were made to the ore cover.

### 3.2.8 Geocomposite Placement and Inspection

All geocomposite inspections were conducted in accordance with the requirements identified in the CQA Plan and the Final Design Plans and Specifications. Material property sheets and quality control certificates for the geocomposite were supplied to the PQAO prior to installation, contained in Appendix B to this report. The PQAO or construction manager inspected transport and placement of each panel, and again after placement, for damage caused by placement operations or wind, any unusual conditions such as materials under the geocomposite, and looked for any areas requiring additional lustering, stitching or ties. Damaged panels or portions of damaged panels were marked and removed from the area. The CQA inspection engineer verified:

- The required field overlaps were obtained;
- Adjacent panels were securely tied with plastic fasteners or stitched, and ties were spaced every five feet along the slope and every two feet across the slope;
- Geocomposite was laid in the proper direction as per the layout diagrams and according to slope;
- Fusing (lustering) procedures were followed, and;

- No unauthorized materials remained under the geocomposite.

Panel placement forms are contained in Appendix D. Photographic documentation of panel placements is presented in Appendix A.

### 3.2.9 Screen Select Soil Placement

Prior to any soil placement on the geocomposite liners for all of the cover locations, a liner acceptance of each geomembrane cover was enacted. As required by the CQA plan, a certificate of liner acceptance was prepared and signed off between the liner contractors (ESI) and the earthwork contractor (CRA) before any screen select 1/2-inch minus soil placement proceeded. Certificates of liner acceptance are contained in Appendix D to this document.

Upon completion of the installation of the geocomposite drainage layer and liner acceptance on each cover, CRA set up depth markers and placed survey monuments as required for the slurry pit and clarifier. CRA then placed 12 inches of a screen select 1/2-inch minus soil over the geocomposite layer. The soil was obtained from a screen plant set up near Dud Hollow by the south of the gated entrance to the site. The screen select 1/2-inch minus soil layer was transported in end dump trucks to each cover, then drifted over the geocomposite layer in approximate a 1-foot layer to avoid damaging the geocomposite. This initial soil layer was compacted using a tracked small D-6 dozer.

### 3.2.10 Survey Monument Placement

CRA provided and installed survey monuments on the clarifier and slurry pit to the geocomposite layer to assess settlement on the covers for long-term monitoring. Survey monuments consisted of vertically constructed 5/8 inch steel rebar rod set into the top of the screen select 1/2-inch minus layer above the geocomposite layer. All rods were fitted with aluminum survey caps. The surface completion that houses each of the survey rods consisted of 4-inch schedule 40 PVC set to 3 feet minimum below grade surface and fitted with a female Schedule 40 4-inch PVC cap. The rod and PVC

casings contain 2 feet of ASTM C-150 concrete placed in the base and filled with silica sand to within about 8 inches of the aluminum caps. Four permanent survey monuments (SP-1 through SP-4) were placed on the slurry pit cover, with one monument specifically placed on the slurry cover near the junction of the Syncline Spring culvert and the 48/60 inch CMP, as requested by the IDEQ. Three monuments (SP-5 through SP-7) were placed on the clarifier cover. All 7 monuments were surveyed on October 2, 2009 to establish a baseline. Locations of the settlement survey monuments are shown on the as-built drawings presented in Chapter 4 of this document.

### 3.2.11 Bulk Select Fill and Topsoil Placement Inspection

A 24-inch bulk select fill (3 inch minus) layer consisting of 3-inch minus screened soil from Dud Hollow was placed on top of the screen select 1/2-inch minus soils on the slurry pit, and ore covers using a dozer to drift the soils into place. An 18-inch layer of 3-in minus soils were used on the clarifier cover. Two feet of bulk select fill (3 inch minus) were also placed on the ore over the furnace cover using a dozer to drift the soils into place. Soil thickness was ensured using depth thickness markers to obtain the required placement thickness. Soil cover design was engineered to provide sufficient soil moisture capacity for vegetated covers and to prevent damage to the underlying geomembranes from wind, from vehicular traffic, freezing conditions, and other activities such as animal burrowing or roots that could be potentially damaging to the geomembranes. Thickness of the screen select fill was verified through surveyed measurements following placement. A final blue top survey was performed on the bulk select fill (3 inch minus) layers to meet the construction design elevations as per the specifications and the final grades and elevations were filled or shaved to meet the survey lines on the IFC drawings. Upon completion of placement of the 3-inch minus bulk select fill cover soil, CRA performed a survey of the layer for confirmation of the as-built elevations.

Topsoil was placed in a similar method to the bulk select fill (3 inch minus) layers, although no truck traffic was allowed to drive on the topsoil. Markers were used to

identify the thickness of the 12-inch layer of topsoil across the clarifier cap and over bulk select 3-inch minus soil cover fill on the furnace. The topsoil on the clarifier and furnace was placed in approximate 6-inch maximum loose lifts. Each lift was compacted by tracking (a minimum of two passes) with a D-6 bulldozer to obtain a firm, dense, appearance and to minimize subsidence. Erosion control fabric or was provided by CRA to prevent erosion of the soil cover on the furnace and clarifier. The erosion-control matting was used to provide a stable seedbed for the first growing season until vegetation can be established and to minimize erosion from snow melt and rainstorm events during the vegetation establishment period in 2010.

### 3.2.12 Armor Placement

An 18-inch thick layer of rock armor was placed on the bulk select soil layer component on the slurry pit and on the ore pile covers to discourage animal burrowing and vandalism. Rock armor was obtained from stockpiled oversize materials generated during soil screening in Dud Hollow, and from drilling and blasting operations in the Wells Limestone on the southwest corner of Phosphoria Gulch. Survey stakes were placed in the surveyed 3-inch minus surfaces and marked to a measured 18-inch thickness prior to armor placement. Armor that was first run through a 3-inch grizzly was then placed using end-dump trucks along the margins of the covers and pushed into place at final grades using an excavator to achieve the final appropriate thickness. The armor cover at each of the two sites was feathered into the contours of the grades on the outside of each anchor trench.

### 3.3 Resolution of Problems Encountered

No significant problems were encountered during the Phase I construction. Construction was finished in accordance with the schedule as the result of good weather, and constant coordination and communication between the PQA, CRA, and CRAs subcontractors. Difficulties that were encountered and problems resolved during the

Phase I construction are identified in the Problem Identification and Corrective Measures Reporting Forms, contained in Appendix B to this document.

Daily progress and activities planning meetings were held between the PQAO and CRA to resolve problems or deficiencies in the Phase I construction work as they were identified. The purpose of the daily meetings was to define and resolve problems from previously completed activities, or work out deficiencies, and anticipate the coordination of scheduled work. IDEQ were informed of problems that arose during construction on a routine bi-weekly basis, accompanied by the progress schedule that was required by the Consent Judgment. These project updates to IDEQ and the progress schedule updates are contained in Appendix D to this report.

## 4.0 PHASE I REMEDIAL CONSTRUCTION ACTIVITIES

### 4.1 Pre-Construction Meeting

A pre-construction meeting was held on July 7, 2009. Members of the CQA team present included members of CRA who performed the earthwork and GET. Items discussed during the meeting included:

- Reviewing work area security and safety protocol;
- Familiarizing each party with the site-specific CQA plan and its role relative to the design criteria, plans and specifications;
- Review of the EPA storm water pollution protection plan (SWPPP) permit and the contractor requirements for maintaining the requirements during Phase I construction and storm water BMPs;
- Review of site-specific environmental health and safety issues including full-time monitoring for phosphine and HCN gasses during all intrusive work;
- Addressing water requirements for construction and mandatory fugitive dust control and monitoring requirements;
- Decon issues on site for equipment;
- Schedules, construction planning meetings and periodic reporting;
- Reviewing the responsibility of each party;
- Discussion of coordination of efforts between the earthwork and the liner construction work;
- Reviewing lines of authority and communication of each party;
- Discussion of weather-related issues in the Soda Springs area that could impact remedial action construction efforts;
- Discussing the CQA Plan including established procedures or protocol for observations and tests;
- Discussing methods for documenting and reporting inspection data;

- Discussing procedures for the location and protection of construction materials and for prevention of damage of the materials from inclement weather or other adverse events, and;
- Locations to begin the work, and the schedule to accommodate completion of grading the ore and initiating liner construction.

The liner subcontractor was not present at the time of the meeting.

#### 4.2 SWPPP BMP Placement

Prior to construction and site dewatering, storm water BMPs were specified by the PQAO and placed by CRA to prevent runoff of sediment generated during Phase I activities to Georgetown Creek. BMPs included:

- Placement of silt fences and silt berms at the furnace, slurry pit, and clarifier and at culverts leading to the creek;
- Silt berm placements above the slopes in Phosphoria Gulch;
- Silt berm placements and silt fences in Phosphoria Gulch south of Phosphoria Creek;
- Regrading the roads above Phosphoria Gulch and to the mine;
- Regrading the screen and borrow areas to provide slope towards the sediment pond, and;
- Berms around fueling areas and double containment for fuel tanks.

Inspections of the BMPs were made and documented by the PQAO or the construction manager on a weekly or bi-monthly basis (BMP dependant) and within a 24-hour period following storm events producing 1/2 inch or greater precipitation.

#### 4.3 Remedial Construction

Remedial construction for the Phase I work at the Central Farmers site began on June 28, 2009 and was completed on October 30, 2009. Photographic documentation of the

remedial Phase I construction is shown in Appendix A to this report. All earthwork construction and related activities described in the specifications for the capping of the slurry pit, furnace, clarifier and ore cap, as well as the dewatering and drainage improvements and borrow from the ore pile and Dud Hollow soils was performed by Conestoga Rover Associates of Kalamazoo, Michigan. Heavy equipment used in the excavation and construction of the cap included two track hoe excavators, two D-6 dozers, two loaders, and one backhoe. Two 15-yard end dump trucks were used to haul phosphate ore, borrow soils, road base materials, armor and rip rap during the remedial construction. A vibrating smooth drum roller was used to achieve compaction of the ore on the slurry pit, furnace, clarifier and ore cover areas requiring fill to ultimate design grade.

One water truck was used to add additional moisture to the ore to achieve moisture and compaction requirements and to control fugitive dust. Water was initially obtained from the clarifier through the first week in August. Water used from the clarifier was visually determined to be sediment free. Following this period, water was obtained on demand from an existing deep well GT-Deep and stored in a 30,000 gallon frac tank.

#### 4.3.1 Site Dewatering

Site dewatering addressed the management of near surface (perched) water and Tank Spring flows prior to work at the slurry pit. Tank spring flowed onto the site from a drainage on the east side of the former facility, issuing from a drainage approximately 30 feet below the existing water tank that is located immediately east of the former site. Tank Spring flows typically range from about 75 gpm in early May to less than one gpm or dry by October. Tank Spring entered the fenced portion of the site to the north and east of the furnace building footprint, as shown on the plan view on Drawing 4-1.

Tank Spring created permanent standing surface water to the east of the slurry pit, and resulted in flooding of the site south of the slurry pit until later in the summer season. Significant perched water was also noted in the shallow subsurface slag which was

thought to be to be associated with the water surface water leakage produced from Tank Spring.

Before any site construction could commence, CRA performed grubbing of the willows, shrubs and trees around the Tank Spring alignment. Next, surface water and near surface flows onto the former plant site required diversion by CRA in order to carry out the remedial actions near the furnace and the slurry pit areas. These areas were too wet for Phase I construction to proceed, and the permanent presence of standing surface water did not allow for final slurry pit investigations on the east and north sides to delineate the entire footprint of the slurry pit prior to remedial construction.

In order to dewater the site, a small pond was created from Tank Spring in early July 2009. Clarified flow from Tank Spring ponding was pumped directly to the CMP drop inlet to facilitate both the excavation of the pipe and the dewatering cutoff drainage trench. Once trenching construction had proceeded and the cutoff trench was completed according to the design, flow was diverted by CRA into the dewatering trench or pumped in order to complete the overlying pipeline. Construction for dewatering began on July 8, 2009 and was completed on October 10, 2009 with the construction of the lined basin and final rip rap placement in the basin and in the Tank Spring conveyance.

Drawing 4-1 shows the as-built construction at Tank Spring, including the construction of the channel used to convey the flow to the drop inlet. Approximately 600 feet of open conveyance diversion ditch and 185 feet of 16-inch HDPE SDR 11 piping was utilized in the construction to convey Tank Spring to the Georgetown Creek CMP riser. The channel was improved from an elevation of about 7002 feet on the hillside (as shown on section A-A', Drawing 4-1) east of the site to the drop inlet basin at an elevation of 6973 feet in the basin at the lip of the manhole drop inlet (as shown on sections A-A', and B-B' on Drawing 4-1). From the drop inlet manhole in the basin, the water was conveyed within the 16-inch pipe to a discharge point of about 6963.5 feet elevation at the CMP riser, approximately 5 feet below grade (as shown on section B-B' on Drawing 4-1 and

on the plan view drawing). Grade on the 16-inch pipe was set to about 2.6 percent during construction. Grade was set using a laser level that was set to the correct grade. Backfill used in the construction consisted of clean-washed silica rock that was stockpiled at the site.

The excavation containing the 16-inch HDPE pipe was constructed to drain to the CMP riser, (as shown on section B-B') on the as-built Drawing 4-1. Dewatering of perched water found in the site fill was accomplished using the existing CMP and the subsurface water cutoff trench that was constructed at the same time that the 16-inch pipeline was installed. The as-built details of the dewatering trench are shown on section B-B' on Drawing 4-1. Pipe and manhole materials used in the construction of the Tank Spring diversion are shown in the materials submittals contained in Appendix B to this report.

The cutoff dewatering trench was constructed at the same time and within the same excavation used to dewater Tank Spring. The cutoff trench was constructed to contain and collect perched water within a 6-inch perforated ADS HDPE pipe near the base of the excavation, as shown on section B-B' on the as-built Drawing 4-1. The 6-inch pipe was constructed on a slope to the CMP riser on a 1-1/2 percent grade. The 6-inch perforated pipe was elbowed into the CMP riser at an elevation of 6963.5 feet, approximately the same elevation as the 16-inch pipe that was installed to convey Tank Spring to the CMP riser.

During the construction, the trench was opened to approximately 18 feet in width and benched at slightly less than 6 feet below grade for safety purposes. An existing 18-inch concrete pipe that at one time was used for site drainage to the CMP was found to be leaking into the site soils and was removed during the excavation of the trench. The banks and bottom of the excavation were covered with an 8-oz non-woven filter fabric as shown on section C-C' on the as-built Drawing 4-1, to prevent fine materials from invading the silica rock backfill or from clogging the perforated pipe. The perforated 6-inch pipe was placed to set grade and then backfilled with clean washed silica rock as shown on section C-C' on as-built Drawing 4-1. The silica rock was used in the design

to provide a conduit of high permeability within the low permeability native materials. An 8-oz non-woven filter fabric was also placed over the top of the silica rock to prevent the entry of fines into the drainage trench. The 16-inch pipeline was placed above the "burrito" . The fill in the excavation above the 16-inch pipeline was backfilled with excavated materials. The new 16-inch pipe was placed into the existing opening utilized by the removed concrete pipe. A five-foot long 36-inch ADS N-12 manhole, shown on the plan view piping detail on Drawing 4-1, was placed on top of the existing 36-inch CMP riser, completed with a locking protective water-tight cover to contain and protect the existing riser to the 48/60-inch CMP.

The improved Tank Spring channel was constructed to a drop inlet box located at N. 316886, E. 900238. The drop inlet box was constructed of 42-inch diameter plastic pipe (ADS N-12) and was 48 inches in depth with a closed bottom, set on backfilled boulders and silica rock to form a solid foundation. The drop inlet was fitted with a debris guard grating and anti seepage collars attached to the 16 inch pipe to prevent losses into the excavation from Tank Spring. The drop inlet was connected using fusion welding techniques to the CMP during construction dewatering using a 16-inch diameter pipe within the trench excavated from N. 316886, E. 900238 to the existing 36-inch CMP drop inlet to the 60/48-inch CMP at a location N. 316948, E. 900058 at an elevation of about 6963.5 feet amsl as shown on section B-B' on the as-built Drawing 4-1. This inlet point allowed for dewatering of the site prior to slurry pit cover construction and additional investigations for the limits of the elemental phosphorus to the east and south of the slurry pit. Dewatering prevented on-going site flooding during construction of both the furnace and the slurry pit.

The HDPE and perforated pipelines were connected to the 36-inch CMP drop inlet by cutting a hole in the 36-inch CMP drop inlet for the 6-inch line. Concrete was used at the joint to make the connection watertight. Once the existing concrete pipe was removed, the 16-inch HDPE pipe was slotted into the existing opening using the excavator. Care was exercised to prevent sediment from entering the CMP riser or from damage to the CMP riser.

Diversion of Tank Spring was completed in early October with improvements to the existing channel in the drainage at about 7002 feet elevation. Improvements included deepening and widening to the dimensions of the channel, as shown on the channel design detail on Drawing 4-1, for approximately 300 feet using a trapezoidal ditch design. Gradation 1 rip rap, as required by the specifications, was added by CRA to about one foot thickness to complete the drainage for the entire length of the improvement. The final 160 foot length (station 4+40 to 6+10 shown on the plan view, Drawing 4-1) was about 2.1 percent grade. Therefore, the outlet detail shown on Drawing 4-1 was underlined with GCL material to reduce potential seepage from the improved drainage. Photographic documentation of the Tank Spring dewatering is presented in Appendix A to this report.

#### 4.3.2 Slurry Pit Cover Construction

Construction on the slurry pit cover began with grubbing of vegetation on the slurry pit surface on July 10, 2009 and was completed with the final placement of the rock armor on September 25, 2009. Photographic documentation of the slurry pit cap construction is presented in Appendix A to this report. Earthwork construction was completed by CRA and liner construction was completed by ESI. Independent Drilling of Soda Spring, Idaho raised the PVC and steel casings on wells GT-2, GT-7 and GT-8 during the placement of the ore and prior to liner installation. Details of the well extensions are shown on Drawing 4-2, well extension detail.

The slurry pit as-built drawing, shown as Drawing 4-2 shows the permanent closure design and construction of the covered phosphorus impoundment. The estimated area of the slurry pit impoundment facility was initially estimated to be approximately 56,000 square feet prior to the additional test pit excavations that were completed on July 24, 2009. The additional test pits resulted in the expansion of the slurry pit cover to about 61,000 square feet to ensure that the elemental phosphorus was covered with a geomembrane. The slurry pit surface contained sparse grasses, sweet clover, alfalfa,

lupine and other native plants, willows, a number of aspen trees, and stockpiled armoring rock material prior to Phase I construction.

Before cover construction could commence, all vegetation and trees existing on the slurry pit cover were removed by CRA. The remaining woody root systems were treated with Roundup concentrate Brush Killer Plus™ an approved herbicide for treatment of both woody and non-woody root systems. Details are contained in Appendix B to this report. CRA applied the herbicide in strict accordance with manufacturer's recommendations for safe and environmental treatment, and color coded all root systems that were treated. The vegetative mat on the slurry surface was grubbed and the stockpiled slag was also removed from the cover to prepare a hard surface for ore placement.

Following removal of the trees and after application of herbicide to the tree and shrub roots to ensure prevention of regrowth, low spots that were previously under standing water on the east side of the slurry pit were backfilled with 12-inch minus rock and compacted to provide a stable base for loading and transport. Four temporary settlement markers were placed on the centerline of the original slurry pit cover in a north-south orientation to assess deflections to the original slurry pit surface during ore loading. The settlement markers consisted of 10-foot metal poles mounted to 4-foot by 4-foot plywood bases. The metal poles were removed from the plywood bases upon final survey and removed prior to placement of any geomembranes. Little to no deflection was noted on the temporary monuments during the ore loading to the cover during the ore loading to the cover during the monitored period. The results of settlement over the ore-loading period of monitoring was inconclusive due to the short duration, therefore the results of settlement over the ore-loading period of monitoring was inconclusive.

Following placement of the temporary markers and survey of the tops of the markers, phosphate ore was then transported from the ore pile in Phosphoria Gulch beginning on July 15, 2009 and transported using end-dump trucks to the slurry pit cover and then

compacted in one-foot lifts on the existing slurry pit cover. The ore was compacted to provide a structurally stable subgrade for the overlying geomembrane and soil layer components. Compaction was completed in order for the cover to resist settlement, compression, and uplift resulting from internal or external pressures, thereby preventing distortion or failure of overlying geomembrane components.

Compaction was completed by CRA between July 15, 2009 and August 5, 2009 using a water truck and a rolling compactor. A total of seven lifts were completed. Compaction testing for these lifts are shown in Table C-1 contained in Appendix C to this report. Density testing was performed by Harper Leavitt Engineering on one-foot lifts, and achieved at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities ranged from 102.5 pounds per cubic foot (lbs/ft<sup>3</sup>) to 131.6 lbs/ft<sup>3</sup>. Relative compactations ranged from 87.6 percent (lift 4) to 112.5 percent.

The lowered compaction and densities on lift 4 of the slurry pit were attributed to soil mixing with the ore during excavation of the ore in Phosphoria Gulch. Visual inspection indicated that a smaller percentage of native soil was mixing into the ore prior to truck loading from the slope in Phosphoria. Obtaining a representative sample of the mixture was not practical. Therefore, it was concluded that the ore curve used to assess compaction of lift four did not match the actual compacted material density. Results in Appendix C show that in 4 tests, compaction ranged from 87 to 94 percent with lowered dry densities ranging from 102 to 106 pounds per cubic foot (pcf). One hundred percent compaction on the ore results in a dry density of about 117 pcf. CQA corrective action measures taken are described in the problem identification and corrective measures report (PICMR), Appendix D to this document. However, the lift appeared to be of sufficient density based on the difficulty in driving the Troxler stake and based on visual appearance while walking the surface. To correct this problem, a water truck and compactor were continuously employed over this area on the following day, as described in the PICM report, Appendix D to ensure that increased moisture content and increased compaction efforts with the equipment ensured the maximum compacted

results that could be achieved with the mixed ore and soil material. Another corrective measure included a requirement that no soil and ore mixing was allowed for cover construction.

Approximately 11,646 yards of ore was placed by CRA to achieve ultimate design elevation shown on the IFC drawings. The ore was crowned to an elevation of about 6982.7 feet in the center, giving the ore surface an approximate 10:1 slope, as shown on as-built Drawing 4-2 cross sections and plan view. The compacted ore surface was blue topped to meet as-built grades. The ore was then smoothed and tested for compaction using a density gage on the seventh lift and surveyed to complete as-built elevations prior to placement of the GCL layer.

On the perimeter of the compacted ore, CRA placed and compacted 1/2-inch minus screen select fill borrow soil from the screened area to build grade for the installation of an anchor trench above native grade. Prior to liner placement, CRA excavated an anchor trench around the perimeter of the slurry pit, leaving an area for access to the cover. The anchor trench was constructed approximately 1 foot in width and 30 inches in depth, and 1049 feet in length as shown on the anchor trench detail on Drawing 4-2. The anchor trench was constructed with compacted 1/2 inch minus clean select fill borrow soils on the exterior of the trench, with compacted ore on the interior of the trench. The bottom of the anchor trench was constructed above the pre-existing grade, reducing the possibility of worker exposure to phosphine and HCN gasses.

Before installation of the final cover system on the slurry pit ore, the ore surfaces were compacted and sloped on the slurry pit in conformance with the lines and grades shown on the IFC drawings. Independent Drilling also extended the PVC and metal casings of wells GT-2, GT-7 and GT-8 on August 4, 2009 without causing any damage to the wells since these wells are within the footprint of the cover. An acceptance of the final grades and surface conditions was completed between CRA and ESI on August 18, 2009 prior to GCL placement.

The final cover system consists of the following components, as detailed on as-built Drawing 4-2 cover details:

- Constructed anchor trench between compacted fill and ore lifts around the slurry pit;
- GCL (CETCO Bentomat ST);
- FMC (GSE LLDPE 40-mil textured geomembrane);
- Geocomposite drainage layer (consisting of SKAPPS geonet with geotextile bonded to both sides);
- 12-inch layer screen select soil (1/2 inch minus layer) over the geocomposite;
- 24 additional inches of bulk select soil (3 inch minus);
- Four settlement monuments extending to the geocomposite; and
- 18-inch thick rock armored covering on the slurry pit with a road base gravel over the armor layer for a drivable surface on selected areas to access the wells.

Details of the materials used in the cover construction are presented in the submittals contained in Appendix B to this report.

Following well extension, confirmation that the ore conformed to the lines and grades shown on the IFC drawings, and subgrade acceptance, a geosynthetic clay liner (GCL) layer was placed directly on the smoothed and compacted ore surface. GCL placement was in an east-west direction. Approximately 65,972 square feet (ft<sup>2</sup>) GCL (accounting for slope and including the anchor trench area) was required to cover the slurry pit footprint within the anchor trench. GCL placement was completed between August 19 and August 21, 2009. The GCL extended to the outside of the slurry pit footprint and completely covered the underlying compacted ore used to slope the cover. The GCL was secured around the perimeter of the slurry pit by placing the panel ends into the anchor trench. A total of 70 panels (15 feet in width) were used to complete the GCL cover. Panels placed were up to 194 feet in length an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the

GCL are contained in Appendix D. Overlaps on the GCL were one foot, and one pound of granular bentonite was used for every four feet of seam length to seal the GCL seams.

In each case for the well penetrations through the GCL, the GCL seam edge was used. Each well penetration through the GCL was completed between two separate panels of GCL. Prior to GCL placement, a square "notch" (about 16" x 16", 4 inches deep) was excavated into the subgrade ore around each well penetration. The notch was then backfilled with granular bentonite. A secondary collar of GCL was placed around the penetration and then the contractor cut a "star" or "pie" shaped pattern in the collar to enhance the collar's fit to the penetration. Granular bentonite was applied between the primary GCL layer and the secondary GCL patch collar. A photograph of the notch is shown in Appendix A. Additional granular bentonite was placed above the GCL patch between the GCL and the 40-mil plastic. Bentonite was also placed on top of the FMC 40 mil plastic beneath the geocomposite.

Following completion of the GCL placement, a 40-mil linear low-density polyethylene flexible membrane cover (FMC), approximately 65,972 ft<sup>2</sup> in area was placed directly on the GCL between August 19 and August 21, 2009 by ESI. A total of twenty four 40-mil LLDPE panels were placed over the GCL and ore on the slurry pit cover. FMC panels used were 40-mil linear low-density polyethylene geomembrane manufactured by GSE that met material specifications. Submittals and testing details are presented in Appendix B to this report. Panels placed were 22.5 feet in width with panel lengths measured in the field up to 194 feet in an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the FMC are contained in Appendix D. The FMC was secured around the perimeter of the slurry pit by placing the panel ends into the anchor trench above the GCL and backfilling and compacting the trench. Pipe boots were used to allow the extended wells GT-2, GT-7 and GT-8 to penetrate the liners which were installed following the Manufacturer's recommendations, and completed as shown on the well extension detail on Drawing 4-2. Photographs of the boots are presented in Appendix A.

Compaction of the soils in the slurry anchor trench was completed in three lifts. Specifications required a minimum of two lifts, but testing frequency within the anchor trenches was not specified. Soils used in the anchor trench were screen select fill (1/2-inch minus). Compaction to 95 percent on lifts one and two in the anchor trench could not be achieved because of the high moisture content in the soils and space restrictions within the 1-foot-width by 30-inch depth anchor trench. Due to the narrow trench dimension, only hand compaction with a jumping jack compactor could be utilized. On August 24, work was halted as the result of a one-inch rainstorm that precluded any dirt work. The first lifts in the anchor trench placed on August 23 had to be completely removed as the result of saturation from runoff from the cap. Screen-select soil lifts were replaced on August 25 and completed in about 10-inch lifts. By the third lift, density testing was performed over 2 days (August 26 and August 27) to allow another day of drying of the compacted soils. The average of 12 tests on the third lift was estimated to be about 95 percent over the two day period. Lift 3 relative compaction in percent ranged from 84.4 percent to 103.2 percent and dry density ranged from 101.9 pcf to 124.6 pcf. Low compaction on August 26 (84.4 percent) was the result of moisture content (13.1 percent) in excess of optimum moisture, laboratory determined at 12.1 percent. These soils were again removed from the anchor trench on the east side of the slurry pit, and new soils were brought in a second time and compacted in three lifts with the jumping jack compactor. Anchor trench compaction results for lift 3 on August 27 ranged from 97.2 percent to 103.2 percent, as shown in Appendix C.

A geocomposite drainage layer with an area of 69,640 ft<sup>2</sup> was placed on the FMC layer to allow percolating moisture to drain off to the sides of the slurry pit cover system. The geocomposite panels used were are 8-oz. double-sided geocomposite material manufactured by SKAPS. Details of the geocomposite are contained in Appendix B. Panels were placed in lengths up to 195 feet. Panels were rolled out in the direction of slope (east-west), and connected with plastic ties. The fabric was overlapped and lystered with a torch, and sewn together to prevent the entry of soil into the geonet.

Following placement of the geocomposite layer, a formal liner acceptance was made by CRA on August 24, 2009 (contained in Appendix D). A 12-inch screen select 1/2-inch minus soil layer was placed above the geocomposite and compacted with a dozer. The soil layer was carefully drifted over the geocomposite layer to avoid damaging the geocomposite layer. No driving was allowed on this layer. This soil layer was compacted using a D-6 tracked dozer. The 24-inch layer of the bulk select fill soil was placed and compacted in a similar manner above the 12-inch layer using two 12-inch lifts. Placement of the slurry pit soil cover was completed on September 11, 2009.

Four permanent survey monuments (SP-1 through SP-4) were placed on the slurry pit cover, with one monument placed near the junction of the Syncline Spring culvert and the 48/60 inch CMP. CRA constructed the monuments according to the specifications and installed the survey monuments to the geocomposite layer during the screen select and bulk select soil placement. CRA ensured that the monuments were not disturbed during soil placement and compaction. Survey monuments consisted of vertically constructed 5/8-inch steel rebar rod set into the top of the screen select 1/2-inch minus layer above the geocomposite layer. All rods were fitted with aluminum survey caps. The surface completion that houses each of the survey rods consisted of 4-inch schedule 40 PVC set to the top level of the armor elevation and fitted with a female Schedule 40 4-inch PVC cap. The rod and PVC casings contain 2 feet of ASTM C-150 concrete placed in the base and filled with silica sand to within about 8 inches of the aluminum caps. These monuments were surveyed on October 2, 2009 to establish a baseline. Locations of the settlement survey monuments are shown on the as-built Drawing 4-2.

An 18-inch thick layer of 18-inch minus rock armor was placed on the slurry cover soil to discourage animal burrowing and vandalism. Armor was end-dumped from trucks between the dates of September 15 and September 25, 2009, and carefully placed using the excavator. Thickness of the armor was carefully controlled using marked stakes to identify the final grade elevations. Armor grade was brought up to the approximate level of the top of the settlement markers.

A drivable road base was added to the top of the slurry pit cover on October 9, 2009 in two locations. The road base consisted of about 18 inches of grizzlied 3-inch minus Wells limestone material from the quarry in Phosphoria Gulch with about 6 inches of crushed clean washed silica rock obtained from Dud Hollow for a drivable base. The base was compacted with a water truck and a vibrating roller. One road accesses well GT-2 from the south, while another access point is on the north end of the slurry pit cover and accessed from the east. Both roads were successfully utilized for sampling in October 2009.

Photographic documentation of the slurry pit construction is contained in Appendix A to this report.

#### 4.3.3 Furnace Cover Construction

Prior to remedial construction, all that remained of the furnace was a circular reinforced conical flat-topped steel structure with blind-flanged pipes on the top. The building that housed the structure was removed in 2001. The Phase I closure of the furnace was largely for visual purposes and to prevent vandalism of the structure and exposure to elemental phosphorus. The furnace is known to contain elemental phosphorus and was, therefore, minimally disturbed by CRA during Phase I covering operations. The swampy area located immediately north of the furnace and east of the slurry pit dried up following the rerouting of Tank Spring into the 16-inch pipe and construction and implementation of the cutoff trench. Cover construction for the furnace proceeded following the dewatering activities when the ground surface surrounding the furnace was relatively dry.

Phase I furnace closure was completed between the dates of July 14 and August 13, 2009. Work between these dates included the covering of the furnace structure. Prior to placement of ore, the ground surface was grubbed to remove vegetative cover and soft soil to provide a firm base for ore loading. The footprint of the cover was staked by

Scherbel according to the IFC drawings in order to delineate the extent of the cover. Drawing 4-3 shows the as-built details of furnace closure. Photographic documentation of the furnace cover construction is contained in Appendix A to this report.

The furnace was covered in place using 1-foot lifts of compacted phosphate ore that was transported in end dump trucks from Phosphoria Gulch by CRA. A D-6 tracked dozer, end dump trucks, a water truck and a vibrating compaction roller was used to compact the ore material. Density testing was performed by Harper Leavitt on ore lifts every 3 feet. Results of the density tests are presented on Table C-1 in Appendix C. In-place compacted maximum dry densities ranged from 107.6 pounds lbs/ft<sup>3</sup> to 125.6 lbs/ft<sup>3</sup>. Relative compactions ranged from 92.0 percent (lift # 6) to 107.4 percent.

With the exception of lift 6, all ore density testing resulted in at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698), ranging from 95 to 107.4 pcf. However, the compaction on lift #6 averaged about 94 percent compaction (three readings between 92 and 94.1 percent). It was noted that some ore-soil mixing was occurring in the lift from native soils in Phosphoria. This also occurred at the slurry pit ore fill, lift 4. This was discussed on July 28, 2009 with the design engineer . Because the values were near passing, the agreed remedy required additional moisture added and additional compaction work on July 29 on lift 6 to ensure completion of a stable layer. This work was completed in the morning on July 29 using the vibrating compactor and the water truck prior to the addition of any more ore.

Approximately 11,646 cubic yards of compacted ore were used in the furnace cover. Near the completion of covering of the furnace, CRA provided and installed granular bentonite backfill immediately around the top and sides of the furnace structure to seal the top of the furnace, as required in the specifications. The sloped cover regrade extended from the slurry pit cover to the canyon slope immediately east of the furnace. The slopes were feathered to existing canyon native grade contours to provide a more natural appearance by breaking up the flat east canyon slope. The IFC drawing required a 3.5:1 final slope. However, the furnace structure had a larger diameter than was

designed for, which required the crest of the fill to cover a larger area. The toe of the slope could not be extended south due to the presence of well GT-3. As a result, the final slope of the cover was approximately 3:1 horizontal to vertical on the south side with a slightly more gentle slope to the north.

The soil cover placed on the ore surrounding the furnace was 3 feet in thickness, as required by the IFC drawings and the specifications. Following completion of the ore placement, compaction and surveying of the ore grades, CRA placed 2 feet of bulk select soil (3-inch minus) over the compacted ore. Approximately 3,563 cubic yards of screen select 3-inch minus soil were used to cover the ore. The soil was end-dumped, and tracked and pushed into place using a D-6 dozer. The bulk select fill (3 inch minus) cover was surveyed on completion to provide as-built surface elevations.

Topsoil cover on the furnace was obtained from the weathered Dinwoody formation that outcrops east of the Tank Spring diversion. Approximately 1,520 cubic yards of Dinwoody topsoil were used to cover the bulk select fill (3 inch minus). The topsoil was end-dumped, and tracked and pushed into place using a D-6 dozer in two 6-inch lifts. The topsoil cover was surveyed on completion to provide as-built surface elevations.

The final topsoil was sampled to obtain nutrient amendment analysis to ascertain nutrient requirements. Nutrient analysis requirements are presented in Appendix B. Nutrient requirements were similar for both the Dinwoody and for the Dud Hollow borrow soils. Analysis recommended a number of blends, among them a 21-0-0 for both soils at an application rate of 125 pounds per acre (lb/ac) with 22 pounds 32 percent zinc sulfate for Dinwoody, 7 pounds borate and 50 to 100 lbs/ac sulfur. Two fertilizers were used, including a water soluble concentrate 20-20-20 applied at 200 lbs/ac on the clarifier and furnace and west end of Phosphoria Gulch. This fertilizer also contained boron and zinc. However, this mixture was replaced with a 16-16-16 fertilizer with sulfur as requested by CRA to be used at the application rates described by the analysis and the analytical labs recommendations. Anderson Hydroseeding obtained the new fertilizer on October 20, 2009 in Pocatello, transported to the site, and applied

the fertilizer at the rate of about 375 lbs/ac, including a complete re-fertilization on the furnace cover and clarifier covers and the west end of Phosphoria Gulch.

The furnace topsoil surface was prepared initially by CRA using the dozer tracks to leave horizontal cleat marks, then was fertilized and seeded using hydro mulch methods. Hydro mulching and fertilization was completed by Anderson Hydro seeding of Pocatello, Idaho. Work was completed on October 26, 2009. The seed mix that was used is shown in Table 4-1. Documentation of seed and fertilization application are contained in Appendix B.

The erosion control matting used was GreenFix WS072B straw matting. It is rated for a 2:1 slope and has netting on both sides. The product is rated for 10 to 12 months, and is naturally biodegradable. Details of the material are contained in Appendix B. CRA placed erosion control fabric on the slopes equal to or steeper than 3:1 to prevent erosion on the furnace soil cover following seeding. Erosion-control matting was placed to provide a stable seedbed for one growing season until vegetation can be established on the furnace cover in 2010.

Grade 1 riprap was placed along the north and south contacts between the furnace cover and the natural slope on both contacts with native grade, as detailed on Drawing 4-3. The ditches were "V" shaped with maximum side slopes of 2:1. Riprap was placed to one foot in thickness. These channels drain the hillside to the east of the furnace below the mine road. A third rip rap channel was placed between the furnace and the slurry pit through the saddle between the two covers. This channel drains the fill area north of the furnace, the east side of the slurry cover, and the north side of the furnace.

Following completion of the furnace and slurry pit covers, additional bulk fill soil cover was transported from Dud Hollow to fill in the low areas north of the furnace and placed in approximate one-foot layers, then compacted by CRA to fill this area. The fill was required to provide positive drainage from this area. The fill was constructed between

the dates of August 14 and September 17, 2009. Compaction record for the fill area contained in Appendix C. Fill thickness varied from about six feet near the furnace cover to several inches near the north end of the slurry pit, and grade was blended to the regraded area for Tank Spring. The slope on the entire fill area was constructed at approximately one percent to the north, as shown on Drawings 4-2 and 4-3. A vegetated v-ditch was constructed on the fill such that the drainage was routed both to the north towards the cutoff trench, and to the saddle to the south between the furnace and the slurry pit cover and discharging down the armored v-ditch channel between the covers. The final soil surface was fertilized and seeded using hydro mulch methods. Hydro mulching and fertilization was completed by Anderson Hydroseeding of Pocatello, Idaho, as detailed in Appendix B. The seed mix that was used is shown in Table 4-1.

#### 4.3.4 Clarifier Closure

Closure of the clarifier took place between August 8 and August 29, 2009. Prior to closure of the clarifier, the structure consisted of a circular open-topped tank basin with concrete walls and a very low permeability clay floor. The clarifier was filled with about 7 to 9 feet of water, with soil on the perimeter and sediment on the bottom. The diameter of the structure was approximately 210 feet within the concrete ring walls. The basin contained wetland plants, including cattails. The metal infrastructure contained in the clarifier included the center pivot and metal raking arms that extended to the edges of the water. There was approximately 800,000 gallons of water in the clarifier in the spring of 2009. Water elevations at their highest were estimated to be about 6028 ft amsl. One monitoring well (well GT-6) is located 175 feet downgradient of the clarifier and indicates no impacts from the facility (GET, 2009). Photographic documentation of the clarifier and Phase I closure of the structure is presented in Appendix A to this document.

Phase I construction to permanently close the clarifier was executed after conclusion of remedial work at the furnace and the slurry pit in order to utilize water from the basin for

ore compaction on lifts on the furnace and slurry pit. The bottom of the clarifier pond contained about 1 foot of extremely fine sediment that was not disturbed by CRA during pumping. Water quality results obtained during the SI (GET, 2007) did not indicate RCRA hazardous levels of metals in the clarifier water, clarifier soils or bottom sediment. After the removal of about 400,000 gallons, the remainder of the water was pumped to the sediment pond. Pumping was completed August 12, 2009.

Phase I closure of the clarifier initially required the dewatering and removal of all vegetation from within the concrete walls and on the outer banks outside of the anchor trench alignment. All vegetation and trees on the inside and outside of the clarifier was grubbed by CRA between August 8 and August 10, 2008. The remaining roots were treated with an approved herbicide for treatment of both woody and non-woody root systems. CRA applied Roundup™ Poison Ivy and Tough Brush Killer Plus, in strict accordance with manufacturer's recommendations for safe and environmental treatment. This herbicide was suitable for both aspen and willow plants. Details of Roundup™ Poison Ivy and Tough Brush Killer Plus are contained in the submittals, Appendix B.

Following grubbing and dewatering, the remaining soil and sediment material was found to be too wet and loose to immediately begin backfill and compaction. Vegetation that included cattails and willows were laid on the soil outer banks on the south side of the clarifier. CRA removed all of the metal plating from the concrete ring surrounding the structure, and the metal rake arms and center pivot. Elemental phosphorus was identified within the top of the wet sediment and on the metal that was removed from the structure. All metal was placed outside of the structure on slag areas and within a safe distance from any points of ignition to eliminate the possibility of fires. Continuous air monitoring was conducted within the clarifier to assess the presence of either HCN or phosphine. Neither of these gasses were detected during the clarifier closure operations. Air monitoring logs are contained in Appendix F to this report.

As the sediments began to dry, CRA transported reject ore (>3/8 inch) from the south

side of Phosphoria Gulch in end dump trucks to the clarifier to stabilize the remaining fine materials. Stabilization of the bottom sediment was completed to achieve compaction for the first several layers of ore. Compaction records are presented in Appendix C. Density testing was performed by Harper Leavitt Engineering on the first three lifts that included most of the stabilized sediment, and achieved at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities for the first three lifts ranged from 119.2 lbs/ft<sup>3</sup> to 127.3 lbs/ft<sup>3</sup>. Relative compactions ranged from 101.9 percent to 108.8 percent. Other soil materials in the clarifier were windrowed and allowed to dry along the perimeter of the clarifier. Some oxidation of phosphorus was noted upon drying of the materials.

Once stabilized, remaining closure of the clarifier facility included excavation of ore from the ore pile in Phosphoria Gulch, transporting the ore to the clarifier, and backfilling the structure. Compaction was completed by CRA using vibrating rolling compaction equipment, a water truck, end-dump trucks, and a D-6 Dozer. Ore was placed in compacted 1-foot lifts (18 one-foot lifts towards the center of the structure) by CRA to provide a structurally stable subgrade for the overlying GCL, 40-mil FMC and soil layer components. Construction specifications required density testing on every third lift in the clarifier. However, due to the 5 percent slope on the surface, the PQAO required more frequent testing by requiring testing for each one foot lift. Density testing was performed by Harper Leavitt Engineering on the remaining lifts (4 through 18), and compaction achieved at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities for the last 15 lifts ranged from 112.3 lbs/ft<sup>3</sup> to 127.3 lbs/ft<sup>3</sup>. Relative compactions ranged from 96 percent to 113 percent. Ore placement and compaction was completed between August 13 and September 14, 2009. Compaction records for all 18 lifts are presented in Appendix C.

Approximately 13,191 cubic yards of ore were placed and compacted within the clarifier to achieve the ultimate design elevation. The ore used as backfill was crowned to an

elevation of about 6940 feet in the center, giving the surface an approximate 5 percent slope from the center to the outside edge of the clarifier. The ore height extended to one foot in elevation above the concrete ring height at all locations, then sloped off on a 2:1 slope to the inside edge of the anchor trench. Once the design elevation at the crown was achieved based on the outside elevations, and the required compaction has been accomplished, the surface was smoothed by CRA to prepare for cover installation and surveyed.

After ensuring that the ore lines and grades met the design IFC drawings, the ore was prepared according to subgrade preparation specifications. Following smoothing of the surface with a screen, a subgrade acceptance form (Appendix D) was signed on September 17, 2009 by the liner contractor ESI. CRA excavated an anchor trench around the perimeter of the clarifier, approximately 2 feet in width and 30 inches in depth. The anchor trench was excavated to a 2-foot width to accommodate a trench compactor. The trench compactor was required because the jumping jack compactor did not work well in the one-foot slurry pit anchor trench resulting in difficulties achieving the required compaction. The trench compactor performed superior results to the previous method based on measured performance at the clarifier and ore cover.

The final cover system consists of the following components, as detailed on as-built Drawing 4-4 engineered covers and anchor trench details:

- Constructed anchor trench between outer bank of the clarifier slope and ore lifts around the clarifier;
- GCL (CETCO Bentomat ST);
- FMC (GSE LLDPE 40-mil textured geomembrane);
- Geocomposite drainage layer (consisting of SKAPPS geonet with geotextile bonded to both sides);
- 12-inch layer screen select soil (1/2 inch minus layer) over the geocomposite;
- 24 additional inches of bulk select soil (3 inch minus);

- Three settlement monuments extending to the geocomposite; and
- 12-inch thick topsoil surface from borrow soils from Dud hollow.

A geosynthetic clay liner (GCL) layer then placed directly on the smoothed and compacted ore surface. GCL placement was in an east-west direction. Approximately 46,403 ft<sup>2</sup> GCL was required to cover the clarifier footprint within the anchor trench. GCL placement was completed between September 16 and September 19, 2009. The GCL extended to the outside of the clarifier footprint and completely covered the underlying compacted ore used to slope the cover. The GCL was secured around the perimeter by placing the panel ends into the anchor trench. A total of 40 panels (15 feet in width) were used to complete the GCL cover. Panels placed were up to 150 feet (maximum roll length) in length an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the GCL are contained in Appendix D. Overlaps on the GCL were one foot, and one pound of granular bentonite was used for every four feet of seam length to seal the GCL seams.

Following completion of the GCL placement, a 40-mil linear low-density polyethylene flexible membrane cover (FMC), approximately 46,403 ft<sup>2</sup> in area was placed directly on the GCL between September 16 and September 19, 2009 by ESI. A total of fourteen 40-mil LLDPE panels were placed over the GCL and ore on the clarifier cover. FMC panels used were 40-mil linear low-density polyethylene geomembrane manufactured by GSE that met material specifications. Submittals and testing details are presented in Appendix B to this report. Panels placed were 22.5 feet in width with panel lengths measured in the field up to 250 feet in an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the FMC are contained in Appendix D. The FMC was secured around the perimeter of the clarifier by placing the panel ends into the anchor trench above the GCL and backfilling and compacting the trench.

Compaction of the soils in the anchor trench was completed in three lifts in accordance with design plans and specifications. Soils used were screen select 1/2-inch minus, and compaction was completed to 95 percent, as shown in Appendix C. Density testing was performed by Harper Leavitt Engineering on the third lift, and achieved at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities for the third lift ranged from 114.8 lbs/ft<sup>3</sup> to 121.8 lbs/ft<sup>3</sup>. Relative compactions ranged from 95.1 percent to 100.9 percent.

A geocomposite drainage layer with an area of 47,146 ft<sup>2</sup> was placed on the FMC layer to allow percolating moisture to drain off to the sides of the clarifier cover system. The geocomposite panels used were are 8-oz. double-sided geocomposite material manufactured by SKAPS. Details of the geocomposite are contained in Appendix B. Panels were rolled out in the direction of slope (east-west), and connected with plastic ties. The fabric was overlapped and lystered with a torch, and sewn together to prevent the entry of soil into the geonet.

Following placement of the geocomposite layer, a formal liner acceptance was made on September 18, 2009 by CRA (contained in Appendix D). A 12-inch screen select 1/2-inch minus soil layer was placed above the geocomposite and compacted with a dozer. The soil layer was carefully drifted over the geocomposite layer to avoid damaging the geocomposite layer. No driving was allowed on this layer. This soil layer was compacted using a D-6 tracked dozer to obtain a firm, dense, appearance and to minimize subsidence.

The 18-inch layer of the bulk select fill soil was placed and compacted in a similar manner above the 12-inch layer using two 9-inch lifts. Temporary depth markers were used to set thickness. Three monuments (SP-5 through SP-7) were placed on the clarifier cover, extending from the top of the geocomposite for future survey, as shown on Drawing 4-4. The surface completion that houses each of the survey rods consisted of 4-inch schedule 40 PVC set to 3 feet minimum below grade surface and fitted with a

female Schedule 40 4-inch PVC cap. The rod and PVC casings contain 2 feet of ASTM C-150 concrete placed in the base and filled with silica sand to within about 8 inches of the aluminum caps. All rods were fitted with aluminum survey caps. The 18-inch layer of the bulk select fill 3-inch minus soil was placed around these permanent monuments and compacted in a similar manner above the 12-inch layer. Placement of the soil cover was completed on September 28, 2009.

A 12-inch topsoil layer using screened soils from Dud Hollow was placed over the cover bulk select fill (3 inch minus). Approximately 2,451 cubic yards of topsoil were used to cover the bulk select fill (3 inch minus). The topsoil was end-dumped, and tracked and pushed into place using a D-6 dozer in two 6-inch lifts. The topsoil cover was surveyed on completion to provide as-built surface elevations on October 2, 2009.

The final topsoil was sampled to obtain nutrient amendment analysis to ascertain nutrient requirements. Nutrient analysis requirements are presented in Appendix B. The clarifier topsoil surface prepared initially by CRA using the dozer tracks to leave horizontal cleat marks, then was fertilized and seeded using hydro mulch methods.

CRA placed erosion control fabric on the outer bank slopes of the clarifier. Slopes with a maximum gradient of 2H:1V were constructed on the outer banks of the clarifier using soils excavated from the drainages surrounding the clarifier. The side slopes were reduced to 2:1 in order to reduce erosion potential from the clarifier cap surface prior to placement of the erosion control matting and prior to seeding. Hydro mulching and fertilization was completed by Anderson Hydroseeding of Pocatello, Idaho. The seed mix that was used is shown in Table 4-1. Documentation of seed and fertilization application are contained in Appendix B.

Erosion-control matting was placed on the outer banks on the south and the west sides of the clarifier to provide a stable seedbed for one growing season until vegetation can be established on the clarifier cover in 2010. The erosion control matting used was GreenFix WS072B straw matting. It is rated for a 2:1 slope and has netting on both

sides. The product is rated for 10 to 12 months, and is naturally biodegradable. Details of the material are contained in Appendix B.

Drainage improvements were designed to reduce the potential for runoff to impact the reclamation cover following the completion of the remedial actions. The surface drainage regrading that was implemented to protect the clarifier cover from runoff from the east side is shown on Drawing 4-4. Drainage from the east side of the clarifier is diverted both to the north and to the south. On the north side of the clarifier, a drainage was excavated from the east side around the north perimeter of the outer bank for a distance of about 305 feet. The bottom of the drainage was 4 feet in width with 2:1 side slopes as shown on the road ditch detail, Figure 4-4. The drainage trailed out to grade between the traffic boulders and the clarifier base. Slopes steeper than 8 percent were completed using grade I rip rap over filter fabric.

The south drainage is diverted through two 12-inch culverts to Georgetown Creek. Approximately 705 feet of trapezoidal conveyance diversion ditch with 2:1 side slopes as shown on the road ditch detail, Figure 4-4 was improved by CRA to convey discharge from the side canyon from an elevation of 6930 feet within the channel to a discharge point of 6920 feet, to the east of Georgetown Creek. Ditches were 4 feet in width at the base. Improvements to the drainage included providing Grade I riprap material above 8-oz filter fabric on slopes that exceeded 8 percent. Drainages around the clarifier were completed on October 19, 2009.

#### 4.3.5 Ore Cover

The reclaimed ore storage area was situated within Phosphoria Gulch on the steep north side of the drainage, as shown on Drawing 4-5. The top elevation of the stockpile was about 7150 feet, with the bottom elevation at about 7015 feet near the mouth of the gulch. Prior to ore removal, the overall slope profile was approximately 1.7:1 or steeper.

Ore removal and slope reclamation included the removal of the ore for fill in the clarifier, for slope grading on the slurry pit cover and for fill material around the furnace. These fills required a total borrow volume of 37,126 cubic yards of material from the ore pile for all three locations. Soda Springs Phosphate removed approximately 11,400 yards less than 3/8 inch in 2009 during the remedial construction. At the completion of Phase I work, approximately 8,270 yards of ore remained for transport to Soda Springs Phosphate in 2010.

The ore pile slope on the north side of Phosphoria Gulch was reshaped to the native grades shown on Drawing 4-5. Based on the slopes following the ore removal, it appeared that earlier Central Farmers operations had stripped some of the topsoil layer prior to ore placement in the storage area. The reclaimed slope was terraced from about 7,100 feet to 7043 feet at the confluence with Phosphoria drainage on an approximate 2 percent slope within the native soils and bedrock. The purpose of the bench was to control runoff, minimize gully erosion and decrease the overall length of the final slope configuration available to erosion so vegetation can be established. Straw wattles were installed along the terrace on 150 foot intervals to minimize soil runoff and prevent sediment from entering the intermittent flow in Phosphoria Gulch.

A minimal amount of run-on was available to the north slope of Phosphoria Gulch as a result of the mine road that was improved approximately 100 feet above the top of the dump, as shown on Drawing 4-5. A second access road reaches the top of the slope above the cleaned ore pile on the north side of Phosphoria Gulch. This road was improved to intercept the runoff from the area between the existing mine road above the slope and the reclaimed slope. The mine road was initially improved by regrading and the addition of a silt berm on the outer roadside by CRA during the first week of July 2009 as part of the SWPPP plan to prevent run-on from accessing the reclaimed slope.

Between October 14 and October 20, CRA excavated a new channel for the intermittent flows in Phosphoria Gulch. Sections of the drainage were rip rapped using Grade I rip rap on 8 oz filter fabric. In anticipation of the access needed in 2010 by Soda Springs

Phosphate, a section of the drainage channel was left without armor. Several rock weir structures were placed in the drainage before the bend at the mouth of Phosphoria Gulch to dissipate energy within the creek at high runoff. The channel was trapezoidal in cross section, as shown on Drawing 4-5, with a bottom dimension of 6 feet and 2:1 side slopes with an average slope of 10.5 percent. The drainage was improved with a rip rapped confluence with the bench on the north slope of the canyon.

A series of straw wattles were stapled along the south side of Phosphoria Gulch stream channel, and additional straw wattles and silt fencing were placed near the mouth of Phosphoria to prevent runoff of silts into the new drainage or out of the canyon to the site below. The wattle rolls will form a barrier to sediment erosion from the reclaimed native soil until vegetation is reestablished on the slope.

An area of elemental phosphorus was identified in the northwest portion of the ore pile. The location of the elemental phosphorus is shown on Drawing 4-5 and was flagged in the field and resurveyed. This area was identified prior to construction to ensure that the elemental phosphorus was not unearthed or disturbed during the ore removal activities. In order to completely define the areas containing elemental phosphorus after the ore on the slope above the phos was removed, three additional test pit excavations were completed on September 2, 2009. Logs of these pits are contained in Appendix G to this document. The additional test pits were excavated to native soil or bedrock and were excavated up to 9.2 feet in depth. The three exploratory pits resulted in a reduction of the original ore cover design size from about 5,100 square feet to about 4,562 square feet.

The ore pile cap was closed by CRA between September 17 and October 1 using the same type of cover system used at the slurry pit. The anchor trench was placed outside of the defined phos areas along the alignment shown on Drawing 4-5. The ore surface was compacted around the perimeter of the elemental phosphorus area from the heavy traffic during the loading out of ore to other sites. Compaction of the final lift was completed with a vibrating roller compactor in accordance with the specifications to

provide a foundation for the overlying geomembrane and soil layer components. Compaction results are presented in Appendix C. Density testing was performed by Harper Leavitt Engineering on the top lift and achieved greater than 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities ranged from 120.2 lbs/ft<sup>3</sup> to 123.5 lbs/ft<sup>3</sup>. Relative compactions ranged from 102.7 percent to 107.5 percent. The ore was slightly crowned to an elevation of about 7030 feet amsl near the northeast extent of the cover slope. The slope gradient of the ore increases from approximately 6 percent at the northeast extent of the ore fill to 15 percent at the southwest extent. The compacted ore surface was smoothed and surveyed prior to placement of the GCL.

A geosynthetic clay liner (GCL) layer was placed directly on the smoothed ore surface, providing a secondary barrier layer above the covered phos. Prior to installation of the final cover system on the slurry pit ore, the ore surfaces were surveyed. An acceptance of the final grades and surface conditions was completed by ESI on September 17, 2009 prior to GCL placement.

The final ore cover capping system consists of the following components, as detailed on as-built Drawing 4-5 cover details:

- Constructed anchor trench around the defined areas of elemental phosphorus;
- GCL (CETCO Bentomat ST);
- FMC (GSE LLDPE 40-mil textured geomembrane);
- Geocomposite drainage layer (consisting of SKAPPS geonet with geotextile bonded to both sides);
- 12-inch layer screen select soil (1/2-inch minus layer) over the geocomposite;
- 24 additional inches of bulk select soil (3-inch minus), and;
- 18-inch thick rock armored covering.

Details of the materials used in the cover construction are presented in the submittals contained in Appendix B to this report.

A geosynthetic clay liner (GCL) layer was placed directly on the smoothed and compacted ore surface. GCL placement was in an east-west direction. Approximately 5,439 square feet (ft<sup>2</sup>) GCL was required to cover the ore footprint over the elemental phosphorus within the anchor trench. GCL placement was completed on September 17, 2009. The GCL extended to the outside of the ore cover footprint and completely covered the underlying compacted ore used to slope the cover. The GCL was secured around the perimeter of the slurry pit by placing the panel ends into the anchor trench. A total of 6 panels (15 feet in width) were used to complete the GCL cover. Panels placed were up to 110 feet in length an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the GCL are contained in Appendix D. Overlaps on the GCL were one foot, and one pound of granular bentonite was used for every four feet of seam length to seal the GCL seams.

Following completion of the GCL placement, a 40-mil linear low-density polyethylene flexible membrane cover (FMC), approximately 5,439 ft<sup>2</sup> in area was placed directly on the GCL on September 17, 2009 by ESI. A total of 3 40-mil LLDPE panels were placed over the GCL and ore on the slurry pit cover. FMC panels used were 40-mil linear low-density polyethylene geomembrane manufactured by GSE that met material specifications. Submittals and testing details are presented in Appendix B to this report. Panels placed were 22.5 feet in width with panel lengths measured in the field up to 107 feet in an east-west direction. Panel Placement Forms identifying date, panel and roll number, panel length and width for the FMC are contained in Appendix D. The FMC was secured around the perimeter of the ore cover by placing the panel ends into the anchor trench above the GCL and backfilling and compacting the trench.

The anchor trench around the ore cap was excavated to a 2-foot width to accommodate a trench compactor. The trench compactor achieved higher compaction rates at the clarifier anchor trench than the compaction measured within the 1-foot trench at the

slurry pit. Compaction of the soils in the anchor trench was completed in a minimum, of two lifts in accordance with design plans and specifications. Soils used were screen select 1/2 inch minus. Density testing was performed by Harper Leavitt Engineering on the third lift, and achieved at least 95 percent of the maximum dry density as determined by the Standard Proctor Test (ASTM D698). In-place compacted maximum dry densities for the third lift ranged from 118.5 lbs/ft<sup>3</sup> to 126.4 lbs/ft<sup>3</sup>. Relative compactions ranged from 98.2 percent to 104.7 percent.

A geocomposite drainage layer with an area of 5,601 ft<sup>2</sup> was placed on the FMC layer to allow percolating moisture to drain off to the sides of the ore cap system. The geocomposite panels used were are 8-oz. double-sided geocomposite material manufactured by SKAPS. Details of the geocomposite are contained in Appendix B. Panels were rolled out in the direction of slope (east-west), and connected with plastic ties. The fabric was overlapped and lystered with a torch, and sewn together to prevent the entry of soil into the geonet.

Following placement of the geocomposite layer, a formal liner acceptance was made by CRA (contained in Appendix D) on September 18, 2009. A 12-inch screen select 1/2-inch minus soil layer was placed above the geocomposite and compacted with a dozer. The soil layer was carefully drifted over the geocomposite layer to avoid damaging the geocomposite layer. No driving was allowed on this layer. This soil layer was compacted using a D-6 tracked dozer. The 24-inch layer of the select fill soil was placed and compacted in a similar manner above the 12-inch layer using two 12-inch lifts. Placement of the ore cover was completed on October 1, 2009.

An 18-inch thick layer of 18-inch minus rock armor was placed on the ore cover soil to discourage animal burrowing and vandalism. Armor was end-dumped from trucks between the dates of September 28 and October 1, 2009, and carefully placed using the excavator. Thickness of the armor was carefully controlled using marked stakes to identify the final grade elevations. Armor grade was brought up to the approximate level of the top of the marks on the stakes. The maximum elevation of the ore cover armor is

at 7035 feet amsl with slope gradients that vary from shallow (5 percent) at the top of the cover to 42 percent for the area outside the anchor trench, as shown on Drawing 4-5.

Photographic documentation of the ore cover construction is contained in Appendix A to this report.

#### 4.4 Long-Term Operation, Maintenance, and Monitoring

##### 4.4.1 General

Appendix H to this document addresses the operation and maintenance (O&M), post-closure care, and monitoring activities for the Phase I remedial construction completion work at the Tank Springs, furnace, slurry pit, clarifier, and the ore pile. The O&M plan will be updated following the completion of Phase II to include O&M for the CMP bypass channel and the open channel Tank Spring and culverted Syncline Spring conveyances. The O&M plan addresses site inspections and routine monitoring for the site including visual observations, survey measurement and observations, ground and surface water monitoring, cap monitoring, inspection of drainages, and observations of reclamation progress. The plan specifies the frequencies of those inspections. The O&M document identifies triggers for corrective actions and presents descriptions of normal O&M, potential problems, and reporting. Specifically, the plan based on the Phase I construction work includes:

- Normal Operation and Maintenance - Long-term maintenance of the remedial actions consisting of inspections and correction and maintenance of any problems identified in the inspections. Maintenance activities will be initiated if a problem is identified during a routine inspection or monitoring activity, or at any time when problems are identified that present an immediate threat to human health and the environment. The completed remedial actions area will be inspected on a quarterly basis for the first two years following completion of the Phase I and II remedial actions. This schedule will be modified to semiannual with the concurrence of IDEQ.

- Assessment of Potential Problems - Potential foreseeable problems that could be encountered are discussed, including obstructed flows, failure of rip rap or undercutting in channels, failure of conveyance or storm water barriers, failure or partial failure of the CMP, failure of reclamation work including lack of regrowth, occlusion of flow in culverts, the occurrence of plants with deep tap roots or trees that become established on the slurry pit or the clarifier or phosphorus ore pile covers, erosion of the soil covers or armor, berms, slopes or riprap, settling of the slurry pit or the clarifier covers, and the presence of burrowing animals.
- Routine Remedial Action Monitoring Tasks - Monitoring activities for the Phase I remedial actions area during the post-closure period include both ground and surface water monitoring, and monitoring of the covers and reclamation work.
- Safety requirements for inspection activities to address the exposure during the routine inspections and personnel protective equipment requirements.
- Routine and emergency reporting requirements.
- Personnel and training requirements.
- Record keeping including the quarterly inspections, and other inspections required including records of the monitoring activities and maintenance records.

#### 4.5 Regulatory Oversight

IDEQ provided regulatory oversight inspections during significant phases of the Phase I remedial work. The IDEQ also had the responsibility to review Phase I construction and CQA documentation to confirm that the approved CQA plan was followed and that the Phase I work was constructed as specified in the design with approved modifications. Doug Tanner and Mark Jeffers of IDEQ performed some of the oversight inspections of construction activities. Inspections were also completed by the Forest Service on several occasions. Inspections of the work were completed by the agencies on August 4, August 20, August 26, September 24, 2009. GET and Nu-West provided bi-weekly reports and schedule updates (contained in Appendix D) to IDEQ that documented the Phase I work completed, problems encountered and resolutions, and projected work. Reports also included the project progress in percent complete and photographic

documentation of the work completed to date. Revegetation of the constructed areas will be monitored under the O&M plan and will be reported to the agencies with the annual report.

## 5.0 CERTIFICATION OF PHASE I REMEDY COMPLETION

Phase I construction activities that constitute the requirements of the Consent Judgment, Part V.13. E parts 1 and 2 have been completed. The Phase I work was completed between June 28 and October 30, 2009 in compliance with the final design IFC drawings, RAP specifications and the construction quality assurance program that were submitted with the Draft Final RAP contained in Appendix B to that document (GET, 2009).

After a complete review and reasonable inquiry about the work, including the certifying engineer site inspections of the final completed work on October 19, 2009 and documentation associated with the project, project certifying engineer, Paul Kos, P.E. of Idaho and staff member of the Norwest Corporation has provided a statement of certification at the front of this document. The statement certifies that Phase I construction activities were completed in such a manner as to meet the requirements of the IFC drawings and the Final Design plans and specifications from the Draft Final RAP that was approved by IDEQ in early July 2009. Nu-West considers these Phase I remedial actions to be complete and eligible to be subject to termination of the corrective action process and eligible for site closeout as applicable to RCRA.

Remaining actions to be completed as required by the Draft Final RAP includes the designs of the Phase II work including the CMP bypass stream channel completion, quarterly monitoring of the Phase I work (to be modified) and semiannual ground and surface water monitoring and annual reporting.

## **6.0 CONSTRUCTION COMPLETION AND LONG-TERM RESPONSE ACTIONS**

Completion of the Phase I remedial actions described within this report and certification of the remedy completion qualifies the Central Farmers site in Georgetown Canyon to satisfy the requirements of the Consent Judgment. Following the completion of the Phase II construction and certification, the facility can be considered for site closeout with the expectation that no further cleanup will be required. According to the Consent Judgment, Nu-West may initiate a petition for termination of the Consent Judgment in accordance with Paragraph XII, termination. Remedial construction at a RCRA site can be considered completed when physical construction is complete for the entire site and that the final remedial actions and corrected measures have been implemented in accordance with the design plan and specifications and that Certification of Remedy Completion has been accomplished.

As requested by the IDEQ, a 5-year post-closure action for monitoring of ground and surface water is required to assess the long-term effectiveness of the completed Phase I construction. Monitoring and maintenance in accordance with the O&M plan (attached, Appendix H) will also be required to assure the construction completion criteria for the Phase I work. This five-year period of monitoring will extend through the fall of 2014. Construction Completion criteria applies when physical construction of the remedial actions defined in the RAP is complete, whether or not final cleanup levels have been achieved. EPA has issued a Guidance on Completion of Corrective Action Activities at RCRA Facilities (EPA, 2007), which describes completion of remedies with controls in place. This guidance document provides guidance to EPA Regions and States involved in RCRA corrective action cleanups. It also provides guidance to the public and the regulated community on the implementation of institutional controls as part of a cleanup decision (EPA, 2007).

As described in the guidance, a "Complete with Controls" determination would be appropriate where a full set of corrective measures has been defined, the facility has completed construction and installation of all required remedial actions, and site-specific

media cleanup objectives have been met. Currently, only Phase I is completed and institutional controls are not yet in place. This will be completed in 2010. When all site criteria are satisfied, and all that remains to ensure that the remedy remains protective of human health and the environment is performance of required operation, maintenance, and monitoring actions, and/or compliance with and maintenance of any institutional controls, then a complete with controls determination can be made for the site. EPA generally believes "it is appropriate to make a Corrective Action Complete with Controls determination at a facility where (among other things) all that remains is performance of required operation and maintenance and monitoring actions, and/or compliance with and maintenance of any institutional controls. The Corrective Action Complete with Controls determination provides the owner with recognition that protection of human health and the environment has been achieved, and will continue as long as the necessary operation and maintenance actions are performed, and any institutional controls are maintained and complied with" (EPA, 2007).

## 7.0 REFERENCES

GET, April 19, 2004 Site Investigation Sample and Analysis Plan - Central Farmer's Fertilizer Facility, Georgetown Canyon, Idaho, Prepared for Nu-West Industries and Nu-West Mining, Inc. April 19, 2004.

GET, 2005, 2005 Site Investigation Sample and Analysis Work Plan - Central Farmer's Fertilizer Facility, Georgetown Canyon, Idaho, Prepared for Nu-West Industries and Nu-West Mining, Inc. June 25, 2005.

GET, 2006, Draft Final Site Investigation Report, Central Farmer's Fertilizer Facility, Georgetown Canyon, Idaho, Prepared for Nu-West industries and Nu-West Mining, Inc. August 16, 2006.

GET, 2009, Draft Final Remedial Action Plan, Central Farmer's Fertilizer Facility, Georgetown Canyon, Idaho, Prepared for Nu-West industries and Nu-West Mining, Inc. May 8, 2009.

U.S. Environmental Protection Agency, 2004 EPA Office of Solid and Hazardous Waste RCRA Corrective Action News, A record of Success Final Completion Guidance, March 2004.

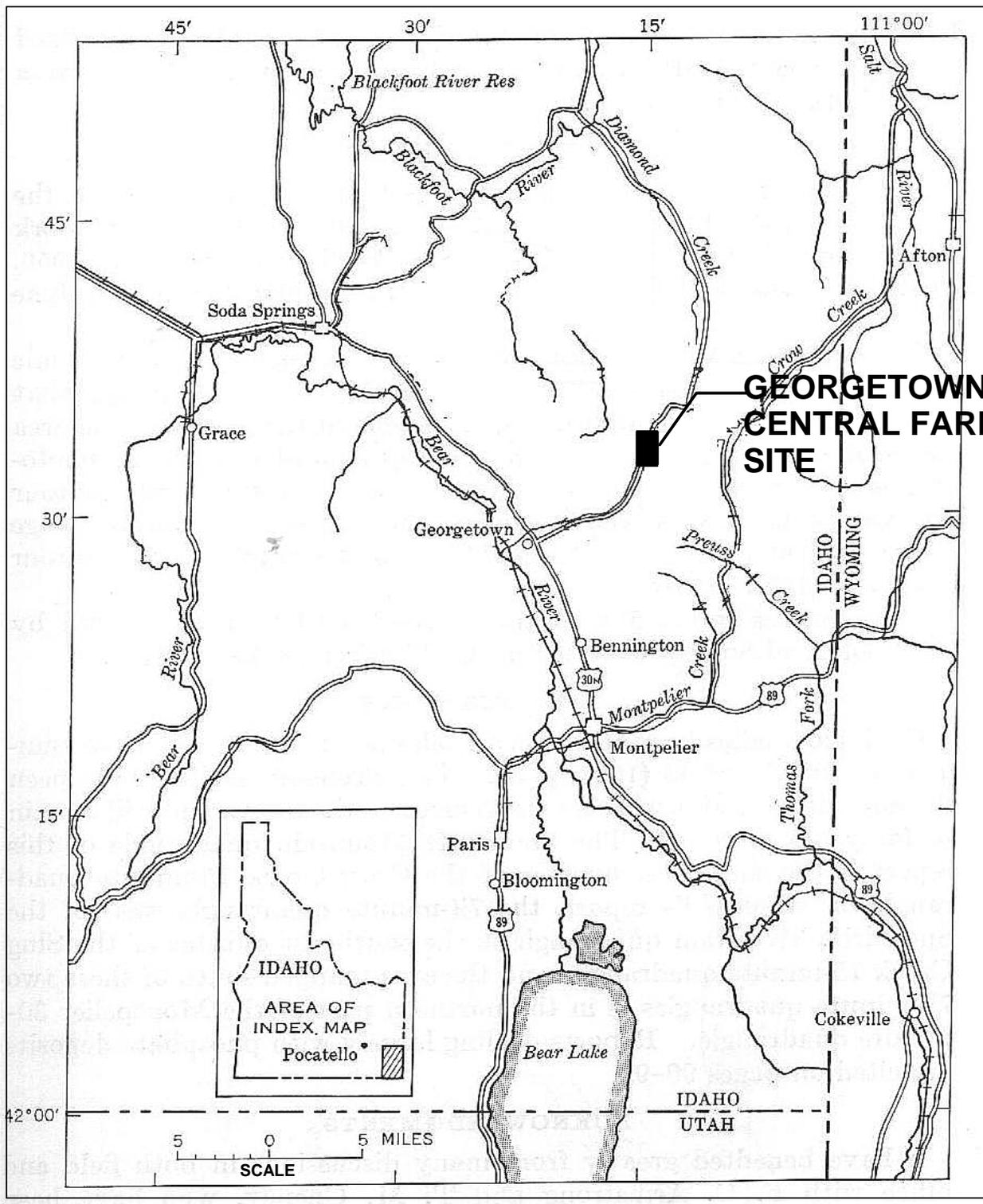
U.S. Environmental Protection Agency, 2007 EPA Memorandum Ensuring Reliable Institutional Controls at RCRA Facilities, June 14, 2007.

USGS, 2000, A History of Phosphate Mining in Southeast Idaho, Open File Report 00-425, Version 1.0

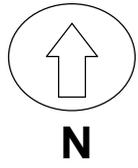
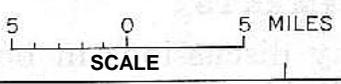
Waterstone, 2006, Human health and Ecological Risk Assessment – Central Farmer's Fertilizer Facility, Georgetown Canyon, Idaho, Prepared for Nu-west industries and Nu-West Mining, Inc. August 16, 2006.

TABLE 4-1

| <b>Georgetown Canyon Central Farmers Facility Reclamation<br/>Seed Mixture</b> |                       |                             |                 |  |
|--|-----------------------|-----------------------------|-----------------|--|
| <b>Species</b>   | <b>Common Name</b>    | <b>Bulk Pounds per Acre</b> | <b>% of Mix</b> | <b>Description</b>   |
| <b>Grasses</b>   |                       |                             |                 |  |
| Oryzopsis hymenoides   | Indian Ricegrass      | 8.1                         | 16%             | Densely tufted, cool season, very drought tolerant, perennial bunchgrass adapted to deep, well drained soils.  |
| Bromus marginatus  | Mountain Brome        | 8.1                         | 16%             | Cool season, short lived perennial bunchgrass, adapted to wide spectrum of soils, Establishes quickly on disturbed sites. Good palatability, good at high elevations       |
| Agropyron trachycaulum   | Slender Wheatgrass    | 6.8                         | 14%             | Cool season, saline tolerant, short lived perennial bunchgrass with short rhizomes. Wide range of sites, moderate drought tolerant, Establishes quickly, Good palatability |
| Agropyron dasystachyum   | Thickspike Wheatgrass | 6.8                         | 14%             | Strongly rhizomatous, long-lived, drought tolerant, perennial sod former. Good on well drained soils   |
| Agropyron spicatum   | Bluebunch Wheatgrass  | 6.8                         | 14%             | Cool season, drought tolerant, long-lived perennial bunchgrass, adapted to most sites including thin-non productive soils. Generally good palatability                     |
| Poa ampla  | Big Bluegrass         | 5.4                         | 11%             | Cool season , perennial bunchgrass with shallow fibrous root system. Intolerant of poorly drained soils or high water table. Excellent forage.                             |
| Festuca idahoensis   | Idaho Fescue          | 4.1                         | 8%              | Cool season, drought tolerant. Will occur on well drained sites. Good palatability   |
| <b>Total Grasses</b>   |                       | <b>46.0</b>                 | <b>92%</b>      |  |
| <b>Wildflowers/Forbs</b>   |                       |                             |                 |  |
| Achillea lanulosa  | Western Yarrow        | 4.1                         | 8%              | Drought tolerant native forb. An aggressive species used for erosion control. Tolerant of full sun, blooms spring to fall.   |
| <b>Total Wildflowers/Forbs</b>   |                       | <b>4.1</b>                  | <b>8%</b>       |  |
| <b>Total Grasses and Wildflowers/Forbs</b>                                     |                       | <b>50.0</b>                 | <b>100%</b>     |  |



**GEORGETOWN  
CENTRAL FARMERS  
SITE**



REFERENCE:  
GEOLOGY OF THE GEORGETOWN CANYON-  
SNOWDRIFT MOUNTAIN AREA,  
SOUTHEASTERN IDAHO  
USGS BULLETIN 1153, 1964, PLATE 4.

|  |            |
|--|------------|
| REMEDIAL ACTION COMPLETION REPORT  |            |
| <b>LOCATION MAP OF<br/>CLOSED CENTRAL FARMERS<br/>FERTILIZER PLANT IN<br/>GEORGETOWN CANYON, IDAHO</b> |            |
| AGRIUM US INC.   | FIGURE 1-1 |

A

B

C

D



8

8

7

7

6

6

5

5

T 10 S

R 44 E

SITE BOUNDARY

SEC 24

SEC 25

TRdl

SEC 24

SITE BOUNDARY

TRdl

GRANT CANYON

FENCE LINE

Qal

TRdl

FOREST SERVICE ROAD

MINE ACCESS ROAD

Qal

SEEPS

EXISTING DEEP WELL (GT-DEEP)

EXISTING SHALLOW WELL (GT-SHALLOW)

GEORGETOWN CANYON CREEK IN 6" CULVERT

S INCLINE SPRINGS

SPRING DEBRIS (150' x 100')

HISTORIC ART WELL (ABANDONED)

COOLING TOWER

FURNACE BUILDING

PUMPHOUSE

BOILER AND SHOP BLDG

TRASH HOPPER

MILL WASTEWATER

FUEL LINE

FUEL LINE

SURFACE STREAM

WATER TANK

MASTER SUBSTATION

LANDFILL

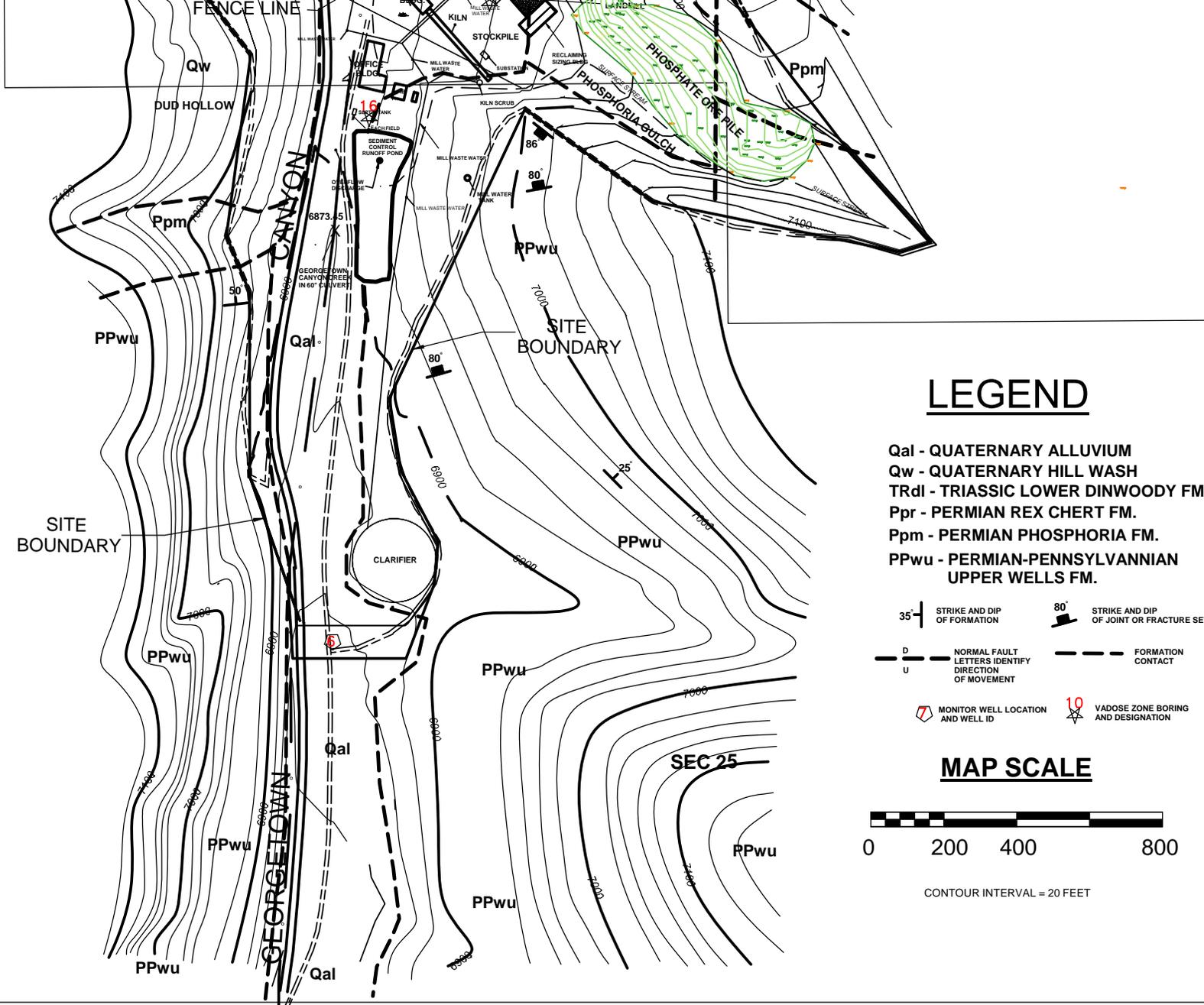
CALCINE PROD STORAGE BINS

WATER TANK

SITE BOUNDARY

Ppr

TRd



### LEGEND

- Qal - QUATERNARY ALLUVIUM
- Qw - QUATERNARY HILL WASH
- TRdl - TRIASSIC LOWER DINWOODY FM.
- Ppr - PERMIAN REX CHERT FM.
- Ppm - PERMIAN PHOSPHORIA FM.
- PPwu - PERMIAN-PENNSYLVANNIAN UPPER WELLS FM.

- 35° STRIKE AND DIP OF FORMATION
- 80° STRIKE AND DIP OF JOINT OR FRACTURE SET
- D U NORMAL FAULT LETTERS IDENTIFY DIRECTION OF MOVEMENT
- FORMATION CONTACT
- Monitor Well Location and Well ID
- Vadose Zone Boring and Designation

### MAP SCALE



CONTOUR INTERVAL = 20 FEET

#### REFERENCES:

- U.S.G.S., HARRINGTON PEAK, IDAHO 15 MINUTE SERIES QUADRANGLE, 1970, PHOTOINSPECTED 1980.
- RECORD OF SURVEY, AGRIMUM U.S. INC., SEC 25, T10S., R.44 E.B.M., HARPER-LEAVITT ENGINEERS, INC, JAN 13, 2003
- GEOLOGY OF THE GEORGETOWN CANYON-SNOWDRIFT MOUNTAIN AREA, SOUTHEASTERN IDAHO - USGS BULLETIN 1153, 1964, PLATE 4.

#### REMEDIAL ACTION COMPLETION REPORT

|   |           |                            |                         |
|---|-----------|----------------------------|-------------------------|
| TITLE   |           |                            |                         |
| <b>GEOLOGIC MAP<br/>CENTRAL FARMERS<br/>FERTILIZER PLANT<br/>GEORGETOWN CANYON, IDAHO</b> |           |                            |                         |
| SIZE  | CAGE CODE | DWG NO                     | REV                     |
| D   |           | GEORGETOWN CANYON BASE MAP | 0                       |
| SCALE   | AS SHOWN  | 1/28/10                    | SHEET <b>FIGURE 1-2</b> |

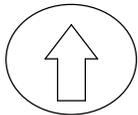
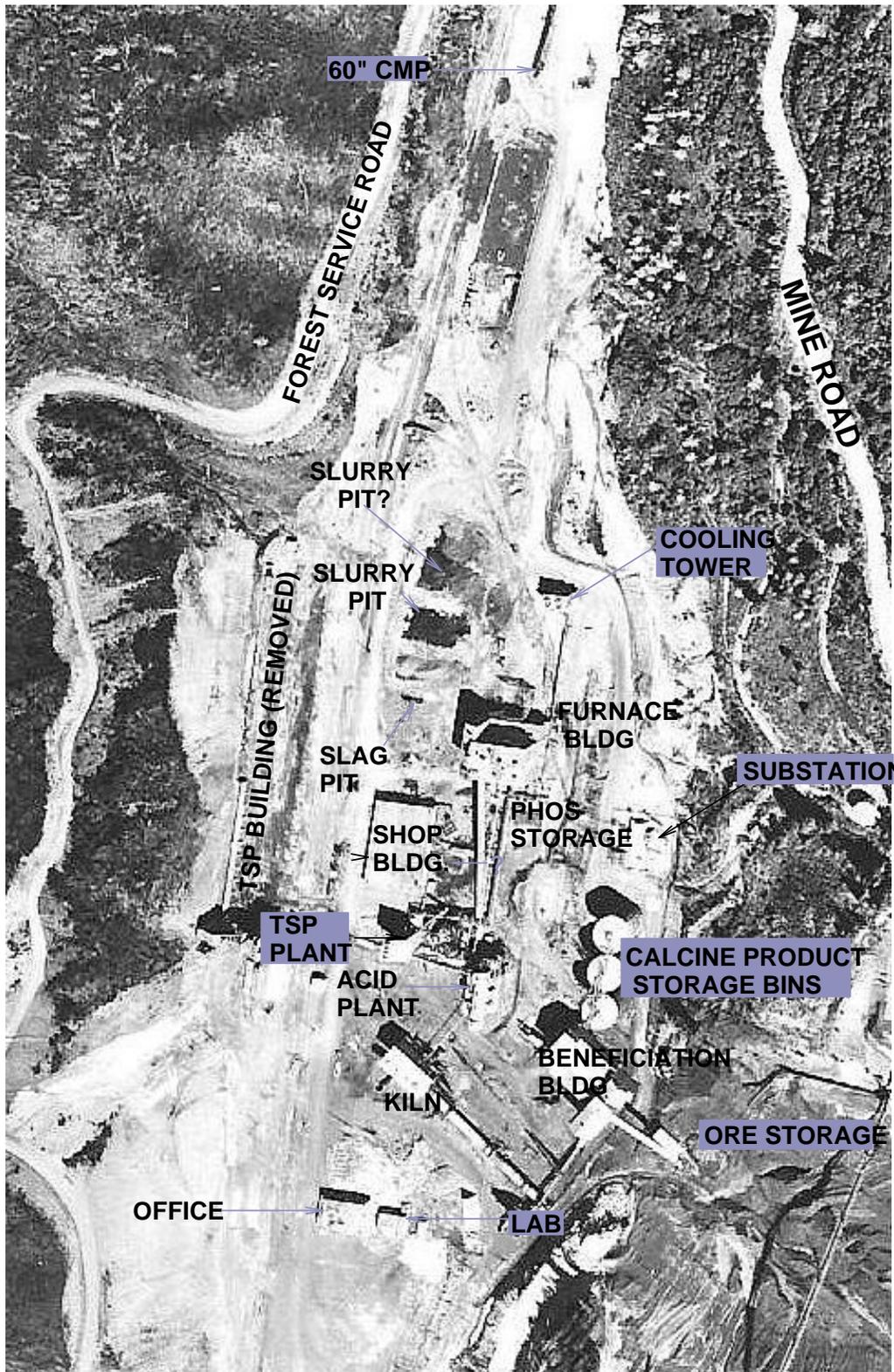
DRAWN BY J.S. BROWN, P.G. # 721

A

B

C

D



N

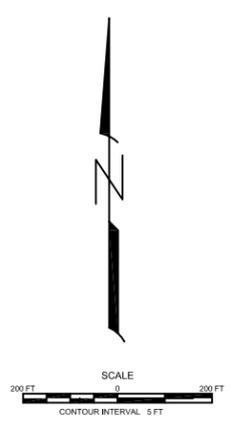
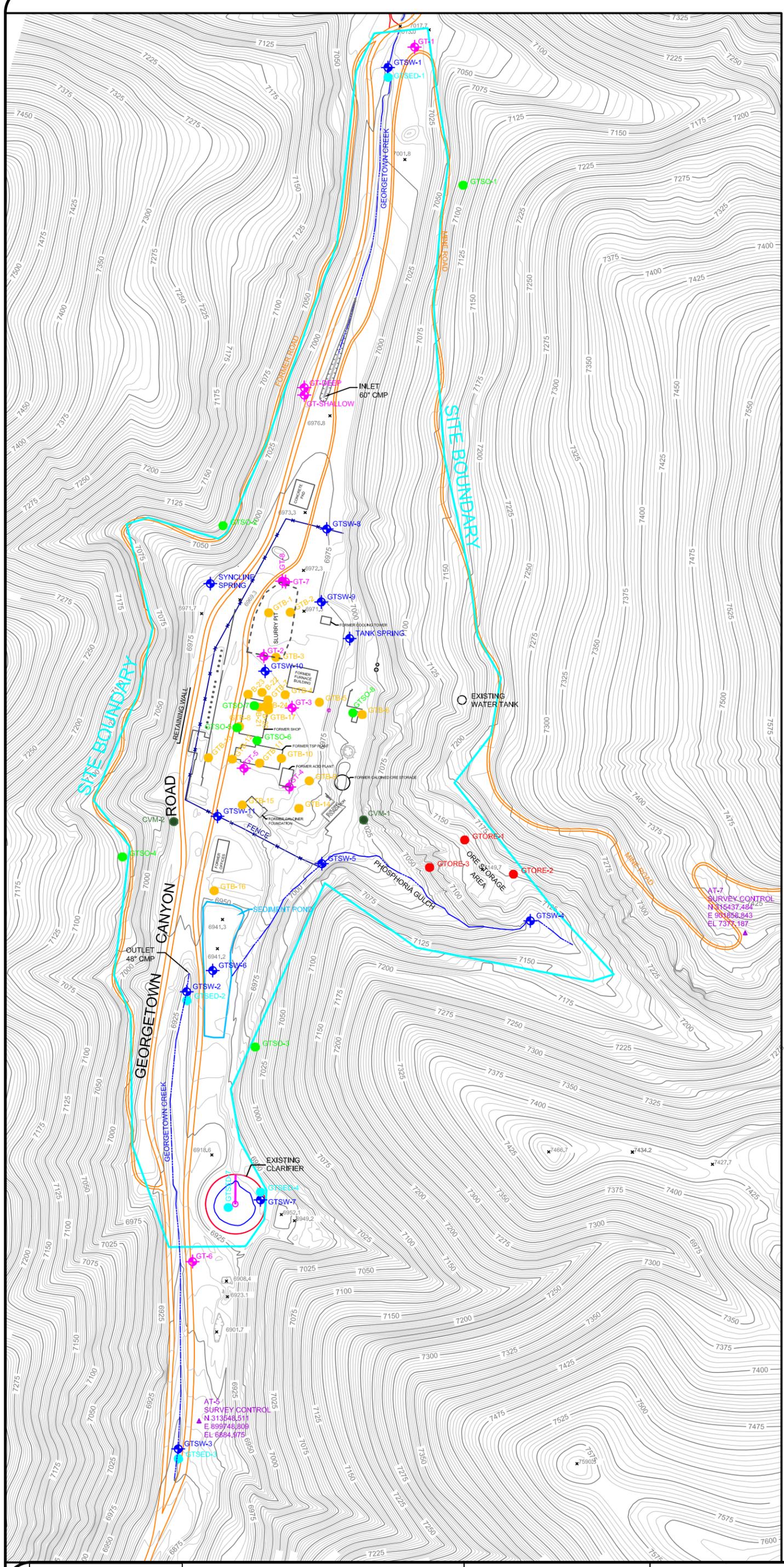
REFERENCE:  
 KOOGLE AND POULS ENGINEERING, ALBUQUERQUE, NM  
 AUGUST 11, 1965 AERIAL PHOTOGRAPHY

REMEDIAL ACTION COMPLETION REPORT

**LOCATION MAP OF  
 CENTRAL FARMERS  
 FERTILIZER FACILITY  
 SITE FEATURES**

CENTRALFARMERSSITEFEATURES.TCW

**FIGURE 1-3**



### LEGEND

- ◆ GTSW-8 SURFACE WATER MONITORING SITE
- ◆ GT-5 GROUND WATER MONITORING SITE
- GTB-5 SOIL AUGER BORING SAMPLE SITE
- GTSED-2 STREAM SEDIMENT SAMPLE SITE
- GTSO-3 SURFACE SOIL SAMPLE SITE
- GTOR-2 ORE SAMPLE SITE
- CVM-1 GEOTECHNICAL SAMPLE SITE



NU-WEST INDUSTRIES, INC.  
AND  
NU-WEST MINING, INC.

**REMEDIAL ACTION  
COMPLETION  
REPORT**

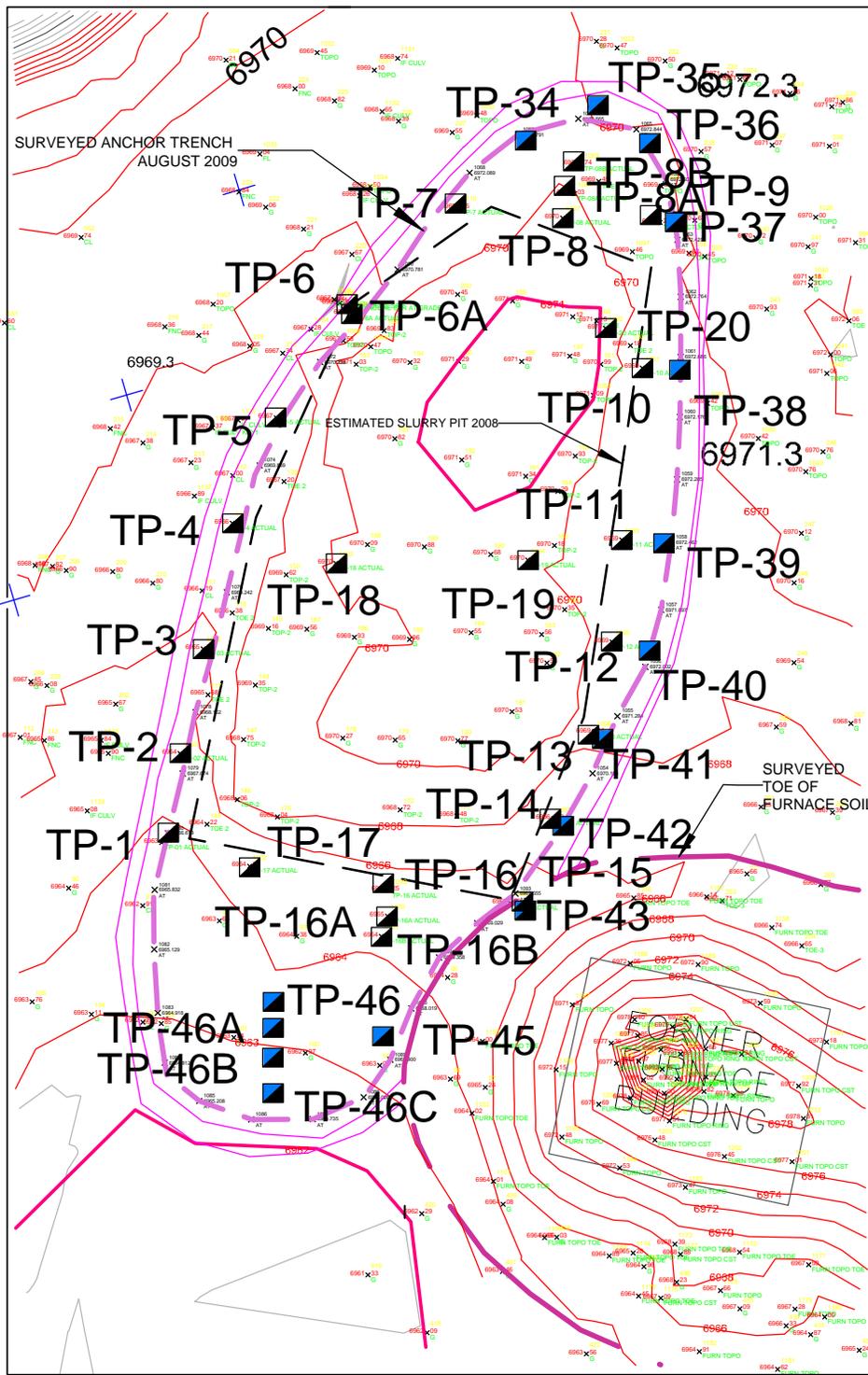
CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON, IDAHO  
SITE MAP

### Phase I Activities Completion Schedule June through October 2009

| Task Name  | Start              | Finish              | Jul '09            |   |    |                     |    | Aug '09 |   |    |    | Sep '09 |   |    |    | Oct '09 |   |    |    | No |    |  |
|--|--------------------|---------------------|--------------------|---|----|---------------------|----|---------|---|----|----|---------|---|----|----|---------|---|----|----|----|----|--|
|  |                    |                     | 28                 | 5 | 12 | 19                  | 26 | 2       | 9 | 16 | 23 | 30      | 6 | 13 | 20 | 27      | 4 | 11 | 18 |    | 25 |  |
| <b>PHASE I Remedial Action Construction</b>                            |                    |                     | <b>Mon 6/29/09</b> |   |    | <b>Fri 10/30/09</b> |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Mobilize to Site</b>  | Mon 6/29/09        | Thu 7/2/09          | 7/2                |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| SWPPP Erosion Control measures   | Tue 6/30/09        | Sat 7/4/09          | 7/4                |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Site Pre-Construction Meeting  | Tue 7/7/09         | Tue 7/7/09          | 7/7 7/7            |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Clearing and Grubbing  | Wed 7/8/09         | Mon 7/13/09         | 7/8 7/13           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Screen Soil and Rock Armor Screening</b>                            | <b>Wed 7/8/09</b>  | <b>Fri 10/16/09</b> | 7/8 10/16          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Screen Soil, Armor and Boulders for Furnace/Slurry Pit                 | Wed 7/8/09         | Mon 8/31/09         | 7/8 8/31           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Screen Soil, Armor, Boulders for Clarifier, Ore Cover and Road Grading | Wed 7/8/09         | Thu 7/23/09         | 7/8 7/23           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Quarry and Grade Rip Rap   | Thu 7/9/09         | Fri 10/16/09        | 7/9 10/16          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Site Surface Water Dewatering</b>                                   | <b>Tue 7/14/09</b> | <b>Sat 10/10/09</b> | 7/14 10/10         |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Excavate to CMP Drop Inlet   | Mon 7/20/09        | Sat 10/10/09        | 7/20 10/10         |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Construct Tank Pipeline to CMP   | Tue 7/14/09        | Thu 7/16/09         | 7/14 7/16          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Complete Cutoff Trench   | Mon 7/20/09        | Tue 7/21/09         | 7/20 7/21          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Replace Culvert  | Fri 10/9/09        | Fri 10/9/09         | 10/9 10/9          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Furnace Cover Construction</b>                                      | <b>Tue 7/14/09</b> | <b>Thu 8/13/09</b>  | 7/14 8/13          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Place and Compact Ore  | Tue 7/14/09        | Mon 8/3/09          | 7/14 8/3           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Place and Compact Subsoil Layer  | Thu 8/6/09         | Sat 8/8/09          | 8/6 8/8            |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Place and Compact Topsoil and Erosion Netting                          | Mon 8/10/09        | Thu 8/13/09         | 8/10 8/13          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Slurry Pit Cap Construction</b>                                     | <b>Thu 7/2/09</b>  | <b>Sat 10/24/09</b> | 7/2 10/24          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Remove/Herbicide Vegetation and Stockpile                              | Thu 7/2/09         | Fri 7/10/09         | 7/2 7/10           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Place and Compact Ore  | Wed 7/15/09        | Thu 8/6/09          | 7/15 8/6           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Extend Wells GT-2, GT-7, GT-8  | Tue 8/4/09         | Tue 8/4/09          | 8/4 8/4            |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Dig Anchor Trench  | Tue 8/18/09        | Thu 8/20/09         | 8/18 8/20          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Install GCL  | Wed 8/19/09        | Thu 8/20/09         | 8/19 8/20          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Install FMC  | Wed 8/19/09        | Sat 8/22/09         | 8/19 8/22          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Install Geocomposite   | Sun 8/23/09        | Mon 8/24/09         | 8/23 8/24          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Install Subsoil/Settlement Monuments                                   | Tue 8/25/09        | Mon 9/14/09         | 8/25 9/14          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Install Rock Armor   | Tue 9/15/09        | Sat 10/24/09        | 9/15 10/24         |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Complete Fill East of Slurry Pit                                       | Fri 8/14/09        | Thu 9/17/09         | 8/14 9/17          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Complete Fill West of Furnace  | Thu 8/6/09         | Fri 8/7/09          | 8/6 8/7            |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| <b>Clarifier Cap Construction</b>                                      | <b>Sat 8/8/09</b>  | <b>Wed 9/30/09</b>  | 8/8 9/30           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Pump Remaining Water to Sediment Pond/Remove Steel                     | Sat 8/8/09         | Wed 8/12/09         | 8/8 8/12           |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Remove/Herbicide Vegetation and Remove Steel                           | Wed 8/12/09        | Fri 8/14/09         | 8/12 8/14          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |
| Place and Compact Ore  | Thu 8/13/09        | Sat 9/12/09         | 8/13 9/12          |   |    |                     |    |         |   |    |    |         |   |    |    |         |   |    |    |    |    |  |

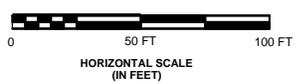
|  |               |  |                         |  |                  |  |
|--|---------------|--|-------------------------|--|------------------|--|
| Project: Final phase I CF remedial acti<br>Date: Fri 1/29/10 | Task          |  | Rolled Up Task          |  | External Tasks   |  |
|  | Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
|  | Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
|  | Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
|  | Summary       |  | Split                   |  |                  |  |





**KEY**

- TP-17  
TEST PIT NUMBER AND SURVEYED LOCATION IN AUGUST 2008
- TP-46  
TEST PIT NUMBER AND SURVEYED LOCATION IN JULY 2009



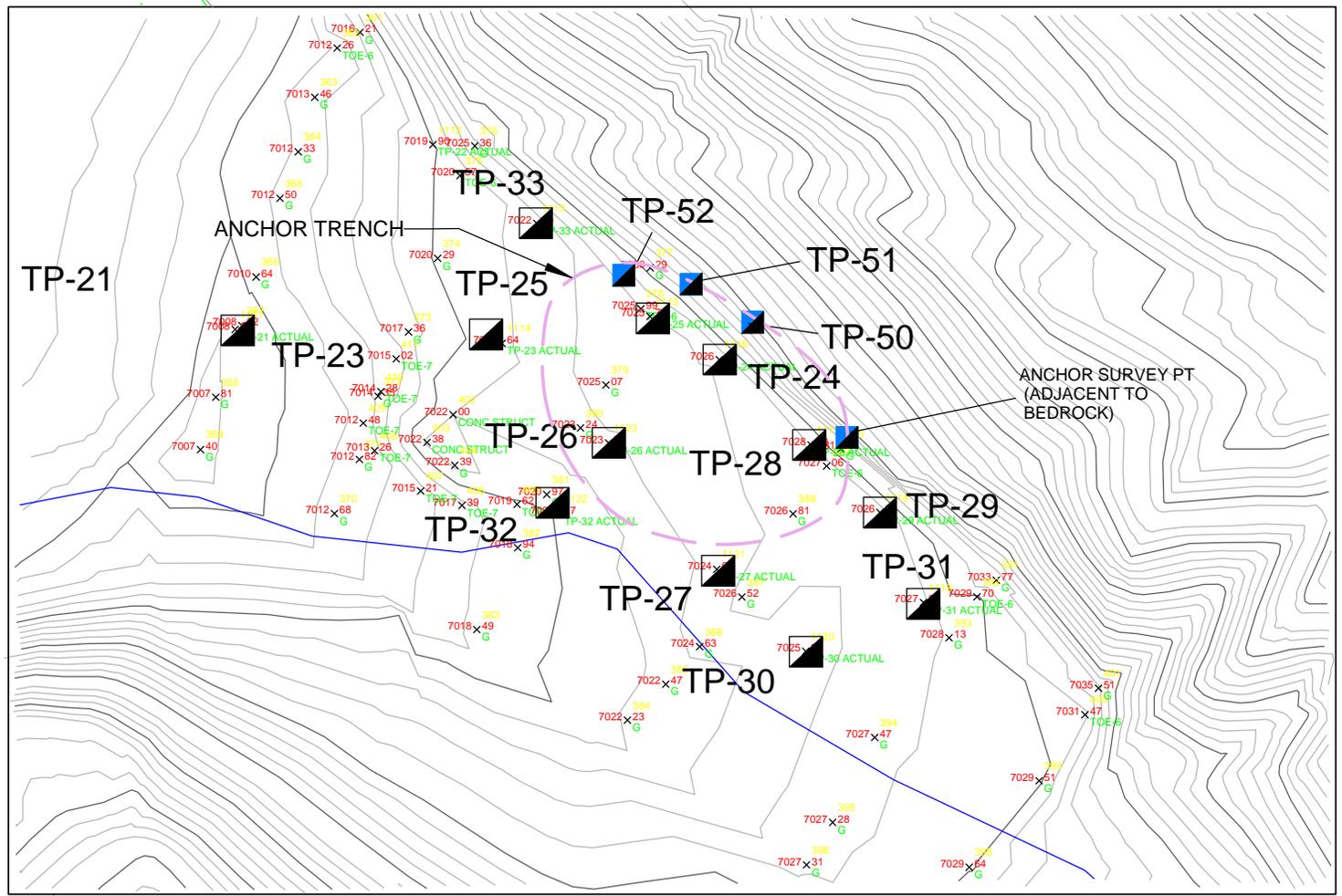
**REFERENCES:**  
 NU-WEST AUGUST AND OCTOBER, 2008  
 SURVEYOR SCHERBEL, LTD. AUGUST 24, 2009

**FINAL REMEDIAL ACTION COMPLETION REPORT**

**LOCATIONS OF TEST PITS AND SLURRY PIT ANCHOR TRENCH**

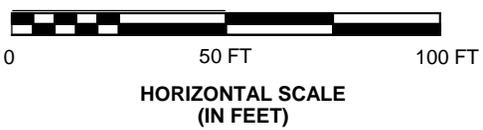
SLURRY PIT TEST PITS.TCW  
 DRAWN BY JS BROWN, P.G. 1/23/10

**FIGURE 2-2**



**KEY**

-  **TP-29**  
TEST PIT NUMBER AND SURVEYED LOCATION IN AUGUST 2008
-  **TP-46**  
TEST PIT NUMBER AND SURVEYED LOCATION IN JULY 2009



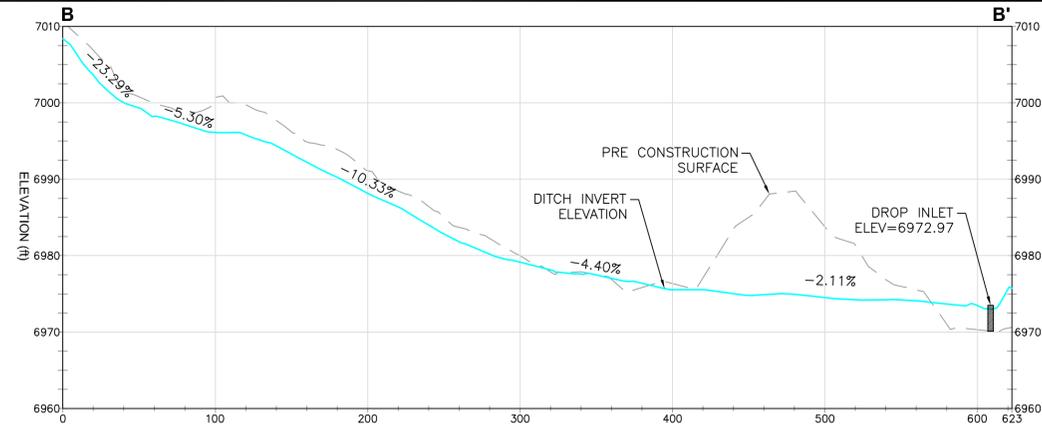
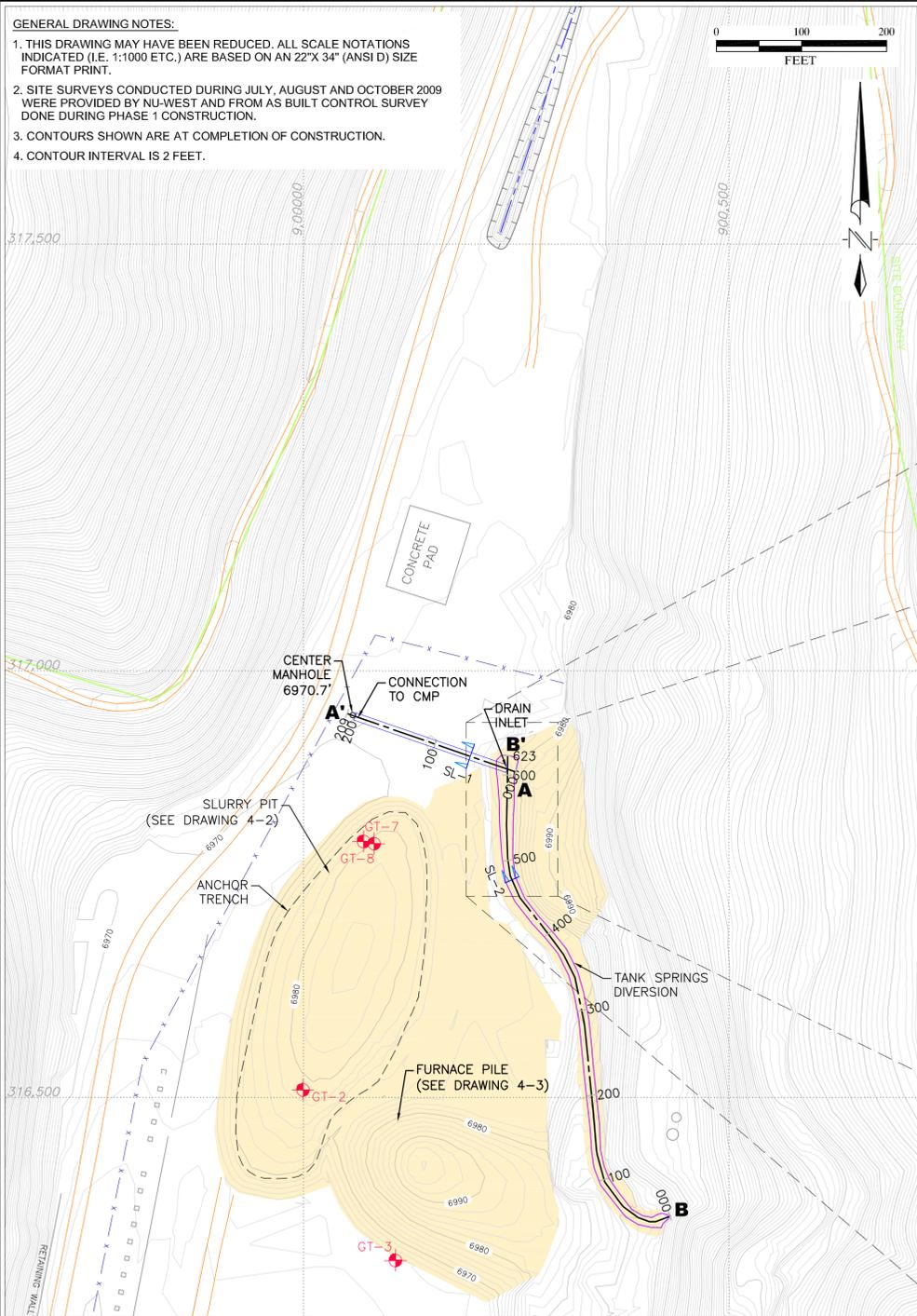
**REFERENCES:**  
 NU-WEST AUGUST AND OCTOBER, 2008  
 SURVEYOR SCHERBEL, LTD. SEPTEMBER 2, 2009

|  |           |        |                         |
|--|-----------|--------|-------------------------|
| <b>REMEDIAL ACTION COMPLETION REPORT</b>                                   |           |        |                         |
| TITLE<br><b>LOCATIONS OF TEST PITS ON<br/>ORE PILE IN PHOSPHORIA GULCH</b> |           |        |                         |
| SIZE<br><b>A4</b>  | CAGE CODE | DWG NO | REV                     |
| DRAWN BY <b>J.S. BROWN, P.G.</b>   |           | SCALE  | SHEET <b>FIGURE 2-3</b> |

1/25/10

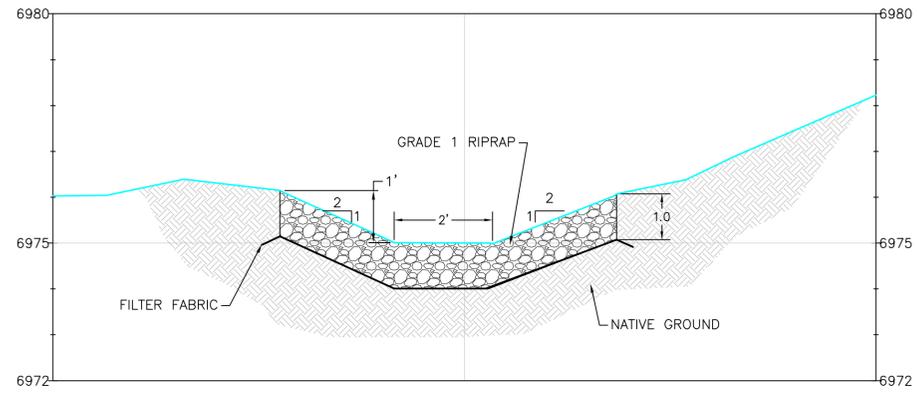
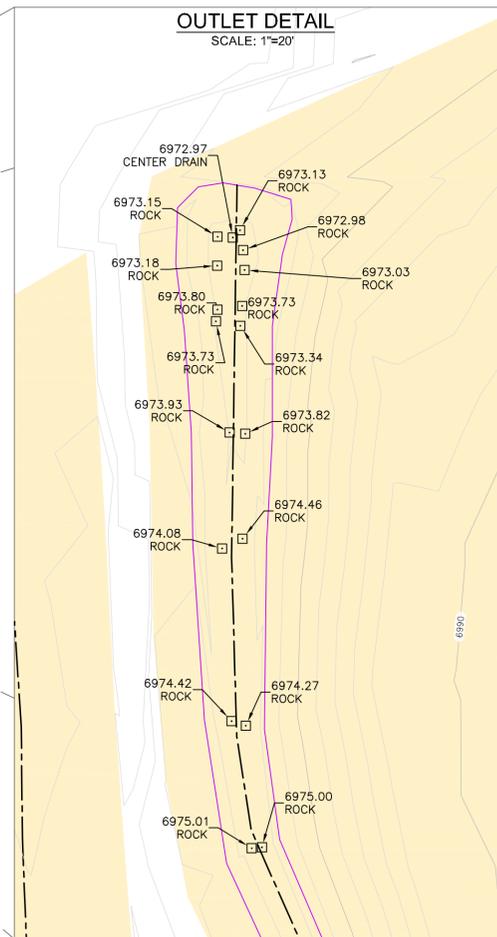
**GENERAL DRAWING NOTES:**

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2. SITE SURVEYS CONDUCTED DURING JULY, AUGUST AND OCTOBER 2009 WERE PROVIDED BY NU-WEST AND FROM AS BUILT CONTROL SURVEY DONE DURING PHASE 1 CONSTRUCTION.
3. CONTOURS SHOWN ARE AT COMPLETION OF CONSTRUCTION.
4. CONTOUR INTERVAL IS 2 FEET.

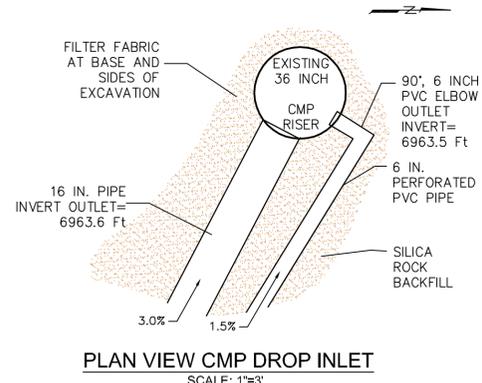


**TANK SPRINGS DITCH PROFILE (B - B')**  
HORIZONTAL SCALE: 1" = 80'  
VERTICAL EXAGGERATION X5

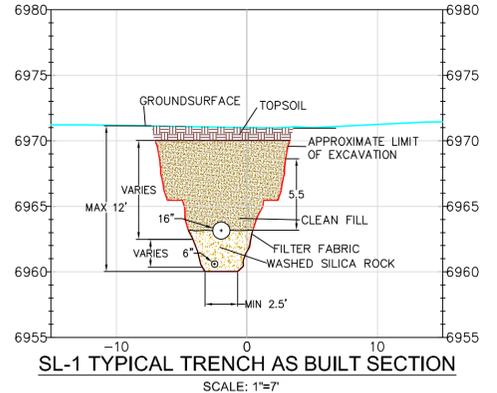
- LEGEND**
- SITE BOUNDARY
  - AS-BUILT EXTENT
  - ROAD
  - ⊕ GT-3 GROUND WATER MONITORING SITE
  - X — FENCE
  - CREEK
  - CULVERT
  - EXTENT OF ROCK RIPRAP
  - AS BUILT SURVEY POINTS



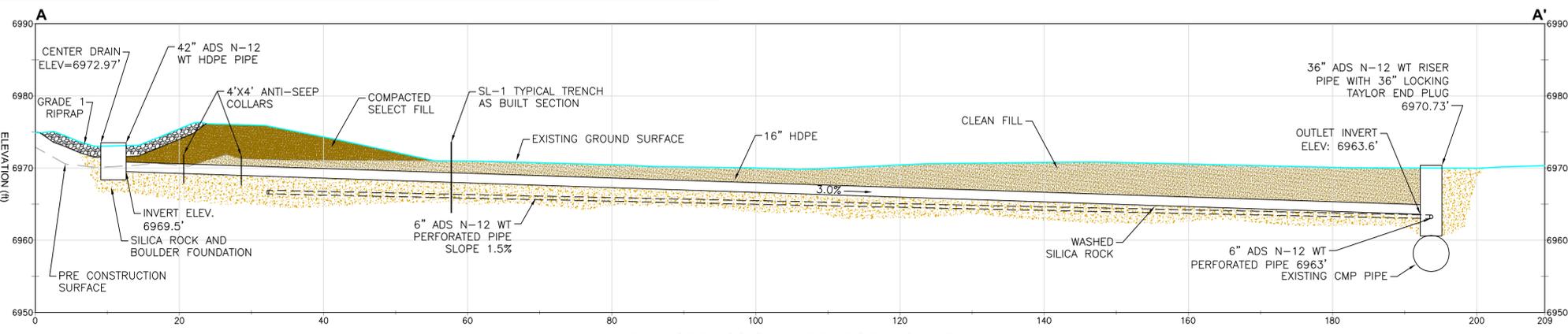
**SL-2 TYPICAL DITCH ASBUILT SECTION**  
SCALE: 1"=2'



**PLAN VIEW CMP DROP INLET**  
SCALE: 1"=3'



**SL-1 TYPICAL TRENCH AS BUILT SECTION**  
SCALE: 1"=7'



**TANK SPRINGS CULVERT PROFILE (A - A')**  
LOOKING SOUTH SCALE: 1"=10'

**Engineer's Certification**

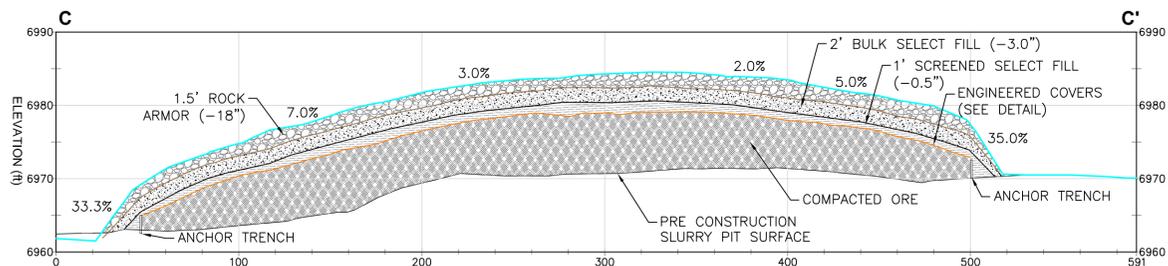
**NORWEST CORPORATION**



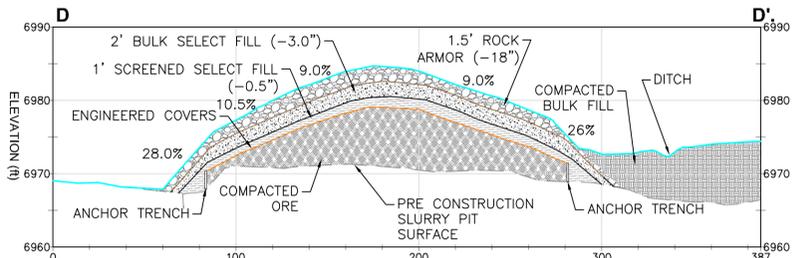
**DRAWING 4-1  
AS BUILT CONSTRUCTION  
TANK SPRINGS DIVERSION**

|                               |                    |                      |
|-------------------------------|--------------------|----------------------|
| DESIGN: NORWEST               | DATE: Jan 27, 2010 | Layer Manager: ----- |
| DRAWN: JLS                    | SCALE: As Shown    | PROJECT NO: 0-00     |
| REVISED: GTC Asbuilt 2009.dwg |                    |                      |

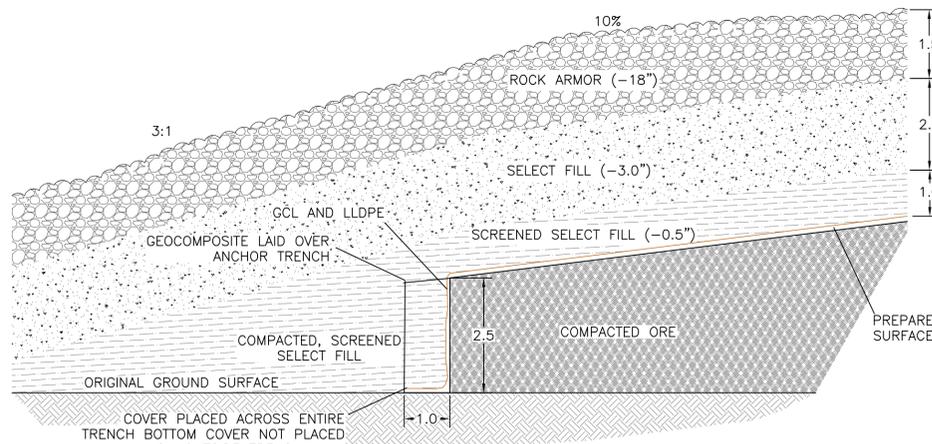
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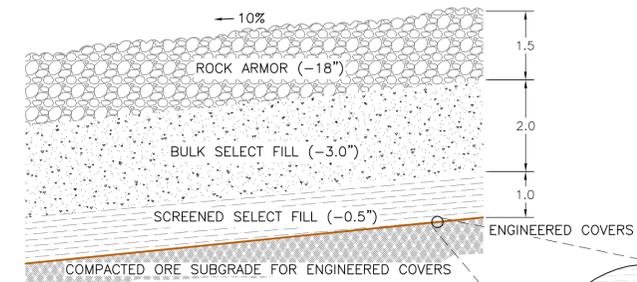
**SLURRY PIT (C - C')**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL EXAGGERATION X4



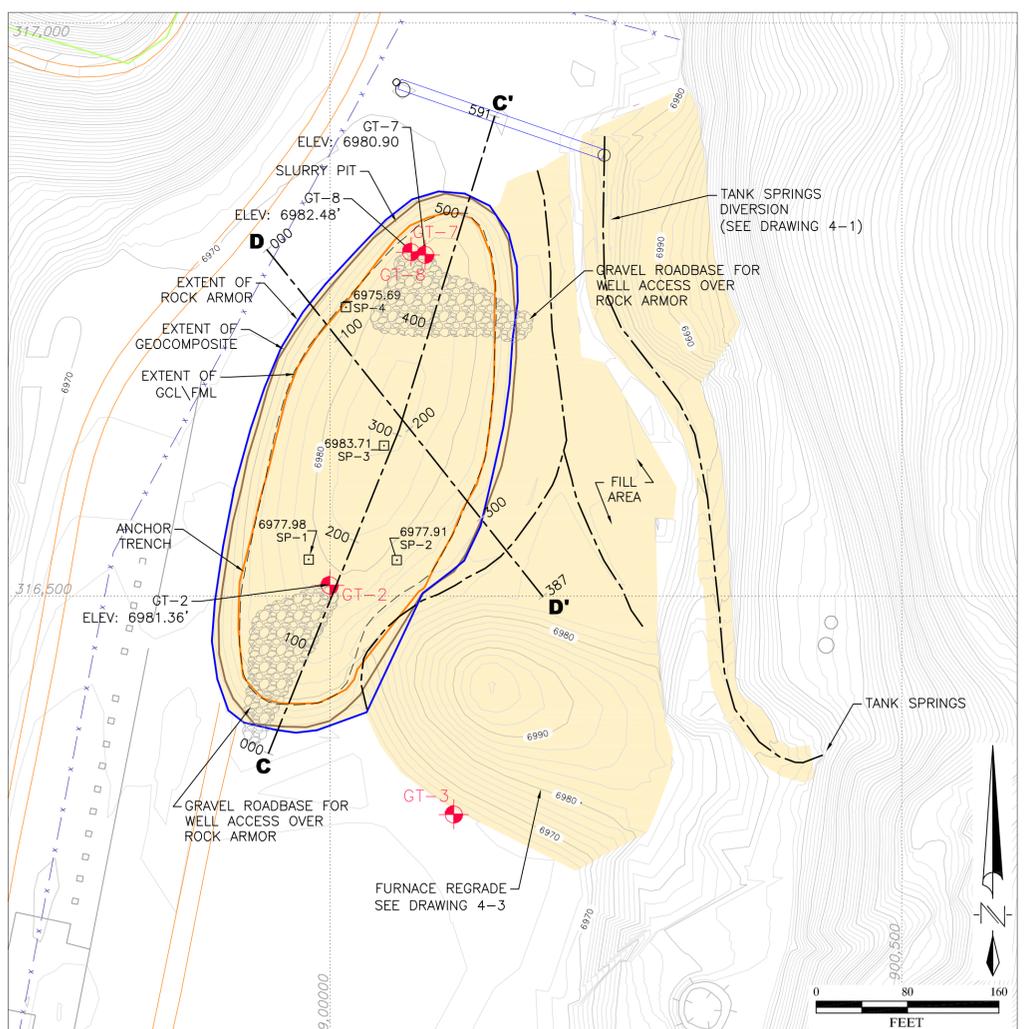
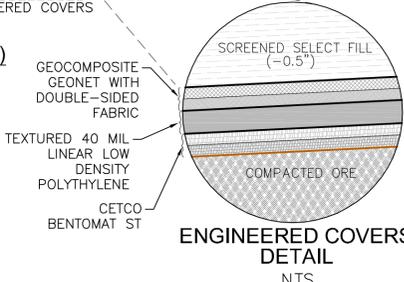
**SLURRY PIT AND DITCH (D - D')**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL EXAGGERATION X4



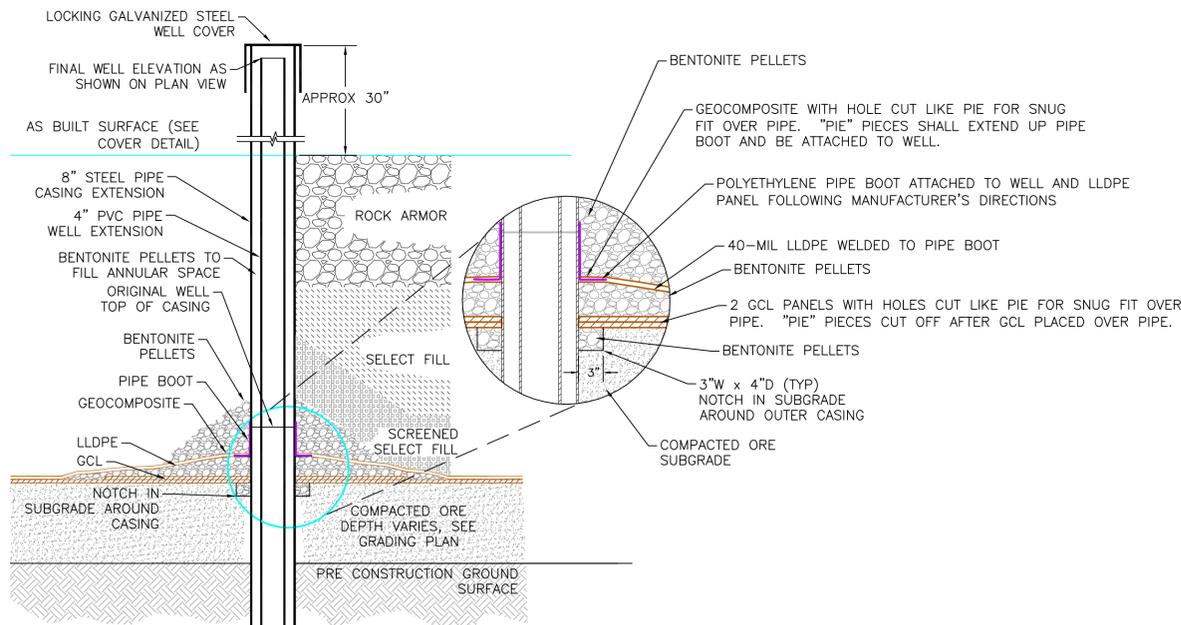
**ANCHOR TRENCH DETAIL (TYPICAL)**  
SCALE: 1"=2'



**COVER DETAIL (TYPICAL)**  
SCALE: 1"=2'



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3. CONTOURS SHOWN ARE AT COMPLETION OF CONSTRUCTION.  
4. CONTOUR INTERVAL IS 2 FEET.



**WELL EXTENSION DETAIL (TYPICAL)**  
SCALE: NTS

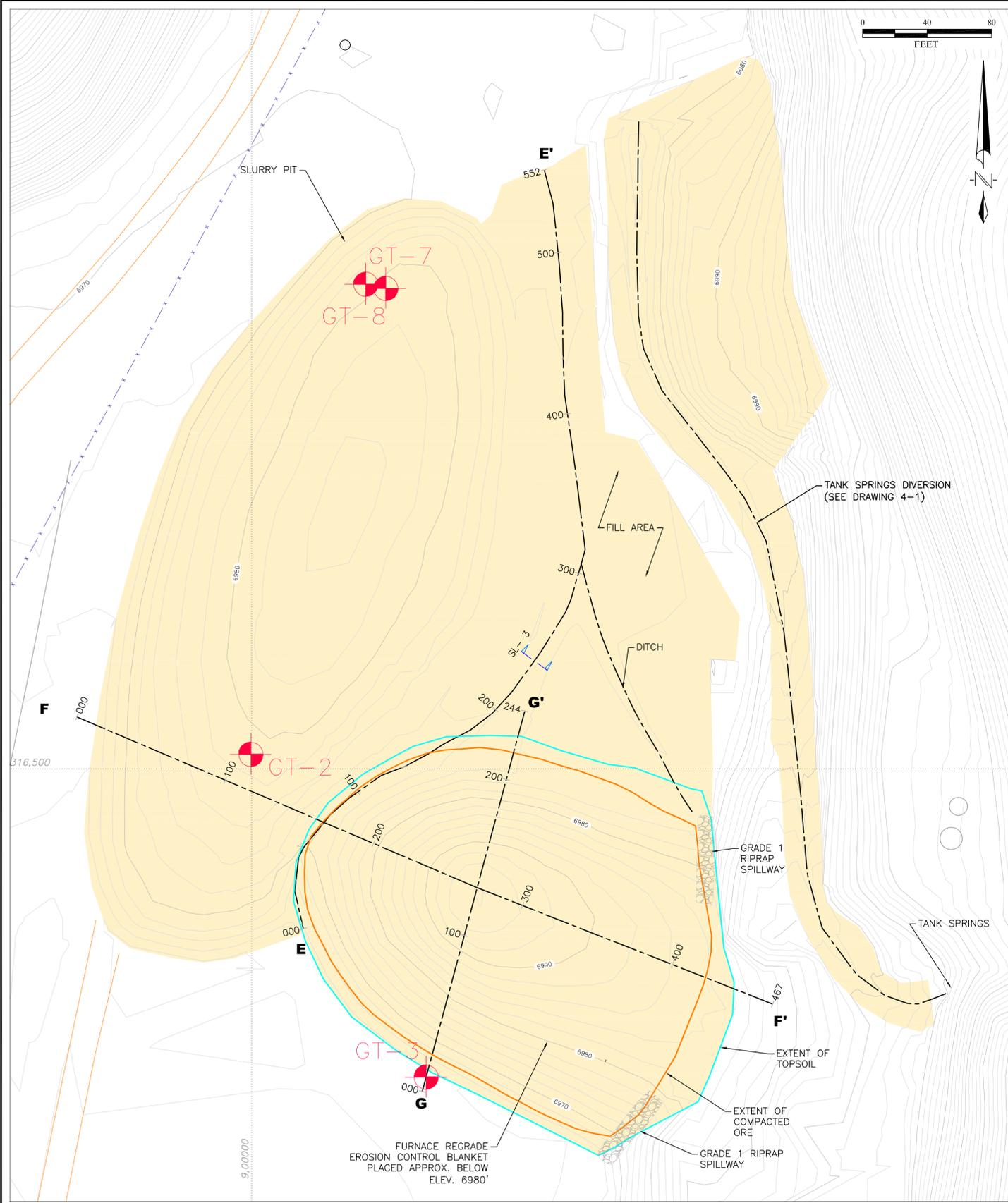
**Engineer's Certification**

**NORWEST CORPORATION**

**NU-WEST INDUSTRIES, INC.**

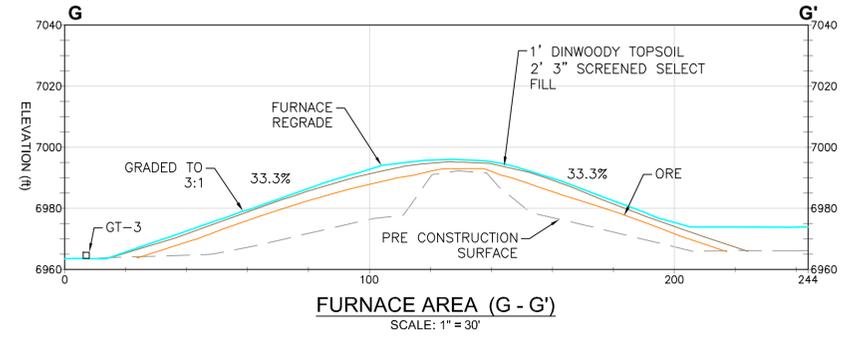
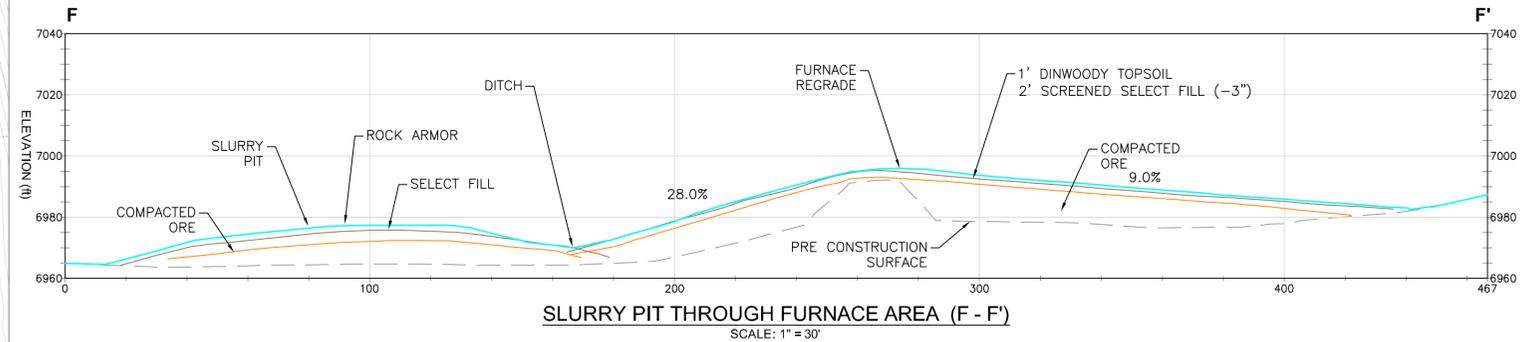
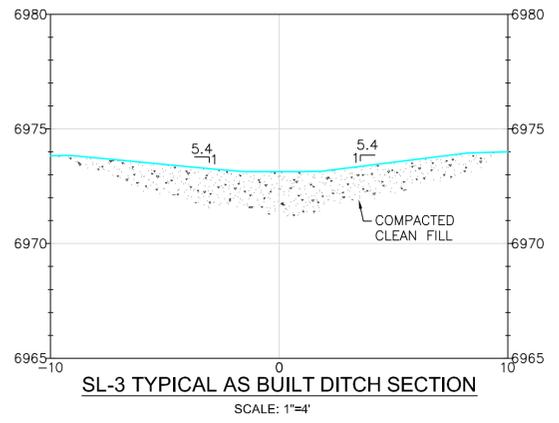
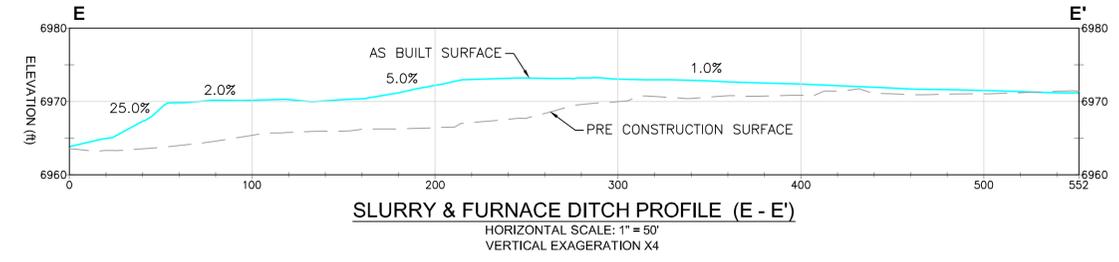
**DRAWING 4-2  
AS BUILT CONSTRUCTION  
SLURRY PIT COVER**

|                               |                    |                      |
|-------------------------------|--------------------|----------------------|
| DESIGN: NORWEST               | DATE: Jan 27, 2010 | Layer Manager: ----- |
| DRAWN: JLS                    | SCALE: As Shown    | PROJECT NO: 0-00     |
| DRAWING: GTC Asbuilt 2009.dwg |                    |                      |



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3. CONTOURS SHOWN ARE AT COMPLETION OF CONSTRUCTION.
4. CONTOUR INTERVAL IS 2 FEET.



- LEGEND**
- AS-BUILT EXTENT
  - ROAD
  - GROUND WATER MONITORING SITE
  - FENCE
  - EXTENT OF TOPSOIL
  - EXTENT OF ORE
  - DITCH CENTERLINE

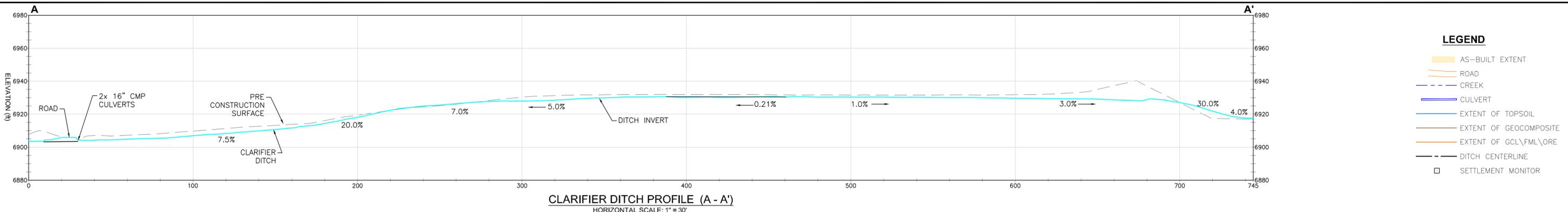
**Engineer's Certification**

**NORWEST CORPORATION**

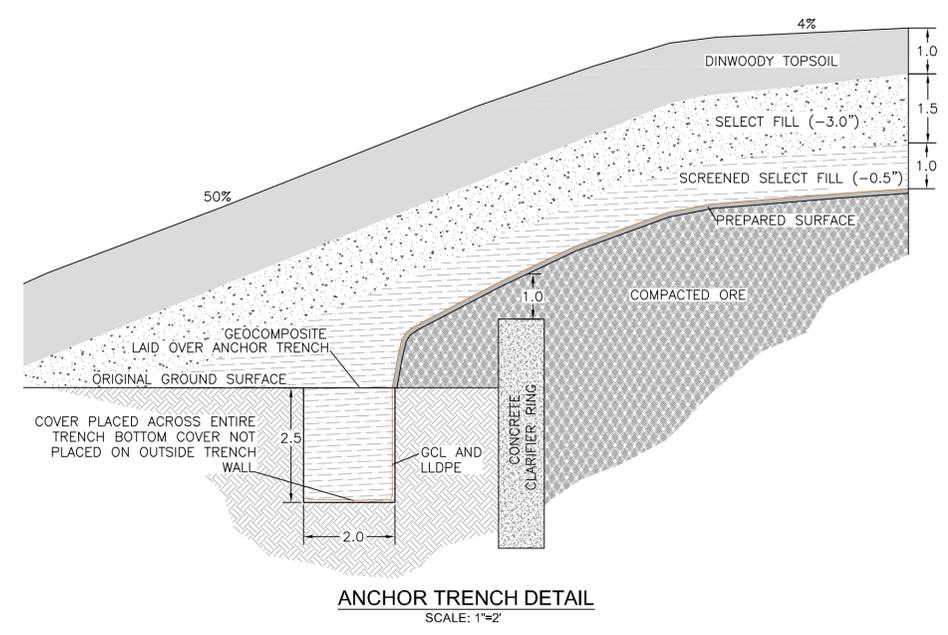
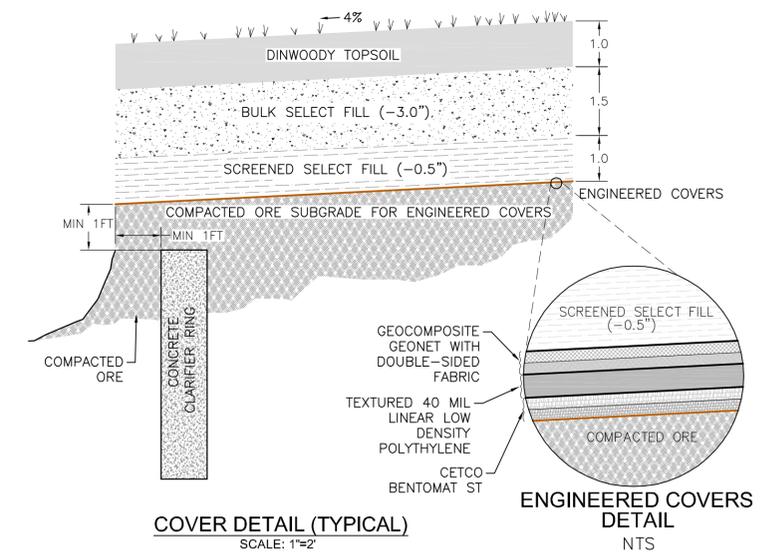
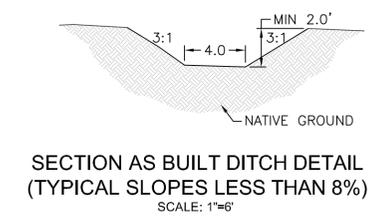
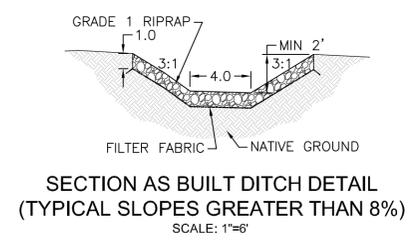
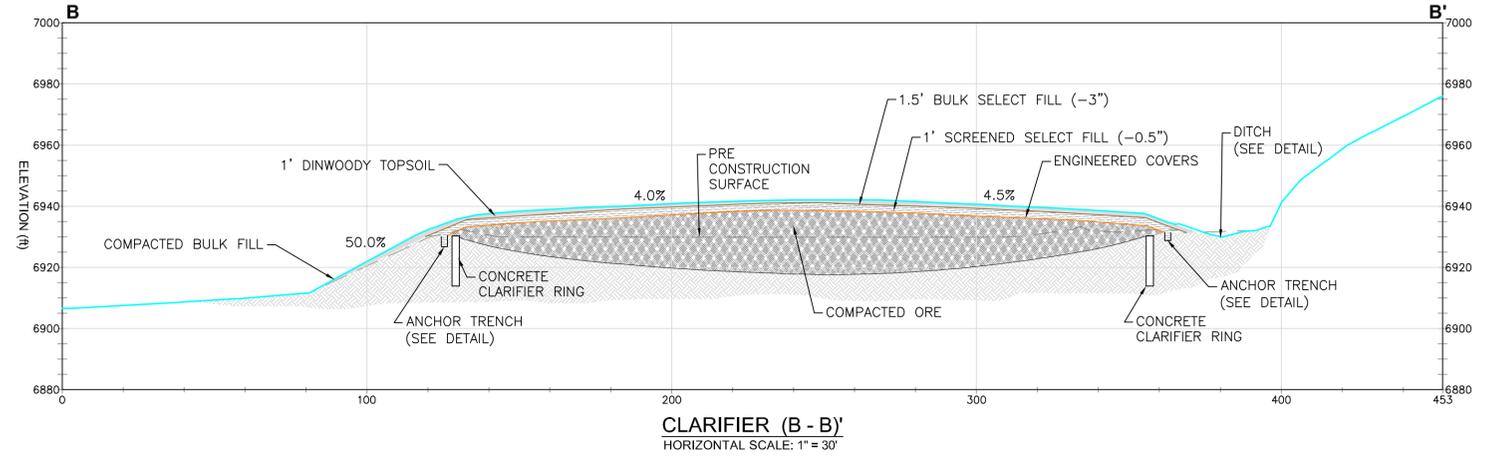
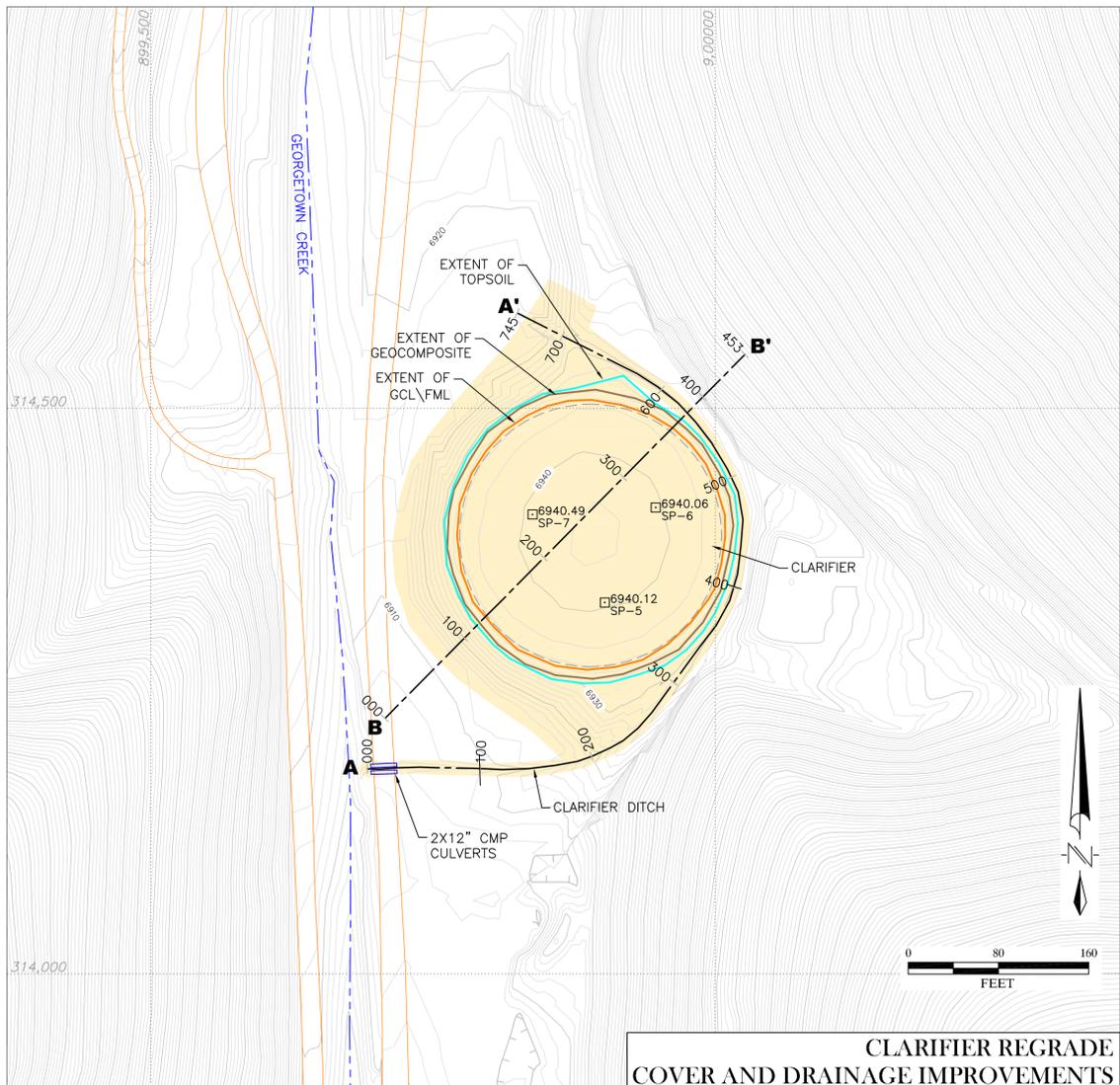


**DRAWING 4-3**  
**AS BUILT FURNACE REGRADE**

|                               |                    |                   |
|-------------------------------|--------------------|-------------------|
| DESIGN: NORWEST               | DATE: Jan 27, 2010 | Layer: Management |
| DRAWN: JLS                    | SCALE: As Shown    | PROJECT NO: 0-00  |
| DRAWING: GTC Asbuilt 2009.dwg |                    |                   |



- LEGEND**
- AS-BUILT EXTENT
  - ROAD
  - CREEK
  - CULVERT
  - EXTENT OF TOPSOIL
  - EXTENT OF GEOCOMPOSITE
  - EXTENT OF GCL\FML\ORE
  - DITCH CENTERLINE
  - SETTLEMENT MONITOR



- GENERAL DRAWING NOTES:**
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  - CONTOURS SHOWN ARE AT COMPLETION OF CONSTRUCTION.
  - CONTOUR INTERVAL IS 2 FEET.

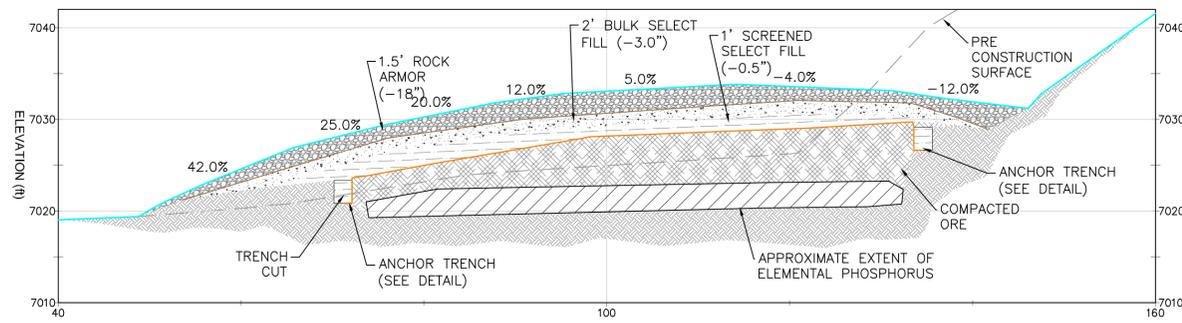
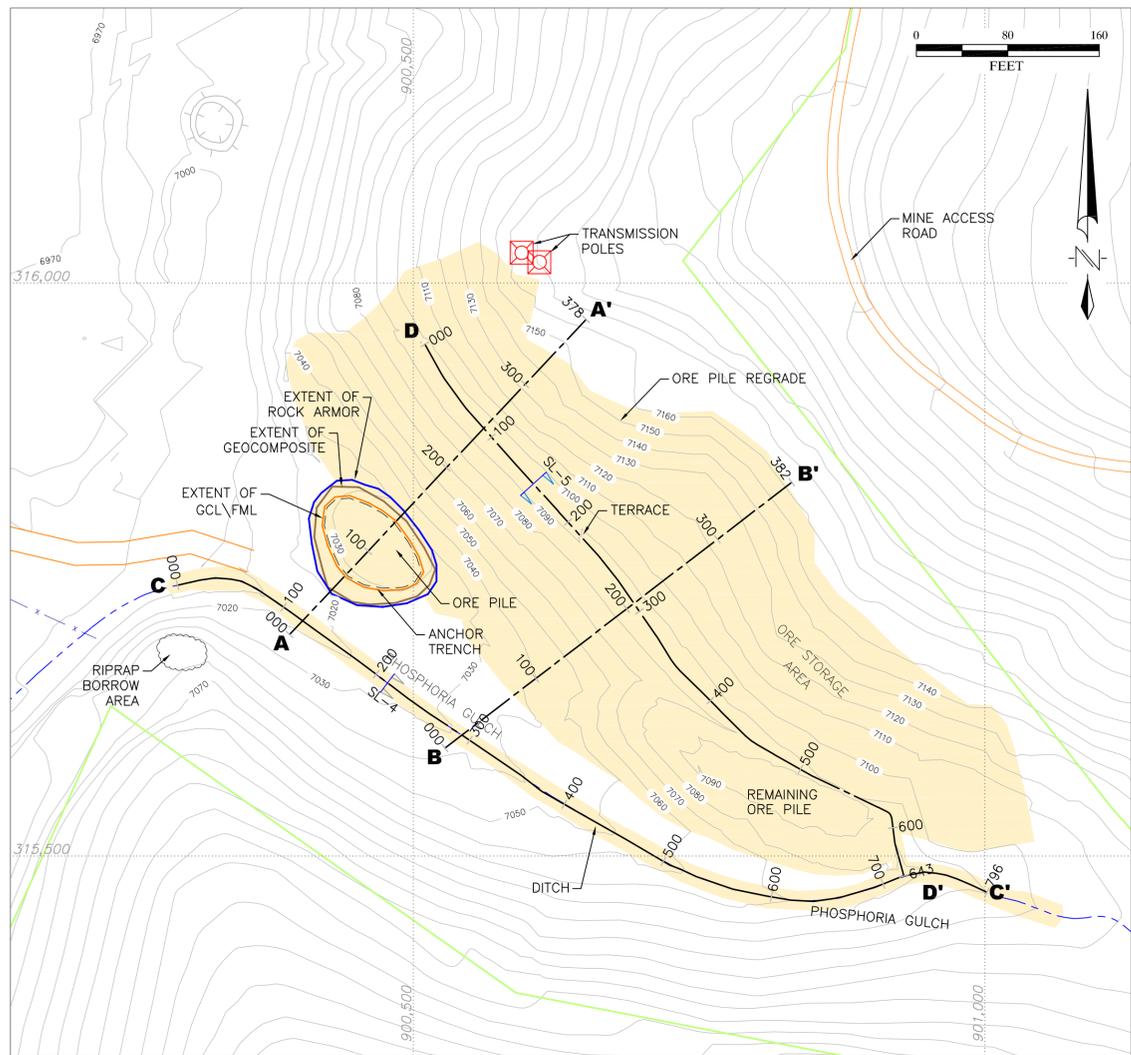
**Engineer's Certification**

**NORWEST CORPORATION**

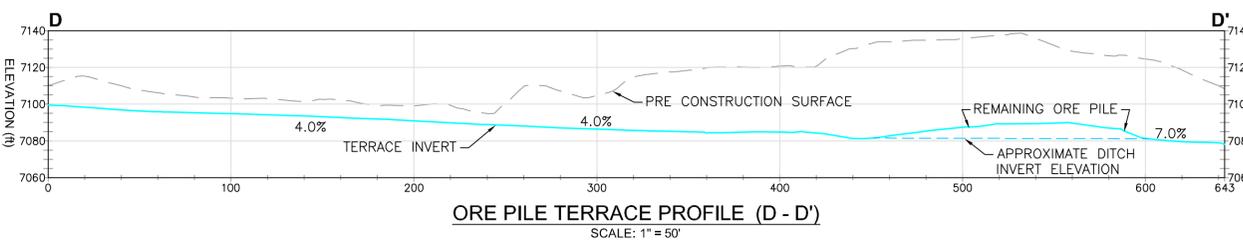
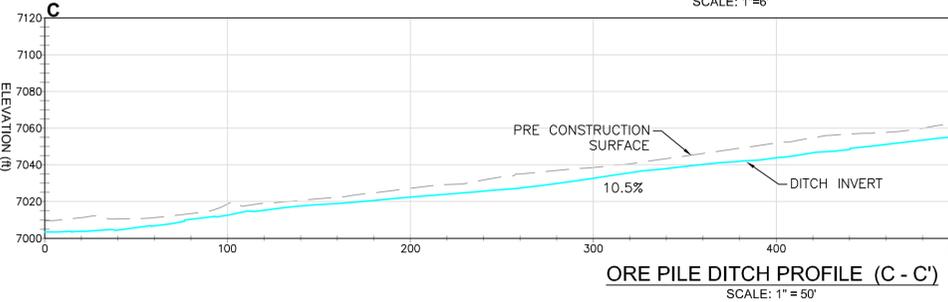
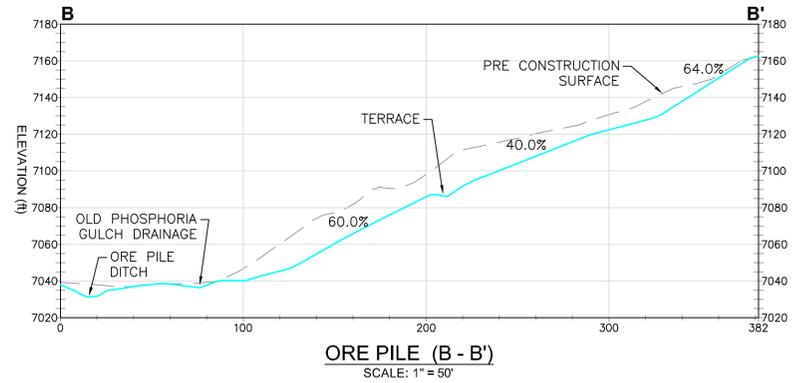
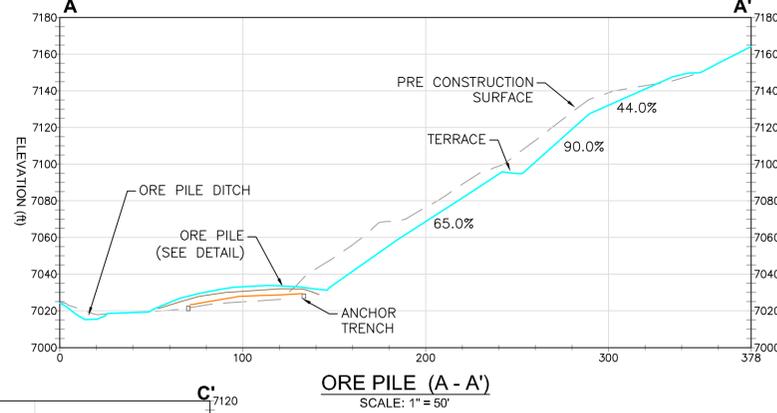
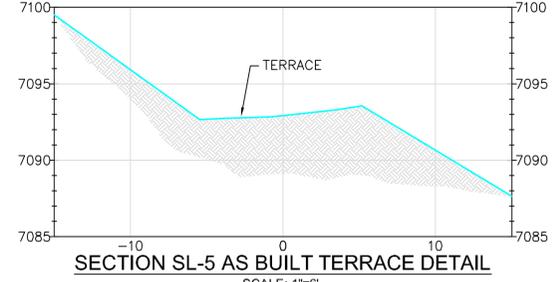
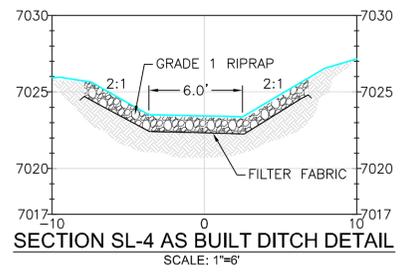
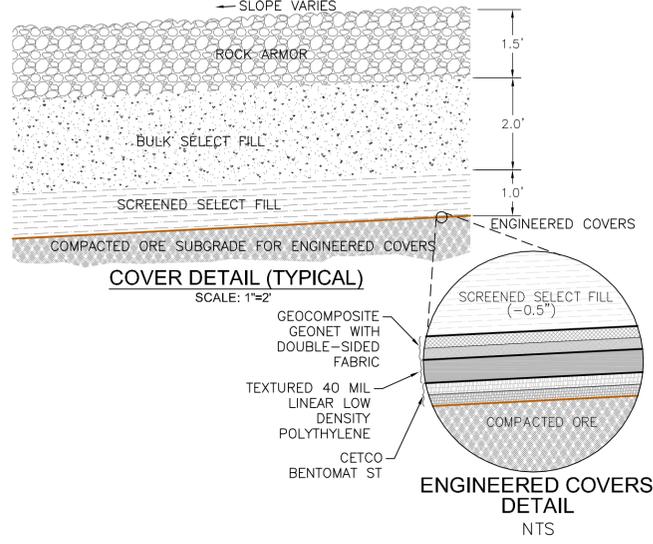
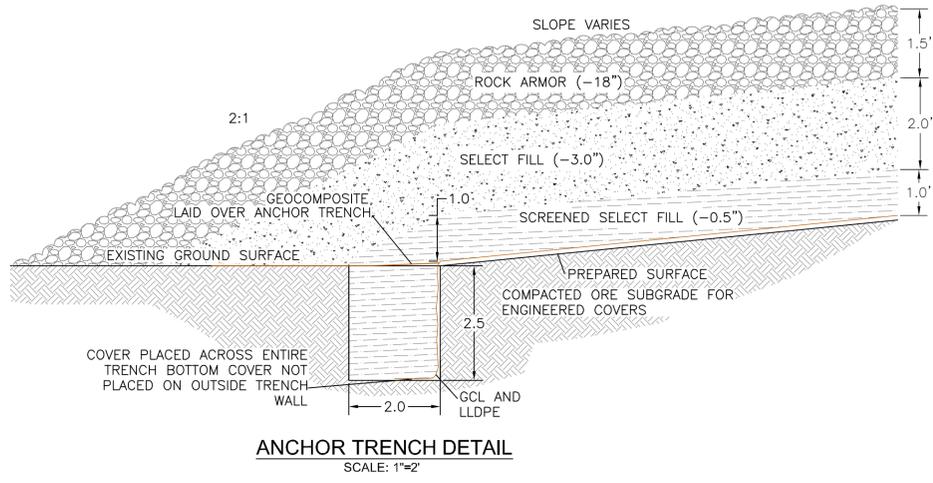
**NU-WEST INDUSTRIES, INC.**

**DRAWING 4-4**  
**AS BUILT CONSTRUCTION**  
**CLARIFIER COVER**

|                               |                    |               |       |
|-------------------------------|--------------------|---------------|-------|
| DESIGN: NORWEST               | DATE: Jan 27, 2010 | Layer Manager | ----- |
| DRAWN: JLS                    | SCALE: As Shown    | PROJECT NO:   | 0-00  |
| DRAWING: GTC Asbuilt 2009.dwg |                    |               |       |



- LEGEND**
- SITE BOUNDARY
  - AS-BUILT EXTENT
  - ROAD
  - FENCE
  - CREEK
  - EXTENT OF ROCK ARMOR
  - EXTENT OF GEOCOMPOSITE
  - EXTENT OF GCL\FML\ORE



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- CONTOURS SHOWN ARE AT COMPLETION OF CONSTRUCTION.
- CONTOUR INTERVAL IS 10 FEET.

**Engineer's Certification**

**NORWEST CORPORATION**

**NU-WEST INDUSTRIES, INC.**

**DRAWING 4-5 AS BUILT CONSTRUCTION ORE PILE COVER AND PHOSPHORIA DRAINAGE**

|                               |                    |                  |       |
|-------------------------------|--------------------|------------------|-------|
| DESIGN: NORWEST               | DATE: Jan 27, 2010 | Layer Manager    | ----- |
| DRAWN: JLS                    | SCALE: As Shown    | PROJECT NO: 0-00 |       |
| DRAWING: GTC Asbuilt 2009.dwg |                    |                  |       |

**TANK SPRING**



TANK SPRING DROP INLET AND CMP RISER COVER WITH WELDING MACHINE IN BACKGROUND - LOOKING NORTH-NORTHEAST - PHOTO DATED 07/14/09 GET LLC



TANK SPRING CLARIFYING POND FOR PUMPING DURING CONSTRUCTION - LOOKING SOUTH-SOUTHWEST - PHOTO DATED 07/17/09 GET LLC



WIDENING TANK SPRING CHANNEL - LOOKING NORTH- PHOTO DATED 07/17/09 GET LLC



LEAKING EXISTING 18 INCH CONCRETE PIPE CONNECTING TO CMP RISER IN TANK SPRING PIPELINE EXCAVATION - LOOKING SOUTHEAST- PHOTO DATED 07/21/09 GET LLC



SETTING LEVEL AND CONNECTING 6 INCH ELBOW TO DRAINAGE PIPE - LOOKING NORTH- PHOTO DATED 07/21/09 GET LLC



SEALING OUTSIDE CONNECTION OF 6 INCH PIPE TO CMP RISER IN CONCRETE THRUST BLOCK - LOOKING SOUTH- PHOTO DATED 07/21/09 GET LLC

**TANK SPRING**



BUILDING DRAINAGE TRENCH AND DRAIN GRAVEL ENVELOPE AND EXPOSING BROKEN AND LEAKING 18-INCH CONCRETE PIPE TO CMP RISER - LOOKING WEST- PHOTO DATED 07/22/09 GET LLC



DRAINAGE TRENCH CONSTRUCTION WITH TANK SPRING BYPASS PUMPAGE INTO CMP- LOOKING WEST- PHOTO DATED 07/22/09 GET LLC



DRAINAGE TRENCH CONSTRUCTION - LOOKING EAST- PHOTO DATED 07/22/09 GET LLC



INSTALLING 16 INCH PIPELINE ON GRADE FOR TANK SPRING - LOOKING EAST - PHOTO DATED 07/23/09 GET LLC



PLACING 16 INCH PIPE INTO CMP RISER IN EXISTING HOLE USED FOR REMOVED CONCRETE PIPELINE ABOVE DRAINAGE LAYER - LOOKING SOUTHWEST- PHOTO DATED 07/23/09 GET LLC



PLACEMENT OF 16 INCH PIPELINE FOR TANK SPRING ON TOP OF DRAINAGE TRENCH PRIOR TO TRENCH BACKFILLING - LOOKING EAST FROM NEAR CMP RISER- PHOTO DATED 07/23/09 GET LLC

**TANK SPRING**



SETTING GRADE ON 16-INCH PIPELINE FOR TANK SPRING ON TOP OF DRAINAGE TRENCH PRIOR TO TRENCH BACKFILLING - LOOKING EAST-SOUTHEAST - PHOTO DATED 07/23/09 GET LLC



GRAVEL PLACEMENT INTO DRAINAGE TRENCH NEAR DROP INLET - LOOKING EAST - PHOTO DATED 07/23/09 GET LLC



SETTING UP TO WELD NEXT PIPE SECTION AND DROP INLET ASSEMBLY - LOOKING EAST - PHOTO DATED 07/24/09 GET LLC



DROP INLET PLACEMENT - LOOKING WEST - PHOTO DATED 07/25/09 GET LLC



COMPACTING BACKFILL ABOVE 16 INCH TANK SPRING PIPELINE - LOOKING EAST - PHOTO DATED 07/28/09 GET LLC



LOOKING INTO CMP RISER AT 16 INCH PIPELINE CONNECTION PRIOR TO SEALING RISER COVER TO CMP RISER WITH BENTONITE - LOOKING DOWN TO GEORGETOWN CREEK - PHOTO DATED 07/29/09 GET LLC

### TANK SPRING



*TANK SPRING DROP INLET BASIN PRIOR TO GRUBBING AND CONSTRUCTION LOOKING SOUTH- PHOTO DATED 8/02/09 GET LLC*



*STAKING OUT THE FINAL TANK SPRING CONVEYANCE ALIGNMENT - LOOKING NORTHWEST- PHOTO DATED 08/13/09 GET LLC*

### TANK SPRING



TANK SPRING INLET BASIN PRIOR TO DROP INLET - LOOKING SOUTH - PHOTO DATED 08/02/09 GET LLC

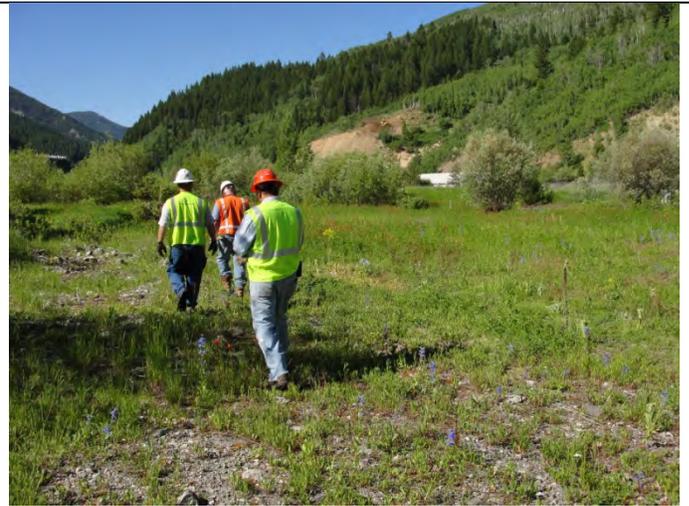


TANK SPRING INLET BASIN FOLLOWING SLOPE RECONTOURING AND RIP RAP PLACEMENT IN DROP INLET BASIN - LOOKING SOUTH - PHOTO DATED 10/09/09 GET LLC

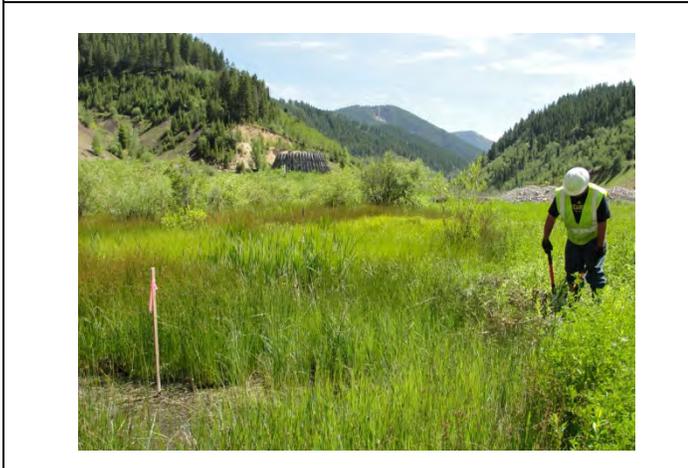
**SLURRY PIT CLOSURE**



SLURRY PIT, NORTH FILL AND FURNACE PRE-PHASE 1 SURFACES PRIOR TO GRUBBING AND ORE PLACEMENT - LOOKING EAST- PHOTO DATED 07/01/09 GET LLC



SLURRY PIT SURFACE PRIOR TO ORE PLACEMENT - LOOKING SOUTH- PHOTO DATED 07/08/09 GET LLC



SLURRY PIT SURFACE PREP EAST SIDE WITH STANDING WATER PRIOR TO GRUBBING AND ORE PLACEMENT - LOOKING SOUTH- PHOTO DATED 07/11/09 GET LLC



DEWATERING EAST OF SLURRY PIT SURFACE - LOOKING SOUTHEAST- PHOTO DATED 07/13/09 GET LLC



SLURRY PIT SURFACE AND SETTLEMENT MARKER PRIOR TO FINAL GRUBBING AND FIRST LIFT OF ORE PLACEMENT - LOOKING SOUTHEAST- PHOTO DATED 07/15/09 GET LLC



SLURRY PIT SURFACE WITH TEMP SURVEY MARKER ON FIRST LIFT ORE PLACEMENT - LOOKING NORTH- PHOTO DATED 07/17/09 GET LLC

**SLURRY PIT CLOSURE**



SLURRY PIT FIRST LIFT OF ORE - LOOKING SOUTHEAST TO FURNACE- PHOTO DATED 07/17/09 GET LLC



EAST SIDE OF SLURRY PIT WITH LOW SPOTS FILLED WITH COMPACTED FOUNDATION ROCK FOR DRIVABLE SURFACE - LOOKING NORTHWEST- PHOTO DATED 07/21/09 GET LLC



SECOND LIFT ON SLURRY PIT SURFACE - LOOKING NORTHEAST- PHOTO DATED 07/22/09 GET LLC



TEST PITS ON EAST SIDE OF SLURRY ON ANCHOR TRENCH ALIGNMENT - LOOKING NORTH- PHOTO DATED 07/24/09 GET LLC



SLURRY PIT SURFACE TESTING LIFT 2 AND 3 - LOOKING EAST- PHOTO DATED 07/31/09 GET LLC



PLACEMENT OF OUTER FOUNDATION OF SOIL TO CONSTRUCT OUTER BANK TO ANCHOR TRENCH - LOOKING SOUTH TOWARDS FURNACE FILL- PHOTO DATED 08/01/09 GET LLC

**SLURRY PIT CLOSURE**



EXTENDING WELL GT-2 ON SLURRY PIT COVER - LOOKING NORTHEAST- PHOTO DATED 08/04/09 GET LLC

SLURRY PIT SURFACE LIFT 5 OF TO ORE - LOOKING NORTH- PHOTO DATED 08/05/09 GET LLC



SLURRY PIT SURFACE PRIOR TO ORE PLACEMENT - LOOKING NORTHEAST- PHOTO DATED 08/12/09 GET LLC

UNLOADING GEOCOMPOSITE - LOOKING NORTH- PHOTO DATED 08/15/09 GET LLC



SLURRY PIT SURFACE ANCHOR TRENCH - WEST SIDE LOOKING NORTH PRIOR TO GCL PLACEMENT - LOOKING NORTH- PHOTO DATED 08/18/09 GET LLC

SLURRY PIT SURFACE AND GCL PLACEMENT - LOOKING SOUTHEAST- PHOTO DATED 08/18/09 GET LLC



WEST SIDE SLURRY PIT SURFACE GCL PLACEMENT AND PULLING GCL INTO ANCHOR TRENCH -  
 LOOKING SOUTH- PHOTO DATED 08/19/09 GET LLC



BENTONITE IN NOTCH AROUND WELL GT-2 OUTER CASING- LOOKING SOUTHWEST- PHOTO DATED  
 08/19/09 GET LLC



LYSTERING GCL SEAMS ON SLURRY PIT COVER PRIOR TO FMC PLACEMENT - LOOKING WEST- PHOTO  
 DATED 08/19/09 GET LLC



PATCHING DESTRUCT SAMPLE ON SLURRY PIT CAP PRIOR TO REPAIR TESTING - LOOKING NORTHEAST-  
 PHOTO DATED 08/19/09 GET LLC



EXCAVATING LAST SEGMENT OF ANCHOR TRENCH EAST SIDE SLURRY PIT WITH LINER LAID BACK -  
 LOOKING NORTH- PHOTO DATED 08/21/09 GET LLC



SLURRY PIT SURFACE ON GEOCOMPOSITE LAYER PRIOR TO CUSHION SOIL PLACEMENT - LOOKING  
 SOUTH- PHOTO DATED 08/22/09 GET LLC

**SLURRY PIT CLOSURE**



SLURRY PIT SURFACE GEOCOMPOSITE STITCHING - LOOKING WEST- PHOTO DATED 08/22/09 GET LLC



GEOCOMPOSITE AND BOOTS ON WELLS GT-7 AND GT-8 - LOOKING WEST- PHOTO DATED 08/24/09 GET LLC



FILLING AND COMPACTING ANCHOR TRENCH ON EAST SIDE OF SLURRY PIT FOLLOWING GEOCOMPOSITE PLACEMENT - LOOKING NORTHWEST- PHOTO DATED 08/25/09 GET LLC



SLURRY PIT CUSHION SOIL PLACEMENT AND THICKNESS MARKERS - LOOKING SOUTH WITH FURNACE ON LEFT- PHOTO DATED 08/26/09 GET LLC



WELL GT-8 AND FIRST LIFT SUBSOIL PLACEMENT ON SLURRY PIT SURFACE PRIOR TO ORE BLUE TOP SURVEY AND ARMOR PLACEMENT - LOOKING SOUTH - PHOTO DATED 08/30/09 GET LLC



SLURRY PIT SUBSOIL PLACEMENT AND FURNACE - LOOKING NORTH- NORTHEAST- PHOTO DATED 09/03/09 GET LLC

**SLURRY PIT CLOSURE**



NICK POINT IN SADDLE BETWEEN SLURRY PIT AND FURNACE PRIOR TO SPILLWAY PLACEMENT -  
 LOOKING NORTH-NORTHEAST- PHOTO DATED 09/16/09 GET LLC



SLURRY PIT SURFACE ARMOR PLACEMENT AND DEPTH MARKERS - LOOKING WEST- PHOTO DATED  
 09/17/09 GET LLC



SPILLWAY SOUTH OF SLURRY PIT AND FURNACE SADDLE SURFACE PRIOR TO RIPRAP PLACEMENT -  
 LOOKING NORTH- PHOTO DATED 09/30/09 GET LLC



SLURRY PIT ARMORED SURFACE AND COMPACTED FILL EAST OF SLURRY PIT FINAL GRADING AND  
 DITCH EXCAVATION - LOOKING NORTH- PHOTO DATED 10/14/09 GET LLC



SLURRY PIT SURFACE, NORTH FILL AND FURNACE FINAL COVERS PRIOR TO RECLAMATION - LOOKING  
 EAST- PHOTO DATED 09/25/09 - MITCH HART, P.E.



SLURRY PIT DRIVABLE SURFACE TO WELLS AND WELL SAMPLING - LOOKING WEST- PHOTO DATED  
 10/14/09 GET LLC

**SLURRY PIT CLOSURE**

**FURNACE CLOSURE**



EAST OF SLURRY PIT, NORTH FILL OF FURNACE PRE-FILL GRUBBING - LOOKING EAST- PHOTO DATED 07/13/09 GET LLC



LIFTS 2 AND 3 ON FURNACE COVER PLACEMENT - LOOKING NORTHEAST- PHOTO DATED 07/23/09 GET LLC



LIFT 2 COMPACTION ON FURNACE - WEST SIDE DURING ORE PLACEMENT - LOOKING WEST- PHOTO DATED 07/23/09 GET LLC



LIFT 3 ON FURNACE COVER - LOOKING SOUTHEAST FROM LIFT 3 ON SLURRY ORE SURFACE- PHOTO DATED 07/23/09 GET LLC



GRADING AND COMPACTION ON LIFT 3 ON FURNACE SURFACE - LOOKING NORTHWEST- PHOTO DATED 07/23/09 GET LLC



COMPACTION TESTING WITH TROXLER ON LIFT 6 ON FURNACE COVER - LOOKING NORTHWEST- PHOTO DATED 07/29/09 GET LLC

**FURNACE CLOSURE**



STAKING OUT GRADE ON LIFT SEVEN ON FURNACE - LOOKING EAST-NORTHEAST TO FURNACE- PHOTO DATED 07/31/09 GET LLC



EAST SIDE OF SLURRY PIT GRUBBING FOR NORTH FILL - LOOKING SOUTHEAST- PHOTO DATED 07/31/09 GET LLC



BENTONITE CAP ON FURNACE - LOOKING NORTHEAST- PHOTO DATED 08/05/09 GET LLC



COMPACTION ON ORE LIFT 13 ON NORTH SIDE OF FURNACE SHOWING BENTONITE CAP - LOOKING SOUTHEAST - PHOTO DATED 08/06/09 GET LLC



DIRT SUBSOIL LIFT ON FURNACE WITH DEPTH MARKERS PLACED - LOOKING WEST- PHOTO DATED 08/06/09 GET LLC



BEGIN FILL PLACEMENT NORTH OF FURNACE AND EAST OF SLURRY COVER - LOOKING NORTH FROM FURNACE- PHOTO DATED 08/15/09 GET LLC

### FURNACE CLOSURE



FURNACE TOPSOIL AND SLURRY PIT COVER WITH ARMOR - LOOKING NORTHWEST FROM MOUTH OF PHOSPHORIA - PHOTO DATED 09/29/09 GET LLC



HYDROMULCH AND HYDROSEEDING RECLAMATION WORK ON FURNACE - LOOKING NORTHEAST- PHOTO DATED 10/17/09 GET LLC

**CLARIFIER CLOSURE**



EAST OF CLARIFIER, WATER LEVEL BEING PUMPED FOR COMPACTION WATER PRIOR TO GRUBBING AND CLOSURE - LOOKING WEST NORTHWEST- PHOTO DATED 08/05/09 GET LLC



RESIDUAL WATER PUMPED TO SED POND AND CATTAILS GRUBBED - ARMS AND CENTER PIVOT POINT IN CLARIFIER - LOOKING SOUTH-SOUTHWEST - PHOTO DATED 08/12/09 GET LLC



PUMPING RESIDUAL WATER FROM CLARIFIER SUMP - EAST SIDE OF CLARIFIER - LOOKING WEST- PHOTO DATED 08/13/09 GET LLC



RESIDUAL SEDIMENT FROM BOTTOM OF CLARIFIER ON CLAY BOTTOM WITH WINDROWS AND RAKE ARMS REMOVED - LOOKING NORTHWEST FROM SUMP AREA- PHOTO DATED 08/13/09 GET LLC



HARD CLAY BOTTOM ON CLARIFIER - CENTER PIVOT REMOVED - LOOKING NORTHWEST- PHOTO DATED 08/14/09 GET LLC



COMPACTION TESTING WITH TROXLER ON LIFTS 4 AND 5 ON CLARIFIER ORE FILL - LOOKING NORTHEAST- PHOTO DATED 08/21/09 GET LLC

**CLARIFIER CLOSURE**



COMPACTION TESTING LIFTS 4 AND 5 ON CLARIFIER - LOOKING EAST-SOUTHEAST- PHOTO DATED 08/21/09 GET LLC



COMPACTION LIFT 13 ON CLARIFIER ORE FILL - LOOKING SOUTH- PHOTO DATED 09/01/09 GET LLC



COMPACTION LIFT 12 ON CLARIFIER - LOOKING NORTHEAST- PHOTO DATED 09/03/09 GET LLC



GCL AND FMC PLACEMENT ON CLARIFIER WITH LINER LAID BACK TO CUT ANCHOR TRENCH - LOOKING WEST-SOUTHWEST - PHOTO DATED 09/18/09 GET LLC



CLARIFIER COVER GEOMEMBRANE PRIOR TO ANCHOR TRENCHING - LOOKING WEST- PHOTO DATED 09/18/09 GET LLC



PLACEMENT OF GEOCOMPOSITE ON CLARIFIER COVER PRIOR TO ANCHOR TRENCH BACKFILLING - LOOKING WEST-NORTHWEST FROM EAST SIDE CLARIFIER- PHOTO DATED 09/19/09 GET LLC

**CLARIFIER CLOSURE**



BACKFILLING AND COMPACTING ANCHOR TRENCH ON SOUTH SIDE OF CLARIFIER - LOOKING EAST-NORTHEAST - PHOTO DATED 09/19/09 GET LLC

MEETING COMPACTION OF EAST SIDE OF CLARIFIER WITH GEOCOMPOSITE PULLED BACK - LOOKING SOUTHWEST - PHOTO DATED 09/20/09 GET LLC



CUSHION SOIL PLACEMENT ON CLARIFIER CAP WITH DEPTH MARKERS SHOWN - LOOKING NORTHWEST - PHOTO DATED 09/23/09 GET LLC

SUBSOIL PLACEMENT ON CLARIFIER CAP - LOOKING SOUTH - PHOTO DATED 09/25/09 GET LLC



OUTSIDE OF CLARIFIER CAP ON 2:1 SIDESLOPE PRIOR TO DRAINAGE DITCH INSTALLATION - LOOKING NORTHWEST - PHOTO DATED 09/29/09 GET LLC

CLARIFIER CAP PRIOR TO RECLAMATION WITH SOUTH DRAINAGE INSTALLED - LOOKING SOUTH FROM EAST SIDE OF CANYON - PHOTO DATED 09/29/09 GET LLC



*FINAL TOPSOIL LAYER ON CLARIFIER, 3 PERMANENT SURVEY MARKERS SHOWN ON 5 PERCENT SLOPED COVER - LOOKING WEST- PHOTO DATED 10/09/09 GET LLC*



*FINAL CLARIFIER COVER WITH TRAFFIC CONTROL BOULDERS IN PLACE SURROUNDING CAP - LOOKING NORTH- PHOTO DATED 10/28/09 GET LLC*

## **CLARIFIER CLOSURE**

**PHOSPHORIA GULCH**



PHOSPHORIA GULCH ORE PILE PRIOR TO PHASE I SITE WORK - LOOKING EAST, INTERMITTENT FLOW ON RIGHT- PHOTO DATED 07/01/09 GET LLC

REGRADED AND IMPROVE MINE ROAD ABOVE PHOSPHORIA ORE PILE WITH BERM, PART OF SITE BMP - LOOKING NORTH-NORTHWEST - PHOTO DATED 07/08/09 GET LLC



SILT FENCE INSTALLED PRIOR TO WINTER IN OCTOBER 2008 INUNDATED BY ORE PRIOR TO ORE REMOVAL 2009 LOOKING EAST- PHOTO DATED 07/09/09 GET LLC

ORE PILE -INITIAL WORK GRADING ROAD TO PHOSPHORIA FOR HAULAGE- LOOKING SOUTHWEST- PHOTO DATED 07/14/09 GET LLC



BEGIN HAULING ORE TO SLURRY PIT FROM WEST END OF PHOSPHORIA - SCREENED ROCK USED TO ESTABLISH ROAD BASE - LOOKING EAST- PHOTO DATED 07/15/09 GET LLC

SAME LOCATION AS LEFT ON WEST END OF PHOSPHORIA SHOWING ORE CLEANED FROM SLOPE - LOOKING EAST- PHOTO DATED 07/31/09 GET LLC

**PHOSPHORIA GULCH**



4 TONS OF EXPLOSIVES DISPERSED WITHIN 60 BY 50 FOOT DEPTH BORINGS ON 8 FOOT SPACING TO GENERATE ABOUT 5,000 YARDS ARMOR AND RIP RAP - LOOKING NORTH-NORTHEAST- PHOTO DATED 08/14/09 REGIS SENG OF CRA



WELLS CANYON LIMESTONE RIP RAP- LOOKING WEST FROM TOP OF QUARRY TO SCREEN AREA AND DUD HOLLOW- PHOTO DATED 08/15/09 GET LLC



STAKED OUT 2 PERCENT BENCH ALIGNMENT ON CLEANED PHOSPHORIA ORE SLOPE - LOOKING NORTHWEST - PHOTO DATED 08/22/09 GET LLC



CUTTING BENCH ON CLEANED ORE SLOPE - LOOKING WEST - PHOTO DATED 09/02/09 GET LLC



CUTTING BENCH ON CLEANED ORE SLOPE - LOOKING EAST- PHOTO DATED 09/02/09 GET LLC



CLEANED OFF ORE SLOPE WITH CUT BENCH AND BORROW QUARRY - LOOKING EAST FROM SCREEN PLANT- PHOTO DATED 09/03/09 GET LLC

### PHOSPHORIA GULCH



TEST PIT LOCATIONS IN COMPACTED ORE COVER AREA - LOOKING EAST-SOUTHEAST - PHOTO DATED 09/16/09 GET LLC

LAYING GCL ON ORE COVER - LOOKING WEST-NORTHWEST - PHOTO DATED 09/18/09 GET LLC



PULLING OUT GCL LINER ON ORE COVER - LOOKING NORTH TO CLEANED ORE SLOPE - PHOTO DATED 09/18/09 GET LLC



GCL PLACED ON ORE COVER INTO ANCHOR TRENCH- LOOKING WEST - PHOTO DATED 09/18/09 GET LLC



FMC LLDPE PLACEMENT ON ORE COVER OVER GCL - LOOKING NORTHWEST- PHOTO DATED 09/18/09 GET LLC



ORE COVER WITH GEOCOMPOSITE PRIOR TO BACKFILLING ANCHOR TRENCH LOOKING NORTHWEST - PHOTO DATED 09/20/09 GET LLC

**PHOSPHORIA GULCH**



HARPER-LEAVITT PERFORMING ANCHOR TRENCH COMPACTION TESTING ON ORE COVER WITH GEOCOMPOSITE PULLED BACK - LOOKING NORTH - PHOTO DATED 09/24/09 GET LLC



ORE CAP AT BASE OF SLOPE WITH SOIL COVER PLACED PRIOR TO ARMOR PLACEMENT - SLOPE BREAK BENCH ON RIGHT - LOOKING WEST-NORTHWEST - PHOTO DATED 09/29/09 GET LLC



ORE COVER WITH FINAL 18-INCH MINUS ARMOR PLACEMENT AT BASE OF PHOSPHORIA SLOPE - LOOKING EAST - PHOTO DATED 10/03/09 GET LLC



WIDENING PHOSPHORIA DRAINAGE AND PLACING FILTER FABRIC AND GRADE 1 RIP RAP - LOOKING EAST - PHOTO DATED 10/16/09 GET LLC



PLACING RIP RAP IN PHOSPHORIA GULCH WITH ORE COVER IN BACKGROUND - LOOKING EAST-NORTHEAST - PHOTO DATED 10/16/09 GET LLC



RIP RAP PLACEMENT IN PHOSPHORIA, ORE COVER ON RIGHT - PRIOR TO RECLAMATION AND BMP PLACEMENT - LOOKING WEST - PHOTO DATED 10/20/09 GET LLC



*CONFLUENCE OF PHOSPHORIA DRAINAGE AND SLOPE BENCH ON RIGHT - STRAW WATTLE AND BERMS  
IN PLACE LOOKING WEST - PHOTO DATED 10/28/09 GET LLC*



*2-PERCENT SLOPED BENCH WITH STRAW WATTLE PLACEMENTS - LOOKING WEST-NORTHWEST - PHOTO  
DATED 10/28/09 GET LLC*

PREPARED BY:



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**SUBMITTAL**

DATE: July 10, 2009

SUBMITTAL NO.: 56872-08

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER:

SUBCONTRACTOR:

MANUFACTURER:

| QTY | SPEC. NO. & TITLE   | DWG. NO. | DESCRIPTION / LOCATION INSTALLED   |
|-----|---|----------|--|
| 1   | Attachment B - Section 3.0 Remedial Construction; Subsection 3.5 Slurry Pit Closure | N/A      | Herbicide - Round Up Poison Ivy & Tough Brush Killer Plus; recommended for multiple weeds, grasses, shrubs, and trees, including willows and aspens. |
|     |   |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:

**CONSEJOS ADICIONALES (Continuación)**

|   |   |
|---|---|
| <b>KUDZÚ</b>  | Para mejores resultados, aplique a mediados o finales del verano cuando las enredadoras se encuentren maduras y crecen activamente.   |
| <b>IRZAMORAS<br/>ILVESTRES</b>                        | Rocíe cada vez que las plantas crezcan activamente. Las cañas deben cortarse y retirarse. Con frecuencia se requiere otra aplicación para eliminar las raíces profundas.  |
| <b>HIEDRA<br/>VENENOSA Y<br/>ZUMAQUE<br/>VENENOSO</b> | El contacto con estas plantas en cualquier momento del año puede causar una reacción alérgica. Rocíe cada vez que las plantas crezcan activamente, pero por lo menos 4 semanas antes de la primera helada de otoño. Vuelva a aplicar si aparecen nuevas plantas. Manipule las plantas muertas con guantes de caucho. Elimine las plantas y guantes de caucho en bolsas de basura cerradas herméticamente. |

**ALMACENAMIENTO Y ELIMINACIÓN**

**ALMACENAMIENTO DEL PLÁSTICO:** Guarde en el envase original en un lugar seguro lejos de la luz directa del sol.  
**ELIMINACIÓN: Si está vacío:** No vuelva a utilizar este envase. Coloque en la basura u ofrezca para el reciclado si existe. **Si se encuentra parcialmente lleno:** Llame a su agencia local de desechos sólidos o 1-800-CLEANUP para obtener instrucciones de eliminación. Nunca coloque el producto sin usar debajo de ningún drenaje interior o exterior.



**Concentrate  
Poison Ivy & Tough  
Brush Killer Plus**

**OPEN  
ABRA**

**PRODUCT FACTS**

**Makes 5 Gallons. Treats up to 1,500 sq ft.**

**KILLS  
WEEDS**

**KILLS ALL TYPES OF TOUGH WEEDS & GRASSES** including Woody Brush and Vines, Poison Ivy, Poison Oak, Kudzu, Wild Blackberry

**HOW IT  
WORKS**

Roundup® Poison Ivy & Tough Brush Killer Plus enters plants through foliage and moves systemically to the roots, killing weeds by altering the production of certain substances found in plants. Weeds usually yellow and wilt within 24 hours with complete kill in 1 to 2 weeks.

**WHERE  
TO USE**

On patios, walkways, & driveways  
 In recreational areas, fields & trails  
 Around buildings, cabins, lodges, & camp sites

Along fences & foundation  
 On wooded & vacant lots  
 Plus other areas where tough weeds are invading your yard

**AMOUNT  
TO USE**

6 fl oz (12 Tbs) per gallon of water

Questions, Comments or Information  
 Call 1-800-246-7219 [www.roundup.com](http://www.roundup.com)

Trusted Results for Guaranteed Satisfaction.\*

\*Open booklet for details.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.  
**KILLS ALL TYPES OF TOUGH WEEDS & GRASSES** including: Alder, ash, aspen, blackberry, broom (French, Scotch), buckwheat, ceanothus, chamise, cherry, coyote brush, dewberry, elderberry, elm, eucalyptus, hawthorn, hazel, honeysuckle, kudzu, locust, maple, oak, persimmon, poison oak, poison ivy, poplar, raspberry, sage, sagebrush, salmonberry, sassafras, sumac, sweetgum, thimbleberry, tree tobacco, trumpet creeper, wild rose (multiflora) and willow.

**MIXING INSTRUCTIONS**

|                         |   |
|-------------------------|---|
| <b>TANK SPRAYER</b>     | (plastic, aluminum, fiberglass, plastic-lined steel, or stainless steel).<br>• Add 6 fl oz (12 Tbs) to 1 gallon of water.<br>• Spot treat or spray evenly over 300 sq ft.   |
| <b>HOSE-END SPRAYER</b> | For large areas consider using the ORTHO® Dial'n Spray®.<br>• Set dial to 6 oz.<br>• To sprayer jar add 6 fl oz (12 Tbs) for each 300 sq ft. <b>DO NOT</b> add water.<br>• Spray evenly over measured area.<br>• After spraying, unused product can be poured back into its original container. |

1 Tablespoon (Tbs) = 3 teaspoons (tsp)      1 fl oz = 2 Tbs  
 For easy to kill weeds such as seedlings add 3 fl oz (6 Tbs) to 1 gallon of water.  
 Do not apply with a galvanized or unlined steel (except stainless steel) sprayer or through any irrigation system.

|                     |  |
|---------------------|--|
| <b>HOW TO APPLY</b> | • Use coarse spray pattern to reduce drift to desirable plants.<br>• Spray the weeds or grasses you want to kill until thoroughly wet.<br>• When spot treating weeds around desirable plants, shield plants from drift with a sheet of cardboard or plastic. If desirable plants are accidentally sprayed, rinse off immediately with water. |
|---------------------|--|

|                  |   |
|------------------|---|
| <b>IMPORTANT</b> | • Do not spray plants or grasses you like as they may die too.<br>• Not recommended for spot weed control in lawns since Roundup kills lawn grasses.<br>• Do not use on or around edible food or feed crops.<br>• Do not use for lawn renovation or flower bed and vegetable garden preparation (plot preparation); instead use Roundup Concentrate or Roundup Super Concentrate. |
|------------------|---|

|                      |  |
|----------------------|--|
| <b>WHEN TO APPLY</b> | • Apply when weeds are actively growing.<br>• For best results, apply during warm, sunny weather (above 60° F).<br>• Apply when air is calm to prevent drift to desirable plants.<br>• <b>RAINPROOF Protection:</b> Rain or watering 30 minutes after application will NOT wash away effectiveness.<br>• Some well established weeds may require a repeat application.<br>• <b>Note:</b> Brush sprayed in the fall may not be controlled until the following season. In the spring spray regrowth if it occurs.<br>• Plants such as ornamental flowers, trees, or shrubs may be planted 30 days after application. |
|----------------------|--|

**DIRECTIONS FOR USE (Continued)**

|                             |   |
|-----------------------------|---|
| <b>HOW TO CLEAN SPRAYER</b> | To clean sprayer after use, rinse sprayer and all sprayer parts with water 3 times. Spray rinse water on bare soil or gravel. After cleaning, sprayer may be used for other products. |
|-----------------------------|---|

**ADDITIONAL TIPS**

|                                    |  |
|------------------------------------|--|
| <b>TO KILL VINES</b>               | • If vines are growing up poles, fences or tree trunks with mature bark, cut vines to a height of 3 to 4 feet and spray vines thoroughly.<br>• If vines are climbing shrubs or tree trunks with green bark, cut vines at base and treat as directed for stumps or spray regrowth. If spraying regrowth, shield shrubs and tree trunks from spray drift with a sheet of cardboard or plastic. |
| <b>TO KILL STUMPS</b>              | • Cut living stump close to ground.<br>• Drive 4 to 5 holes into freshly cut stump.<br>• Immediately pour undiluted product into holes.  |
| <b>IMPORTANT</b>                   | Some trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal a shared roots system. Injury may occur to non-treated trees when one or more trees sharing common roots are treated.  |
| <b>KUDZU</b>                       | For best results, apply in mid- to late-summer when vines are mature and actively growing.   |
| <b>WILD BLACKBERRY</b>             | Spray anytime plants are actively growing. Dead canes should be cut down and removed. Reapplication is often required to kill deep roots.  |
| <b>POISON IVY &amp; POISON OAK</b> | Contact with these plants anytime of the year can cause an allergic reaction. Spray anytime plants are actively growing, but at least 4 weeks before the first killing frost in the fall. Reapply if new growth appears. Handle dead plants with rubber gloves. Dispose of plants and rubber gloves in tightly-sealed garbage bags.  |

**STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Store in original container in a safe place away from direct sunlight.  
**DISPOSAL: If Empty:** Do not reuse this container. Place in trash or offer for recycling if available.  
**If Partly Filled:** Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

Aspen ✓  
 Willow ✓



PREPARED BY:



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**SUBMITTAL**

DATE: July 1, 2009

SUBMITTAL NO.: 56872-03

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: \_\_\_\_\_

SUBCONTRACTOR: N/A

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE   | DWG. NO.    | DESCRIPTION / LOCATION INSTALLED   |
|-----|---|-------------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsection 4.8 Pipeline Installation | DWG/FIG 5-1 | HDPE pipe materials for drop inlet and pipeline installation. See page 2 for additional information regarding materials. |
|     |   |             |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
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SIGNED: 

PREPARED BY:



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Manufacturers data and drawings are included for the following components:

- 16" SDR11 HDPE piping to be used for the pipeline connecting the drop inlet to the existing 36" diameter CMP riser. HDPE pipe connection to CMP riser to be achieved by placing concrete/grout around the HDPE pipe, per the manufacturer;
- Fabricated HDPE anti-seepage rings. These will be constructed out of 4'X4'X1/2" HDPE sheet stock and extrusion welded to a 5' section of 16" SDR11 HDPE pipe;
- HDPE drop inlet assembly consisting of a 42" diameter X 48" high section of ADS N-12 WT pipe, 42" round steel grate (Part No 4201SG), and 16" SDR11 HDPE outlet extrusion welded to riser pipe;
- 6" ADS N-12 WT perforated pipe and fittings, for the cutoff trench collection pipe connected to the existing 36" diameter CMP riser. HDPE pipe connection to CMP riser to be achieved by placing concrete/grout around the HDPE pipe, per the manufacturer;
- 36" ADS N-12 WT pipe, to be used to extend the existing 36" diameter CMP riser. New ADS riser section will be placed over existing CMP riser and attached using lag screws per the manufacturer;
- 36" ADS Taylor End Plug (Part No 3633AA) to be used for lid on new 36" riser.

**Specifications for HDPE Pipe**

The properties of high-density polyethylene pipe are described using ASTM D 3350-02, "Standard Specification for Polyethylene Plastic Pipe and Fittings Materials". This ASTM Standard provides cell classifications that define the physical properties of the resin used to make the HDPE pipe.

Most HDPE pipe is made with a cell classification of PE 345464C. The meaning of this cell classification is provided in the table below:

**ISCO Standard HDPE Resin Specifications**

| PROPERTY VALUE           | SPECIFICATION  | UNIT                 | NOMINAL        |
|--------------------------|----------------|----------------------|----------------|
| Material Designation     | PPI / ASTM     |                      | PE3408         |
| Material Classification  | ASTM D 1248    |                      | III C 5 P34    |
| Cell Classification      | ASTM D 3350-02 |                      | 345464C        |
| Density (3)              | ASTM D 1505    | g/cm <sup>3</sup>    | .955 to .957   |
| Melt Index (4)           | ASTM D 1238    | gm/ 10 min           | .10 to .15     |
| Flexural Modulus (5)     | ASTM D 790     | psi                  | 110 to 140,000 |
| Tensile Strength (4)     | ASTM D 638     | psi                  | 3,200 min.     |
| <b>Slow Crack Growth</b> |                |                      |                |
| ESCR                     | ASTM D 1693    | hours in 100% igepal | >5,000         |
| PENT (6)                 | ASTM F 1473    | hours                | >100           |
| HDB @ 73 deg F (4)       | ASTM D 2837    | psi                  | 1,600          |
| UV Stabilizer C          | ASTM D 1603    | %C                   | 2 to 2.5%      |

**Types of Polyethylene Pipe**

All polyethylene pipe is not the same. The Plastic Pipe Institute's "Engineering Properties of Polyethylene" shows that polyethylene with a density of greater than 0.941 (with no additives) is high-density. Materials with a density of 0.926 to .94 are medium density and those with a density of between .90 and .925 are low density.

Density influences key properties in polyethylene materials. As the density increases, the tensile strength increases. Also the chemical resistance increases.

Traditionally, medium density polyethylene resin has been used to make pipe for gas distribution. When medium density was selected for gas pipe, it had better stress crack resistance than other resins.

As new resins and manufacturing processes have been developed, high and medium density polyethylene resins have improved in their ability to handle stress and stress cracking agents.

The current test to determine stress crack resistance is the PENT test. The PENT Test is run in accordance with ASTM F 1473-97, "Standard Test Method for Notch Tensile Test to Measure the Resistance to Slow Crack Growth of Polyethylene Pipes and Resins". This test requires that slow crack growth test be run on samples of extruded pipe.

1-800-345-ISCO

www.isco-pipe.com



*ISCO HDPE Product Catalog*

The first Environmental Stress Crack (ESCR) testing was conducted on compression molded tensile bars. As resin manufacturing techniques have improved, samples no longer failed using the ESCR test methods. ESCR testing uses strong detergents at elevated temperatures to evaluate resins.

The PENT test is a good test of resistance to slow crack growth and related failures induced by the presence of stressing agents. Since this test is conducted using HDPE pipe, it is a better test to determine the best resins to use for piping applications.

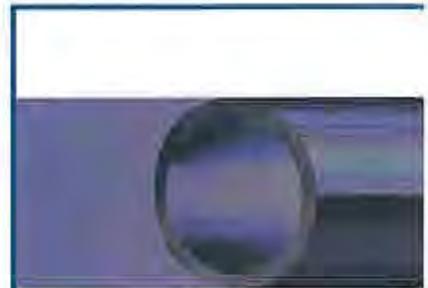
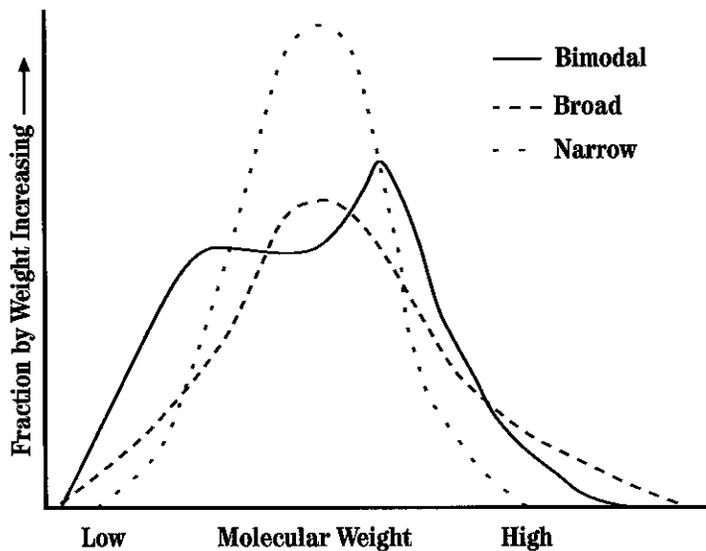
Traditional broad molecular weight resins are used to produce most high-density polyethylene pipe. Typical PENT Test values for these HDPE pipes are 100 to 600 hours.

The Chart below shows the modular weight distribution for Bimodal, Broad and Narrow molecular weight resins.

**Molecular Weight Distribution**

The dotted line shows a typical molecular weight distribution for a narrow molecular weight HDPE resin. The dashes show just the distribution for a broad molecular weight HDPE. The solid line shows the distribution of a bimodal HDPE resin.

The properties of the HDPE resin can be changed because of the molecular distribution. Density and melt index also are important in tailoring the properties of the HDPE resin.



HDPE Pipe

1-800-345-ISCO

[www.isco-pipe.com](http://www.isco-pipe.com)



### Typical IPS HDPE Pipe Sizes

Most high-density polyethylene pipe is made to the following dimensions. At present PE 3408 is the resin used for most applications

| Pipe Size Nominal | Actual OD | Dimension Ratio | Pressure rating, psi @73°F | Minimum Wall | Average ID | Weight lbs./ft |
|-------------------|-----------|-----------------|----------------------------|--------------|------------|----------------|
| 3/4"              | 1.050"    | DR 11           | 160                        | 0.095"       | 0.86"      | 0.12           |
| 1"                | 1.315"    | DR 11           | 160                        | 0.12"        | 1.075"     | 0.19           |
| 1.25"             | 1.660"    | DR 11           | 160                        | 0.151"       | 1.358"     | 0.31           |
| 1.5"              | 1.900"    | DR 11           | 160                        | 0.173"       | 1.55"      | 0.41           |
| 2"                | 2.375"    | DR 7            | 267                        | 0.339"       | 1.670"     | 0.943          |
| 2"                | 2.375"    | DR 9            | 200                        | 0.264"       | 1.826"     | 0.762          |
| 2"                | 2.375"    | DR 11           | 160                        | 0.216"       | 1.926"     | 0.639          |
| 2"                | 2.375"    | DR 13.5         | 128                        | 0.176"       | 2.009"     | 0.531          |
| 2"                | 2.375"    | DR 15.5         | 110                        | 0.153"       | 2.057"     | 0.467          |
| 2"                | 2.375"    | DR 17           | 100                        | 0.140"       | 2.084"     | 0.429          |
| 3"                | 3.500"    | DR 7            | 267                        | 0.500"       | 2.460"     | 2.047          |
| 3"                | 3.500"    | DR 9            | 200                        | 0.389"       | 2.691"     | 1.656          |
| 3"                | 3.500"    | DR 11           | 160                        | 0.318"       | 2.839"     | 1.387          |
| 3"                | 3.500"    | DR 13.5         | 128                        | 0.259"       | 2.961"     | 1.153          |
| 3"                | 3.500"    | DR 15.5         | 110                        | 0.226"       | 3.048"     | 1.020          |
| 3"                | 3.500"    | DR 17           | 100                        | 0.206"       | 3.088"     | 0.932          |
| 4"                | 4.500"    | DR 7            | 267                        | 0.643"       | 3.163"     | 3.384          |
| 4"                | 4.500"    | DR 9            | 200                        | 0.500"       | 3.460"     | 2.737          |
| 4"                | 4.500"    | DR 11           | 160                        | 0.409"       | 3.649"     | 2.294          |
| 4"                | 4.500"    | DR 13.5         | 128                        | 0.333"       | 3.807"     | 1.906          |
| 4"                | 4.500"    | DR 15.5         | 110                        | 0.290"       | 3.897"     | 1.678          |
| 4"                | 4.500"    | DR 17           | 100                        | 0.265"       | 3.949"     | 1.54           |
| 4"                | 4.500"    | DR 21           | 80                         | 0.214"       | 4.055"     | 1.262          |
| 4"                | 4.500"    | DR 26           | 64                         | 0.173"       | 4.140"     | 1.03           |
| 4"                | 4.500"    | DR 32.5         | 51                         | 0.138"       | 4.213"     | 0.831          |
| 5"                | 5.375"    | DR 11           | 160                        | 0.489"       | 4.358"     | 3.272          |
| 5"                | 5.375"    | DR 17           | 100                        | 0.316"       | 4.718"     | 2.197          |
| 5"                | 5.375"    | DR 21           | 80                         | 0.256"       | 4.843"     | 1.801          |
| 5"                | 5.375"    | DR 26           | 64                         | 0.207"       | 4.944"     | 1.186          |

\*Blue Bold indicates standard/more readily available items.

#### Pipe Lengths

Straight lengths: Pipe 2" to 24" stocked in 40 foot lengths. Sizes 28" to 63" in 50 ft. lengths.

Coil: Standard for 3/4" to 6". Coils for 8" available on special order.

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## ISCO HDPE Product Catalog

## Typical IPS HDPE Pipe Sizes

| Pipe Size<br>Nominal | Actual<br>OD  | Dimension<br>Ratio | Pressure<br>rating,<br>psi @73°F | Minimum<br>Wall | Average<br>ID | Weight<br>lbs./ft |
|----------------------|---------------|--------------------|----------------------------------|-----------------|---------------|-------------------|
| 5"                   | 5.563"        | DR 7               | 267                              | 0.795"          | 3.909"        | 5.172             |
| 5"                   | 5.563"        | DR 9               | 200                              | 0.618"          | 4.278"        | 4.182             |
| 5"                   | 5.563"        | DR 11              | 160                              | 0.506"          | 4.511"        | 3.505             |
| 5"                   | 5.563"        | DR 13.5            | 128                              | 0.412"          | 4.706"        | 2.912             |
| 5"                   | 5.563"        | DR 15.5            | 110                              | 0.359"          | 4.816"        | 2.564             |
| 5"                   | 5.563"        | DR 17              | 100                              | 0.327"          | 4.883"        | 2.353             |
| 5"                   | 5.563"        | DR 21              | 80                               | 0.265"          | 5.012"        | 1.929             |
| 5"                   | 5.563"        | DR 26              | 64                               | 0.214"          | 5.118"        | 1.574             |
| 5"                   | 5.563"        | DR 32.5            | 51                               | 0.171"          | 5.207"        | 1.27              |
| 6"                   | 6.625"        | DR 7               | 267                              | 0.946"          | 4.657"        | 7.336             |
| 6"                   | 6.625"        | DR 9               | 200                              | 0.736"          | 5.094"        | 5.932             |
| 6"                   | <b>6.625"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>0.602"</b>   | <b>5.373"</b> | <b>4.971</b>      |
| 6"                   | 6.625"        | DR 13.5            | 128                              | 0.491"          | 5.604"        | 4.13              |
| 6"                   | 6.625"        | DR 15.5            | 110                              | 0.427"          | 5.737"        | 3.637             |
| 6"                   | <b>6.625"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>0.390"</b>   | <b>5.814"</b> | <b>3.338</b>      |
| 6"                   | 6.625"        | DR 19              | 89                               | 0.349"          | 5.900"        | 3.007             |
| 6"                   | 6.625"        | DR 21              | 80                               | 0.315"          | 5.970"        | 2.736             |
| 6"                   | 6.625"        | DR 26              | 64                               | 0.255"          | 6.095"        | 2.233             |
| 6"                   | 6.625"        | DR 32.5            | 51                               | 0.204"          | 6.201"        | 1.801             |
| 7"                   | 7.125"        | DR 11              | 160                              | 0.648"          | 5.777"        | 5.75              |
| 7"                   | 7.125"        | DR 17              | 100                              | 0.419"          | 6.253"        | 3.86              |
| 7"                   | 7.125"        | DR 19              | 89                               | 0.375"          | 6.350"        | 3.478             |
| 7"                   | 7.125"        | DR 21              | 80                               | 0.339"          | 6.420"        | 3.165             |
| 7"                   | 7.125"        | DR 26              | 64                               | 0.274"          | 6.555"        | 2.582             |
| 7"                   | 7.125"        | DR 32.5            | 51                               | 0.219"          | 6.669"        | 2.083             |
| 8"                   | 8.625"        | DR 7               | 267                              | 1.232"          | 6.062"        | 12.433            |
| 8"                   | 8.625"        | DR 9               | 200                              | 0.958"          | 6.632"        | 10.054            |
| 8"                   | <b>8.625"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>0.784"</b>   | <b>6.994"</b> | <b>8.425</b>      |
| 8"                   | 8.625"        | DR 13.5            | 128                              | 0.639"          | 7.296"        | 7.001             |
| 8"                   | 8.625"        | DR 15.5            | 110                              | 0.556"          | 7.469"        | 6.164             |
| 8"                   | <b>8.625"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>0.507"</b>   | <b>7.570"</b> | <b>5.657</b>      |
| 8"                   | 8.625"        | DR 19              | 89                               | 0.454"          | 7.680"        | 5.097             |
| 8"                   | 8.625"        | DR 21              | 80                               | 0.411"          | 7.770"        | 4.637             |
| 8"                   | 8.625"        | DR 26              | 64                               | 0.332"          | 7.934"        | 3.784             |
| 8"                   | 8.625"        | DR 32.5            | 51                               | 0.265"          | 8.074"        | 3.053             |



## HDPE Pipe

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## Typical IPS HDPE Pipe Sizes

| Pipe Size<br>Nominal | Actual<br>OD       | Dimension<br>Ratio | Pressure<br>rating,<br>psi @73°F | Minimum<br>Wall | Average<br>ID  | Weight<br>Lbs./ft |
|----------------------|--------------------|--------------------|----------------------------------|-----------------|----------------|-------------------|
| 10"                  | 10.750"            | DR 7               | 267                              | 1.536"          | 7.555"         | 19.314            |
| 10"                  | <del>10.750"</del> | DR 9               | 200                              | 1.194"          | 8.266"         | 15.618            |
| 10"                  | <b>10.750"</b>     | <b>DR 11</b>       | <b>160</b>                       | <b>0.977"</b>   | <b>8.718"</b>  | <b>13.089</b>     |
| 10"                  | 10.750"            | DR 13.5            | 128                              | 0.796"          | 9.094"         | 10.875            |
| 10"                  | 10.750"            | DR 15.5            | 110                              | 0.694"          | 9.306"         | 9.576             |
| 10"                  | <b>10.750"</b>     | <b>DR 17</b>       | <b>100</b>                       | <b>0.632"</b>   | <b>9.435"</b>  | <b>8.788</b>      |
| 10"                  | 10.750"            | DR 19              | 89                               | 0.566"          | 9.570"         | 7.918             |
| 10"                  | 10.750"            | DR 21              | 80                               | 0.512"          | 9.685"         | 7.204             |
| 10"                  | 10.750"            | DR 26              | 64                               | 0.413"          | 9.891"         | 5.878             |
| 10"                  | 10.750"            | DR 32.5            | 51                               | 0.331"          | 10.062"        | 4.742             |
| 12"                  | 12.750"            | DR 7               | 267                              | 1.821"          | 8.962"         | 27.17             |
| 12"                  | 12.750"            | DR 9               | 200                              | 1.417"          | 9.803"         | 21.97             |
| 12"                  | <b>12.750"</b>     | <b>DR 11</b>       | <b>160</b>                       | <b>1.150"</b>   | <b>10.339"</b> | <b>18.412</b>     |
| 12"                  | 12.750"            | DR 13.5            | 128                              | 0.944"          | 10.786"        | 15.298            |
| 12"                  | 12.750"            | DR 15.5            | 110                              | 0.823"          | 11.038"        | 13.471            |
| 12"                  | <b>12.750"</b>     | <b>DR 17</b>       | <b>100</b>                       | <b>0.750"</b>   | <b>11.190"</b> | <b>12.362</b>     |
| 12"                  | 12.750"            | DR 19              | 89                               | 0.671"          | 11.350"        | 11.138            |
| 12"                  | 12.750"            | DR 21              | 80                               | 0.607"          | 11.487"        | 10.134            |
| 12"                  | 12.750"            | DR 26              | 64                               | 0.490"          | 11.731"        | 8.269             |
| 12"                  | 12.750"            | DR 32.5            | 51                               | 0.392"          | 11.935"        | 6.671             |
| 14"                  | 14.000"            | DR 7               | 267                              | 2.000"          | 9.840"         | 32.758            |
| 14"                  | 14.000"            | DR 9               | 200                              | 1.556"          | 10.764"        | 26.489            |
| 14"                  | <b>14.000"</b>     | <b>DR 11</b>       | <b>160</b>                       | <b>1.273"</b>   | <b>11.352"</b> | <b>22.199</b>     |
| 14"                  | 14.000"            | DR 13.5            | 128                              | 1.037"          | 11.843"        | 18.445            |
| 14"                  | 14.000"            | DR 15.5            | 110                              | 0.903"          | 12.122"        | 16.242            |
| 14"                  | <b>14.000"</b>     | <b>DR 17</b>       | <b>100</b>                       | <b>0.824"</b>   | <b>12.286"</b> | <b>14.905</b>     |
| 14"                  | 14.000"            | DR 19              | 89                               | 0.737"          | 12.470"        | 13.429            |
| 14"                  | 14.000"            | DR 21              | 80                               | 0.667"          | 12.613"        | 12.218            |
| 14"                  | 14.000"            | DR 26              | 64                               | 0.538"          | 12.881"        | 9.97              |
| 14"                  | <b>14.000"</b>     | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.431"</b>   | <b>13.104"</b> | <b>8.044</b>      |
| 16"                  | 16.000"            | DR 7               | 267                              | 2.286"          | 11.245"        | 42.786            |
| 16"                  | 16.000"            | DR 9               | 200                              | 1.778"          | 12.302"        | 34.598            |
| → 16"                | <b>16.000"</b>     | <b>DR 11</b>       | <b>160</b>                       | <b>1.455"</b>   | <b>12.974"</b> | <b>28.994</b> ←   |
| 16"                  | 16.000"            | DR 13.5            | 128                              | 1.185"          | 13.535"        | 24.092            |
| 16"                  | 16.000"            | DR 15.5            | 110                              | 1.032"          | 13.853"        | 21.214            |
| 16"                  | <b>16.000"</b>     | <b>DR 17</b>       | <b>100</b>                       | <b>0.941"</b>   | <b>14.043"</b> | <b>19.467</b>     |
| 16"                  | 16.000"            | DR 19              | 89                               | 0.842"          | 14.250"        | 17.540            |
| 16"                  | 16.000"            | DR 21              | 80                               | 0.762"          | 14.415"        | 15.959            |
| 16"                  | 16.000"            | DR 26              | 64                               | 0.615"          | 14.721"        | 13.022            |
| 16"                  | <b>16.000"</b>     | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.492"</b>   | <b>14.977"</b> | <b>10.506</b>     |

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## ISCO HDPE Product Catalog

## Typical IPS HDPE Pipe Sizes

| Pipe Size<br>Nominal | Actual<br>OD   | Dimension<br>Ratio | Pressure<br>rating,<br>psi @73°F | Minimum<br>Wall | Average<br>ID  | Weight<br>lbs./ft |
|----------------------|----------------|--------------------|----------------------------------|-----------------|----------------|-------------------|
| 18"                  | 18.000"        | DR 7               | 267                              | 2.571"          | 12.652"        | 54.151            |
| 18"                  | 18.000"        | DR 9               | 200                              | 2.000"          | 13.840"        | 43.788            |
| <b>18"</b>           | <b>18.000"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>1.636"</b>   | <b>14.597"</b> | <b>36.696</b>     |
| 18"                  | 18.000"        | DR 13.5            | 128                              | 1.333"          | 15.227"        | 30.491            |
| 18"                  | 18.000"        | DR 15.5            | 110                              | 1.161"          | 15.585"        | 26.849            |
| <b>18"</b>           | <b>18.000"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>1.059"</b>   | <b>15.797"</b> | <b>24.638</b>     |
| 18"                  | 18.000"        | DR 19              | 89                               | 0.947"          | 16.030"        | 22.199            |
| 18"                  | 18.000"        | DR 21              | 80                               | 0.857"          | 16.217"        | 20.198            |
| 18"                  | 18.000"        | DR 26              | 64                               | 0.692"          | 16.561"        | 16.48             |
| <b>18"</b>           | <b>18.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.544"</b>   | <b>16.868"</b> | <b>13.296</b>     |
|                      |                |                    |                                  |                 |                |                   |
| 20"                  | 20.000"        | DR 7               | 267                              | 2.857"          | 14.057"        | 66.853            |
| 20"                  | 20.000"        | DR 9               | 200                              | 2.222"          | 15.378"        | 54.059            |
| <b>20"</b>           | <b>20.000"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>1.818"</b>   | <b>16.219"</b> | <b>45.304</b>     |
| 20"                  | 20.000"        | DR 13.5            | 128                              | 1.481"          | 16.920"        | 37.643            |
| 20"                  | 20.000"        | DR 15.5            | 110                              | 1.290"          | 17.317"        | 33.146            |
| <b>20"</b>           | <b>20.000"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>1.176"</b>   | <b>17.554"</b> | <b>30.418</b>     |
| 20"                  | 20.000"        | DR 21              | 80                               | 0.952"          | 18.020"        | 24.936            |
| 20"                  | 20.000"        | DR 26              | 64                               | 0.769"          | 18.400"        | 20.346            |
| <b>20"</b>           | <b>20.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.615"</b>   | <b>18.721"</b> | <b>16.415</b>     |
|                      |                |                    |                                  |                 |                |                   |
| 22"                  | 22.000"        | DR 7               | 267                              | 3.143"          | 15.337"        | 80.17             |
| 22"                  | 22.000"        | DR 9               | 200                              | 2.444"          | 16.916"        | 65.412            |
| <b>22"</b>           | <b>22.000"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>2.000"</b>   | <b>17.840"</b> | <b>54.818</b>     |
| 22"                  | 22.000"        | DR 13.5            | 128                              | 1.630"          | 18.610"        | 45.458            |
| 22"                  | 22.000"        | DR 15.5            | 110                              | 1.419"          | 19.048"        | 40.107            |
| <b>22"</b>           | <b>22.000"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>1.294"</b>   | <b>19.308"</b> | <b>36.805</b>     |
| 22"                  | 22.000"        | DR 21              | 80                               | 1.048"          | 19.820"        | 30.172            |
| 22"                  | 22.000"        | DR 26              | 64                               | 0.846"          | 20.240"        | 24.619            |
| <b>22"</b>           | <b>22.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.677"</b>   | <b>20.592"</b> | <b>19.863</b>     |
|                      |                |                    |                                  |                 |                |                   |
| 24"                  | 24.000"        | DR 7               | 267                              | 3.429"          | 16.731"        | 95.42"            |
| 24"                  | 24.000"        | DR 9               | 200                              | 2.667"          | 18.453"        | 77.845            |
| <b>24"</b>           | <b>24.000"</b> | <b>DR 11</b>       | <b>160</b>                       | <b>2.182"</b>   | <b>19.461"</b> | <b>65.237</b>     |
| 24"                  | 24.000"        | DR 13.5            | 128                              | 1.778"          | 20.302"        | 54.206            |
| 24"                  | 24.000"        | DR 15.5            | 110                              | 1.548"          | 20.780"        | 47.731            |
| <b>24"</b>           | <b>24.000"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>1.412"</b>   | <b>21.063"</b> | <b>43.801</b>     |
| 24"                  | 24.000"        | DR 21              | 80                               | 1.143"          | 21.623"        | 35.907            |
| 24"                  | 24.000"        | DR 26              | 64                               | 0.923"          | 22.080"        | 29.299            |
| <b>24"</b>           | <b>24.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>0.738"</b>   | <b>22.465"</b> | <b>23.638</b>     |



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## Typical IPS HDPE Pipe Sizes

| Pipe Size<br>Nominal | Actual<br>OD | Dimension<br>Ratio | Pressure<br>rating,<br>psi @73°F | Minimum<br>Wall | Average<br>ID | Weight<br>lbs./ft |
|----------------------|--------------|--------------------|----------------------------------|-----------------|---------------|-------------------|
| 26"                  | 26.000"      | DR 9               | 200                              | 2.889           | 19.876        | 92.05             |
| 26"                  | 26.000"      | DR 11              | 160                              | 2.364"          | 21.083"       | 76.563            |
| 26"                  | 26.000"      | DR 13.5            | 128                              | 1.926"          | 21.994"       | 63.617            |
| 26"                  | 26.000"      | DR 15.5            | 110                              | 1.677"          | 22.512"       | 56.018            |
| 26"                  | 26.000"      | DR 17              | 100                              | 1.529"          | 22.820"       | 51.406            |
| 26"                  | 26.000"      | DR 21              | 80                               | 1.238"          | 23.425"       | 42.141            |
| 26"                  | 26.000"      | DR 26              | 64                               | 1.000"          | 23.920"       | 34.385            |
| 26"                  | 26.000"      | DR 32.5            | 51                               | 0.8000"         | 24.336"       | 27.742            |
| 28"                  | 28.000"      | DR 9               | 200                              | 3.111           | 21.404        | 106.75            |
| 28"                  | 28.000"      | DR 11              | 160                              | 2.545"          | 22.706"       | 88.795            |
| 28"                  | 28.000"      | DR 13.5            | 128                              | 2.074"          | 23.686"       | 73.781            |
| 28"                  | 28.000"      | DR 15.5            | 110                              | 1.806"          | 24.244"       | 64.967            |
| 28"                  | 28.000"      | DR 17              | 100                              | 1.647"          | 24.574"       | 59.618            |
| 28"                  | 28.000"      | DR 21              | 80                               | 1.333"          | 25.227"       | 48.874            |
| 28"                  | 28.000"      | DR 26              | 64                               | 1.077"          | 25.760"       | 39.879            |
| 28"                  | 28.000"      | DR 32.5            | 51                               | 0.862"          | 26.207"       | 32.174            |
| 30"                  | 30.000"      | DR 9               | 200                              | 3.333           | 22.933        | 122.54            |
| 30"                  | 30.000"      | DR 11              | 160                              | 2.727"          | 24.328"       | 101.934           |
| 30"                  | 30.000"      | DR 13.5            | 128                              | 2.222"          | 25.378"       | 84.697            |
| 30"                  | 30.000"      | DR 15.5            | 110                              | 1.935"          | 25.975"       | 74.58             |
| 30"                  | 30.000"      | DR 17              | 100                              | 1.765"          | 26.329"       | 68.439            |
| 30"                  | 30.000"      | DR 21              | 80                               | 1.429"          | 27.028"       | 56.105            |
| 30"                  | 30.000"      | DR 26              | 64                               | 1.154"          | 27.600"       | 45.779            |
| 30"                  | 30.000"      | DR 32.5            | 51                               | 0.923"          | 28.080"       | 36.934            |
| 32"                  | 32.000"      | DR 11              | 160                              | 2.909"          | 25.833"       | 116.67            |
| 32"                  | 32.000"      | DR 13.5            | 128                              | 2.370"          | 27.070"       | 96.367            |
| 32"                  | 32.000"      | DR 15.5            | 110                              | 2.065"          | 27.705"       | 84.855            |
| 32"                  | 32.000"      | DR 17              | 100                              | 1.882"          | 28.065"       | 77.869            |
| 32"                  | 32.000"      | DR 21              | 80                               | 1.524"          | 28.830"       | 63.835            |
| 32"                  | 32.000"      | DR 26              | 64                               | 1.231"          | 29.440"       | 52.086            |
| 32"                  | 32.000"      | DR 32.5            | 51                               | 0.985"          | 29.951"       | 42.023            |
| 34"                  | 34.000"      | DR 11              | 160                              | 3.091"          | 27.447"       | 131.72            |
| 34"                  | 34.000"      | DR 13.5            | 128                              | 2.519"          | 28.661"       | 109.33            |
| 34"                  | 34.000"      | DR 15.5            | 110                              | 2.194"          | 29.350"       | 96.21             |
| 34"                  | 34.000"      | DR 17              | 100                              | 2.000"          | 29.760"       | 88.24             |
| 34"                  | 34.000"      | DR 21              | 80                               | 1.619"          | 30.568"       | 72.28             |
| 34"                  | 34.000"      | DR 26              | 64                               | 1.308"          | 31.281"       | 58.96             |
| 34"                  | 34.000"      | DR 32.5            | 51                               | 1.046"          | 31.782"       | 47.52             |

\*Blue Bold indicates  
standard/more readily  
available items.

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## ISCO HDPE Product Catalog

## Typical IPS HDPE Pipe Sizes

| Pipe Size<br>Nominal | Actual<br>OD   | Dimension<br>Ratio | Pressure<br>rating,<br>psi @73°F | Minimum<br>Wall | Average<br>ID  | Weight<br>lbs./ft |
|----------------------|----------------|--------------------|----------------------------------|-----------------|----------------|-------------------|
| 36"                  | 36.000"        | DR 11              | 160                              | 3.272"          | 29.194"        | 146.78            |
| 36"                  | 36.000"        | DR 13.5            | 128                              | 2.667"          | 30.452"        | 121.96            |
| 36"                  | 36.000"        | DR 15.5            | 110                              | 2.323"          | 31.168"        | 107.395           |
| <b>36"</b>           | <b>36.000"</b> | <b>DR 17</b>       | <b>100</b>                       | <b>2.118"</b>   | <b>31.595"</b> | <b>98.553</b>     |
| 36"                  | 36.000"        | DR 21              | 80                               | 1.714"          | 32.434"        | 80.791            |
| 36"                  | 36.000"        | DR 26              | 64                               | 1.385"          | 33.119"        | 65.922            |
| <b>36"</b>           | <b>36.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>1.108"</b>   | <b>33.696"</b> | <b>53.186</b>     |
| 42"                  | 42.000"        | DR 11              | 160                              | 3.818"          | 33.905"        | 201.00            |
| 42"                  | 42.000"        | DR 13.5            | 128                              | 3.111"          | 35.404"        | 166.80            |
| 42"                  | 42.000"        | DR 15.5            | 110                              | 2.710"          | 36.363"        | 146.176           |
| 42"                  | 42.000"        | DR 17              | 100                              | 2.471"          | 36.860"        | 134.141           |
| 42"                  | 42.000"        | DR 21              | 80                               | 2.000"          | 37.840"        | 109.966           |
| 42"                  | 42.000"        | DR 26              | 64                               | 1.615"          | 38.641"        | 89.727            |
| <b>42"</b>           | <b>42.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>1.292"</b>   | <b>39.313"</b> | <b>72.392</b>     |
| 48"                  | 48.000"        | DR 17              | 100                              | 2.824"          | 42.126"        | 175.205           |
| 48"                  | 48.000"        | DR 21              | 80                               | 2.286"          | 43.245"        | 143.629           |
| 48"                  | 48.000"        | DR 26              | 64                               | 1.846"          | 44.160"        | 117.194           |
| <b>48"</b>           | <b>48.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>1.477"</b>   | <b>44.928"</b> | <b>94.552</b>     |
| 54"                  | 54.000"        | DR 17              | 100                              | 3.176"          | 47.266"        | 222.55            |
| 54"                  | 54.000"        | DR 21              | 80                               | 2.571"          | 48.652"        | 181.781           |
| 54"                  | 54.000"        | DR 26              | 64                               | 2.077"          | 49.680"        | 148.324           |
| <b>54"</b>           | <b>54.000"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>1.662"</b>   | <b>50.543"</b> | <b>119.668</b>    |
| 63"                  | 63.209"        | DR 21              | 80                               | 3.000"          | 56.849"        | 247.8             |
| 63"                  | 63.209"        | DR 26              | 64                               | 2.421"          | 58.076"        | 202.0             |
| <b>63"</b>           | <b>63.209"</b> | <b>DR 32.5</b>     | <b>51</b>                        | <b>1.937"</b>   | <b>59.102"</b> | <b>162.98</b>     |



HDPE Pipe

\*Blue Bold indicates  
standard/more readily  
available items.

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## ISCO HDPE Product Catalog

## DIPS HDPE Pipe Sizes

| Pipe Size Nominal | Actual O.D.   | Dimension Ratio | Pressure rating, psi @73°F | Minimum Wall  | Average ID     | Weight lbs./ft |
|-------------------|---------------|-----------------|----------------------------|---------------|----------------|----------------|
| 3"                | 3.96"         | DR 9            | 200                        | 0.440"        | 3.045"         | 2.119          |
| 3"                | 3.96"         | DR 11           | 160                        | 0.360"        | 3.211"         | 1.776          |
| 3"                | 3.96"         | DR 13.5         | 128                        | 0.294"        | 3.348"         | 1.476          |
| 3"                | 3.96"         | DR 17           | 100                        | 0.233"        | 3.475"         | 1.192          |
| 4"                | 4.80"         | DR 9            | 200                        | 0.533"        | 3.691"         | 3.114          |
| 4"                | <b>4.80"</b>  | <b>DR 11</b>    | <b>160</b>                 | <b>0.437"</b> | <b>3.891"</b>  | <b>2.609</b>   |
| 4"                | 4.80"         | DR 13.5         | 128                        | 0.356"        | 4.060"         | 2.168          |
| 4"                | <b>4.80"</b>  | <b>DR 17</b>    | <b>100</b>                 | <b>0.283"</b> | <b>4.211"</b>  | <b>1.752</b>   |
| 4"                | 4.80"         | DR 26           | 64                         | 0.189"        | 4.407"         | 1.172          |
| 6"                | 6.90"         | DR 9            | 200                        | 0.767"        | 5.305"         | 6.434          |
| 6"                | <b>6.90"</b>  | <b>DR 11</b>    | <b>160</b>                 | <b>0.628"</b> | <b>5.594"</b>  | <b>5.392</b>   |
| 6"                | 6.90"         | DR 13.5         | 128                        | 0.512"        | 5.835"         | 4.480          |
| 6"                | <b>6.90"</b>  | <b>DR 17</b>    | <b>100</b>                 | <b>0.406"</b> | <b>6.056"</b>  | <b>3.620</b>   |
| 6"                | 6.90"         | DR 26           | 64                         | 0.266"        | 6.347"         | 2.422          |
| 8"                | 9.05"         | DR 9            | 200                        | 1.006"        | 6.958"         | 11.069         |
| 8"                | <b>9.05"</b>  | <b>DR 11</b>    | <b>160</b>                 | <b>0.823"</b> | <b>7.338"</b>  | <b>9.276</b>   |
| 8"                | 9.05"         | DR 13.5         | 128                        | 0.670"        | 7.656"         | 7.708          |
| 8"                | <b>9.05"</b>  | <b>DR 17</b>    | <b>100</b>                 | <b>0.533"</b> | <b>7.941"</b>  | <b>6.228</b>   |
| 8"                | 9.05"         | DR 19           | 89                         | 0.476"        | 8.059"         | 5.611          |
| 8"                | 9.05"         | DR 26           | 64                         | 0.348"        | 8.326"         | 4.166          |
| 10"               | 11.10"        | DR 9            | 200                        | 1.233"        | 8.535"         | 16.652         |
| 10"               | <b>11.10"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.009"</b> | <b>9.001"</b>  | <b>13.955</b>  |
| 10"               | 11.10"        | DR 13.5         | 128                        | 0.823"        | 9.338"         | 11.595         |
| 10"               | <b>11.10"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>0.653"</b> | <b>9.742"</b>  | <b>9.369</b>   |
| 10"               | 11.10"        | DR 19           | 89                         | 0.584"        | 9.885"         | 8.441          |
| 10"               | 11.10"        | DR 26           | 64                         | 0.427"        | 10.212"        | 6.267          |
| 12"               | 13.20"        | DR 9            | 200                        | 1.467"        | 10.149"        | 23.548         |
| 12"               | <b>13.20"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.200"</b> | <b>10.704"</b> | <b>19.734</b>  |
| 12"               | 13.20"        | DR 13.5         | 128                        | 0.978"        | 11.166"        | 16.397         |
| 12"               | <b>13.20"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>0.777"</b> | <b>11.584"</b> | <b>13.250</b>  |
| 12"               | 13.20"        | DR 19           | 89                         | 0.695"        | 11.755"        | 11.938         |
| 12"               | 13.20"        | DR 26           | 64                         | 0.508"        | 12.143"        | 8.863          |
| 14"               | 15.30"        | DR 9            | 200                        | 1.700"        | 11.764"        | 31.637         |
| 14"               | <b>15.30"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.391"</b> | <b>12.407"</b> | <b>26.513</b>  |
| 14"               | 15.30"        | DR 13.5         | 128                        | 1.134"        | 12.941"        | 22.030         |
| 14"               | <b>15.30"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>0.900"</b> | <b>13.428"</b> | <b>17.801</b>  |
| 14"               | 15.30"        | DR 26           | 64                         | 0.589"        | 14.075"        | 11.907         |

\*Blue Bold indicates standard/more readily available items.

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## ISCO HDPE Product Catalog

## DIPS HDPE Pipe Sizes

| Pipe Size Nominal | Actual O.D.   | Dimension Ratio | Pressure rating, psi @73°F | Minimum Wall  | Average ID     | Weight lbs./ft |
|-------------------|---------------|-----------------|----------------------------|---------------|----------------|----------------|
| 16"               | 17.40"        | DR 9            | 200                        | 1.933"        | 13.379"        | 40.917         |
| <b>16"</b>        | <b>17.40"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.582"</b> | <b>14.109"</b> | <b>34.290</b>  |
| 16"               | 17.40"        | DR 13.5         | 128                        | 1.289"        | 14.719"        | 28.492         |
| <b>16"</b>        | <b>17.40"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>1.024"</b> | <b>15.270"</b> | <b>23.023</b>  |
| 16"               | 17.40"        | DR 21           | 80                         | .829"         | 15.742"        | 18.870"        |
| 16"               | 17.40"        | DR 26           | 64                         | 0.670"        | 16.006"        | 15.400         |
| 18"               | 19.50"        | DR 9            | 200                        | 2.167"        | 14.993"        | 51.390         |
| <b>18"</b>        | <b>19.50"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.773"</b> | <b>15.812"</b> | <b>43.067</b>  |
| 18"               | 19.50"        | DR 13.5         | 128                        | 1.445"        | 16.494"        | 35.785         |
| <b>18"</b>        | <b>19.50"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>1.147"</b> | <b>17.114"</b> | <b>28.916</b>  |
| 18"               | 19.50"        | DR 21           | 80                         | 0.929"        | 17.568"        | 23.700         |
| 18"               | 19.50"        | DR 26           | 64                         | 0.750"        | 17.940"        | 19.342         |
| 20"               | 21.60"        | DR 9            | 200                        | 2.400"        | 16.608"        | 63.055         |
| <b>20"</b>        | <b>21.60"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>1.964"</b> | <b>17.515"</b> | <b>52.842</b>  |
| 20"               | 21.60"        | DR 13.5         | 128                        | 1.600"        | 18.272"        | 43.907         |
| <b>20"</b>        | <b>21.60"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>1.271"</b> | <b>18.956"</b> | <b>35.479</b>  |
| 20"               | 21.60"        | DR 21           | 80                         | 1.029"        | 19.460"        | 29.090         |
| 20"               | 21.60"        | DR 26           | 64                         | 0.831"        | 19.872"        | 23.732         |
| <b>24"</b>        | <b>25.80"</b> | <b>DR 11</b>    | <b>160</b>                 | <b>2.346"</b> | <b>20.920"</b> | <b>75.390</b>  |
| 24"               | 25.80"        | DR 13.5         | 128                        | 1.912"        | 21.823"        | 62.642         |
| <b>24"</b>        | <b>25.80"</b> | <b>DR 17</b>    | <b>100</b>                 | <b>1.518"</b> | <b>22.643"</b> | <b>50.618</b>  |
| 24"               | 25.80"        | DR 21           | 80                         | 1.229"        | 23.244"        | 41.500         |
| 24"               | 25.80"        | DR 26           | 64                         | 0.993"        | 23.735"        | 33.858         |
| 30"               | 32.00"        | DR 13.5         | 128                        | 2.37"         | 27.070"        | 96.367         |
| 30"               | 32.00"        | DR 17           | 100                        | 1.883"        | 28.083"        | 77.869         |
| 30"               | 32.00"        | DR 21           | 80                         | 1.524"        | 28.830"        | 63.840         |
| 30"               | 32.00"        | DR 26           | 64                         | 1.231"        | 29.440"        | 52.086         |
| 36"               | 38.30"        | DR 13.5         | 128                        | 2.837"        | 32.286"        | 138.04         |
| 36"               | 38.30"        | DR 17           | 100                        | 2.253"        | 33.524"        | 111.55         |
| 36"               | 38.30"        | DR 21           | 80                         | 1.842"        | 34.506"        | 91.45          |
| 36"               | 38.30"        | DR 26           | 64                         | 1.473"        | 35.177"        | 74.61          |
| 42"               | 44.50"        | DR 17           | 100                        | 2.618"        | 33.524"        | 150.60         |
| 42"               | 44.50"        | DR 21           | 80                         | 2.119"        | 40.008"        | 123.44         |
| 42"               | 44.50"        | DR 26           | 64                         | 1.712"        | 40.871"        | 100.75         |
| 48"               | 50.80"        | DR 17           | 100                        | 2.989"        | 44.465"        | 196.23         |
| 48"               | 50.80"        | DR 21           | 80                         | 2.419"        | 45.672"        | 160.87         |
| 48"               | 50.80"        | DR 26           | 64                         | 1.954"        | 46.658"        | 131.28         |



HDPE Pipe

\*Blue Bold indicates standard/more readily available items.

Sizes above 30" DIPS are not standard products, large special orders will be required to get these sizes.

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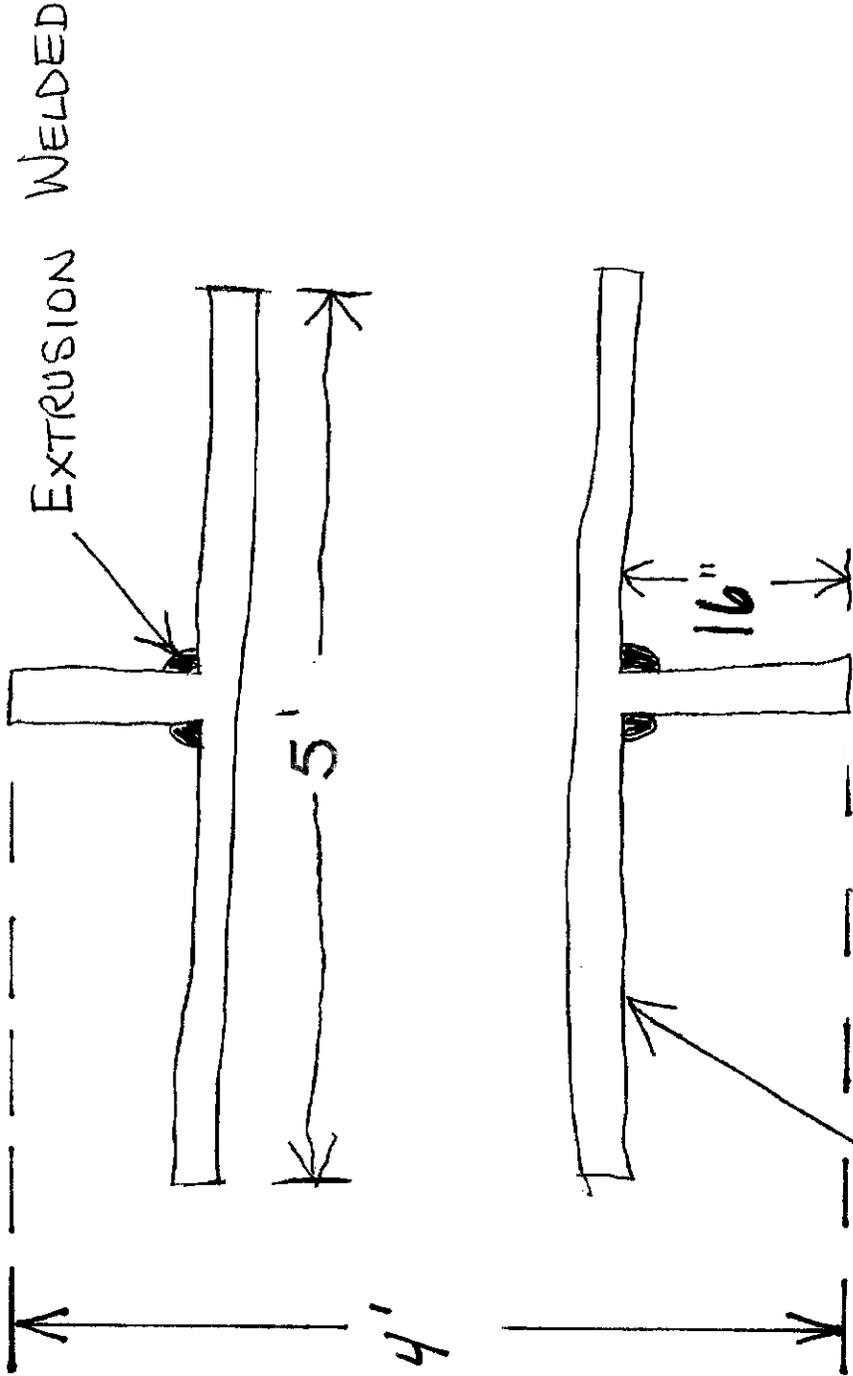
GEORGETOWN CANYON PROJECT

\* 16" DR-11 SEEP RING

1/2" HDPE SHEET

TYPICAL (2) PLACES

@ 10'-0" O.C.

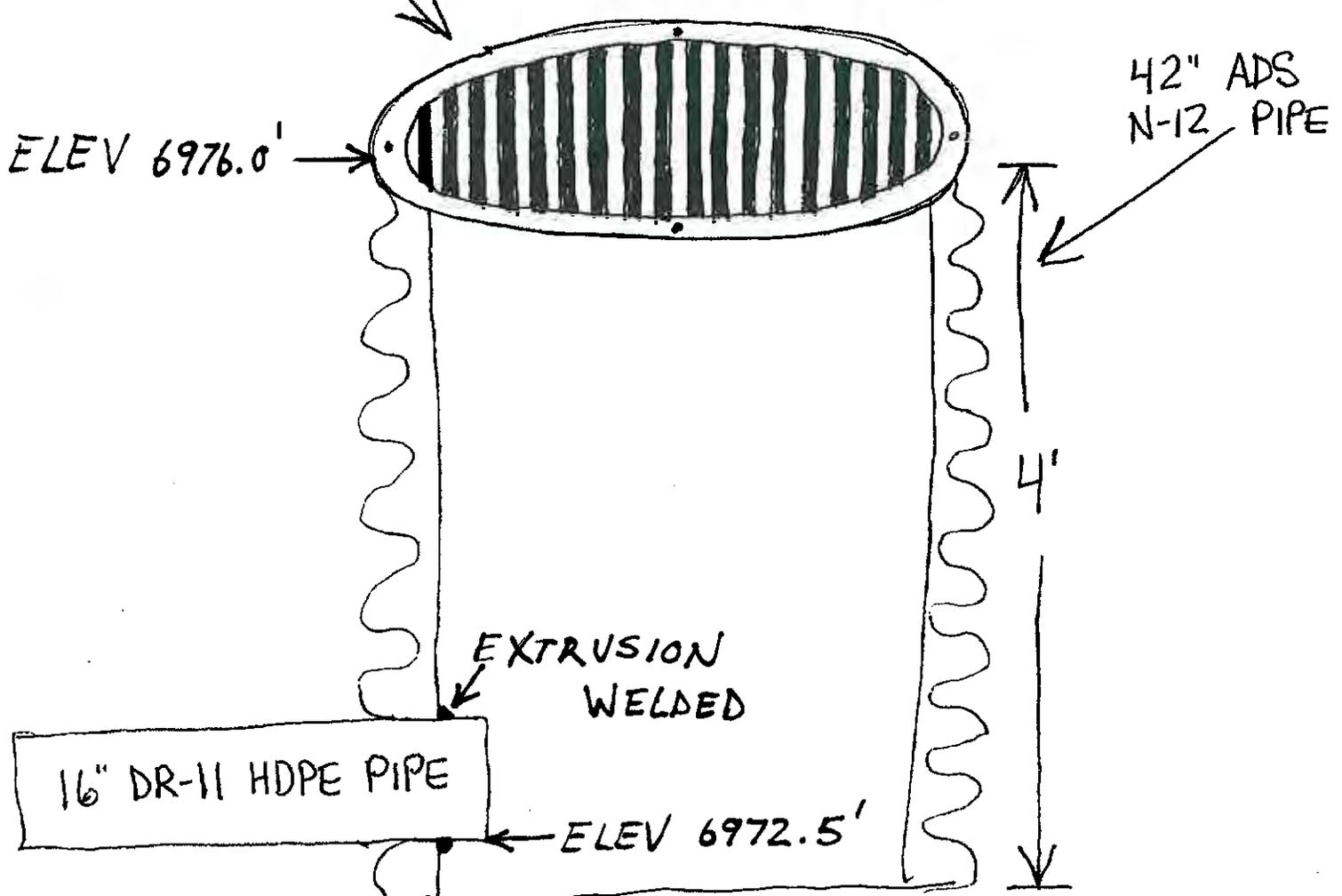


16" DR-11 HDPE PIPE

# GEORGETOWN CANYON PROJECT

## DROP INLET

42" ADS #4201SG  
ROUND GRATE (NON-TRAFFIC)



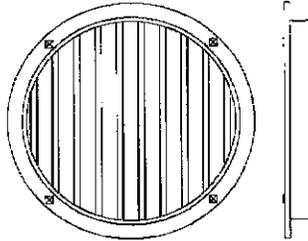
4" →

CONCRETE  
or  
RAILROAD TIE  
BASE

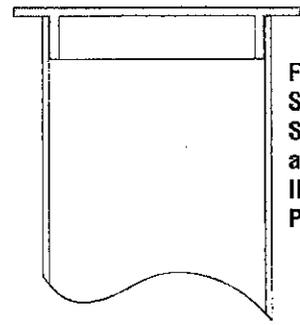


**Round Grates - Steel (Black or Green) Non-Traffic**

| Part #     | Size |
|------------|------|
| 0401SG     | 4"   |
| 0601SG     | 6"   |
| 0801SG     | 8"   |
| 1001SG     | 10"  |
| 1201SG     | 12"  |
| 1501SG     | 15"  |
| 1801SG     | 18"  |
| 2401SG     | 24"  |
| 3001SG     | 30"  |
| 3601SG     | 36"  |
| → 4201SG ← | 42"  |
| 4801SG     | 48"  |



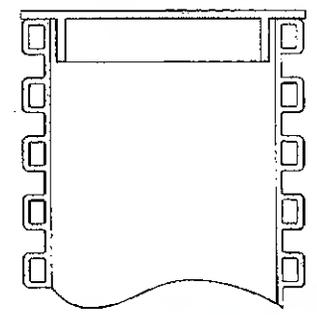
Multiple sizes available for traffic and non-traffic applications. Fits inside ADS N-12 pipe, SDR 35 pipe and IPS SCH 40 pipe. Length 12.66'



Fits Inside Sewer SDR 35 Pipe and IPS SCH 40 Pipe



Fits Inside ADS N-12 Pipe



**Round Grates - Cast Iron Non-Traffic**

| Part # | Size |
|--------|------|
| 0601CG | 6"   |
| 0801CG | 8"   |
| 1001CG | 10"  |
| 1201CG | 12"  |
| 1501CG | 15"  |
| 1801CG | 18"  |
| 2401CG | 24"  |
| 3001CG | 30"  |



| Part # | Drop-In Grate |
|--------|---------------|
| 0601DI | 6"            |
| 0801DI | 8"            |
| 1001DI | 10"           |
| 1201DI | 12"           |
| 1501DI | 15"           |
| 1801DI | 18"           |
| 2401DI | 24"           |

THE MOST  
ADVANCED  
NAME IN  
DRAINAGE  
SYSTEMS®



# N-12<sup>®</sup> Pipe



The high-performance future  
of engineered drainage

The logo for ADS, featuring a stylized 'A' made of vertical lines followed by the letters 'ADS' in a bold, sans-serif font.

# The new standard in drainage pipe

Every day for more than 40 years, Advanced Drainage Systems corrugated high density polyethylene (HDPE) pipe has been building its reputation for economy, durability, and superior performance in gravity-flow drainage applications. During the 1970's and 1980's, ADS single wall pipe became the preferred product for agricultural, mining, turf/recreation, and residential drainage markets.

## N-12® Pipe (4" - 60")(100-1500mm)

The hydraulic capabilities of the product were significantly improved in 1987 when ADS introduced the first HDPE drainage pipe to combine an annular corrugated exterior for strength with a smooth interior wall for maximum flow capacity. Named for its excellent Manning's "n" rating of 0.012, N-12 pipe was designed specifically for storm sewers, highways, airports, and other engineered construction. Through extensive field and university testing, ADS engineers were able to refine the corrugated wall design for larger diameters

without compromising the pipe's excellent strength-to-weight ratio. Its performance and economy have led to rapid acceptance by contractors and engineers, and official approval by state and municipal agencies.

## Revolutionary joining technology

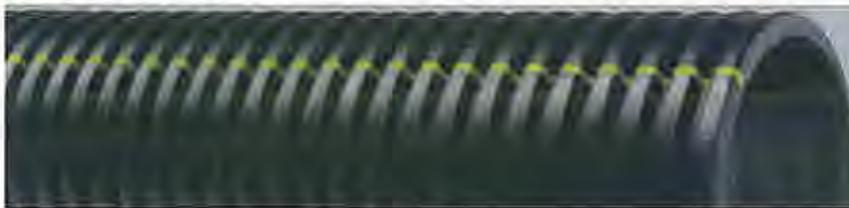
Years of research and testing have produced soil-tight and watertight systems providing unsurpassed joint integrity, with built-in bell joints and fast push-together installation.

**Soil-tight joint.** N-12 ST IB pipe, delivered with an integral bell and spigot joint, meets the most stringent soil-tight requirements. The bell design resists distortion, chipping or cracking, and spans two or more corrugations, exceeding ASTM F2306 recommendations. The in-line bell design eliminates the need to dig bell holes in the trench. Joints are sealed by a factory-installed rubber gasket that meets all requirements of ASTM F477.

**Watertight joint.** Incorporating patented technology developed in the aerospace industry, N-12 WT IB pipe adds two important features to the N-12 soil-tight pipe design. The sealing area of the bell is reinforced with a proprietary 2" (50mm) polymer composite collar which improves the joint's integrity and dimensional control. Secondly, a proprietary gasket designed to maximize sealing reference and meeting ASTM F477, is factory installed into the spigot. The result is a design that meets or exceeds ASTM D3212 lab test and ASTM F2487 watertight field test requirements, and fills an essential role in complying with the stricter demands of new EPA water quality guidelines.

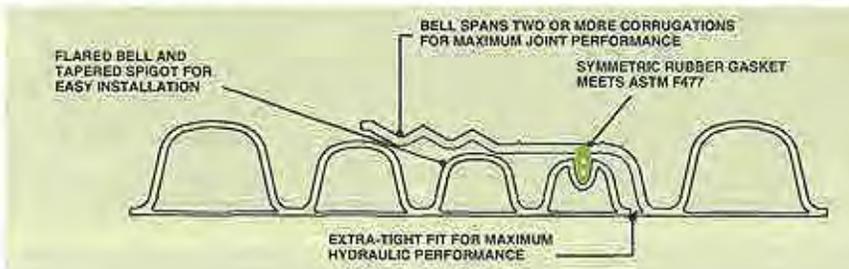
## Applications

N-12 pipe meets the requirements of ASTM F2306 and AASHTO M252 and M294 type S. This product can be specified for culverts, cross drains, storm sewers, landfills, and other public and private construction.



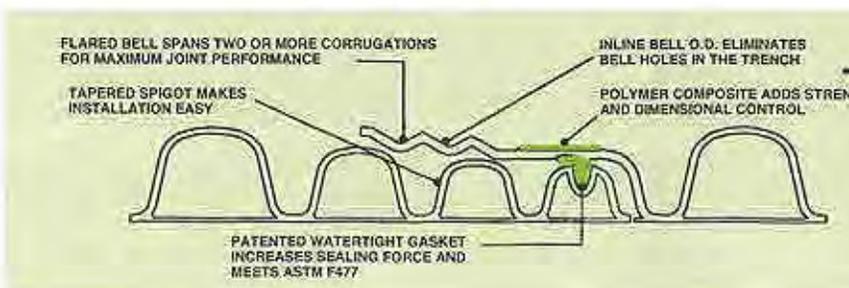
N-12 Pipe, (plain end, 4" - 60") (100-1500mm)

The first corrugated High Density Polyethylene drainage pipe with a smooth inner wall for superior hydraulics and maximum flow capacity.



N-12 ST IB Soil-tight Pipe, (4" - 60") (100-1500mm)

Integral gasketed bell-and-spigot joint for long-term soil-tight performance. (4"-10" sizes incorporate integral bell and non-tapered gasketed spigot.)



N-12 WT IB Watertight Pipe, (4" - 60") (100-1500mm)

Reinforcing collar and proprietary sealing gasket provide a durable watertight connection. (4"-10" sizes incorporate integral bell and non-tapered gasketed spigot.)

## Technology creates a superior pipe material

Gone are the days when plastic pipe was specified only for cost reasons. Advances in polymer science and structural design have created a product that has **actually outperformed and outlasted concrete and metal pipe while maintaining its cost advantage.** By any measure, ADS N-12 pipe compares favorably to conventional materials.

### Structural Strength

As a flexible conduit, HDPE pipe withstands vertical pressure by transferring most of the load to the surrounding soil. N-12 pipe will support H-25 live loads with 12" minimum cover\* fill height tables are available in the ADS Water Management Drainage Handbook. Field research done in Ohio and Pennsylvania has placed HDPE pipe under 40 and even 100 feet of fill. Even under some harsh backfill conditions, N-12 pipe has continued to give outstanding performance.

\* 60" pipe requires 2' cover for H-25 loads.

### Durability

High density polyethylene is an extremely tough material that can easily withstand the normal impacts involved in shipping and installation. It is highly resistant to chemical attack and is unaffected by soils or effluents with pH ranges from 1.5 to 14.

HDPE's ductility and molecular structure result in excellent resistance to abrasion. Polyethylene pipe shows less than 20% of the material loss of concrete pipe in abrasive environments, and is often specified for harsh mine slurries and as a slip liner for deteriorated culverts.

### Hydraulic efficiency

The smooth interior of N-12 pipe provides superior flow characteristics. The chart to the right indicates that the values for N-12 pipe are basically the same as those yielded on previ-

ous tests of reinforced concrete pipe. On the other hand, the "n" ratings for corrugated metal pipe are considerably higher, and are predicated on the pipe running full to develop the spiral flow.

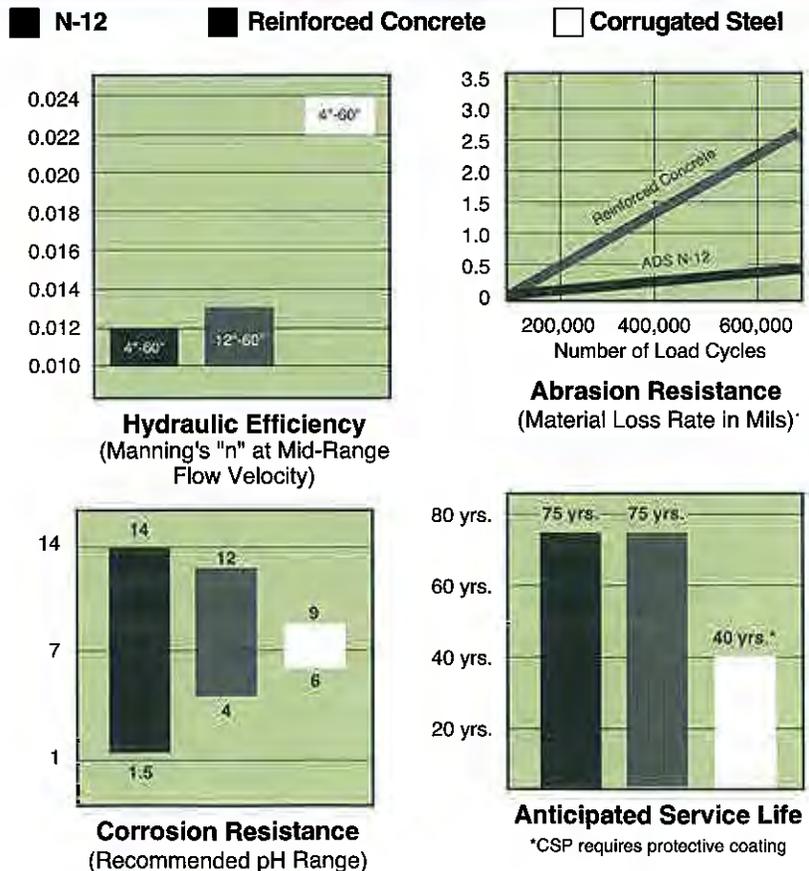
### Light weight

HDPE pipe is up to 30 times lighter than concrete pipe, making it far easier to transport and handle. On-site labor and equipment requirements are reduced, with a corresponding reduction in the potential risk of injury.

### Fast installation

Long 6m (19' 8") lengths mean fewer joints. (N-12 pipe is also available in 13 ft. lengths for smaller trench boxes.) Soil-tight or watertight connections are quick and easy with integral gasketed bell and spigot joints. The pipe cuts easily and does not need to be beveled for joining. In typical trench depths of 6 to 10 feet, contractors report installation rates ranging from 1,200 feet per day of 15"-24" pipe to more than 400 feet per day of 60" pipe.

## How HDPE stacks up against the competition:



# The lowest installed cost of any drainage pipe

The material cost of HDPE is extremely competitive with concrete and corrugated metal. When installation costs are factored in, the savings start to multiply.

- Polyethylene's light weight cuts shipping charges. More lengths of pipe per truck means fewer delivery loads.
- Fewer people are needed for on-site unloading and handling.
- Heavy equipment requirements are reduced.
- Long lengths are easy to handle and require fewer joints.

A recent survey of state Departments of Transportation revealed that reductions in installed cost for HDPE pipe were 12 to 38 percent compared to concrete, and 5 to 28 percent vs. corrugated steel.

## A choice of joining systems

**1. Integral bell-and-spigot joints.** N-12 ST IB and N-12 WT IB pipe (see page 2) are engineered for fast installation of long straight sewer lines that require soil-tight or watertight joint performance.

**2. Hinged split couplers and fabricated fittings** provide cost effective connections for normal drainage installations. ADS can fabricate virtually any fitting as long as it meets engineering standards.

**3. Injection molded HDPE couplers** are available on fittings and repair couplers to meet specific joint performance requirements and provide installation savings. Just align the pipe or fitting sections, lubricate the bell and spigot, and push together.

**4. Small diameter injection molded fittings.** A complete line of fittings including tees, wyes, elbows, couplers and reducers are available in 4"-12" (100-300mm) diameters for both soil tight and watertight applications.

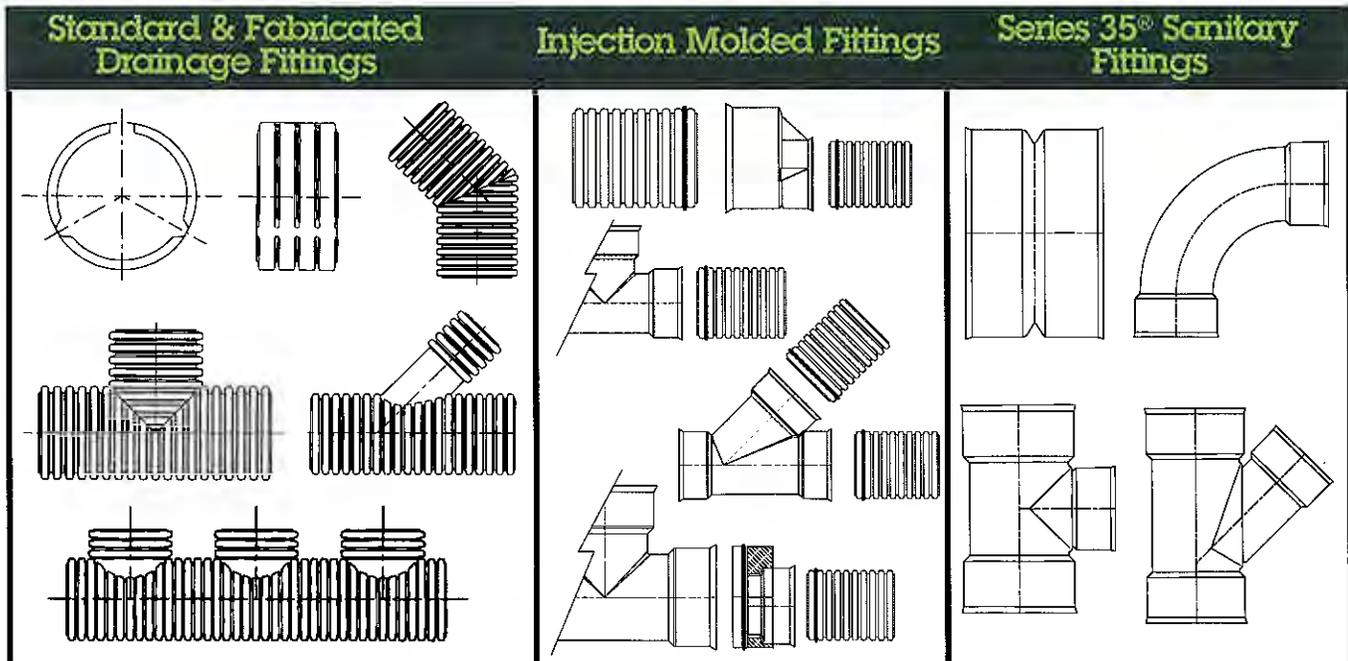
**5. Series 35<sup>®</sup> thermo-molded PVC sanitary fittings** meet the 10.8 psi pressure testing requirements of ASTM D 3212. Selection includes couplers, tees, wyes, elbows, caps and adaptors, each fitted with a rubber gasket. The fittings connect not only to corrugated HDPE pipe, but also PVC, concrete and other materials.

## Installation recommendations

Proper installation is necessary for the long-term performance of any drainage pipe. The basic procedures and precautions for corrugated polyethylene pipe are in fact quite similar to those for concrete and metal pipe.

N-12 pipe is a flexible conduit. As is the nature of flexible conduits live and dead loads are transferred to the surrounding soil. It is important to properly place and use backfill material that will produce a pipe-soil interaction system capable of withstanding the applied loads. Class I, II, or III soils may be used for backfill material, and should be compacted to at least 90% Standard Proctor Density or as otherwise specified by the engineer.

Instructions for underground installation of plastic drainage pipe are contained in ASTM D2321. Specific instructions for N-12 pipe may be found in the Installation Section of the ADS Water Management Drainage Handbook.



# Specifications

## Recommended Manning's 'n' for Design

| Pipe Dia. (in) | Pipe Dia. (mm) |      | Reinforced Concrete <sup>1</sup> | Corrugated Steel <sup>1,2</sup> |
|----------------|----------------|------|----------------------------------|---------------------------------|
| 4" - 10"       | 100-250        | .010 | N/A                              | .024                            |
| 12" - 15"      | 300-380        | .012 | .012                             | .024                            |
| 18" - 36"      | 450-900        | .012 | .012                             | .024                            |
| 42" - 60"      | 1050-1500      | .012 | .013                             | .024                            |

<sup>1</sup> Source: "Hydraulic Design of Highway Culverts"  
Federal Highway Administration, HDS No. 5

<sup>2</sup> 2 2/3 x 1/2 corrugation pattern

## Height of Cover

**Minimum Cover:** Measured from top of Pipe to tie  
 H-25 loads: 12" <sup>\*\*</sup>(300mm)  
 E-80 loads:  
 up to 24" (600 mm) diameter,  
 24" (600 mm) of cover  
 30"-36" (750-900 mm) diameter,  
 36" (900 mm) of cover  
 42"-60" (1050 - 1500 mm)  
 diameter, 48" (1200 mm) of cover

**Maximum Cover:** Fill heights depend on backfill selection and compaction level. Fill height tables are available in the ADS water Management Drainage Handbook.

### Notes:

- Cover heights are measured from the top of the pipe.
- Calculations based on Load Resistance Factor Design procedures per AASHTO section 12.
- Assume soil density of 120 lbs./cu. ft.
- Backfill compacted to minimum 90% Standard Proctor Density.
- If a hydro-hammer "hoe-pack" is used for compaction, at least 48" (1.2m) of compacted cover must be provided.

<sup>\*\*</sup> 60" pipe requires 2' cover for H-25 loads.

## Pipe Stiffness

| Pipe Diameter (in") | Pipe Diameter (mm) | Minimum Pipe Stiffness (psi) |
|---------------------|--------------------|------------------------------|
| 4"-12"              | 100-300            | 50                           |
| 15"                 | 375                | 42                           |
| 18"                 | 450                | 40                           |
| 24"                 | 600                | 34                           |
| 30"                 | 750                | 28                           |
| 36"                 | 900                | 22                           |
| 42"                 | 1050               | 20                           |
| 48"                 | 1200               | 18                           |
| 60"                 | 1500               | 14                           |

## Weight Comparison

|                 |                | Pounds per Foot |                       |                               |
|-----------------|----------------|-----------------|-----------------------|-------------------------------|
| Pipe Dia. (in") | Pipe Dia. (mm) | N-12            | Concrete <sup>1</sup> | Corrugated Steel <sup>2</sup> |
| 4"              | 100            | 0.45            | N/A                   | N/A                           |
| 6"              | 150            | 0.85            | N/A                   | 6                             |
| 8"              | 200            | 1.5             | N/A                   | 7                             |
| 10"             | 250            | 2.0             | 50                    | 9                             |
| 12"             | 300            | 3.2             | 79                    | 11                            |
| 15"             | 375            | 4.6             | 103                   | 13                            |
| 18"             | 450            | 6.4             | 131                   | 16                            |
| 24"             | 600            | 11.5            | 264                   | 19                            |
| 30"             | 750            | 15.4            | 384                   | 24                            |
| 36"             | 900            | 18.1            | 524                   | 29                            |
| 42"             | 1050           | 25.3            | 686                   | 34                            |
| 48"             | 1200           | 31.3            | 867                   | 38                            |
| 60"             | 1500           | 46.3            | 1295                  | 60                            |

<sup>1</sup> Class B pipe

<sup>2</sup> 16 gauge steel

## Applicable Standards

**ASTM F 2306**, Standard Specification for 12" to 60" [300 mm to 1,500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

**ASTM D 2321**, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications

**ASTM F 477**, Standard Specifications for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

**ASTM D 3212**, Standard Specification for Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Joints

**ASTM F 2487**, Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Corrugated High Density Polyethylene Pipelines

**ASTM F 1417**, Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-pressure Air

**ASTM F 2510**, Standard Specification for Resilient Connectors Between Reinforced concrete Manhole Structures and Corrugated High Density Polyethylene Drainage Pipes

**AASHTO M 252**, Standard Specification for Corrugated Polyethylene Pipe, 3"-10" (75mm to 250mm)

**AASHTO M 294**, Standard Specification for Corrugated Polyethylene Pipe, 12"- 60" (300mm to 1500mm)

**AASHTO Section 30**, Construction Standard, Thermoplastic Pipe

**CAN/CSA B128.8**, Storm Sewer and Drainage Pipe and Fittings Polyethylene

## Solving drainage problems across the nation

### **PennDOT Deep Burial Study**

In 1987, the Pennsylvania Department of Transportation initiated what is believed to be the most ambitious research project ever attempted by the plastic pipe industry. A total of 576 ft. (175m) of 24" (600mm) corrugated HDPE pipe (both standard single wall and N-12 pipe) were buried at depths exceeding 100 feet (30m) in an embankment under Interstate 279 near Pittsburgh. Researchers from the University of Massachusetts administered the test, which sought to determine the performance limits of HDPE pipe under extreme loads.



Electronic and hydraulic systems have been monitoring many aspects of pipe performance, including wall strain, deflection, soil pressure and soil strain. The results to date are impressive. Despite the tremendous soil load, the total of pipe deflection and circumferential shortening is just 4.3%, and has remained constant since the second year of the test. In 2002, 15 years after the initial installation, a full inspection was conducted. The pipe was unchanged from the last inspection completed in 1997. PennDOT has provided the full report to the Federal Highway Administration for their distribution and use.

PennDOT officials view the pipe's performance under these severe soil pressures as very positive, particular-

ly since a sample of concrete pipe failed rather quickly under 65 feet in the same embankment. The study results have led PennDOT and other state transportation agencies to conclude that existing maximum fill height requirements for HDPE pipe are conservative and may be increased under certain project design conditions.

### **Underground Retention/Detention Systems**

As real estate costs continue to escalate, developers and design engineers strive to maximize the potential of available land. Add to this the ever-increasing variables of government regulations, environmental impact and safety, one quickly recognizes the challenges that come with commercial and residential site development.

For over 20 years ADS has been assisting landowners increase the value of their investments by designing underground stormwater management systems as an economic alternative to retention ponds. No longer are designers limited to high-maintenance ponds along with their inherent aesthetic and safety issues. By creating subsurface retention or detention systems, previously unusable land can now be used for other applications such as parking lots, playing fields and green spaces. With minimal maintenance costs and produc-



tive use of the land, this investment pays significant dividends over its lifetime.

N-12 pipe plays a critical role in the design of a complete stormwater system. By connecting to surface drainage structures like our Nyloplast® drain basins, collected storm water feeds into a complete retention or detention system using N-12 pipe for distribution and storage. By taking advantage of N-12 pipe's superior abrasion and corrosion resistance, integral soil tight or watertight joints, and its design flexibility for water quality structures, it is no wonder engineers and architects readily choose N-12 pipe for all their stormwater management needs.

### **Neighborhood storm sewer project installs easily**



After 25 years of persistent flooding, the residents of the Lakeview subdivision of Madison Township, Ohio, applied for state public improvement funds to install a modern storm drainage system. Of all the materials bid, only the HDPE system fell within the funding limit.

The installation included 5,000 ft. (1520m) of ADS N-12 pipe (12" to 36") (300-900mm) and was accomplished well within the deadline and the limited budget. Since then, flooding complaints have been non-existent, despite a 100-year rain event in 1993.

Five years later, ADS cooperated in an internal inspection by an independent pipe cleaning company using a remotely controlled television camera. Three hours of video tape revealed no abnormalities with the 2,400 feet (730m) of sewer line inspected—no damage, no misaligned joints, no changes in line and grade.

Since the Lakeview installation, Madison Township has specified N-12 pipe on several other large drainage projects. Officials point to HDPE's ease of handling, and believe that it performs as well or better than the concrete and metal pipe used previously.

Lakeview was also the first HDPE sewer installation for the contractor, who cites several advantages of the lighter weight pipe: use of smaller equipment, which made it easier to negotiate the narrow right-of-ways with numerous trees; less risk of damaging the streets; the 10 loads of polyethylene vs. 29 loads if the pipe were concrete; and the ability to unload and move the N-12 pipe by hand.

## HDPE pipe speeds work on Olympic highway

N-12 pipe played a key role in what was called the biggest design-build freeway project in North America. Early in 1998, Salt Lake City began the massive task of replacing and expanding 17 miles (27km) of the I-15 highway in preparation for the 2002 Winter Olympic Games. Normally an 8-year project, the time frame was cut to 4½ years, placing a premium on time-saving methods and materials.



The project coordinator reported little difficulty in deciding on the drainage pipe material. "For the 33 miles (53km) of 24" (600mm) and 30"

(760mm) pipe, polyethylene was the hands down winner. It should save us at least 15 percent in material and installation costs compared to reinforced concrete pipe. An 80-ft. (24m) run of PE requires three joints, while RCP needs ten. Two people can lay the 20-ft., (6m) sections in the trench and just 'pop' them together."

Designers selected ADS N-12 ST IB pipe with its integral bell-and-spigot joining system. The even profile of this pipe eliminates the need for separate "digouts" to accommodate the protruding bell on standard pipe. The pipe's toughness is another time-saving factor, according to the coordinator. "We can drop PE pipe 100 feet, (30m) and nothing will happen to it. If the bell on a concrete pipe is hit, the joint is gone and we have to get a new section."

## New trench design engineered for 1,000 ft. (300m) pipe burial

The Morenci Mine in Arizona, owned by Phelps Dodge, processes more copper than any other mine in North America. The extraction technique is called "heap leaching," a process where an acid solution percolates through an extremely large stockpile of ore and is piped to a processing plant where the copper is recovered.



The consulting engineer, Dames and Moore (now URS), believed that corrugated HDPE pipe could handle the acid and abrasion, but were not sure how the pipe would perform at surcharge pressures of 833 psi under 1,000 feet (300m) of crushed ore.

Working with Dames and Moore, ADS engineers developed a new installation method involving a narrower trench, highly compacted side

walls, and the comparatively loose placement of fill above and around the pipe. The theory was that the settling of this loose overhead fill would promote soil arching of the ore, placing the main load on the compacted areas on either side of the pipe. A test installation proved the theory's viability, and three 1,000 ft. (300m) runs of 24" (600mm) N-12 perforated pipe were installed on the site of the ore stockpile. Several months later, the initial covering of ore was in place, and the acid leaching process was begun. After four years, the pile has reached several hundred feet, and the three N-12 pipelines are performing flawlessly, delivering 35,000 gpm (132,500 lpm) of copper leachate to the processing center.

## Special school installs complex but economical drainage system

Small diameter N-12 pipe met all the requirements for an intricate drainage system to be installed at McArthur Teszler Elementary in Spartanburg, South Carolina, a school for physically handicapped children. The building consisted of many wings spaced 30 ft. (90m) apart, with an exit door from each classroom leading to sidewalks between the wings. Because of the special needs of the children, no standing water was permitted to accumulate on these walkways.

This requirement, plus the limited space between wings, created the need for extensive roof drainage and numerous inlets and fittings in the underground pipe system. The designer specified 4" (100mm) N-12 pipe for the roof drain connections, tying in to 6"-15" (150-380mm) N-12 trunk lines and 12" or 15" (300-380mm) watertight Nyloplast inline drains and drain basins.

After evaluating many products, the engineer determined that ADS "offered an extremely cost effective system . . . The smooth interior of N-12 pipe allowed us to use smaller pipe sizes around the building because of better hydraulics. The pipe is lightweight and since you don't have to bevel the ends to connect with fittings, it is easier to install and more cost effective than PVC."

# Tomorrow's drainage system products available everywhere today

As time takes its toll on the service life of installed concrete and metal pipe, N-12 pipe is fast becoming the preferred choice for gravity-flow drainage applications. In addition to its proven performance and economy, ADS HDPE pipe has the same widespread availability as traditional pipe materials.



## ADS Sales and Service Locations



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# TECHNICAL NOTE

Dual Wall HDPE Perforation Patterns

TN 1.01  
July 2007

## Introduction

Perforated pipe plays an integral role in many applications of HDPE pipe. Generally, perforated pipe is used to accelerate the removal of subsurface water in soils or to allow storm water to percolate into the soil. Currently, two classifications of perforations are specified in the AASHTO material specifications for HDPE pipe; Class I, and Class II. Class I perforations are commonly used in combination storm/underdrain systems while Class II incorporates subsurface drainage and detention/retention systems. Both classes are explained in more detail in the AASHTO materials specifications (M294 and M252). AASHTO M252 covers pipe diameters 3- through 10-inch (75 - 250 mm) while M294 covers 12-inch through 60-inch (300 - 1500 mm).

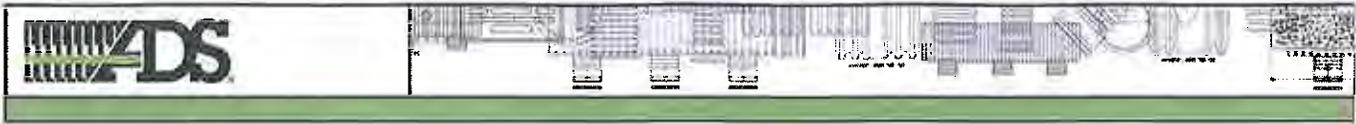
## Standard Perforation Patterns

### AASHTO Class II Perforation

The following terminology for perforations is derived from the applicable AASHTO specification. Differences between the specifications are covered in Table I. The perforations shall be circular and/or slotted. The perforations shall be located in the outside valleys of the corrugations. The water inlet area shall be no less than 0.945 in<sup>2</sup>/ft (20 cm<sup>2</sup>/m) for pipe diameters 4- through 10-inch (100 - 250mm), 1.42 in<sup>2</sup>/ft (30 cm<sup>2</sup>/m) for pipe diameters 12- through 18-inch (300 - 450 mm) and 1.89 in<sup>2</sup>/ft (40 cm<sup>2</sup>/m) for pipe diameters larger than and equal to 24 inches (450 mm). Table 1 below represents ADS standard perforation patterns for AASHTO Class II. Patterns indicated with an asterisk are a made to order product and should allow for additional lead-time when ordering.

| Nominal I.D. |      | Perforation Type | Maximum Slot Length or Diameter |     | Maximum Slot Width |    | Minimum Inlet Area  |                    |
|--------------|------|------------------|---------------------------------|-----|--------------------|----|---------------------|--------------------|
| in           | mm   |                  | in                              | mm  | in                 | mm | in <sup>2</sup> /ft | cm <sup>2</sup> /m |
| *4           | 100  | Slot             | 0.875                           | 22  | 0.125              | 3  | 1.0                 | 21                 |
| *6           | 150  | Slot             | 0.875                           | 22  | 0.125              | 3  | 1.0                 | 21                 |
| *8           | 200  | Slot             | 1.18                            | 30  | 0.125              | 3  | 1.0                 | 21                 |
| *10          | 250  | Slot             | 1.18                            | 30  | 0.125              | 3  | 1.0                 | 21                 |
| 12           | 300  | Circular         | 0.313                           | 8   | -                  | -  | 1.5                 | 32                 |
| 15           | 375  | Circular         | 0.313                           | 8   | -                  | -  | 1.5                 | 32                 |
| 18           | 450  | Circular         | 0.313                           | 8   | -                  | -  | 1.5                 | 32                 |
| 24           | 600  | Circular         | 0.313                           | 8   | -                  | -  | 2.0                 | 42                 |
| 30           | 750  | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |
| 36           | 900  | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |
| 42           | 1050 | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |
| 48           | 1200 | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |
| 54           | 1350 | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |
| 60           | 1500 | Circular         | 0.375                           | 9.5 | -                  | -  | 2.0                 | 42                 |

\* Denotes perforation pattern made to order



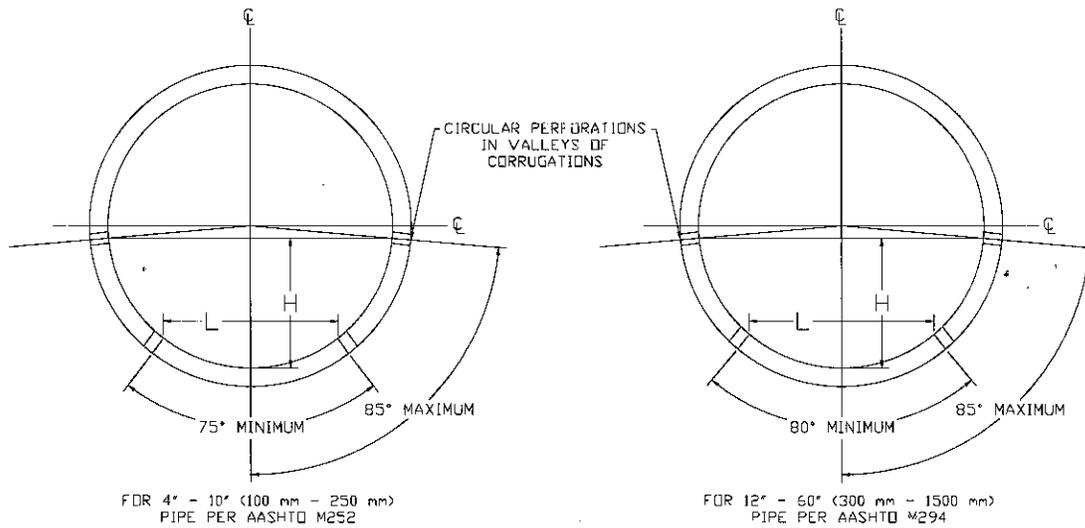
## AASHTO Class I Perforation

The following terminology is derived from the applicable AASHTO specification. ADS manufactures 12- through 24-inch (300 – 600 mm) Class I perforation as a standard product (ADS designation 'C' perforation), however, other sizes may be ordered as a made to order with sufficient lead time. Please contact your local ADS representative when ordering 4- through 10-inch and 30- through 60-inch Class 1 perforated pipe. The perforations shall be approximately circular and arranged in rows parallel to the axis of the pipe. The locations of the perforations shall be in the valley of the outside corrugation and also in each corrugation. The perforations shall be arranged in two equal groups placed symmetrically on either side of the lower half of the pipe. Please note that certain perforation patterns are not available in various parts of the United States. **Please contact your local ADS representative for availability and ordering of Class I perforations.**

| Nominal I.D. |      | Min. No. of Rows of Perforations | Maximum Perforation Hole Diameter |    | Minimum Perforation Hole Diameter |    | "H" Maximum |     | "L" Minimum |     | Nominal Inlet Area  |                    |
|--------------|------|----------------------------------|-----------------------------------|----|-----------------------------------|----|-------------|-----|-------------|-----|---------------------|--------------------|
| in           | mm   |                                  | in                                | mm | in                                | mm | in          | mm  | mm          | mm  | in <sup>2</sup> /ft | cm <sup>2</sup> /m |
| 12           | 300  | 6                                | 0.40                              | 10 | 0.20                              | 5  | 5.4         | 138 | 7.6         | 192 | 2.65                | 56                 |
| 15           | 375  | 6                                | 0.40                              | 10 | 0.20                              | 5  | 7.2         | 184 | 10.1        | 256 | 1.97                | 42                 |
| 18           | 450  | 6                                | 0.40                              | 10 | 0.20                              | 5  | 8.1         | 207 | 11.3        | 288 | 1.90                | 40                 |
| 24           | 600  | 8                                | 0.40                              | 10 | 0.20                              | 5  | 10.9        | 276 | 15.1        | 384 | 2.15                | 46                 |
| *30          | 750  | 8                                | 0.40                              | 10 | 0.20                              | 5  | 13.6        | 345 | 18.9        | 480 | 1.65                | 35                 |
| *36          | 900  | 8                                | 0.40                              | 10 | 0.20                              | 5  | 16.3        | 414 | 22.7        | 576 | 1.32                | 28                 |
| *42          | 1050 | 8                                | 0.40                              | 10 | 0.20                              | 5  | 19.0        | 483 | 26.5        | 672 | 1.31                | 28                 |
| *48          | 1200 | 8                                | 0.40                              | 10 | 0.20                              | 5  | 21.7        | 552 | 30.2        | 768 | 1.29                | 27                 |
| *60          | 1500 | 12                               | 0.40                              | 10 | 0.20                              | 5  | 27.2        | 690 | 37.8        | 960 | 1.70                | 36                 |

\* Denotes perforation pattern made to order

Figure 1 – AASHTO Class I Perforation Patterns



# ADS Split N-12<sup>®</sup> Couplers

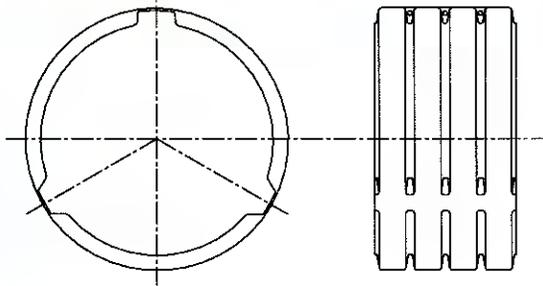
NOTE: # of cable ties must  
match # of holes on coupler



# ADS Couplers



N-12 Annular



| Part #                                 | Size |                        |
|--|------|------------------------|
| 0665AA                                 | 6"   |                        |
| 1265AA                                 | 12"  |                        |
| (used for 12" SW only in some regions) |      |                        |
| 1266AA                                 | 12"  | Premium coupling       |
| 1565AA                                 | 15"  |                        |
| 1566AA                                 | 15"  | Premium coupling       |
| 1865AA                                 | 18"  |                        |
| 1866AA                                 | 18"  | Premium coupling       |
| 2465AA                                 | 24"  |                        |
| 2466AA                                 | 24"  | Premium coupling       |
| 2411AA                                 | 24"  | Drossbach              |
| 2412AA                                 | 24"  | Dros. Premium coupling |
| 3065AA                                 | 30"  |                        |
| 3066AA                                 | 30"  | Premium coupling       |
| 3661AA                                 | 36"  |                        |
| 3662AA                                 | 36"  | Premium coupling       |
| 4265AA                                 | 42"  |                        |
| 4266AA                                 | 42"  | Premium coupling       |
| 4865AA                                 | 48"  |                        |
| 4866AA                                 | 48"  | Premium coupling       |
| 6065AA                                 | 60"  |                        |
| 6066AA                                 | 60"  | Premium coupling       |

## INTERNAL COUPLER

| Part # | Size |
|--------|------|
| 0315AA | 3"   |
| 0415AA | 4"   |
| 0417AA | 4"   |
| 0515AA | 5"   |
| 0615AA | 6"   |
| 0815AA | 8"   |
| 1015AA | 10"  |



## EXTERNAL COUPLER SW\*

| Part #  | Size |
|---------|------|
| 0312AA  | 3"   |
| 0412AA* | 4"   |
| 0512AA  | 5"   |
| 0612AA  | 6"   |
| 0812AA  | 8"   |
| 1012AA  | 10"  |

\* Fits N-12  
pipe



## N-12 BELL COUPLER

| Part # | Size |
|--------|------|
| 0613AA | 6"   |
| 0813AA | 8"   |
| 1013AA | 10"  |



## N-12 BELL COUPLER "ST"

for use with odd length pipe

| Part # | Size |
|--------|------|
| 1214AA | 12"  |
| 1514AA | 15"  |
| 1814AA | 18"  |
| 2414AA | 24"  |



## N-12 BELL COUPLER "WT"

| Part # | Size |
|--------|------|
| 1213AA | 12"  |
| 1513AA | 15"  |
| 1813AA | 18"  |
| 2413AA | 24"  |



## SPLIT COUPLER S/W

| Part # | Size |
|--------|------|
| 0311AA | 3"   |
| 0411AA | 4"   |
| 0511AA | 5"   |
| 0611AA | 6"   |
| 0811AA | 8"   |
| 1011AA | 10"  |



## INTERNAL REDUCING COUPLER

| Part # | Size    |
|--------|---------|
| 0425AA | 5" x 4" |
| 0526AA | 6" x 5" |



## REDUCING COUPLER S/W

| Part # | Size     |
|--------|----------|
| 0314AA | 4" x 3"  |
| 0514AA | 5" x 4"  |
| 0516AA | 6" x 5"  |
| 0614AA | 6" x 4"  |
| 0816AA | 8" x 6"  |
| 1018AA | 10" x 8" |



SECTION 4

**BLIND TEE (ONE END)**

| Part # | Size |
|--------|------|
| 0341AA | 3"   |
| 0441AA | 4"   |
| 0541AA | 5"   |
| 0641AA | 6"   |
| 0841AA | 8"   |
| 1041AA | 10"  |



**MULTIPLE CROSS TEE**

| Part # | Size        |
|--------|-------------|
| 0654AA | 6" - 4,5,6" |



**MULTIPLE TEE**

| Part # | Size          |
|--------|---------------|
| 0644AA | 6" - 3,4,5,6" |
| 0844AA | 8" - 4,5,6,8" |
| 1044AA | 10" - 6,8,10" |



**BLIND MULTIPLE TEE (BOTH ENDS)**

| Part # | Size            |
|--------|-----------------|
| 0845AA | 8" - 4,5,6,8"   |
| 1045AA | 10" - 6,8,10"   |
| 1247AA | 12" - 8,10,12"  |
| 1547AA | 15" - 15,12,10" |
| 1847AA | 18" - 18,15,12" |



**TAP TEE**

| Part # | Size |
|--------|------|
| 0350AA | 3"   |
| 0450AA | 4"   |
| 0410AA | 4"   |

Long Tap



**INTERNAL SNAP TEE**

| Part #   | Size |
|----------|------|
| 0321AAIN | 3"   |



**SNAP TEE**

| Part # | Size |
|--------|------|
| 0321AA | 3"   |
| 0421AA | 4"   |
| 0525AA | 5"   |
| 0626AA | 6"   |



**REDUCING TEE**

| Part # | Size    |
|--------|---------|
| 0523AA | 5" x 3" |
| 0524AA | 5" x 4" |
| 0624AA | 6" x 4" |
| 0625AA | 6" x 5" |



**SNAP END CAP**

| Part # | Size |
|--------|------|
| 0332AA | 3"   |
| 0432AA | 4"   |
| 0832AA | 8"   |
| 1032AA | 10"  |



**INTERNAL END CAP**

| Part #   | Size |
|----------|------|
| 0332AAIN | 3"   |



**SPLIT END CAP**

| Part # | Size |
|--------|------|
| 0331AA | 3"   |
| 0431AA | 4"   |
| 0531AA | 5"   |
| 0631AA | 6"   |
| 0831AA | 8"   |
| 1267AA | 12"  |
| 1567AA | 15"  |
| 1867AA | 18"  |
| 2467AA | 24"  |



SW or N-12  
SW or N-12  
SW or N-12  
SW or N-12

**N-12 SNAP END CAP**

| Part # | Size |
|--------|------|
| 0667AA | 6"   |
| 0867AA | 8"   |
| 1067AA | 10"  |



**END PLUGS "S/W"**

| Part # | Size          |
|--------|---------------|
| 0333AA | 3"            |
| 0433AA | 4"            |
| 0434AA | 4" Perforated |
| 0533AA | 5"            |
| 0633AA | 6"            |



**TAYLOR END PLUGS**

| Part # | Size |
|--------|------|
| 0833AA | 8"   |
| 1033AA | 10"  |
| 1233AA | 12"  |
| 1533AA | 15"  |
| 1833AA | 18"  |
| 2433AA | 24"  |
| 3033AA | 30"  |
| 3633AA | 36"  |
| 4233AA | 42"  |
| 4833AA | 48"  |
| 6033AA | 60"  |



**ELBOWS**

| Part # | Size     |
|--------|----------|
| 0390AA | 3" - 90° |
| 0445AA | 4" - 45° |
| 0490AA | 4" - 90° |



**INTERNAL SNAP WYES**

| Part #   | Size |
|----------|------|
| 0322AAIN | 3"   |



**WYES**

| Part # | Size |
|--------|------|
| 0322AA | 3"   |
| 0422AA | 4"   |
| 0522AA | 5"   |
| 0622AA | 6"   |
| 0822AA | 8"   |



**SUMP LINER**

| Part # | Size     |
|--------|----------|
| 1524AD | 24" high |
| 1530AD | 30" high |



1524

1530

**SUMP LID**

| Part #   | Description     |
|----------|-----------------|
| 1536AD   | Standard        |
| 1537AD   | Heavy Duty      |
| 1537ADL  | Locking Sump    |
| 1537ADNL | Notched Locking |



1536

1537ADL

**DISTRIBUTION BOX**

| Part # | Description         |
|--------|---------------------|
| 1369AB | Regular             |
| 1370AB | Hillside            |
| 1379AB | Regular             |
| 1380AB | Hillside Dist. Plug |



1370

1369

**SEPTIC TEES**

| Part # |
|--------|
| 0493AA |



| Part # |
|--------|
| 0497AA |



| Part #   |
|----------|
| 0497AAFL |



**OFFSET ADAPTER (SB2)**

| Part # | Size               |
|--------|--------------------|
| 0839AA | 8" without gasket  |
| 0840AA | 8" with gasket     |
| 0940AA | Gasket             |
| 1039AA | 10" without gasket |
| 1040AA | 10" with gasket    |



**SEPTIC TANK ADAPTER**

| Part # | Size |
|--------|------|
| 0463AA | 4"   |

**CLAY ADAPTER**

| Part # | Size |
|--------|------|
| 0362AA | 3"   |
| 0462AA | 4"   |
| 0562AA | 5"   |
| 0662AA | 6"   |
| 0862AA | 8"   |



**DOWNSPOUT ADAPTER**

| Part # | Tube Size | Downspout          |
|--------|-----------|--------------------|
| 0364AA | 3"        | 3.25 x 2.5         |
| 0464AA | 4"        | 3.25 x 2.5         |
| 0465AA | 4"        | 4.25 x 3           |
| 0466AA | 4"        | 2.56 x 2.56 Raingo |
| 0664AA | 6"        | 4 x 6              |



**SEWER & DRAIN FITTINGS (SMOOTH SURFACE)**

| Part # | Size            |
|--------|-----------------|
| 0467AA | 4" N-12 Adapter |



ADS Plastic End Sections

| Part # | Pipe Diameter |
|--------|---------------|
| 1210NP | 12" and 15"   |
| 1810NP | 18"           |
| 2410NP | 24"           |
| 3012NP | 30"           |
| 3612NP | 36"           |



**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 7-14-09 TRUCK # \_\_\_\_\_  
 BILL OF LADING # \_\_\_\_\_ PROJECT NAME \_\_\_\_\_  
 PROJECT NUMBER \_\_\_\_\_ MATERIAL TYPE Tank Spring Pipe  
 LOCATION \_\_\_\_\_

|   | COMPLETE ROLL NUMBER                     | BATCH NUMBER  | ROLL SIZE | DAMAGE/REMARKS             |
|---|--|---------------|-----------|----------------------------|
| 1 | WL Plastics 16"<br>IPSDR HPE 3408        |               |           |                            |
| 2 | PE 36.08 ASTM<br>F-714 ANWA 0906         | 5x40' lengths |           | no damage -<br>good slope  |
| 3 | PC 160 <sup>MSF-61</sup><br>DZ-03-07-074 |               |           |                            |
| 4 |  |               |           |                            |
| 5 | 2x5' w/ anti seepage collars             |               |           | good cond.<br>Ho excellent |
| 6 | 1x 48" x 4' diam ADS drop inlet - prefab |               |           |                            |
| 7 |  |               |           | good cond/<br>ex cond      |



**ADVANCED DRAINAGE SYSTEMS, INC.**

|    |                                   |  |  |                   |
|----|-----------------------------------|--|--|-------------------|
| 8  |                                   |  |  |                   |
| 9  |                                   |  |  |                   |
| 10 |                                   |  |  |                   |
| 1  |                                   |  |  |                   |
| 2  |                                   |  |  |                   |
| 3  |                                   |  |  |                   |
| 4  |                                   |  |  |                   |
| 5  |                                   |  |  |                   |
| 6  | 1x 5' x 3' diam ADS manhole w/lid |  |  |                   |
| 7  |                                   |  |  | → excellent cond. |
| 8  |                                   |  |  |                   |
| 9  |                                   |  |  |                   |

**A/H** SALT LAKE UT 84054 **2**  
 DATE 06/17/09 NO. 133  
 ITEM # 06110020dw  
 EMPLOYEE hi/sarro

FORM #5

**MATERIAL DELIVERY LIST**

DATE 7-14-09 # 1  
 BILL OF LADING # \_\_\_\_\_ PROJECT NAME CF GTC  
 PROJECT NUMBER \_\_\_\_\_ MATERIAL TYPE Piping and Tank  
 LOCATION GTC Spring Appurtenances

|   | COMPLETE ROLL NUMBER                                       | BATCH NUMBER    | ROLL SIZE    | DAMAGE/REMARKS |
|---|--|-----------------|--------------|----------------|
| 1 | <u>Item # 06110020 dw</u>                                  | <u>123-133-</u> | <u>9x20'</u> | <u>None</u>    |
| 2 | <u>↳ 6" perforated pipe - 180' in good (new) condition</u> |                 |              |                |



**N-12® and N-12 WT PIPE JOINT ASSEMBLY**

*\*Contractor is responsible for proper joint assembly-before beginning assembly, Contractor should read and familiarize itself with installation procedures as outlined in ADS Product Note 3.115\**

- Step 1: Remove Stretch Film from Gasket
- Step 2: Check to see that Gasket is Properly Seated
- Step 3: Thoroughly clean bell socket and then liberally apply lube to entire bell interior and gasket
- Step 4: Align the pipe and push it together on grade, taking care not to allow foreign objects into the joint

**WARNING: JOINT ASSEMBLY WITHOUT THE GASKET OR SUFFICIENT LUBRICATION VOIDS THE MANUFACTURER'S WARRANTY. IF THE GASKET IS DISLODGED OR UNDUE RESISTANCE IS FELT, CONTRACTOR MUST DISASSEMBLE AND RE-ASSEMBLE THE JOINT FOLLOWING THESE INSTRUCTIONS.**

CONTACT ADS AT 1-800-821-6710 FOR ANY QUESTIONS REGARDING ASSEMBLY

|    |  |  |               |                                |
|----|--|--|---------------|--------------------------------|
| 8  |  |  |               |                                |
| 9  |  |  |               |                                |
| 10 |  |  |               |                                |
| 1  |  |  |               |                                |
| 2  |  |  |               |                                |
| 3  | <u>Item # 12650020 dw</u>                      |  | <u>10x20'</u> | <u>new - in good condition</u> |
| 4  | <u>↳ 16" Culvert Pipe (ADS) for Phosphoria</u> |  |               |                                |
| 5  |  |  |               |                                |
| 6  |  |  |               |                                |
| 7  |  |  |               |                                |
| 8  |  |  |               |                                |
| 9  |  |  |               |                                |

**A/H** SALT LAKE UT 84054 **3**  
 DATE 06/19/09 NO. 98  
 ITEM # 12650020dw  
 EMPLOYEE mt/cas

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230  
www.CRAworld.com

Fax: (269) 344-8558

**SUBMITTAL**

DATE: July 2, 2009

SUBMITTAL NO.: 56872-06

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER:

SUBCONTRACTOR:

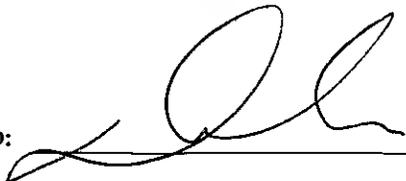
MANUFACTURER:

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION / LOCATION INSTALLED   |
|-----|--|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.5 Geotextile Fabric | N/A      | Proposed geotextile fabric:<br>Skaps GE-180, 8 oz needle punched non-woven geotextile fabric |
|     |  |          |  |

**CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:**

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED: 



Sales Office:  
 Engineered Synthetic Products, Inc.  
 Phone (770) 564-1857  
 Fax (770) 564-1818  
 www.espgeosynthetics.com

## Geotextile Product Description Sheet

# SKAPS GE-180 8 oz Nonwoven Geotextile

SKAPS GE-180 is a needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, which are formed into a random network for dimensional stability. SKAPS GE-180 resists ultraviolet deterioration, rotting, biological degradation, naturally encountered basics and acids. Polypropylene is stable within a pH range of 2 to 13. SKAPS GE-180 conforms to the physical property values listed below:

| PROPERTY                | TEST METHOD | UNIT  | M.A.R.V.<br>(Minimum Average Roll Value) |
|-------------------------|-------------|---|--|
| Weight                  | ASTM D 5261 | oz/sy (g/m <sup>2</sup> )                   | 8.0 (271)                                |
| Thickness*              | ASTM D 5199 | mls (mm)                                    | 100 (2.5)                                |
| Grab Tensile            | ASTM D 4632 | lbs (kN)                                    | 225 (1.0)                                |
| Grab Elongation         | ASTM D 4632 | %   | 50                                       |
| Trapezoid Tear Strength | ASTM D 4533 | lbs (kN)                                    | 90 (.40)                                 |
| Puncture Resistance     | ASTM D 4833 | lbs (kN)                                    | 130 (.578)                               |
| Mullen Burst Strength   | ASTM D 3786 | psi   | 425                                      |
| Permittivity*           | ASTM D 4491 | sec <sup>-1</sup>                           | 1.26                                     |
| Permeability*           | ASTM D 4491 | cm/sec                                      | .30                                      |
| Water Flow*             | ASTM D 4491 | gpm/ft <sup>2</sup> (l/min/m <sup>2</sup> ) | 100 (4074)                               |
| AOS*                    | ASTM D 4751 | US Sieve (mm)                               | 80 (.180)                                |
| UV Resistance           | ASTM D 4355 | %/hrs                                       | 70/500                                   |

\* At the time of manufacturing. Handling, storage, and shipping may change these properties.

| PACKAGING                    |          |
|------------------------------|----------|
| Roll Dimensions (W x L) – ft | 15 x 690 |
| Square Yards Per Roll        | 1150     |
| Estimated Roll Weight - lbs  | 620      |

This information is provided for reference purposes only and is not intended as a warranty or guarantee. SKAPS assumes no liability in connection with the use of this information.

SKAPS Industries, 316 S. Holland Dr., Pendergrass, GA 30567, Phone (706) 693-3440, Fax (706) 693-3450, Email: info@skaps.com

**Made in U.S.A.**

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 17, 2009

SUBMITTAL NO.: 56872-06A

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: Skaps Industries, Inc

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER:

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.5 Geotextile Fabric | N/A      | Skaps GE180-180 Nonwoven Geotextile Fabric, 8 oz Roll Certifications for Geotextile Fabric |
|     |  |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 8-17-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 007

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE    | DRAWING NO. | REV. | DESCRIPTION                   | ACTION ( * ) |
|--------|---------|-------------|------|-------------------------------|--------------|
| e-copy | 8-17-09 |             |      | Skapps Geotextile MQC 2 Rolls |              |
|        |         |             |      |                               |              |
|        |         |             |      |                               |              |
|        |         |             |      |                               |              |
|        |         |             |      |                               |              |
|        |         |             |      |                               |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....



SKAPS Industries (Nonwoven Division)  
335, Athena Drive  
Athens, GA 30601 (U.S.A.)  
Phone (706) 354-3700 Fax (706) 354-3737  
E-mail: info@skaps.com

Sales Office:  
Engineered Synthetic Product Inc.  
Phone: (770)564-1857  
Fax: (770)564-1818

**August 12, 2009**

**Environmental Specialties International**

7943 Pecue Lane, Suite A  
Baton Rouge, LA 70809  
Ref : Central Farmers  
**PO : 11774**

Dear Sir/Madam:

This is to certify that SKAPS GE180 is a high quality needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, randomly networked to form a high strength dimensionally stable fabric. SKAPS GE180 resists ultraviolet deterioration, rotting, biological degradation. The fabric is inert to commonly encountered soil chemicals. Polypropylene is stable within a pH range of 2 to 13. SKAPS GE180 conforms to the property values listed below:

| <b>PROPERTY</b>     | <b>TEST METHOD</b> | <b>UNITS</b>                                | <b>M.A.R.V.<br/>Minimum Average Roll Value</b> |
|---------------------|--------------------|---|--|
| Weight              | ASTM D 5261        | oz/sy (g/m <sup>2</sup> )                   | 8.00 (271)                                     |
| Grab Tensile        | ASTM D 4632        | lbs (kN)                                    | 220 (0.98)                                     |
| Grab Elongation     | ASTM D 4632        | %   | 50   |
| Trapezoidal Tear    | ASTM D 4533        | lbs (kN)                                    | 95 (0.42)                                      |
| Puncture Resistance | ASTM D 4833        | lbs (kN)                                    | 120 (0.53)                                     |
| Permittivity*       | ASTM D 4491        | sec <sup>-1</sup>                           | 1.50   |
| Water Flow*         | ASTM D 4491        | gpm/ft <sup>2</sup> (l/min/m <sup>2</sup> ) | 110 (4482)                                     |
| AOS*                | ASTM D 4751        | US Sieve (mm)                               | 80 (0.18)                                      |
| UV Resistance       | ASTM D 4355        | %/hrs                                       | 70/500   |

**Notes:**

\* At the time of manufacturing. Handling may change these properties.

**ANURAG SHAH**  
QUALITY CONTROL MANAGER

**Product : GE180-15**

| ROLL #      | WEIGHT   | MD TENSILE | MD ELONG | XMD TENSILE | XMD ELONG | MD TRAP | XMD TRAP | PUNCTURE | AOS      | WATER FLOW          | PERMITTIVITY      |
|-------------|----------|------------|----------|-------------|-----------|---------|----------|----------|----------|---------------------|-------------------|
| ASTM METHOD | D5261    | D4632      | D4632    | D4632       | D4632     | D4533   | D4533    | D4833    | D4751    | D4491               | D4491             |
| UNITS       | oz/sq yd | lbs.       | %        | lbs         | %         | lbs.    | lbs      | lbs.     | US Sieve | gpm/ft <sup>2</sup> | sec <sup>-1</sup> |
| TARGET      | 8.00     | 220        | 50       | 220         | 50        | 95      | 95       | 120      | 80       | 110                 | 1.50              |
| 12740.01    | 8.14     | 229        | 69       | 243         | 81        | 97      | 118      | 133      | 100      | 115                 | 1.53              |
| 12740.02    | 8.14     | 229        | 69       | 243         | 81        | 97      | 118      | 133      | 100      | 115                 | 1.53              |

\*All Values are MARV.

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: July 14, 2009

SUBMITTAL NO.: 56872-07A

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER:

SUBCONTRACTOR:

MANUFACTURER:

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED   |
|-----|--|----------|---|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.5 Geotextile Fabric | N/A      | Geotextile fabric roll certifications:<br>Tencate Polyfelt TN80E, 8 oz needle punched non-woven geotextile fabric. Also manufactured under name of Mirafi S800. |
|     |  |          |   |

CONSTRUCTION MANAGER'S/ ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 7-13-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 001

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE | DRAWING NO. | REV. | DESCRIPTION                                   | ACTION ( * ) |
|--------|------|-------------|------|---|--------------|
| e-copy | 7-13 |             |      | Roll Certification Tencate Geotextile 3 Rolls |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....

# Mirafi<sup>®</sup> S800 Certification

Attn: Kevin Kent  
GeoDynamics

Bol: 2072291  
Order: 1039248

Email: [khkent@msn.com](mailto:khkent@msn.com)  
CC: [t.krock@tencate.com](mailto:t.krock@tencate.com)

This is to certify Mirafi<sup>®</sup> S800 is a needle-punched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi<sup>®</sup> S800 is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

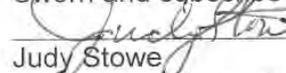
| Mechanical Properties                    | Test Method | Unit   | Minimum Average Roll Value |
|--|-------------|--|----------------------------|
| Weight                                   | ASTM D 5261 | g/m <sup>2</sup> (oz/yd <sup>2</sup> )             | 271 (8.0)                  |
| Thickness                                | ASTM D 5199 | mm (mils)  | 2.3 (90)                   |
| Grab Tensile Strength                    | ASTM D 4632 | N (lbs)  | 1024 (230)                 |
| Grab Tensile Elongation                  | ASTM D 4632 | %  | 50                         |
| Trapezoid Tear Strength                  | ASTM D 4533 | N (lbs)  | 401 (90)                   |
| Mullen Burst Strength*                   | ASTM D 3786 | kPa (psi)  | 2756 (400)                 |
| Puncture Strength <sup>1</sup>           | ASTM D 4833 | N (lbs)  | 579 (130)                  |
| CBR Puncture Strength                    | ASTM D 6241 | N (lbs)  | 2670 (600)                 |
| Apparent Opening Size (AOS) <sup>2</sup> | ASTM D 4751 | mm<br>(U.S. Sieve)                                 | 0.15<br>(100)              |
| Permittivity                             | ASTM D 4491 | sec <sup>-1</sup>                                  | 1.36                       |
| Permeability                             | ASTM D 4491 | cm/sec   | 0.31                       |
| Flow Rate                                | ASTM D 4491 | l/min/m <sup>2</sup><br>(gal/min/ft <sup>2</sup> ) | 4074<br>(100)              |
| UV Resistance (at 500 hours)             | ASTM D 4355 | % strength retained                                | 80                         |

<sup>1</sup> ASTM D 4833 has been replaced with ASTM D 6241

<sup>2</sup> ASTM D 4751: AOS is a Maximum Opening Diameter Value

\* Modified - tare weight not removed.

Sworn and subscribed before me this 13<sup>th</sup> day of July, 2009

  
Judy Stowe

  
Randy Johnson

My commission expires June 26, 2010

Technical Manager

Unless specified separately in writing, material results apply only to items tested. No portion of this document may be reproduced whole or in part without the expressed written consent of Ten Cate. Ten Cate warrants our products and services to be free from defects in material and workmanship when delivered to Ten Cate's customers and that our products meet our published specifications. Actual test data supplied is for the full width of the tested master roll.

FGS000348  
ETQR12

S800.07a



## Geotextile Properties

| Roll#     | Style | Weight ASTM D5261 | Grab Tensile MD ASTM D4632 | Elongation MD ASTM D4632 | Grab Tensile XMD ASTM D4632 | Elongation XMD ASTM D4632 | Trap Tear MD ASTM D4533 | Trap Tear XMD ASTM D4533 | Puncture ASTM D4833 | Burst ASTM D3786 | AOS ASTM D4751 | Thickness ASTM D5199 | Flow Rate ASTM D4491 | Permeability ASTM D4491 | Permittivity ASTM D4491 |
|-----------|-------|-------------------|----------------------------|--------------------------|-----------------------------|---------------------------|-------------------------|--------------------------|---------------------|------------------|----------------|----------------------|----------------------|-------------------------|-------------------------|
|           |       | Oz/Sy             | lbs                        | %                        | lbs                         | %                         | lbs                     | lbs                      | lbs                 | psi              | US Std Sieve   | mils                 | gal/min /sf          | cm/sec                  | sec-1                   |
| 922485999 | S800  | 9.5               | 304                        | 72                       | 295                         | 95                        | 122                     | 133                      | 155                 | 518              | 100            | 110                  | 110                  | 0.42                    | 1.50                    |
| 922486002 | S800  | 9.5               | 304                        | 72                       | 295                         | 95                        | 122                     | 133                      | 155                 | 518              | 100            | 110                  | 110                  | 0.42                    | 1.50                    |
| 922486005 | S800  | 9.5               | 304                        | 72                       | 295                         | 95                        | 122                     | 133                      | 155                 | 518              | 100            | 110                  | 110                  | 0.42                    | 1.50                    |

**Final "put-up" rolls taken from a single master roll and having identical properties and test data.**

**Results may only be available for tested rolls.**

Unless specified separately in writing, material results apply only to items tested. No portion of this document may be reproduced whole or in part without the expressed written consent of TC Mirafi. TC Mirafi warrants our products and services to be free from defects in material and workmanship when delivered to TC Mirafi's customers and that our products meet our published specifications.

Order #: 1039248 BOL #: 2072291

Page 1 of 1





# TENCATE MIRAFI

## 800/15/300

## SY1

|                  |        |                  |          |
|------------------|--------|------------------|----------|
| Length (meters)  | 91.44  | Length (FT)      | 300.00   |
| Width (Meters)   | 4.57   | Width (Inches)   | 180.00   |
| Area (Sq Meters) | 418.05 | Area (Sq. Yards) | 500.00   |
| Gross KGS        | 139.25 | Gross LBS        | 307.00   |
| Net Kilograms    | 130.18 | Net Pounds       | 287.00   |
| Lot ID           | 22582A | Pack Date        | 20090415 |

# 922486002



922486002

# TENCATE MIRAFI

## 800/15/300

## TENCATE MIRAFI®

## SY1

|                  |        |                  |          |
|------------------|--------|------------------|----------|
| Length (meters)  | 91.44  | Length (FT)      | 300.00   |
| Width (Meters)   | 4.57   | Width (Inches)   | 180.00   |
| Area (Sq Meters) | 418.05 | Area (Sq. Yards) | 500.00   |
| Gross KGS        | 138.80 | Gross LBS        | 306.00   |
| Net Kilograms    | 129.73 | Net Pounds       | 286.00   |
| Lot ID           | 22582A | Pack Date        | 20090415 |

# 922486005



922486005

|                  |        |                  |          |
|------------------|--------|------------------|----------|
| Length (meters)  | 91.44  | Length (FT)      | 300.00   |
| Width (Meters)   | 4.57   | Width (Inches)   | 180.00   |
| Area (Sq Meters) | 418.05 | Area (Sq. Yards) | 500.00   |
| Gross KGS        | 139.71 | Gross LBS        | 308.00   |
| Net Kilograms    | 130.63 | Net Pounds       | 288.00   |
| Lot ID           | 22582A | Pack Date        | 20090415 |

## 800/15/300

# 922485999



922485999

(3) Rolls delivered 7/14/2009 \*

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230  
www.CRAworld.com

Fax: (269) 344-8558

**SUBMITTAL**

DATE: August 17, 2009

SUBMITTAL NO.: 56872-06B

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries

ENGINEER: Norwest Corporation

3010 Conda Road

136 E South Temple, 12<sup>th</sup> Floor

Soda Springs, ID 83276

Salt Lake City, UT 84111

SUPPLIER: Skaps Industries, Inc

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION / LOCATION INSTALLED  |
|-----|--|----------|---|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.5 Geotextile Fabric | N/A      | Skaps GE180-180 Nonwoven Geotextile Fabric, 8 oz<br>Material Delivery Checklist & Bill of Lading; - 2 rolls |
|     |  |          |   |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White

[Please Print]

SIGNED: \_\_\_\_\_

GEOTEX

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 7-14-09 TRUCK # \_\_\_\_\_  
 BILL OF LADING # \_\_\_\_\_ PROJECT NAME Central Farmers 67C  
 PROJECT NUMBER \_\_\_\_\_ MATERIAL TYPE Filter Fabric  
 LOCATION CF 67C

|    | COMPLETE ROLL NUMBER  | BATCH NUMBER | ROLL SIZE       | DAMAGE/REMARKS                        |
|----|---|--------------|-----------------|---------------------------------------|
| 1  | <b>TENCATE MIRAFL®</b>  |              |                 |                                       |
| 2  | <b>8000/15/300</b>  |              |                 |                                       |
| 3  |   |              |                 | <b>SY1</b>                            |
| 4  |   |              |                 |                                       |
| 5  | Length (meters)   | 91.44        | Length (FT)     | 300.00                                |
| 6  | Width (Meters)  | 4.57         | Width (Inches)  | 180.00                                |
| 7  | Area (Sq Meters)  | 418.05       | Area (Sq Yards) | 500.00                                |
| 8  | Gross KGS   | 139.71       | Gross LBS       | 308.00                                |
| 9  | Net Kilograms   | 130.63       | Net Pounds      | 288.00                                |
| 10 | Lot ID  | 22582A       | Pack Date       | 20090415                              |
| 1  | <b>922485999</b>  |              |                 |                                       |
| 2  |  |              |                 |                                       |
| 3  | 922485999   |              | 300 ft          | small tears in cover - fabric perfect |
| 4  | 92248965  |              | 300 ft          | tears in cover - fabric perfect       |
| 5  | 922486002   |              | 300 ft          | good - perfect                        |
| 6  |   |              |                 |                                       |
| 7  |   |              |                 |                                       |
| 8  |   |              |                 |                                       |
| 9  |   |              |                 |                                       |

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230  
www.CRAworld.com

Fax: (269) 344-8558

**SUBMITTAL**

DATE: July 1, 2009

SUBMITTAL NO.: 56872-04

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SUBCONTRACTOR: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO.    | DESCRIPTION / LOCATION INSTALLED   |
|-----|--|-------------|--|
| 1   | Attachment B - Section 3.0 Execution;<br>Subsection 3.4 Furnace Closure<br>Attachment B - Section 4.0 Technical<br>Specifications; Subsection 4.8 Pipeline<br>Installation | DWG/FIG 5-1 | Wyo-Ben Enviroplug Medium granular bentonite for use<br>in construction of the Tank Spring Diversion and Furnace<br>Closure. |
|     |  |             |  |

**CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:**

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White

SIGNED: 

[Please Print]



# ENVIROPLUG<sup>®</sup> MEDIUM AND COARSE



ENVIROPLUG<sup>®</sup> MEDIUM & COARSE were the FIRST bentonite chips developed and marketed. They are pure Wyoming Bentonite, designed for use as sealants for hole abandonment, casing seals or any vertical seal to prevent water movement up or down a bore hole. When absorbing water, ENVIROPLUG<sup>®</sup> MEDIUM and COARSE swell to fill voids, exerting pressure against all surfaces to create a flexible low permeability seal. Since ENVIROPLUG<sup>®</sup> is introduced in a “dry” state, shrinkage cannot occur and there is a reserve expansion capacity. Generally hydration takes 1 to 2 hours.

## PRODUCT SPECIFICATIONS

|                                  | Sizing       | Bulk Density          | Moisture Content | Permeability                  |
|----------------------------------|--------------|-----------------------|------------------|-------------------------------|
| → ENVIROPLUG <sup>®</sup> MEDIUM | -3/8” + 1/4” | 68 lb/ft <sup>3</sup> | 15% ± 2          | 1 x 10 <sup>-9</sup> cm/sec ← |
| ENVIROPLUG <sup>®</sup> COARSE   | -3/4” + 3/8” | 64 lb/ft <sup>3</sup> | 15% ± 2          | 1 x 10 <sup>-9</sup> cm/sec   |

## HOLE ABANDONMENT AND APPLICATION GUIDELINES

ENVIROPLUG<sup>®</sup> COARSE has been used for abandoning drill holes since 1983. It easily falls through standing water and thin drilling fluids filling the column from the bottom upward. A fall rate of 1 foot/second through water can be expected and has been successfully applied through water to depths of over 1600 feet. Consult local regulations before beginning any abandonment procedure. Hole abandonment should be done by “Groundwater Professionals Only.”

### CASED HOLES OR UNCASED HOLES

For decommissioning cased or uncased holes larger than 3" diameter, use ENVIROPLUG<sup>®</sup> COARSE. If static water is present, pour chips from the bag at a rate of 1 1/2 to 2 minutes per 50 pounds. A funneling device with a 2" opening can be used to insure a constant flow of material into the hole. Should the water level be quite low - a screen can be used to drop out "fines" from the material before entering the hole.

For holes less than 3" in diameter use ENVIROPLUG<sup>®</sup> MEDIUM. The technique is the same but a funnel with a 1" to 1 1/2" opening is recommended to regulate the flow. Holes with less than a 1" diameter should be plugged with a pumpable material such as ENVIROPLUG<sup>®</sup> GROUT.

### ABANDONING DUG WELLS

Completely filling dug wells with bentonite chips can be very expensive and unnecessary. To economically decommission and stabilize dug wells, ENVIROPLUG<sup>®</sup> COARSE should be placed from the bottom section upward to 3 feet above the water bearing zone. Alternate sections of sand, fine gravel, or clay upward with a 12" layer of ENVIROPLUG<sup>®</sup> COARSE or MEDIUM every 5 to 6 feet.

Any of the above methods should be finished off approximately 3 feet below the surface, then filled with native soil or cement depending upon local regulatory requirements.



# ENVIROPLUG<sup>®</sup> MEDIUM AND COARSE



## SEALING CASING

Slowly pour ENVIROPLUG<sup>®</sup> MEDIUM into annulus and allow to drop to the gravel pack. For bentonite grouting, continue to pour ENVIROPLUG<sup>®</sup> MEDIUM directly into annulus, alternating from one side of the casing to the other. This aids in even distribution of particles around the casing. To avoid bridging problems pour at a rate of 1½ to 2 minutes per bag. If available, a funnel-type device with a 1½” bottom opening has proven very successful in regulating the flow into the hole and thus reducing the chances for bridging. When used in conjunction with pumpable grouts, ENVIROPLUG<sup>®</sup> MEDIUM can be used immediately above the sand or gravel pack and at the top of the hole for a more rigid seal.

## GROUNDING ROD AND HEAT PUMP CONDUCTOR HOLES

After drilling a 4½” to 5” diameter hole to the desired depth, simply center the grounding rod with the ground wire attached or the circulating loop from the heat pump in the bore hole. In the case of a wet hole condition, pour hole ENVIROPLUG<sup>®</sup> MEDIUM slowly (1½ - 2 minutes per bag) down the bore alternating each bag from one side of the hole to the other. In dry hole conditions, fill the hole with water, then add the ENVIROPLUG<sup>®</sup> MEDIUM displacing the water upward. If the water dissipates into formations while filling the hole, continue to add water while adding ENVIROPLUG<sup>®</sup> MEDIUM until the hole is sealed. Adding 5 gallons of water per 50 pound bag is usually adequate to provide hydration. Expected values for hydrated chips: Thermal Conductivity 0.50 Btu/hr-ft-°F Resistance < 0.3 ohms-meter.

## SEISMIC SHOT HOLES

After the hole is drilled and charge is placed, pour ENVIROPLUG<sup>®</sup> COARSE slowly into the hole (1½ - 2 minutes per bag). In wet hole conditions add enough ENVIROPLUG<sup>®</sup> COARSE to fill up to the static water level. In a dry hole, add 2 to 4 bags directly over the charge. Where auger drills are used or where water is injected, pour 2 bags per 50 feet of hole depth.

### TYPICAL E.P. TOXICITY ANALYSIS

|          | Standard (ppm) | Set Grout (ppm) |
|----------|----------------|-----------------|
| Arsenic  | 5.0            | <0.10           |
| Barium   | 100.0          | 0.50            |
| Cadmium  | 1.0            | <0.05           |
| Chromium | 5.0            | <0.10           |
| Lead     | 5.0            | <0.10           |
| Mercury  | 0.2            | <0.02           |
| Selenium | 1.0            | <0.05           |
| Silver   | 5.0            | <0.10           |

### TYPICAL CHEMICAL ANALYSIS %

|                                |       |                   |      |
|--------------------------------|-------|-------------------|------|
| SiO <sub>2</sub>               | 61.40 | MgO               | 1.70 |
| Al <sub>2</sub> O <sub>3</sub> | 18.10 | CaO <sub>3</sub>  | 0.40 |
| Fe <sub>2</sub> O <sub>3</sub> | 3.50  | TiO <sub>2</sub>  | 0.20 |
| K <sub>2</sub> O               | 0.10  | Na <sub>2</sub> O | 2.30 |
| H <sub>2</sub> O               | 7.80  | Other             | 0.07 |
| L.O.I. *                       | 4.40  |                   |      |

\*Loss on Ignition

**ENVIROPLUG<sup>®</sup> MEDIUM and COARSE are available in 50 pound bags and 3,000 pound bulk bags.**



PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 17, 2009

SUBMITTAL NO.: 56872-10A

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: CETCO

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED   |
|-----|--|----------|---|
| 2   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL | N/A      | Proposed GCL:<br>CETCO Bentomat ST geosynthetic clay liner (GCL)<br>Roll Certifications - Rolls 2013 through 2043 |
|     |  |          |   |

**CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:**

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White

[Please Print]

SIGNED: \_\_\_\_\_



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 8-17-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 004

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE    | DRAWING NO. | REV. | DESCRIPTION   | ACTION ( * ) |
|--------|---------|-------------|------|---|--------------|
| e-copy | 8-17-09 |             |      | Roll Certifications Cetco GCL Rolls Number Range - 2013 to 2043 |              |
|        |         |             |      | 17 Rolls  |              |
|        |         |             |      |   |              |
|        |         |             |      |   |              |
|        |         |             |      |   |              |
|        |         |             |      |   |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....



Date: 8/15/2009  
Purchase Order: 11773  
ORDER NUMBER: 025319601

ESI-Environmental Specialties Int'l.  
7943 Pecue Lane  
Baton Rouge, LA 70809  
grenshaw@esiliners.com

To Whom it May Concern:

Please find enclosed the MQA/MQC test data package for Geosynthetic Clay Liner shipments to ESI-Environmental Specialties Int'l..

The enclosed data package includes results of all the MQC tests required by ASTM D5889, with the exception of index flux/hydraulic conductivity. This test, which is run according to ASTM D5887, is normally performed once per production lot (once per week), unless a higher frequency is required by the project specifications. Because of the GCL's low permeability, this test can take several weeks to complete. The index flux/hydraulic conductivity results associated with this lot of material will be provided under separate cover as soon as they are available.

Although the index flux/hydraulic conductivity test results are not yet available, CETCO accepts responsibility for our GCL should the index flux/hydraulic conductivity tests produce unacceptable results. If, upon delivery and prior to installation, individual rolls of GCL are found to be nonconforming to accepted project specifications, CETCO will replace the nonconforming material at no charge.

Questions regarding this information should be directed to Chris Athanassopoulos, Technical Support Engineer, at (847) 851-1831.

Sincerely,

A handwritten signature in black ink, appearing to read 'Roger B. Wilkerson', is written over a horizontal line.

Roger B. Wilkerson  
Quality Assurance Coordinator  
CETCO Lovell Plant



**GEOSYNTHETIC CLAY LINER  
MANUFACTURING QUALITY ASSURANCE DATA PACKAGE**

PROJECT NAME: Central Farmers  
CUSTOMER P.O.: 11773  
ORDER NUMBER: 025319601  
PREPARED FOR: ESI-Environmental Specialties Int'l.

**CONTENTS:**

- Daily production and needle detection certification
- GCL property specifications
- Order packing list
- GCL MQA tracking form
- GCL manufacturing quality control test data
- Bentonite clay certification
- Raw material test results

PREPARED BY: Roger B. Wilkerson  
Quality Assurance Coordinator  
CETCO  
P.O. Box 428  
92 Hwy. 37  
Lovell, WY 82431

Telephone: 800-322-1149 ext. 413  
Fax:  
E-Mail: [rwilke@cetco.com](mailto:rwilke@cetco.com)



## **PRODUCTION CERTIFICATION**

PROJECT NAME: Central Farmers  
CUSTOMER P.O.: 11773  
PREPARED FOR: ESI-Environmental Specialties Int'l.

CETCO affirms that these products meet the physical and chemical criteria listed on the attached GCL property specification sheet.

## **NEEDLE REMOVAL AND DETECTION PROCEDURE**

CETCO hereby affirms that all Bentomat<sup>®</sup> geosynthetic clay liner material manufactured for this project is continually passed under a magnet for needle removal and then screened with a metal detection device. CETCO certifies Bentomat<sup>®</sup> to be essentially free of broken needles and fragments of needles that would negatively effect the performance of the final product.

A handwritten signature in black ink, appearing to read 'Roger B. Wilkerson', with a horizontal line extending to the right.

Roger B. Wilkerson  
Quality Assurance Coordinator  
Colloid Environmental Technologies Co. ( CETCO )



Ship Date: 8/14/2009

Order Number: 025319601

Prepared For: ESI-Environmental Specialties Int'l.

The GCL raw materials and GCL finished product manufactured for the above-referenced order number(s) are hereby certified to achieve the properties listed in the tables below.

**GCL PROPERTY SPECIFICATIONS FOR BENTOMAT ST**

| Test Method | Test Method Property                     | Test Frequency              | Certified Value  |
|-------------|--|-----------------------------|--|
| ASTM D 5891 | Bentonite Fluid Loss                     | 1 per 50 Tons               | 18 ml Max  |
| ASTM D 5993 | Bentonite Mass/Area                      | 40,000 sq ft (4000 sq m)    | 0.75 lb /sq ft (3.6 kg/sq m) Min                             |
| ASTM D 5890 | Bentonite Swell Index                    | 1 per 50 Tons               | 24 ml/2g Min   |
| ASTM D 6768 | GCL Grab Strength                        | 200,000 sq ft (20,000 sq m) | 30 lbs/in MARV   |
| ASTM D 6243 | GCL Hydrated Internal Shear Strength     | Periodic                    | 500 psf (48 kPa) typ @ 200 psf                               |
| ASTM D 5887 | GCL Hydraulic Conductivity               | Weekly                      | 5 x 10 <sup>-9</sup> cm/ sec Max                             |
| ASTM D 5887 | GCL Index Flux                           | Weekly                      | 1 x 10 <sup>-8</sup> m <sup>3</sup> /m <sup>2</sup> /sec Max |
| ASTM D 6496 | GCL Peel Strength                        | 40,000 sq ft (4000 sq m)    | 3.5 lbs/in Min   |
| ASTM D4632* | Grab Strength*modified with 4-inch grips | 200,000 sq ft (20,000 sq m) | 90 lbs (400 N) MARV  |
| ASTM D4632* | Peel Strength*modified with 4-inch grips | 40,000 sq ft (4000 sq m)    | 15 lbs (65 N) Min  |

**SPECIALY REQUESTED CERTIFIED PROPERTIES FOR THIS ORDER OF BENTOMAT ST**

| Test Method | Test Method Property | Requested Frequency | Requested Value             | Requested Conditions |
|-------------|----------------------|---------------------|-----------------------------|----------------------|
| ASTM D 5993 | Bentonite Mass/Area  | Standard            | .90 lb/sqft @ 0.0% Moisture | Standard             |
| ASTM D 6768 | GCL Grab Strength    | 1/40,000 sqft       | 40 lbs/inch                 | Standard             |

Bentonite property tests are performed at a bentonite processing facility before shipment to CETCO's production facility. All tensile testing is in the machine direction.

**FABRIC SUPPLIER REQUIREMENTS FOR BENTOMAT ST**

| Raw Material                  | test method | mass per area | units              |
|-------------------------------|-------------|---------------|--------------------|
| Nonwoven Cover Fabric         | ASTM D 5261 | 6.0           | oz/yd <sup>2</sup> |
| Bentomat ST Woven Base Fabric | ASTM D 5261 | 3.2           | oz/yd <sup>2</sup> |

Fabric certifications from our raw material suppliers are on file at our production facility.



CETCO's MQA laboratory is GAI-accredited ([www.geosynthetic-institute.org/gai/lab.html](http://www.geosynthetic-institute.org/gai/lab.html)).

Roger B. Wilkerson  
 Quality Assurance Coordinator  
 CETCO Lovell Plant



**GCL ORDER PACKING LIST**

GCL shipped for certification package number 000253196

| Order #                                    | Product        | Lot Number | Roll Number | Length (ft) | Width (ft) | Square Ft    | Weight (lbs) |
|--|----------------|------------|-------------|-------------|------------|--------------|--------------|
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002013    | 150         | 15         | 2250         | 2785         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002014    | 150         | 15         | 2250         | 2790         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002015    | 150         | 15         | 2250         | 2770         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002016    | 150         | 15         | 2250         | 2795         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002017    | 150         | 15         | 2250         | 2775         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002018    | 150         | 15         | 2250         | 2775         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002024    | 150         | 15         | 2250         | 2770         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002025    | 150         | 15         | 2250         | 2800         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002029    | 150         | 15         | 2250         | 2775         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002030    | 150         | 15         | 2250         | 2770         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002031    | 150         | 15         | 2250         | 2780         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002032    | 150         | 15         | 2250         | 2790         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002033    | 150         | 15         | 2250         | 2760         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002034    | 150         | 15         | 2250         | 2805         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002036    | 150         | 15         | 2250         | 2790         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002041    | 150         | 15         | 2250         | 2815         |
| 025319601                                  | LO-BENTOMAT ST | 200933LO   | 00002043    | 150         | 15         | 2250         | 2845         |
| <b>Totals:</b>                             |                |            |             | <b>2550</b> | <b>255</b> | <b>38250</b> | <b>47390</b> |
| Total Number of Rolls Certified: <b>17</b> |                |            |             |             |            |              |              |



## GCL MQA TRACKING FORM

Listing of finished and raw materials used to produce certification package number 000253196

| GCL            |            |               | Geotextiles     |            |               | Clay        |             |
|----------------|------------|---------------|-----------------|------------|---------------|-------------|-------------|
| LO-BENTOMAT ST |            |               | LO-N/W-WHITE-ST |            |               | LO-WOVEN-ST | LO-CG 50-ST |
| GCL Lot #      | GCL Roll # | Roll # Tested | Cap Lot #       | Cap Roll # | Roll # Tested | Base Roll # | Clay Lot #  |
| 200933LO       | 00002013   | 00002009      | 2020211942      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002014   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002015   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002016   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002017   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002018   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002024   | 00002009      | 2020212099      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002025   | 00002009      | 2020212099      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002029   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002030   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002031   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002032   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002033   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002034   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002036   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002041   | 00002026      | 2020212094      |            |               | 081409AW1   | 073109A     |
| 200933LO       | 00002043   | 00002043      | 2020212094      |            |               | 081409AW2   | 073109A     |



## GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 000253196 have been tested in our production facility lab.

| Product   | Lot # Tested | Roll # Tested | Mass Area          | Grab Strength | Peel Strength |
|---|--------------|---------------|--------------------|---------------|---------------|
| Standard Test Method:   |              |               | ASTM D 5993        | ASTM D 6768   | ASTM D 6496   |
| Standard Specification:   |              |               | 0.75 lb/sq ft MARV | 30lbs/in MARV | 3.5lbs/in Min |
| Non-standard specifications were requested for this order as indicated on the attached property sheet |              |               |                    |               |               |
| LO-BENTOMAT ST  | 200933LO     | 00002009      | 0.94               | 60.9          | 5.9           |
| LO-BENTOMAT ST  | 200933LO     | 00002026      | 0.98               | 46.4          | 8.7           |
| LO-BENTOMAT ST  | 200933LO     | 00002043      | 0.94               | 46.4          | 5.9           |

ASTM test methods and property specifications per CETCO standard unless non-standard specifications were requested.  
 Any non-standard property specifications requested for this order are noted on the attached GCL property specifications sheet.



## **BENTONITE CLAY CERTIFICATION**

The Bentonite Clay used to produce package 000253196 has been tested by American Colloid Company and yielded the following test results.

| <b>Reference</b> | <b>Moist</b> | <b>Swell</b> | <b>Fluid Loss</b> |
|------------------|--------------|--------------|-------------------|
| Test Method:     | ASTM D 2216  | ASTM D 5890  | ASTM D 5891       |
| Specification:   | 12% Max      | 24 ml/2g Min | 18 ml Max         |
| 073109A          | 10.8         | 25.0         | 17.2              |



## GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 000253196 was manufactured with geotextiles which were tested with the following results.

| <b>BASE</b>     |                    |  |                              |
|-----------------|--------------------|--|------------------------------|
| <b>Material</b> | <b>Roll Number</b> | <b>Mass Area<br/>oz/yd<sup>2</sup></b> | <b>Grab Strength<br/>lbs</b> |
| PT              | 081409AW1          | 3.6                                    | 162.0                        |
| PT              | 081409AW2          | 3.7                                    | 169.0                        |
| PPX 82TEX       | 2020200477         | 3.4                                    | 141.7                        |

| <b>CAP</b>      |                    |  |                              |
|-----------------|--------------------|--|------------------------------|
| <b>Material</b> | <b>Roll Number</b> | <b>Mass Area<br/>oz/yd<sup>2</sup></b> | <b>Grab Strength<br/>lbs</b> |
| PPX 650         | 2020211942         | 7.5                                    | 70.5                         |
| PPX 650         | 2020212086         | 7.3                                    | 64.4                         |
| PPX 650         | 2020212094         | 7.1                                    | 63.3                         |
| PPX 650         | 2020212098         | 7.0                                    | 65.8                         |
| PPX 650         | 2020212099         | 7.0                                    | 65.8                         |

Certifications from our suppliers are on file at our production facility. An '\*' or 'PT' indicates supplier certifications were unavailable prior to shipping so testing was performed at a CETCO lab.

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

## SUBMITTAL

DATE: August 18, 2009

SUBMITTAL NO.: 56872-10B

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: CETCO

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 2   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL | N/A      | Proposed GCL:<br>CETCO Bentomat ST geosynthetic clay liner (GCL)<br>Material Delivery Checklist & Bill of Lading; 17 rolls |
|     |  |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White

[Please Print]

SIGNED: \_\_\_\_\_

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-18-09 TRUCK # 26  
 BILL OF LADING # 002498 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 00002017             |              | 150' X 15' |                |
| 2  | 00002013             |              | "          |                |
| 3  | 00002018             |              | "          |                |
| 4  | 00002014             |              | "          |                |
| 5  | 00002025             |              | "          |                |
| 6  | 00002016             |              | "          |                |
| 7  | 00002029             |              | "          |                |
| 8  | 00002032             |              | "          |                |
| 9  | 00002015             |              | "          |                |
| 10 | 00002036             |              | "          |                |
| 1  | 00002030             |              | "          |                |
| 2  | 00002034             |              | "          |                |
| 3  | 00002043             |              | "          |                |
| 4  | 00002033             |              | "          |                |
| 5  | 00002041             |              | "          |                |
| 6  | 00002024             |              | "          |                |
| 7  | 00002031             |              | "          |                |
| 8  | 8 bgs bentonite      |              | 50 #       |                |
| 9  |                      |              |            |                |

002498

This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

# Wanner Rock LLC

## STRAIGHT BILL OF LADING

Original - Not Negotiable

P.O. BOX 466  
Preston, Idaho 83263  
208-852-3122 or 851-3122

Shipper No. 85229601  
Carrier No. \_\_\_\_\_  
Date 8/14/09

TO: CONSIGNEE WANNER ROCK LLC  
On Collect or Delivery Shipments the letters "COD" must appear before consignee's name - or as otherwise provided in Item 430, Sec. 1  
STREET \_\_\_\_\_

FROM: SHIPPER  
STREET \_\_\_\_\_

DESTINATION PRESTON ID ZIP \_\_\_\_\_

ORIGIN WALLACE WY ZIP \_\_\_\_\_

VEHICLE NUMBER \_\_\_\_\_ U.S. DOT Hazmat Reg. Number \_\_\_\_\_  
ROUTE \_\_\_\_\_

| NO. SHIPPING UNITS | * H. M | KIND OF PACKAGING, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS | WEIGHT (Subject to Correction) | RATE | CHARGES |
|--------------------|--------|--|--------------------------------|------|---------|
|                    |        | <u>4000 50000 40000</u>  | <u>40000</u>                   |      |         |
|                    |        | <u>WY RESTAURANT</u>   |                                |      |         |
|                    |        |  |                                |      |         |
|                    |        |  |                                |      |         |
|                    |        |  |                                |      |         |
|                    |        |  |                                |      |         |
|                    |        |  |                                |      |         |

REMIT C.O.D. TO: ADDRESS \_\_\_\_\_  
C.O.D. Fee: \$ \_\_\_\_\_  
Prepaid  Collect

COD \_\_\_\_\_  
AMT. \$ \_\_\_\_\_  
Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: "The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges."

TOTAL CHARGES \$ \_\_\_\_\_  
FREIGHT CHARGES \_\_\_\_\_  
FREIGHT PREPAID  Check box if charges are to be collected at right is checked

\$ \_\_\_\_\_ per \_\_\_\_\_  
RECEIVED, subject to the classification and lawfully filed tariffs in effect in the date of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER \_\_\_\_\_ CARRIER **Wanner Rock LLC, Preston, Idaho 83263**  
PER \_\_\_\_\_  
EMERGENCY RESPONSE TELEPHONE NUMBER \_\_\_\_\_ DATE 8/14/09  
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604)  
Mark with an "X" to designate Hazardous Material as defined in the Department of Transportation Regulations governing the transportation of hazardous materials on bills of lading per Section 172.201 (a)(1)(iii) of Title 49, code of Federal Regulations. Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204 (a) of the Federal Regulations must be indicated on the bill of lading. Unless a specific exception from this requirement is provided in the Regulations for a particular material.



Shippers No : 025319601 Previous Page

**Straight Bill of Lading - Original**

Loaded On Time In: 8/14/09-13:55:03 Time Out: 8/14/09-17:54:05

**Carrier:** WANNER ROCK  
**Consigned To :**  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
**Deliver Date :** 08/19/2009  
**Ship Date :** 08/17/2009 **Via:** NATI  
FOB ORIGIN

GEORGETOWN ID  
Phone:

**Sold To :** 1823 **Ship To :** 119  
Consigned PO: 11773  
Truck #: 26 Trailer #: W18/

**Shipping Plant:** CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity   | UOM | Product Size / Description   | Weight     |
|------------|-----|--|------------|
| 38250.0000 | SF  | BENTOMAT ST<br><br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 49074.7500 |
| 8.0000     | EA  | COMMODITY GRANULAR-50<br>(10902/024)<br>CLAY-BENTONITE-GROUND (CLASS 50)<br>3295232 / CLASS 50 ITEM 48170                      | 400.0000   |

Gross: 0.0000

Tare: 0.0000

**Total:**

49475

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

**CETCO**

Mark with an 'X' to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of issued of this billing of lading, the properly described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COD charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

Per

**Placards Required?** Yes / No **Supplied?** Yes / No

P A C K I N G   L I S T

CETCO  
 2870 FORBS AVENUE  
 HOFFMAN ESTATES      IL   60004

ORDER NO:.. 025319601  
 ORDER DATE:  7/10/2009  
 SHIP DATE:.. 8/14/2009

SOLD TO: 1823  
 ENVIRONMENTAL SPECIALTIES  
 INTERNATIONAL, INC.  
 7943 PECUE LANE

SHIP FROM: . CETCO LOVELL PLANT  
 FRT TERMS: . PREPAID & ADD  
 SHIP VIA:.. AMERICO LOGISTICS

BATON ROUGE              LA   70809

SHIP TO: 119  
 CENTRAL FARMERS

PO: 11773

GEORGETOWN              ID .

| PRODUCT        | SIZE U/M | LOT #    | ROLL#    | LNPTH | WIDTH | SHIP QTY | WEIGHT |
|----------------|----------|----------|----------|-------|-------|----------|--------|
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002013 | 150.0 | 15.0  | 2250.0   | 2785.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002014 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002015 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002016 | 150.0 | 15.0  | 2250.0   | 2795.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002017 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002018 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002024 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002025 | 150.0 | 15.0  | 2250.0   | 2800.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002029 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002030 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002031 | 150.0 | 15.0  | 2250.0   | 2780.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002032 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002033 | 150.0 | 15.0  | 2250.0   | 2760.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002034 | 150.0 | 15.0  | 2250.0   | 2805.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002036 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002041 | 150.0 | 15.0  | 2250.0   | 2815.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002043 | 150.0 | 15.0  | 2250.0   | 2845.0 |

ORDER TOTALS.....

=====      =====  
 38250.0      47390.0

TOTAL ITEMS.....      17

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

**DATE:** August 18, 2009

**SUBMITTAL NO.:** 56872-10C

**PROJECT NO.:** 56872

**PROJECT NAME:** Georgetown Canyon  
Remediation

**CLIENT:** Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

**ENGINEER:** Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

**SUPPLIER:** CETCO

**SUBCONTRACTOR:** Environment Specialties  
International, Inc (ESI)

**MANUFACTURER:** \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 2   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL | N/A      | Proposed GCL:<br>CETCO Bentomat ST geosynthetic clay liner (GCL)<br>Material Delivery Checklist & Bill of Lading; 15 rolls |
|     |  |          |  |

**CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:**

**COPY TO:** Howard Stich (CRA)  
Regis Seng (CRA)

**COMPLETED BY:** Dan White

[Please Print]

**SIGNED:** \_\_\_\_\_

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-18-09 TRUCK # 12  
 BILL OF LADING # 12 025319602 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 00002006             |              | 150' X 15' | OK             |
| 2  | 00002009             |              | "          |                |
| 3  | 00002008             |              | "          |                |
| 4  | 00002007             |              | "          |                |
| 5  | 00002010             |              | "          |                |
| 6  | 00001991             |              | "          |                |
| 7  | 00001984             |              | "          |                |
| 8  | 00002000             |              | "          |                |
| 9  | 00001999             |              | "          |                |
| 10 | 00001996             |              | "          |                |
| 1  | 00002250             |              | "          |                |
| 2  | 00002004             |              | "          |                |
| 3  | 00002005             |              | "          |                |
| 4  | 00002003             |              | "          |                |
| 5  | 00002002             |              | "          |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |

**This Memorandum**

is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

David S. Munne Trucking, Inc.  
MC 167333

Shipper No. 225319612

Carrier No. 224755

Date 8-17-88

(Name of Carrier)

| TO: Consignee <u>Robert Turner</u> |     | FROM: Shipper <u>Etee</u>  |                                |      |         |
|------------------------------------|-----|--|--------------------------------|------|---------|
| Street                             |     | Street   |                                |      |         |
| Destination <u>Longtown Idaho</u>  |     | Origin <u>Leoti Wyoming</u>  |                                |      |         |
| Route <u>América Logistics</u>     |     | Emergency Response Phone No.   | Vehicle Number <u>12151</u>    |      |         |
| No. Shipping Units                 | HM* | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Weight (subject to correction) | Rate | CHARGES |
| <u>5</u>                           |     | <u>200 lbs 2 barrels Fully Taped</u>                                     | <u>8330</u>                    |      |         |

When transporting hazardous materials include the technical or chemical name for H.U.S. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Communication Standard (HM-126C). Provide emergency response phone number in case of incident or accident in box above.

|   |   |  |
|---|---|--|
| REMIT C.O.D. TO: ADDRESS:   | <b>COB</b> Amt: \$  | C.O.D. FEE: PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/> \$   |
| NOTE — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.<br>The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per _____ | This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.<br>Signature _____ | Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:<br>The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.<br>(Signature of Consignor) _____ |
|   |   | TOTAL CHARGES: \$<br>FREIGHT CHARGES: FREIGHT PREPAID <input type="checkbox"/> Check box if charges are to be collect except when box at right is checked <input type="checkbox"/>   |

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the Bill of Lading terms

and conditions in the governing classification on the date of shipment.  
Shipper hereby certifies that he is familiar with all the Bill of Lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.  
NOTICE: Freight moving under this Bill of Lading is subject to the classifications and lawfully filed tariffs in effect on the date of this Bill of Lading. This notice supersedes and negates any claimed, alleged or asserted oral or written contract, promise, representation or understanding between the parties with respect to this freight, except to the extent of any written contract which establishes lawful contract carriage and is signed by authorized representatives of both parties to the contract.

|                          |  |
|--------------------------|--|
| SHIPPER <u>Etee</u>      | CARRIER <u>David S. Munne Trucking, Inc.</u> |
| PER <u>Leoti Wyoming</u> | PER <u>David Munne</u>                       |
|                          | DATE <u>8-17-88</u>                          |

4



Shippers No : 025319602

Previous Page

**Straight Bill of Lading - Original**

Loader: BR Time In: 8/17/09-11:33:57 Time Out: 8/17/09-13:52:14

**Carrier:** Americo  
**Consigned To :**  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
**Deliver Date :** 08/19/2009  
**Ship Date :** 08/17/2009 **Via:** NATI  
FOB ORIGIN

GEORGETOWN ID .  
Phone:

**Sold To :** 1823 **Ship To :** 119  
Consigned PO: 11773  
Truck #: 12 Trailer #: 15-A/

**Shipping Plant:** CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity      | HM | Product Size / Description   | Weight     |
|---------------|----|--|------------|
| 33750.0000 SF |    | BENTOMAT ST<br><br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 43301.2500 |

Gross: 0.0000

Tare: 0.0000

**Total:**

43301

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

**CETCO**

Mark with an "X" to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of issued of this billing of lading, the properly described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Stright Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COD charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

*David Munns*

Per **Placards Required?** Yes / No **Supplied?** Yes / No

*Dave Johnson  
Norwest*

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 18, 2009

SUBMITTAL NO.: 56872-10D

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: CETCO  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL | N/A      | Proposed GCL:<br>CETCO Bentomat ST geosynthetic clay liner (GCL)<br>Material Delivery Checklist & Bill of Lading; 13 rolls |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED: \_\_\_\_\_

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-18-09 TRUCK # 557  
 BILL OF LADING # 322536 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 0000 1992            |              | 150' x 15' |                |
| 2  | 0000 1993            |              |            |                |
| 3  | 0000 1983            |              |            |                |
| 4  | 0000 1988            |              |            |                |
| 5  | 0000 1985            |              |            |                |
| 6  | 0000 1990            |              |            |                |
| 7  | 0000 1989            |              |            |                |
| 8  | 0000 1987            |              |            |                |
| 9  | 0000 1986            |              |            |                |
| 10 | 0000 1987            |              |            |                |
| 1  | 0000 1995            |              |            |                |
| 2  | 0000 1994            |              |            |                |
| 3  | 0000 1998            |              |            |                |
| 4  |                      |              |            |                |
| 5  |                      |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |



Shippers No : 025319604 Previous Page

**Straight Bill of Lading - Original**

Loader: BR Time In: 8/17/09-08:50:38 Time Out: 8/17/09-10:08:12

**Carrier:** Sherman Bros  
**Consigned To :**  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
**Deliver Date :** 08/19/2009  
**Ship Date :** 08/17/2009 **Via:** NATI  
FOB ORIGIN

GEORGETOWN ID :  
Phone:

**Sold To :** 1823 **Ship To :** 119  
Consigned PO: 11773  
Truck #: 557 Trailer #: 48S108/

**Shipping Plant:** CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity      | HM | Product Size / Description   | Weight     |
|---------------|----|--|------------|
| 29250.0000 SF |    | BENTOMAT ST<br><br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 37527.7500 |

Gross: 0.0000

Tare: 0.0000

**Total:**

37528

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

**CETCO**

Mark with an 'X' to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of issued of this billing of lading, the properly described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Stright Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COD charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

Per

Placards Required? Yes / No **Supplied?** Yes / No

  
Dan White (CRA)

P A C K I N G L I S T

CETCO  
 2870 FORBS AVENUE  
 HOFFMAN ESTATES IL 60004

ORDER NO:.. 025319604  
 ORDER DATE: 7/10/2009  
 SHIP DATE:.. 8/17/2009

SOLD TO: 1823  
 ENVIRONMENTAL SPECIALTIES  
 INTERNATIONAL, INC.  
 7943 PECUE LANE

SHIP FROM:.. CETCO LOVELL PLANT  
 FRT TERMS:.. PREPAID & ADD  
 SHIP VIA:.. AMERICO LOGISTICS

BATON ROUGE LA 70809

SHIP TO: 119  
 CENTRAL FARMERS

GEORGETOWN ID

PO: 11773

| PRODUCT        | SIZE U/M | LOT #    | ROLL#    | LNTH  | WIDTH | SHIP QTY | WEIGHT |
|----------------|----------|----------|----------|-------|-------|----------|--------|
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001983 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001985 | 150.0 | 15.0  | 2250.0   | 2735.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001986 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001987 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001988 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001989 | 150.0 | 15.0  | 2250.0   | 2755.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001990 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001992 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001993 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001994 | 150.0 | 15.0  | 2250.0   | 2735.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001995 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001997 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001998 | 150.0 | 15.0  | 2250.0   | 2755.0 |

|                   |         |         |
|-------------------|---------|---------|
| ORDER TOTALS..... | =====   | =====   |
|                   | 29250.0 | 35685.0 |
| TOTAL ITEMS.....  | 13      |         |



- S. B., Inc. -

dba

Sherman Bros. Heavy Trucking

dba Sound Transportation

P.O. Box 706 — Harrisburg, OR 97446  
541/995-7751 or WATS 800/547-8980



|           |        |
|-----------|--------|
| TRUCK #   | 557    |
| TRAILER # | 485108 |

B/L NO. 322536

COMBINATION ORIGINAL BILL OF LADING AND TRANSPORTATION RECEIPT

- NOT NEGOTIABLE -

DISPATCH

NO. 1091304

SHIPPER'S NO. 025319604

P.O. No. 11773

NOTE: Carrier not responsible for shipper's load, weight and count.  
HAZARDOUS MATERIAL REG # 060807 552 037P & # 060807 552 035P

ICCMC 77061 CALT 124891  
OPUC 80785 WUTC CC67

|      |          |
|------|----------|
| DATE | 08-17-09 |
|------|----------|

RECEIVED, subject to the classifications and tariffs in effect on the date of the receipt by the carrier of the property described in the Original Bill of Lading.

CONSIGN TO on collection on delivery shipments the letters "C.O.D." must appear before consignee's name.

SHIPPER CETCO

NAME CENTRAL FARMERS

ADDRESS

ADDRESS

CITY & STATE LOVELL, WY

CITY & STATE GEORGETOWN, ID

CONTACT PHONE

CONTACT PHONE

Unless a greater value is declared by the shipper, and stated on the bill of lading, the carriers liability for loss or damage to any package or article shall not exceed \$5,000 per ton of 2,000 pounds, actual weight, in accordance with the tariff provisions that govern.

Customer is liable for any and all damages to private roads that may occur during pick-up, delivery or transit.

SHIPPER HEREBY DECLARES that the released value of this shipment is \$ PER: Excess value, if any, over \$5,000 per ton of 2,000 pounds per package or article shall be charged for in accordance with tariff provisions that govern.

Signed Customer

| DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS | WEIGHT (Subject to Correction) | PERMITS |
|---|--------------------------------|---------|
| 13 ROLLS CLOTH, FABRIC                                | 37528                          |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |

AUTHORITY TO UNLOAD  
RECEIVER HAS VERIFIED THAT A CONNECTION HAS BEEN MADE FROM THE PROPER TRAILER OUTLET TO THE PROPER STORAGE FACILITY AND THE CARRIER MANIFEST AND VENDOR SHIPPING DOCUMENT MATCH AS TO THE PROPER MATERIAL ORDERED.

CONSIGNEE SIGNATURE DATE

SUBJECT TO SECTION 7 OF CONDITIONS OF APPLICABLE BILL OF LADING, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CONSIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CONSIGNOR SHALL SIGN THE FOLLOWING STATEMENT:  
THE CARRIER SHALL NOT MAKE DELIVERY OF THIS SHIPMENT WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.

SIGNATURE OF SHIPPER  
Shipper Signature

| LENGTH OF FRT. | WIDTH | HEIGHT | OVERALL HEIGHT | TARP | REQUIRED DELIVERY DATE & TIME |
|----------------|-------|--------|----------------|------|-------------------------------|
|                |       |        |                |      | 08-18-09                      |

RECEIVED SHIPMENT IN GOOD ORDER EXCEPT AS NOTED HEREON

Consignee Signature Date

CUSTOMER

Delivering Driver Signature

ICC AND PUC RULES REQUIRE PAYMENT WITHIN 7 DAYS OF PRESENTATION OF FREIGHT BILL

FOR SHIPMENTS IN, THROUGH, AND OUT OF THE STATE OF CALIFORNIA, FAILURE TO PAY BILLED CHARGES MAY RESULT IN A LIEN ON FUTURE SHIPMENTS, INCLUDING THE COST OF STORAGE AND APPROPRIATE SECURITY FOR THE SUBSEQUENT SHIPMENT HELD.



**GCL ORDER PACKING LIST**

GCL shipped for certification package number 000253196

| Order #   | Product        | Lot Number | Roll Number | Length (ft) | Width (ft) | Square Ft | Weight (lbs) |
|-----------|----------------|------------|-------------|-------------|------------|-----------|--------------|
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001983    | 150         | 15         | 2250      | 2740         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00001984    | 150         | 15         | 2250      | 2720         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001985    | 150         | 15         | 2250      | 2735         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001986    | 150         | 15         | 2250      | 2740         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001987    | 150         | 15         | 2250      | 2745         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001988    | 150         | 15         | 2250      | 2750         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001989    | 150         | 15         | 2250      | 2755         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001990    | 150         | 15         | 2250      | 2745         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00001991    | 150         | 15         | 2250      | 2760         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001992    | 150         | 15         | 2250      | 2745         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001993    | 150         | 15         | 2250      | 2740         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001994    | 150         | 15         | 2250      | 2735         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001995    | 150         | 15         | 2250      | 2750         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00001996    | 150         | 15         | 2250      | 2745         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001997    | 150         | 15         | 2250      | 2750         |
| 025319604 | LO-BENTOMAT ST | 200933LO   | 00001998    | 150         | 15         | 2250      | 2755         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00001999    | 150         | 15         | 2250      | 2755         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002000    | 150         | 15         | 2250      | 2705         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002001    | 150         | 15         | 2250      | 2705         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002002    | 150         | 15         | 2250      | 2730         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002003    | 150         | 15         | 2250      | 2775         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002004    | 150         | 15         | 2250      | 2760         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002005    | 150         | 15         | 2250      | 2780         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002006    | 150         | 15         | 2250      | 2775         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002007    | 150         | 15         | 2250      | 2785         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002008    | 150         | 15         | 2250      | 2780         |
| 025319602 | LO-BENTOMAT ST | 200933LO   | 00002009    | 150         | 15         | 2250      | 2755         |

| Order #                                    | Product        | Lot Number | Roll Number | Length (ft) | Width (ft) | Square Ft    | Weight (lbs)  |
|--|----------------|------------|-------------|-------------|------------|--------------|---------------|
| 025319602                                  | LO-BENTOMAT ST | 200933LO   | 00002010    | 150         | 15         | 2250         | 2770          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002011    | 150         | 15         | 2250         | 2755          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002012    | 150         | 15         | 2250         | 2800          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002020    | 150         | 15         | 2250         | 2770          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002021    | 150         | 15         | 2250         | 2815          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002022    | 150         | 15         | 2250         | 2790          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002023    | 150         | 15         | 2250         | 2745          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002026    | 150         | 15         | 2250         | 2775          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002027    | 150         | 15         | 2250         | 2790          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002028    | 150         | 15         | 2250         | 2785          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002035    | 150         | 15         | 2250         | 2745          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002037    | 150         | 15         | 2250         | 2785          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002038    | 150         | 15         | 2250         | 2790          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002039    | 150         | 15         | 2250         | 2845          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002040    | 150         | 15         | 2250         | 2820          |
| 025319603                                  | LO-BENTOMAT ST | 200933LO   | 00002042    | 150         | 15         | 2250         | 2840          |
| <b>Totals:</b>                             |                |            |             | <b>6450</b> | <b>645</b> | <b>96750</b> | <b>118835</b> |
| Total Number of Rolls Certified: <b>43</b> |                |            |             |             |            |              |               |



## GCL MQA TRACKING FORM

Listing of finished and raw materials used to produce certification package number 000253196

| GCL            |            |               | Geotextiles     |            |               | Clay        |             |
|----------------|------------|---------------|-----------------|------------|---------------|-------------|-------------|
| LO-BENTOMAT ST |            |               | LO-N/W-WHITE-ST |            |               | LO-WOVEN-ST | LO-CG 50-ST |
| GCL Lot #      | GCL Roll # | Roll # Tested | Cap Lot #       | Cap Roll # | Roll # Tested | Base Roll # | Clay Lot #  |
| 200933LO       | 00001983   | 00001975      | 2020211929      |            |               | 2020217451  | 073009E     |
| 200933LO       | 00001984   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001985   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001986   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001987   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001988   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001989   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001990   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001991   | 00001975      | 2020211929      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001992   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001993   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001994   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001995   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001996   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001997   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001998   | 00001992      | 2020212096      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00001999   | 00001992      | 2020212097      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00002000   | 00001992      | 2020212097      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00002001   | 00001992      | 2020212097      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00002002   | 00001992      | 2020212097      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00002003   | 00001992      | 2020212097      |            |               | 2020135562  | 073009E     |
| 200933LO       | 00002004   | 00001992      | 2020212097      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002005   | 00001992      | 2020212097      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002006   | 00001992      | 2020211942      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002007   | 00001992      | 2020211942      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002008   | 00001992      | 2020211942      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002009   | 00002009      | 2020211942      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002010   | 00002009      | 2020211942      |            |               | 2020135562  | 073109A     |
| 200933LO       | 00002011   | 00002009      | 2020211942      |            |               | 2020200477  | 073109A     |

| GCL Lot # | GCL Roll # | Roll # Tested | Cap Lot #  | Cap Roll # | Roll # Tested | Base Roll # | Clay Lot # |
|-----------|------------|---------------|------------|------------|---------------|-------------|------------|
| 200933LO  | 00002012   | 00002009      | 2020211942 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002020   | 00002009      | 2020212086 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002021   | 00002009      | 2020212086 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002022   | 00002009      | 2020212086 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002023   | 00002009      | 2020212099 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002026   | 00002026      | 2020212099 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002027   | 00002026      | 2020212099 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002028   | 00002026      | 2020212099 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002035   | 00002026      | 2020212098 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002037   | 00002026      | 2020212094 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002038   | 00002026      | 2020212094 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002039   | 00002026      | 2020212094 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002040   | 00002026      | 2020212094 |            |               | 2020200477  | 073109A    |
| 200933LO  | 00002042   | 00002026      | 2020212094 |            |               | 081409AW2   | 073109A    |



## GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 000253196 have been tested in our production facility lab.

| Product   | Lot # Tested | Roll # Tested | Mass Area          | Grab Strength | Peel Strength |
|---|--------------|---------------|--------------------|---------------|---------------|
| Standard Test Method:   |              |               | ASTM D 5993        | ASTM D 6768   | ASTM D 6496   |
| Standard Specification:   |              |               | 0.75 lb/sq ft MARV | 30lbs/in MARV | 3.5lbs/in Min |
| Non-standard specifications were requested for this order as indicated on the attached property sheet |              |               |                    |               |               |
| LO-BENTOMAT ST  | 200933LO     | 00001975      | 0.90               | 60.9          | 8             |
| LO-BENTOMAT ST  | 200933LO     | 00001992      | 0.90               | 60.9          | 9.2           |
| LO-BENTOMAT ST  | 200933LO     | 00002009      | 0.94               | 60.9          | 5.9           |
| LO-BENTOMAT ST  | 200933LO     | 00002026      | 0.98               | 46.4          | 8.7           |

ASTM test methods and property specifications per CETCO standard unless non-standard specifications were requested.  
 Any non-standard property specifications requested for this order are noted on the attached GCL property specifications sheet.



## **BENTONITE CLAY CERTIFICATION**

The Bentonite Clay used to produce package 000253196 has been tested by American Colloid Company and yielded the following test results.

| <b>Reference</b> | <b>Moist</b> | <b>Swell</b> | <b>Fluid Loss</b> |
|------------------|--------------|--------------|-------------------|
| Test Method:     | ASTM D 2216  | ASTM D 5890  | ASTM D 5891       |
| Specification:   | 12% Max      | 24 ml/2g Min | 18 ml Max         |
| 073009E          | 10.4         | 27.0         | 15.6              |
| 073109A          | 10.8         | 25.0         | 17.2              |



## GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 000253196 was manufactured with geotextiles which were tested with the following results.

| <b>BASE</b>     |                    |                             |                              |
|-----------------|--------------------|-----------------------------|------------------------------|
| <b>Material</b> | <b>Roll Number</b> | <b>Mass Area<br/>oz/yd2</b> | <b>Grab Strength<br/>lbs</b> |
| PT              | 081409AW2          | 3.7                         | 169.0                        |
| PPX 82TEX       | 2020135562         | 3.4                         | 167.3                        |
| PPX 82TEX       | 2020200477         | 3.4                         | 141.7                        |
| PPX 82TEX       | 2020217451         | 3.4                         | 136.8                        |

| <b>CAP</b>      |                    |                             |                              |
|-----------------|--------------------|-----------------------------|------------------------------|
| <b>Material</b> | <b>Roll Number</b> | <b>Mass Area<br/>oz/yd2</b> | <b>Grab Strength<br/>lbs</b> |
| PPX 650         | 2020211929         | 7.2                         | 67.0                         |
| PPX 650         | 2020211942         | 7.5                         | 70.5                         |
| PPX 650         | 2020212086         | 7.3                         | 64.4                         |
| PPX 650         | 2020212094         | 7.1                         | 63.3                         |
| PPX 650         | 2020212096         | 7.0                         | 65.8                         |
| PPX 650         | 2020212097         | 7.0                         | 65.8                         |
| PPX 650         | 2020212098         | 7.0                         | 65.8                         |
| PPX 650         | 2020212099         | 7.0                         | 65.8                         |

Certifications from our suppliers are on file at our production facility. An '\*' or 'PT' indicates supplier certifications were unavailable prior to shipping so testing was performed at a CETCO lab.

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 19, 2009

SUBMITTAL NO.: 56872-10F

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: CETCO

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER:

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION / LOCATION INSTALLED   |
|-----|--|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL | N/A      | Proposed GCL:<br>CETCO Bentomat ST geosynthetic clay liner (GCL)<br>Material Delivery Checklist & Bill of Lading; 15 rolls |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

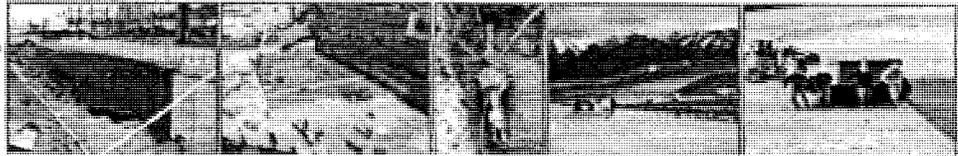
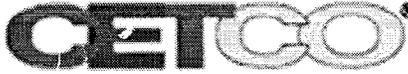
COMPLETED BY: Dan White  
[Please Print]

SIGNED:

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-19-09 TRUCK # 106  
 BILL OF LADING # 11773 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 0000 2012            |              | 150' x 15' |                |
| 2  | 0000 2022            |              |            |                |
| 3  | 0000 2021            |              |            |                |
| 4  | 0000 2020            |              |            |                |
| 5  | 0000 2011            |              |            |                |
| 6  | 0000 2040            |              |            |                |
| 7  | 0000 2023            |              |            |                |
| 8  | 0000 2037            |              |            |                |
| 9  | 0000 2038            |              |            |                |
| 10 | 0000 2026            |              |            |                |
| 1  | 0000 2027            |              |            |                |
| 2  | 0000 2042            |              |            |                |
| 3  | 0000 2039            |              |            |                |
| 4  | 0000 2035            |              |            |                |
| 5  | 0000 2028            |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |



Shippers No : 025319603 Previous Page

**Straight Bill of Lading - Original** Loader: BR Time In: 8/18/09-10:03:20 Time Out: 8/18/09-13:08:54

**Carrier:** Michelena  
**Consigned To :**  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
**Deliver Date :** 08/19/2009  
**Ship Date :** 08/17/2009 **Via:** NATI  
FOB ORIGIN

GEORGETOWN ID .  
Phone:

**Sold To :** 1823 **Ship To :** 119  
Consigned PO: 11773  
Truck #: 106 Trailer #: 7t/

**Shipping Plant:** CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity      | HM | Product Size / Description   | Weight     |
|---------------|----|--|------------|
| 33750.0000 SF |    | BENTOMAT ST<br><br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 43301.2500 |

Gross: 0.0000

Tare: 0.0000

**Total:**

43301

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

**CETCO**

Mark with an 'X' to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of issued of this billing of lading, the properly described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Stright Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COD charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

Per

**Placards Required?** Yes / No **Supplied?** Yes / No

P A C K I N G L I S T

CETCO  
 2870 FORBS AVENUE  
 HOFFMAN ESTATES IL 60004

ORDER NO:.. 025319603  
 ORDER DATE: 7/10/2009  
 SHIP DATE:.. 8/18/2009

SOLD TO: 1823  
 ENVIRONMENTAL SPECIALTIES  
 INTERNATIONAL, INC.  
 7943 PECUE LANE

SHIP FROM:.. CETCO LOVELL PLANT  
 FRT TERMS:.. PREPAID & ADD  
 SHIP VIA:.. AMERICO LOGISTICS

BATON ROUGE LA 70809

SHIP TO: 119  
 CENTRAL FARMERS

PO: 11773

GEORGETOWN ID

| PRODUCT        | SIZE U/M | LOT #    | ROLL#    | LNPTH | WIDTH | SHIP QTY | WEIGHT |
|----------------|----------|----------|----------|-------|-------|----------|--------|
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002011 | 150.0 | 15.0  | 2250.0   | 2755.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002012 | 150.0 | 15.0  | 2250.0   | 2800.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002020 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002021 | 150.0 | 15.0  | 2250.0   | 2815.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002022 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002023 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002026 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002027 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002028 | 150.0 | 15.0  | 2250.0   | 2785.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002035 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002037 | 150.0 | 15.0  | 2250.0   | 2785.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002038 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002039 | 150.0 | 15.0  | 2250.0   | 2845.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002040 | 150.0 | 15.0  | 2250.0   | 2820.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002042 | 150.0 | 15.0  | 2250.0   | 2840.0 |

ORDER TOTALS.....

===== =====  
 33750.0 41850.0

TOTAL ITEMS..... 15





- S. B., Inc. -

dba

# Sherman Bros. Heavy Trucking

dba Sound Transportation

P.O. Box 706 - Harrisburg, OR 97446  
541/935-7751 or WATS 800/547-8980



|           |        |
|-----------|--------|
| TRUCK #   | 557    |
| TRAILER # | 485108 |

B/L NO. 322538

NOTE: Carrier not responsible for shipper's load, weight and count.  
HAZARDOUS MATERIAL REG # 060807 552 037P &  
# 060807 552 035P

ICCMC 77061 CALT 124891  
OPUC 80785 WUTC CC67

## COMBINATION ORIGINAL BILL OF LADING AND TRANSPORTATION RECEIPT

- NOT NEGOTIABLE -

DISPATCH NO. 1091304  
SHIPPER'S NO. 025319604  
P.O. No. 11773

DATE  
08-17-09

RECEIVED, subject to the classifications and tariffs in effect on the date of the receipt by the carrier of the property described in the Original Bill of Lading.

CONSIGNEE on collection on delivery shipments the letters "C.O.D." must appear before consignee's name.

SHIPPER CETCO

NAME CENTRAL FARMERS

ADDRESS

ADDRESS

CITY & STATE LOVELL, WY

CITY & STATE GEORGETOWN, ID

CONTACT PHONE

CONTACT PHONE

Unless a greater value is declared by the shipper, and stated on the bill of lading, the carrier's liability for loss or damage to any package or article shall not exceed \$5,000 per ton of 2,000 pounds, actual weight, in accordance with the tariff provisions that govern.

Customer is liable for any and all damages to private roads that may occur during pick-up, delivery or transit.

SHIPPER HEREBY DECLARES that the released value of this shipment is \$ \_\_\_\_\_ PER: \_\_\_\_\_ Excess value, if any, over \$5,000 per ton of 2,000 pounds per package or article shall be charged for in accordance with tariff provisions that govern.

Signed \_\_\_\_\_ Customer

| DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS | WEIGHT (Subject to Correction) | PERMITS |
|---|--------------------------------|---------|
| 3 ROLLS CLOTH, FABRIC                                 | 37528                          |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |
|   |                                |         |

**AUTHORITY TO UNLOAD**  
RECEIVER HAS VERIFIED THAT A CONNECTION HAS BEEN MADE FROM THE PROPER TRAILER OUTLET TO THE PROPER STORAGE FACILITY AND THE CARRIER MANIFEST AND VENDOR SHIPPING DOCUMENT MATCH AS TO THE PROPER MATERIAL ORDERED.

CONSIGNEE SIGNATURE DATE

SUBJECT TO SECTION 7 OF CONDITIONS OF APPLICABLE BILL OF LADING, IF THIS SHIPMENT IS TO BE DELIVERED TO THE CONSIGNEE WITHOUT RECOURSE ON THE CONSIGNOR THE CONSIGNOR SHALL SIGN THE FOLLOWING STATEMENT:  
THE CARRIER SHALL NOT MAKE DELIVERY OF THIS SHIPMENT WITHOUT PAYMENT OF FREIGHT AND ALL OTHER LAWFUL CHARGES.

SIGNATURE OF SHIPPER  
Shipper Signature

| LENGTH OF FRT. | WIDTH | HEIGHT | OVERALL HEIGHT | TARP | REQUIRED DELIVERY DATE & TIME |
|----------------|-------|--------|----------------|------|-------------------------------|
|                |       |        |                |      | 08-18-09                      |

RECEIVED SHIPMENT IN GOOD ORDER EXCEPT AS NOTED HEREON

Consignee Signature Date

Delivering Driver Signature

CUSTOMER

ICC AND PUC RULES REQUIRE PAYMENT WITHIN 7 DAYS OF PRESENTATION OF FREIGHT BILL

FOR SHIPMENTS IN, THROUGH, AND OUT OF THE STATE OF CALIFORNIA, FAILURE TO PAY BILLED CHARGES MAY RESULT IN A LIEN ON FUTURE SHIPMENTS, INCLUDING THE COST OF STORAGE AND APPROPRIATE SECURITY FOR THE CLOSURE OF EMPLOYMENT HELD.



**LINING TECHNOLOGIES**

800.527.9948    [www.cetco.com](http://www.cetco.com)

**GCL ORDER PACKING LIST**

GCL shipped for certification package number 000253196

| Order # | Product | Lot Number | Roll Number | Length<br>(ft) | Width<br>(ft) | Square Ft | Weight<br>(lbs) |
|---------|---------|------------|-------------|----------------|---------------|-----------|-----------------|
|---------|---------|------------|-------------|----------------|---------------|-----------|-----------------|



**GCL MQA TRACKING FORM**

Listing of finished and raw materials used to produce certification package number 000253196

| GCL            |            |               | Geotextiles     |            |               | Clay        |             |
|----------------|------------|---------------|-----------------|------------|---------------|-------------|-------------|
| LO-BENTOMAT ST |            |               | LO-N/W-WHITE-ST |            |               | LO-WOVEN-ST | LO-CG 50-ST |
| GCL Lot #      | GCL Roll # | Roll # Tested | Cap Lot #       | Cap Roll # | Roll # Tested | Base Roll # | Clay Lot #  |
| 200933LO       | 00002013   | 00002009      | 2020211942      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002014   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002015   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002016   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002017   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002018   | 00002009      | 2020212086      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002024   | 00002009      | 2020212099      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002025   | 00002009      | 2020212099      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002029   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002030   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002031   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002032   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002033   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002034   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002036   | 00002026      | 2020212098      |            |               | 2020200477  | 073109A     |
| 200933LO       | 00002041   | 00002026      | 2020212094      |            |               | 081409AW1   | 073109A     |
| 200933LO       | 00002043   | 00002043      | 2020212094      |            |               | 081409AW2   | 073109A     |



**GCL MANUFACTURING QUALITY CONTROL TEST DATA**

The following rolls in GCL certification package number 000253196 have been tested in our production facility lab.

| <b>Product</b>  | <b>Lot # Tested</b> | <b>Roll # Tested</b> | <b>Mass Area</b>   | <b>Grab Strength</b> | <b>Peel Strength</b> |
|---|---------------------|----------------------|--|----------------------|----------------------|
|   |                     |                      | Standard Test Method: ASTM D 5993                                      | ASTM D 6768          | ASTM D 6496          |
|   |                     |                      | Standard Specification: 0.75 lb/sq ft MARV 30lbs/in MARV 3.5lbs/in Min |                      |                      |
| Non-standard specifications were requested for this order as indicated on the attached property sheet |                     |                      |  |                      |                      |
| LO-BENTOMAT ST  | 200933LO            | 00002009             | 0.94   | 60.9                 | 5.9                  |
| LO-BENTOMAT ST  | 200933LO            | 00002026             | 0.98   | 46.4                 | 8.7                  |
| LO-BENTOMAT ST  | 200933LO            | 00002043             | 0.94   | 46.4                 | 5.9                  |

ASTM test methods and property specifications per CETCO standard unless non-standard specifications were requested.  
 Any non-standard property specifications requested for this order are noted on the attached GCL property specifications sheet.



**LINING TECHNOLOGIES**

800.527.9948    [www.cetco.com](http://www.cetco.com)

## **BENTONITE CLAY CERTIFICATION**

The Bentonite Clay used to produce package 000253196 has been tested by American Colloid Company and yielded the following test results.

| <b>Reference</b>         | <b>Moist</b> | <b>Swell</b> | <b>Fluid Loss</b> |
|--------------------------|--------------|--------------|-------------------|
| Test Method: ASTM D 2216 | ASTM D 5890  | ASTM D 5891  |                   |
| Specification: 12% Max   | 24 ml/2g Min | 18 ml Max    |                   |
| 073109A                  | 10.8         | 25.0         | 17.2              |



**GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS**

The GCL in certification package number 000253196 was manufactured with geotextiles which were tested with the following results.

**BASE**

| Material  | Roll Number | Mass Area<br>oz/yd <sup>2</sup> | Grab Strength<br>lbs |
|-----------|-------------|---------------------------------|----------------------|
| PT        | 081409AW1   | 3.6                             | 162.0                |
| PT        | 081409AW2   | 3.7                             | 169.0                |
| PPX 82TEX | 2020200477  | 3.4                             | 141.7                |

**CAP**

| Material | Roll Number | Mass Area<br>oz/yd <sup>2</sup> | Grab Strength<br>lbs |
|----------|-------------|---------------------------------|----------------------|
| PPX 650  | 2020211942  | 7.5                             | 70.5                 |
| PPX 650  | 2020212086  | 7.3                             | 64.4                 |
| PPX 650  | 2020212094  | 7.1                             | 63.3                 |
| PPX 650  | 2020212098  | 7.0                             | 65.8                 |
| PPX 650  | 2020212099  | 7.0                             | 65.8                 |

Certifications from our suppliers are on file at our production facility. An "M" or "PT" indicates supplier certifications were unavailable prior to shipping so testing was performed at a CETCO lab.

P A C K I N G L I S T

CETCO  
 2870 FORBS AVENUE  
 HOFFMAN ESTATES IL 60004

ORDER NO:.. 025319604  
 ORDER DATE: 7/10/2009  
 SHIP DATE:.. 8/17/2009

SOLD TO: 1823  
 ENVIRONMENTAL SPECIALTIES  
 INTERNATIONAL, INC.  
 7943 PECUE LANE

SHIP FROM:.. CETCO LOVELL PLANT  
 FRT TERMS:.. PREPAID & ADD  
 SHIP VIA:.. AMERICO LOGISTICS

BATON ROUGE LA 70809

SHIP TO: 119  
 CENTRAL FARMERS

GEORGETOWN ID

PO: 11773

| PRODUCT        | SIZE U/M | LOT #    | ROLL#    | LNPTH | WIDTH | SHIP QTY | WEIGHT |
|----------------|----------|----------|----------|-------|-------|----------|--------|
| L BENTOMAT ST  | SFT SF   | 200933LO | 00001983 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001985 | 150.0 | 15.0  | 2250.0   | 2735.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001986 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001987 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001988 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001989 | 150.0 | 15.0  | 2250.0   | 2755.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001990 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001992 | 150.0 | 15.0  | 2250.0   | 2745.0 |
| LO BENTOMAT ST | SFT SF   | 200933LO | 00001993 | 150.0 | 15.0  | 2250.0   | 2740.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001994 | 150.0 | 15.0  | 2250.0   | 2735.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001995 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001997 | 150.0 | 15.0  | 2250.0   | 2750.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00001998 | 150.0 | 15.0  | 2250.0   | 2755.0 |

ORDER TOTALS.....

===== =====  
 29250.0 35685.0

TOTAL ITEMS..... 13



Shippers No : 025319604

Previous Page

**Straight Bill of Lading - Original**

Loader: BR Time In: 8/17/09-08:50:38 Time Out: 8/17/09-10:08:12

Carrier: Sherman Bros  
Consigned To :  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
Deliver Date : 08/19/2009  
Ship Date : 08/17/2009 Via: NATI  
FOB ORIGIN

GEORGETOWN ID  
Phone:

Sold To : 1823 Ship To : 119  
Consigned PO: 11773  
Truck #: 557 Trailer #: 48S108/

Shipping Plant: CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity      | HM | Product Size / Description   | Weight     |
|---------------|----|--|------------|
| 29250.0000 SF |    | BENTOMAT ST<br><br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 37527.7500 |

Gross: 0.0000

Tare: 0.0000

Total:

37528

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COO charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

**CETCO**  
Mark with an 'X' to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of this billing of lading, the property described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and defined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

Per

Placards Required? Yes / No Supplied? Yes / No

  
Dan White (CRA)



Shippers No : 025319601 Previous Page

**Straight Bill of Lading - Original**

Loader: DR Time In: 8/14/09-13:55:03 Time Out: 8/14/09-17:54:06

**Carrier:** WANNER ROCK  
**Consigned To :**  
CENTRAL FARMERS

CETCO 2870 FORBS AVENUE  
HOFFMAN ESTATES IL 60192  
**Deliver Date :** 08/19/2009  
**Ship Date :** 08/17/2009 **Via:** NATI  
FOB ORIGIN

GEORGETOWN ID  
Phone:

**Sold To :** 1823 **Ship To :** 119  
Consigned PO: 11773  
Trailer #: 26 Trailer #: W18/

**Shipping Plant:** CETCO LOVELL PLANT P.O. BOX 428 LOVELL WY 82431  
Product Lots: Seal #: --enter here-- Container #:

**Global Comments:** ALL SHIPMENTS LOADED ON FLATBED OR OPEN TOP TRAILERS MUST BE COVERED WITH ADEQUATE TARPULIN PRIOR TO HIGHWAY MOVEMENT. CARRIER WILL BE HELD FULLY RESPONSIBLE FOR LOSS OR DAMAGE OCCURRING TO UNPROTECTED LOADS. LOADS MAY NOT BE UNTARPED FOR ANY REASON PRIOR TO DELIVERY TO THE CUSTOMER UNTARPING THE LOAD MAY RESULT IN REJECTION OF THE MATERIAL AND LIABILITY TO THE CARRIER

**Customer Comments:**

**Order Comments:** MAP & WRITTEN DIRECTIONS PROVIDED TO DRIVER CONTACT - DAN WHITE @ 269-998-2363

| Quantity      | HM | Product Size / Description   | Weight     |
|---------------|----|--|------------|
| 38250.0000 SF |    | BENTOMAT ST<br>CLOTH,FABRIC OR PIECE GOODS,NOI,OTHER THAN FOR THE MANUFACTURE OF CLOTHING:<br>CLASS 65 / ITEM 49265 SUB 10 | 49074.7500 |
| 8.0000 EA     |    | COMMODITY GRANULAR-50<br>(10902/024)<br>CLAY-BENTONITE-GROUND (CLASS 50)<br>3295232 / CLASS 50 ITEM 48170                  | 400.0000   |

is: 0.0000

Tare: 0.0000

**Total:**

49475

Subject to section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges

**CETCO**

Mark with an 'X' to designate hazardous materials as defined in title 49 of the code of Federal Regulations. Received Subject to the classifications and lawfully filed tariffs in effect on the date of issued of this billing of lading, the property described above in apparent good order, except as noted (contents and conditions of contents of packages unknown) marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of the said property over all or any portion of the said route to destination, and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification of tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. **Carrier:**

This is to certify that the above named materials are properly classified, described, packaged, and labeled and are in proper condition for transportation according to the applicable regulations of the department of Transportation.

If the charges are to be prepaid, write or stamp here, "Prepaid."

**Prepaid**

Shipper liable for the linehaul charges only. COD charges to be paid by: Consignee

Phone:  
Fax:  
Attn:

Per **Placards Required?** Yes / No **Supplied?** Yes / No

P A C K I N G   L I S T

CETCO  
2870 FORBS AVENUE  
HOFFMAN ESTATES      IL 60004

ORDER NO:.. 025319601  
ORDER DATE: 7/10/2009  
SHIP DATE:.. 8/14/2009

SOLD TO: 1823  
ENVIRONMENTAL SPECIALTIES  
INTERNATIONAL, INC.  
7943 PECUE LANE

SHIP FROM:.. CETCO LOVELL PLANT  
FRT TERMS:.. PREPAID & ADD  
SHIP VIA:.. AMERICO LOGISTICS

BATON ROUGE              LA 70809

SHIP TO: 119  
CENTRAL FARMERS

PO: 11773

GEORGETOWN              ID .

| PRODUCT        | SIZE U/M | LOT #    | ROLL#    | LNTH  | WIDTH | SHIP QTY | WEIGHT |
|----------------|----------|----------|----------|-------|-------|----------|--------|
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002013 | 150.0 | 15.0  | 2250.0   | 2785.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002014 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002015 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002016 | 150.0 | 15.0  | 2250.0   | 2795.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002017 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002018 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002024 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002025 | 150.0 | 15.0  | 2250.0   | 2800.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002029 | 150.0 | 15.0  | 2250.0   | 2775.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002030 | 150.0 | 15.0  | 2250.0   | 2770.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002031 | 150.0 | 15.0  | 2250.0   | 2780.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002032 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002033 | 150.0 | 15.0  | 2250.0   | 2760.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002034 | 150.0 | 15.0  | 2250.0   | 2805.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002036 | 150.0 | 15.0  | 2250.0   | 2790.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002041 | 150.0 | 15.0  | 2250.0   | 2815.0 |
| LO-BENTOMAT ST | SFT SF   | 200933LO | 00002043 | 150.0 | 15.0  | 2250.0   | 2845.0 |

ORDER TOTALS.....

===== =====  
38250.0      47390.0

TOTAL ITEMS..... 17

This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

**Wanner Rock LLC**  
P.O. BOX 466  
Preston, Idaho 83263  
208-852-3122 or 851-3122

**STRAIGHT BILL OF LADING**  
**Original - Not Negotiable**

Shipper No. \_\_\_\_\_

Carrier No. \_\_\_\_\_

Date \_\_\_\_\_

|   |     |                             |     |
|---|-----|-----------------------------|-----|
| TO: CONSIGNEE<br><small>On Collect or Delivery Shipments the letters "COD" must appear before consignee's name - or as otherwise provided in Item 430, Sec. 1</small> |     | FROM: SHIPPER               |     |
| STREET  |     | STREET                      |     |
| DESTINATION   | ZIP | ORIGIN                      | ZIP |
| VEHICLE NUMBER  |     | U.S. DOT Hazmat Reg. Number |     |
| ROUTE   |     |                             |     |

| NO. SHIPPING UNITS | * H. M. | KIND OF PACKAGING, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS | WEIGHT (Subject to Correction) | RATE | CHARGES |
|--------------------|---------|--|--------------------------------|------|---------|
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |
|                    |         |  |                                |      |         |

|  |  |   |                                  |
|--|--|---|----------------------------------|
| REMIT C.O.D. TO: ADDRESS   | <b>COD</b>   | AMT. \$   | C.O.D. Fee: \$                   |
| <small>Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.<br/>The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding</small><br>\$ _____ per _____ | <small>Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</small><br>_____<br><small>(Signature of Consignor)</small> | Prepaid <input type="checkbox"/>  | Collect <input type="checkbox"/> |
|  |  | <b>TOTAL CHARGES \$</b><br>FREIGHT CHARGES<br>FREIGHT PREPAID <input type="checkbox"/> Check box if charges are to be collect<br><small>except when box at right is checked</small> |                                  |

RECEIVED, subject to the classification and lawfully filed tariffs in effect in the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment. Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

|                                     |  |
|-------------------------------------|--|
| SHIPPER                             | CARRIER                                      |
| PER                                 | <b>Wanner Rock LLC, Preston, Idaho 83263</b> |
| EMERGENCY RESPONSE TELEPHONE NUMBER | DATE   |

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.504)  
Mark with an "X" to designate Hazardous Material as defined in the Department of Transportation Regulations governing the transportation of hazardous materials on bills of lading per Section 172.201 (a)(1)(ii) of Title 49, code of Federal Regulations. Also, when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204 (a) of the Federal Regulations must be indicated on the bill of lading. Unless a specific exception from this requirement is provided in the Regulations for a particular material.

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-18-09 TRUCK # 26  
 BILL OF LADING # 002498 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 00002017             |              | 150' X 15' |                |
| 2  | 00002013             |              | "          |                |
| 3  | 00002018             |              | "          |                |
| 4  | 00002014             |              | "          |                |
| 5  | 00002025             |              | "          |                |
| 6  | 00002016             |              | "          |                |
| 7  | 00002029             |              | "          |                |
| 8  | 00002032             |              | "          |                |
| 9  | 00002015             |              | "          |                |
| 10 | 00002036             |              | "          |                |
| 1  | 00002030             |              | "          |                |
| 2  | 00002034             |              | "          |                |
| 3  | 00002043             |              | "          |                |
| 4  | 00002033             |              | "          |                |
| 5  | 00002041             |              | "          |                |
| 6  | 00002024             |              | "          |                |
| 7  | 00002031             |              | "          |                |
| 8  | 8 bags bentonite     |              | 50 #       |                |
| 9  |                      |              |            |                |

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-18-09 TRUCK # 557  
 BILL OF LADING # 322536 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE GCL  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 0000 1992            |              | 150' x 15' |                |
| 2  | 0000 1993            |              |            |                |
| 3  | 0000 1983            |              |            |                |
| 4  | 0000 1988            |              |            |                |
| 5  | 0000 1985            |              |            |                |
| 6  | 0000 1990            |              |            |                |
| 7  | 0000 1989            |              |            |                |
| 8  | 0000 1987            |              |            |                |
| 9  | 0000 1986            |              |            |                |
| 10 | 0000 1987            |              |            |                |
| 1  | 0000 1995            |              |            |                |
| 2  | 0000 1994            |              |            |                |
| 3  | 0000 1998            |              |            |                |
| 4  |                      |              |            |                |
| 5  |                      |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |



**PACER**  
TRANSPORT

**This Memorandum**

is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

P.O. BOX 1105  
DESOTO, TX 75123

Shipper No. \_\_\_\_\_

Carrier No. \_\_\_\_\_

Date 7-31-09

|  |  |  |                            |
|--|--|--|----------------------------|
| TO: Consignee <u>CENTRAL FARMERS REMEDIATION</u>       |  | FROM: Shipper <u>JC ELLIOTT LEADFILL</u> |                            |
| Street <u>GEORGETOWN CANYON RD</u>                     |  | Street <u>7001 MYERS STREET</u>          |                            |
| Destination <u>GEORGETOWN ID</u> Zip Code <u>82439</u> |  | Origin <u>CORBUS CHWY TX 72416</u>       |                            |
| Route _____  |  |  | Vehicle Number <u>F074</u> |

| No. Shipping Units | HM* | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Weight (subject to correction) | Rate | CHARGES |
|--------------------|-----|--|--------------------------------|------|---------|
| <u>1/2</u>         |     | <u>Roll 23' X 3' 3.7wt</u>   | <u>34714</u>                   |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |

*Handwritten signature: Timothy Reed / CRA*

|   |   |   |  |
|---|---|---|--|
| REMIT TO: ADDRESS<br><small>NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of a property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding</small><br><u>1.75</u> per <u>Pound</u><br><small>Unless Otherwise Stated</small> | This is to certify that the above named materials are property classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.<br>Signature _____ | <b>COD</b> Amt: \$ _____<br><small>Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</small><br><small>(Signature of Consignor)</small> | C.O.D. FEE:<br>PREPAID <input type="checkbox"/> \$<br>COLLECT <input type="checkbox"/> \$<br><b>TOTAL CHARGES:</b> \$ _____<br>FREIGHT CHARGES:<br>FREIGHT PREPAID <input type="checkbox"/> Check box if charges are to be collect<br>except when box at right is checked <input type="checkbox"/> |
|---|---|---|--|

RECEIVED subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

|                     |                               |
|---------------------|-------------------------------|
| SHIPPER _____       | CARRIER <b>PacerTransport</b> |
| ER _____            | PER _____                     |
| DATE <u>7-31-09</u> |                               |

\* is Materials

*FML*

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: July 23, 2009

SUBMITTAL NO.: 56872-11A

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: GSE

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 2   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.3 FML | N/A      | GSE UltraFlex Textured Geomembrane, LLDPE 40 mil Roll Certifications for LLDPE Liner (FML) |
|     |  |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED: \_\_\_\_\_



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 7-23-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 002

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE | DRAWING NO. | REV. | DESCRIPTION                                    | ACTION ( * ) |
|--------|------|-------------|------|--|--------------|
| e-copy | 7-13 |             |      | Roll Certifications LLDPE Geomembrane 10 Rolls |              |
|        |      |             |      |  |              |
|        |      |             |      |  |              |
|        |      |             |      |  |              |
|        |      |             |      |  |              |
|        |      |             |      |  |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....

# ***GSE Roll Allocation***

***Order*** 57547

***Customer*** Environmental Specialists, Inc.

***Site*** Central Waste Nu-West Central Farmer's

| <i><b>Roll#</b></i> | <i><b>Resin Lot</b></i> | <i><b>Product Code</b></i> | <i><b>Description</b></i> | <i><b>Mfg. Date</b></i> | <i><b>Length</b></i> |
|---------------------|-------------------------|----------------------------|---------------------------|-------------------------|----------------------|
| 103148996           | CXM811400               | LUT040A000                 | LUT040A000                | 2/27/2009               | 700                  |
| 103149005           | CXM811400               | LUT040A000                 | LUT040A000                | 2/28/2009               | 700                  |
| 103149009           | CXM811400               | LUT040A000                 | LUT040A000                | 2/28/2009               | 440                  |
| 103149024           | CYA810280               | LUT040A000                 | LUT040A000                | 3/1/2009                | 700                  |
| 103149036           | CYA810280               | LUT040A000                 | LUT040A000                | 3/2/2009                | 700                  |
| 103149037           | CYA810280               | LUT040A000                 | LUT040A000                | 3/2/2009                | 700                  |
| 103149040           | CYA810280               | LUT040A000                 | LUT040A000                | 3/2/2009                | 700                  |
| 103149045           | CYA810280               | LUT040A000                 | LUT040A000                | 3/2/2009                | 700                  |
| 103149058           | CYB811050               | LUT040A000                 | LUT040A000                | 3/3/2009                | 700                  |
| 103149059           | CYB811050               | LUT040A000                 | LUT040A000                | 3/3/2009                | 700                  |



# Roll Test Data Report

Sales Order No.  
57547

Project Number  
526618

Customer Name  
Environmental Specialists,  
Inc.

Project Location  
Georgetown, Idaho

Product Name  
LUT040A000



Report Date  
7/23/2009

| Roll No.  | ASTM D 5994 |           |             | ASTM D638, Type IV / D6693 |               |               | ASTM D 1004 |            | ASTM D 4833 | ASTM D 1505 | ASTM D 4218/1603 | ASTM D 5596          | GRI GM 12       |                 |
|-----------|-------------|-----------|-------------|----------------------------|---------------|---------------|-------------|------------|-------------|-------------|------------------|----------------------|-----------------|-----------------|
|           | Average     | Minimum   | TD Strength | MD Strength                | TD Elongation | MD Elongation | TD Tear     | MD Tear    | Puncture    |             | Carbon Black     | Carbon Black         | Asperity Height | Asperity Height |
|           | Thickness   | Thickness | @ Break     | @ Break                    | @ Break       | @ Break       | Resistance  | Resistance | Resistance  | Density     | Content          | Dispersion           | Side A          | Side B          |
|           | (mils)      | (mils)    | (ppi)       | (ppi)                      | (%)           | (%)           | (lbs)       | (lbs)      | (lbs)       | (g/cc)      | (%)              | Views in Cat1 - Cat2 | (mils)          | (mils)          |
|           | every roll  |           |             | every 3rd                  |               | every 3rd     |             | every 3rd  | every 3rd   | every 3rd   | every 3rd        |                      | every 2nd       |                 |
| 103148996 | 41          | 38        | 143         | 176                        | 597           | 688           | 33          | 34         | 95          | 0.93        | 2.50             | 10                   | 23              | 21              |
| 103149005 | 41          | 39        | 139         | 170                        | 580           | 710           | 30          | 30         | 87          | 0.927       | 2.39             | 10                   | 21              | 19              |
| 103149009 | 40          | 37        | 139         | 162                        | 592           | 669           | 30          | 32         | 94          | 0.927       | 2.46             | 10                   | 22              | 21              |
| 103149024 | 41          | 38        | 142         | 168                        | 598           | 638           | 32          | 31         | 98          | 0.93        | 2.15             | 10                   | 20              | 19              |
| 103149036 | 41          | 37        | 136         | 144                        | 591           | 595           | 28          | 30         | 95          | 0.929       | 2.28             | 10                   | 19              | 20              |
| 103149037 | 42          | 40        | 141         | 142                        | 571           | 626           | 29          | 30         | 89          | 0.927       | 2.32             | 10                   | 20              | 20              |
| 103149040 | 40          | 37        | 145         | 163                        | 603           | 655           | 29          | 30         | 93          | 0.929       | 2.50             | 10                   | 23              | 21              |
| 103149045 | 41          | 38        | 145         | 174                        | 605           | 688           | 31          | 32         | 97          | 0.927       | 2.52             | 10                   | 20              | 20              |
| 103149058 | 41          | 39        | 152         | 164                        | 653           | 666           | 30          | 31         | 94          | 0.93        | 2.54             | 10                   | 21              | 20              |
| 103149059 | 42          | 39        | 152         | 164                        | 653           | 666           | 30          | 31         | 94          | 0.93        | 2.54             | 10                   | 24              | 21              |

Laboratory Manager: Jane Allen

GSE-8.2.4-029 Rev -- 03/05

This test report shall not be reproduced, except in full, without written approval of the laboratory.

19103 Gundle Road - Houston, Texas 77073



## Certificate of Analysis

Shipped To: CHEVRON PHILLIPS CHEM. CO LP: GSE  
19103 GUNDLE ROAD  
WESTFIELD TX 77090  
USA

CPC Delivery #: 87808629  
PO #: 46823  
Weight: 183750 LB  
Ship Date: 02/04/2009  
Package: BULK  
Mode: Hopper Car  
Car #: CEFX054222  
Seal No: 482991

Recipient: UP TRACK 14732 Phouangsavanh  
Fax:

Product: PE 7104 BULK

Lot Number: CXM811400

| Property        | Test Method | Value    | Unit   |
|-----------------|-------------|----------|--------|
| Melt Index      | ST-103      | 0.34     | g/10mi |
| Density         | ST-292      | 0.918    | g/cm3  |
| Production date |             | 20081122 |        |

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP.  
**However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.**

Kevin Ayres  
Quality Control Supervisor

For CoA questions contact Customer Service Representative at 800-231-1212



## Certificate of Analysis

Shipped To: CHEVRON PHILLIPS CHEM. CO LP: GSE  
19103 GUNDLE ROAD  
WESTFIELD TX 77090  
USA

CPC Delivery #: 87812309  
PO #: 46823  
Weight: 181300 LB  
Ship Date: 02/12/2009  
Package: BULK  
Mode: Hopper Car  
Car #: PSPX002296  
Seal No: 483785

Recipient: UP TRACK 14732 Phouangsavanh  
Fax:

Product: PE 7104 BULK

Lot Number: CYA810280

| Property        | Test Method | Value    | Unit   |
|-----------------|-------------|----------|--------|
| Melt Index      | ST-103      | 0.35     | g/10mi |
| Density         | ST-292      | 0.919    | g/cm3  |
| Production date |             | 20090112 |        |

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP.  
**However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.**

Kevin Ayres  
Quality Control Supervisor

For CoA questions contact Customer Service Representative at 800-231-1212



## Certificate of Analysis

Shipped To: CHEVRON PHILLIPS CHEM. CO LP: GSE  
19103 GUNDLE ROAD  
WESTFIELD TX 77090  
USA

CPC Delivery #: 87816920  
PO #: 46823  
Weight: 183900 LB  
Ship Date: 02/20/2009  
Package: BULK  
Mode: Hopper Car  
Car #: GOCX058303  
Seal No: 485115

Recipient: UP TRACK 14732 Phouangsavanh  
Fax:

Product: PE 7104 BULK

Lot Number: CYB811050

| Property        | Test Method | Value    | Unit   |
|-----------------|-------------|----------|--------|
| Melt Index      | ST-103      | 0.31     | g/10mi |
| Density         | ST-292      | 0.918    | g/cm3  |
| Production date |             | 20090216 |        |

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP.  
**However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.**

Kevin Ayres  
Quality Control Supervisor

For CoA questions contact Customer Service Representative at 800-231-1212



Report Date  
7/23/2009

## Quality Assurance Laboratory Test Results

**Job Name:** Central Waste Nu-West Central Farmer's  
**Sales Order:** 57547

**Required Testing:** ASTM D 3895 -- Standard Test Method for Oxidative Induction Time of Polyolefins by Differential Scanning Calorimetry

**Custom Frequency:** 1/200,000 lbs.

**Custom Criteria:** 100 minutes

| <b>Product Code</b> | <b>Resin Lot Number</b> | <b>Test Results</b> |
|---------------------|-------------------------|---------------------|
| LUT040A000          | CXM811400               | PASS                |
| LUT040A000          | CYA810280               | PASS                |
| LUT040A000          | CYB811050               | PASS                |

Approved By: Debra Gortemiller  
Date Approved: July 22, 2009

*The above stated data shall not be reproduced except in full, without the written approval of the laboratory.*

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 3, 2009

SUBMITTAL NO.: 56872-11B

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: GSE

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE  | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|--|----------|--|
| 2   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.3 FML | N/A      | GSE UltraFlex Textured Geomembrane, LLDPE 40 mil<br>Material Delivery Checklist & Bill of Lading; 10 rolls |
|     |  |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED: \_\_\_\_\_

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-03-09 TRUCK # Vin YNS13617  
 BILL OF LADING # 09-06-1169-001 PROJECT NAME CF-GTC  
 PROJECT NUMBER \_\_\_\_\_ MATERIAL TYPE FML  
 LOCATION CF GTC

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE     | DAMAGE/REMARKS                                 |      |
|----|----------------------|--------------|---------------|--|------|
| 1  | 103149058            | CYB811000    | 22.5 (15,750) | good   | 3692 |
| 2  | 103149045            | CYAB10280    | 15,750        | "  | 3722 |
| 3  | 103149009            | CXM811400    | 440 x 22.5    | " small roll                                   | UNIK |
| 4  | 103149005            | "            | 15,750        | good cond.                                     | 3676 |
| 5  | 103149024            | CYAB10280    | 15,750        | "  | 3736 |
| 6  | 103149036            | "            | 15,750        | "  | 3648 |
| 7  | 103149059            | CYB811050    | 15,750        | "  | 3688 |
| 8  | 103149040            | CYAB10280    | 15,750        | "  | 3672 |
| 9  | 103148996            | CXM811400    | 15,750        | "  | 3700 |
| 10 | 103149037            | CYAB10280    | 15,750        | small tear -<br>3' from end<br>in center (~2") | 3702 |
| 1  |                      |              |               |  |      |
| 2  |                      |              |               |  |      |
| 3  |                      |              |               |  |      |
| 4  |                      |              |               |  |      |
| 5  |                      |              |               |  |      |
| 6  |                      |              |               |  |      |
| 7  |                      |              |               |  |      |
| 8  |                      |              |               |  |      |
| 9  |                      |              |               |  |      |

WT (lbs)  
 3692  
 3722  
 UNIK  
 3676  
 3736  
 3648  
 3688  
 3672  
 3700  
 3702



STRAIGHT BILL OF LADING  
ORIGINAL - NOT NEGOTIABLE

**BOL# 09-06-1169-001**

Environmental Specialties International, Inc  
7943 Pecue Lane Suite A  
Baton Rouge, LA 70809

DATE 7/31/2009

**CH Robinson**

|   |   |                                      |                             |
|---|---|--------------------------------------|-----------------------------|
| TO: (NAME OF CARRIER)   |   | FROM: (SCAC)                         |                             |
| CONSIGNEE   | Central Farmers Remediation                   | SHIPPER                              | ESI c/o JC Elliott Landfill |
| ON "COLLECT ON DELIVERY" SHIPMENTS, THE "COD" MUST APPEAR BEFORE THE CONSIGNEE'S NAME - OR AS OTHERWISE IN FIELD 420, SECTION 1 |   |                                      |                             |
| STREET  | No physical address - see attached directions | STREET                               | 7001 Ayres Street           |
| DESTINATION   | Georgetown, ID                                | ORIGIN                               | Corpus Christi, TX 78416    |
| ZIP CODE  | 83239   | Attention: Rodney Story 225-317-3699 |                             |
| Contact:  | Dan White 269-998-2363                        | Seal #                               | TAG #                       |

| NO. SHIPPING UNITS | KIND OF PACKAGING, DESCRIPTION OF ARTICLES | Quantity | WEIGHT (SUBJECT TO CORRECTION) |
|--------------------|--|----------|--------------------------------|
| 9 rolls            | HDPE Liner                                 | 9 rolls  | 27,000 lbs                     |
| 9 1/2 rolls        | Roll size: 23' x 3' x 3000 lbs             |          | 1800                           |
| Roll #             |  |          |                                |
| 103149058          |  |          |                                |
| 103149009          |  |          |                                |
| 103149045          |  |          |                                |
| 103149005          |  |          |                                |
| 103149024          |  |          |                                |
| 103149056          |  |          |                                |
| 103149059          |  |          |                                |
| 103149048          |  |          |                                |
| 103149996          |  |          |                                |
| * 103149037        |  |          |                                |
| Total              |  | Total    | Total 34884                    |
| 1 roll             |  | 1 roll   | 3000 lbs                       |

*Handwritten notes: "Any Roll", "Tom Reed / Cok", "4500", "28800", "34884"*

|   |          |                |    |
|---|----------|----------------|----|
| REMIT C.O.D. TO:  | COD AMT: | C.O.D. PREPAID | \$ |
| ADDRESS - ESI @ 7943 Pecue Lane, Suite A, Baton Rouge, LA |          | FEE: COLLECT   | \$ |

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

\* Roll 103149037

- 3" tear, 3' from end, center of roll

Carrier: CH Robinson

Shipper: ESI  
Baton Rouge, LA

Driver:

Per:

Driver's #:

Date: 7/31/2009

\* Mark with "X" to designate Hazardous Material as defined in Title 49 of the code of Federal Regulations



**PACER**  
TRANSPORT

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

P.O. BOX 1105  
DESOTO, TX 75123

Shipper No. \_\_\_\_\_  
Carrier No. \_\_\_\_\_  
Date 7-31-09

|  |  |   |  |
|--|--|---|--|
| TO: Consignee <u>CENTRAL FARMERS REMEDIATION</u>       |  | FROM: Shipper <u>JC ELIOTT LANDFILL</u> |  |
| Street <u>GEORGETOWN CANYON RD</u>                     |  | Street <u>7001 MYERS STREET</u>         |  |
| Destination <u>GEORGETOWN ID</u> Zip Code <u>83239</u> |  | Origin <u>COROUS CHRISTI TX 78416</u>   |  |

| to. Shipping Units | HM* | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Weight (subject to correction) | Rate | CHARGES |
|--------------------|-----|--|--------------------------------|------|---------|
| <u>1/2</u>         |     | <u>Roll 23' X 3' 3.767</u>   | <u>34814</u>                   |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |
|                    |     |  |                                |      |         |

*Handwritten signature: Michael Reed*  
*Handwritten signature: Tracy Reed*

|   |   |  |  |
|---|---|--|--|
| REMIT<br>J.O.D. TO:<br>ADDRESS<br><br><small>NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding</small><br><u>1.75</u> per <u>  </u> Pound<br><small>Unless Otherwise Stated</small> | This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.<br><br>_____<br><small>Signature</small> | COD Amt: \$ _____<br><br><small>Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:<br/>         The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</small><br>_____<br><small>(Signature of Consignor)</small> | C.O.D. FEE:<br>PREPAID <input type="checkbox"/><br>COLLECT <input type="checkbox"/> \$ _____<br><br>TOTAL CHARGES: \$ _____<br><br>FREIGHT CHARGES:<br>FREIGHT PREPAID <input type="checkbox"/> Check box if charges are to be collected<br>except when box at right is checked <input type="checkbox"/> are to be collect |
|---|---|--|--|

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

|                     |                               |
|---------------------|-------------------------------|
| SHIPPER             | CARRIER <b>PacerTransport</b> |
| ER                  | PER _____                     |
| DATE <u>7-31-09</u> |                               |

Hazardous Materials

3

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-03-09 TRUCK # VIA YNS13617  
 BILL OF LADING # 09-06-1169-001 PROJECT NAME CF-GTC  
 PROJECT NUMBER \_\_\_\_\_ MATERIAL TYPE FML  
 LOCATION CF GTC

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE     | DAMAGE/REMARKS                                 | WT (lbs) |
|----|----------------------|--------------|---------------|--|----------|
| 1  | 103149058            | CYB811050    | 22.5 (15,750) | good   | 3692     |
| 2  | 103149045            | CYAB10280    | 15,750        | "  | 3722     |
| 3  | 103149009            | CXM811400    | 440 x 22.5    | " small roll                                   | UNIK     |
| 4  | 103149005            | "            | 15,750        | good cond.                                     | 3676     |
| 5  | 103149024            | CYAB10280    | 15,750        | "  | 3736     |
| 6  | 103149036            | "            | 15,750        | "  | 3648     |
| 7  | 103149059            | CYB811050    | 15,750        | "  | 3688     |
| 8  | 103149040            | CYAB10280    | 15,750        | "  | 3672     |
| 9  | 103148996            | CXM811400    | 15,750        | "  | 3700     |
| 10 | 103149037            | CYAB10280    | 15,750        | small tear -<br>3' from end<br>in center (~2") | 3702     |
| 1  |                      |              |               |  |          |
| 2  |                      |              |               |  |          |
| 3  |                      |              |               |  |          |
| 4  |                      |              |               |  |          |
| 5  |                      |              |               |  |          |
| 6  |                      |              |               |  |          |
| 7  |                      |              |               |  |          |
| 8  |                      |              |               |  |          |
| 9  |                      |              |               |  |          |



STRAIGHT BILL OF LADING  
ORIGINAL - NOT NEGOTIABLE

BOL# 09-06-1169-001

Environmental Specialties International, Inc.  
7943 Pecue Lane Suite A  
Baton Rouge, LA 70809

DATE 7/31/2009

CH Robinson  
(NAME OF CARRIER) (SCAC)

TO: FROM: ESI c/o JC Elliott Landfill  
CONSIGNEE: Central Farmers Remediation SHIPPER: ESI c/o JC Elliott Landfill

STREET: No physical address - see attached directions STREET: 7001 Ayres Street

DESTINATION: Georgetown, ID ORIGIN: Corpus Christi, TX 78416

ZIP CODE: 83239 Attention: Rodney Story 225-317-3699

Contact: Dan White 269-998-2363 Seal # TAG # TRF #

| NO. SHIPPING UNITS | KIND OF PACKAGING, DESCRIPTION OF ARTICLES | Quantity | WEIGHT (SUBJECT TO CORRECTION) |
|--------------------|--|----------|--------------------------------|
| 9 rolls            | HDPE Liner                                 | 9 rolls  | 27,000 lbs                     |
| 9 1/2 rolls        | Roll size: 23' x 3' x 3000 lbs             |          | 18000                          |
| Roll #             |  |          |                                |
| 103149058          |  |          |                                |
| 103149009          |  |          |                                |
| 103149045          |  |          |                                |
| 103149005          |  |          |                                |
| 103149024          |  |          | 34884                          |
| 103149036          |  |          |                                |
| 103149059          |  |          |                                |
| 103149040          |  |          |                                |
| 103149976          |  |          |                                |
| * 103149037        |  |          |                                |
| Total              |  | Total    | Total 34884                    |
| 1 roll             |  | 1 roll   | 3000 lbs                       |

*Handwritten notes: May Read, Time Read, Look*

REMIT C.O.D. TO: ADDRESS - ESI @ 7943 Pecue Lane, Suite A, Baton Rouge, LA

COD AMT: C.O.D. PREPAID \$ FEE: COLLECT \$

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

\* Roll 103149037

- 3" tear, 3' from end, center of roll

Carrier: CH Robinson

Shipper: ESI  
Baton Rouge, LA

Driver:

Per:

Driver's #:

Date: 7/31/2009

\* Mark with "X" to designate Hazardous Material as defined in Title 49 of the code of Federal Regulations

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 18, 2009

SUBMITTAL NO.: 56872-12

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)  
\_\_\_\_\_  
\_\_\_\_\_

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE   | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|---|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.2 GCL, 4.3 FML, and 4.4 Geocomposite | N/A      | Diagram of proposed liner panel layout for slurry pit, clarifier, and ore stockpile area |
|     |   |          |  |

**CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:**

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED: \_\_\_\_\_



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 8-17-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 006

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE    | DRAWING NO. | REV. | DESCRIPTION            | ACTION ( * ) |
|--------|---------|-------------|------|------------------------|--------------|
| e-copy | 8-17-09 |             |      | Proposed Panel Layouts |              |
|        |         |             |      |                        |              |
|        |         |             |      |                        |              |
|        |         |             |      |                        |              |
|        |         |             |      |                        |              |
|        |         |             |      |                        |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....







PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: July 23, 2009

SUBMITTAL NO.: 56872-09A

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER: Skaps Industries, Inc

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER:

| QTY | SPEC. NO. & TITLE   | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|---|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.4 Geocomposite | N/A      | Skaps Transnet Product: TN 220-2-8<br>Roll Certifications for Geocomposite |
|     |   |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:



7943 PECUE LANE SUITE A BATON ROUGE, LA 70809 TEL (225) 291-2700 FAX (225) 291-2788

TO: CRA Services

DATE: 7-23-09

JOB NAME: Central Farmers

TRANSMITTAL NUMBER: 003

ATTENTION: Dan White

ESI PROJECT NUMBER: 09-06-1169

WE ARE SENDING YOU  ATTACHED  UNDER SEPARATE COVER VIA \_\_\_\_\_ THE FOLLOWING ITEMS:  
 SHOP DRAWINGS  PRINTS  PLANS  SAMPLES  SPECIFICATIONS  
 COPY OF LETTER  CHANGE ORDER  Roll Certifications

| COPIES | DATE | DRAWING NO. | REV. | DESCRIPTION   | ACTION ( * ) |
|--------|------|-------------|------|---|--------------|
| e-copy | 7-13 |             |      | Roll Certifications Skaps Geocomposite 220-2-8 Rolls 0001 to 0054 |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |
|        |      |             |      |   |              |

ACTION ( \* )

AS - AS REQUESTED  FA - FOR APPROVAL  \_\_\_\_\_  
 F - FILE  RC - REVIEW & COMMENT  \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SENT VIA:

E-MAIL  MAIL  OVERNIGHT  HAND DELIVERY  OTHER

COPY TO: \_\_\_\_\_ BY: \_\_\_\_\_

If enclosures are not as noted, please notify us at once.....

July 15, 2009  
 Environmental Specialties International  
 7943 Pecue Lane, Suite A  
 Baton Rouge, LA 70809

**Ref. : Central Farmers, ID  
 Customer P.O. # 11774  
 Transnet 220-2-8**

We certify that the Transnet 220-2-8 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

| Property                              | Test Method              | Unit                | Required Value         | Qualifier         |
|---------------------------------------|--------------------------|---------------------|------------------------|-------------------|
| <b>Geonet<sup>4</sup></b>             |                          |                     |                        |                   |
| Mass per Unit Area                    | ASTM D 5261              | lbs/ft <sup>2</sup> | 0.162                  | Minimum           |
| Thickness                             | ASTM D 5199              | mil                 | 200                    | Minimum           |
| Carbon Black                          | ASTM D 4218              | %                   | 1.0                    | Minimum           |
| Tensile Strength                      | ASTM D 5035              | lbs/in              | 45                     | Minimum           |
| Melt Flow                             | ASTM D 1238 <sup>3</sup> | g/10 min            | 1.0                    | Maximum           |
| Density                               | ASTM D 1505              | g/cm <sup>3</sup>   | 0.94                   | Minimum           |
| Transmissivity <sup>1</sup>           | ASTM D 4716              | m <sup>2</sup> /sec | 2.0 x 10 <sup>-3</sup> | MARV <sup>6</sup> |
| <b>Composite</b>                      |                          |                     |                        |                   |
| Ply Adhesion                          | GRI GC7                  | lb/in               | 1.0                    | MARV              |
| Transmissivity <sup>2</sup>           | ASTM D 4716              | m <sup>2</sup> /sec | 1.0 x 10 <sup>-4</sup> | MARV              |
| <b>Geotextile<sup>4 &amp; 5</sup></b> |                          |                     |                        |                   |
| Fabric Weight                         | ASTM D 5261              | oz/yd <sup>2</sup>  | 8.0                    | MARV              |
| Grab Strength                         | ASTM D 4632              | lbs                 | 220                    | MARV              |
| Puncture Resistance                   | ASTM D 4833              | lbs                 | 120                    | MARV              |
| Water Flow Rate                       | ASTM D 4491              | gpm/ft <sup>2</sup> | 110                    | MARV              |
| Permittivity                          | ASTM D 4491              | sec <sup>-1</sup>   | 1.5                    | MARV              |
| AOS                                   | ASTM D 4751              | US Sieve            | 80                     | MARV              |
| UV Resistance                         | ASTM D 4355              | %/hrs               | 70/500                 | MARV              |

**Notes:**

- 1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.
- 2 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.
- 3 Condition 190/2.16
- 4 Geotextile and Geonet properties are prior to lamination.
- 5 Geotextile data is provided by the supplier.
- 6 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,  
**Nilay Patel**  
 Nilay Patel  
 QA Manager

**Product :** TN220-2-8  
**Project :** Central Farmers, ID

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

| Roll | Geocomposite Roll Number | Geonet Roll Number | Geotextile Roll Number |          | Ply Adhesion (lb/in) |         | Geocomposite Transmissivity* (m <sup>2</sup> /sec) |
|------|--------------------------|--------------------|------------------------|----------|----------------------|---------|--|
|      |                          |                    | Top                    | Bottom   | Minimum              | Average |  |
| 1    | 330310001                | 330310001 - N      | 3303.005               | 3303.012 | 1.24                 | 2.13    | 1.94 x 10 <sup>-4</sup>                            |
| 2    | 330310002                | 330310002 - N      | 3303.005               | 3303.012 |                      |         |  |
| 3    | 330310003                | 330310003 - N      | 3303.005               | 3303.012 |                      |         |  |
| 4    | 330310004                | 330310004 - N      | 3303.005               | 3303.012 |                      |         |  |
| 5    | 330310005                | 330310005 - N      | 3303.005               | 3303.012 |                      |         |  |
| 6    | 330310006                | 330310006 - N      | 3303.017               | 3303.004 |                      |         |  |
| 7    | 330310007                | 330310007 - N      | 3303.017               | 3303.004 |                      |         |  |
| 8    | 330310008                | 330310008 - N      | 3303.017               | 3303.004 |                      |         |  |
| 9    | 330310009                | 330310009 - N      | 3303.017               | 3303.004 |                      |         |  |
| 10   | 330310010                | 330310010 - N      | 3303.017               | 3303.004 | 1.75                 | 2.91    |  |
| 11   | 330310011                | 330310011 - N      | 3303.007               | 3303.018 |                      |         |  |
| 12   | 330310012                | 330310012 - N      | 3303.007               | 3303.018 |                      |         |  |
| 13   | 330310013                | 330310013 - N      | 3303.007               | 3303.018 |                      |         |  |
| 14   | 330310014                | 330310014 - N      | 3303.007               | 3303.018 |                      |         |  |
| 15   | 330310015                | 330310015 - N      | 3303.007               | 3303.018 |                      |         |  |
| 16   | 330310016                | 330310016 - N      | 3303.015               | 3303.008 |                      |         |  |
| 17   | 330310017                | 330310017 - N      | 3303.015               | 3303.008 |                      |         |  |
| 18   | 330310018                | 330310018 - N      | 3303.015               | 3303.008 |                      |         |  |
| 19   | 330310019                | 330310019 - N      | 3303.015               | 3303.008 |                      |         |  |
| 20   | 330310020                | 330310020 - N      | 3303.015               | 3303.008 | 1.33                 | 2.28    |  |
| 21   | 330310021                | 330310021 - N      | 3303.003               | 3303.014 |                      |         |  |
| 22   | 330310022                | 330310022 - N      | 3303.003               | 3303.014 |                      |         |  |
| 23   | 330310023                | 330310023 - N      | 3303.003               | 3303.014 |                      |         |  |
| 24   | 330310024                | 330310024 - N      | 3303.003               | 3303.014 |                      |         |  |
| 25   | 330310025                | 330310025 - N      | 3303.003               | 3303.014 |                      |         | 2.03 x 10 <sup>-4</sup>                            |
| 26   | 330310026                | 330310026 - N      | 3303.021               | 3303.002 |                      |         |  |
| 27   | 330310027                | 330310027 - N      | 3303.021               | 3303.002 |                      |         |  |

\* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.



**Product :** TN220-2-8  
**Project :** Central Farmers, ID

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

| Geonet Roll Number | Resin Lot Number | Geonet Density (gm/cc) | Mass Per Unit Area (lb/ft <sup>2</sup> ) | Thickness (mils) | Carbon Black (%) | Tensile Strength (MD) (lb/in) | Transmissivity* (m <sup>2</sup> /sec) |
|--------------------|------------------|------------------------|--|------------------|------------------|-------------------------------|---------------------------------------|
| 330310001 - N      | PSPX009176       | 0.9557                 | 0.181                                    | 212              | 2.27             | 69                            | 2.32 x 10 <sup>-3</sup>               |
| 330310002 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310003 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310004 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310005 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310006 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310007 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310008 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310009 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310010 - N      | PSPX009176       | 0.9557                 | 0.189                                    | 218              | 2.61             | 75                            |                                       |
| 330310011 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310012 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310013 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310014 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310015 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310016 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310017 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310018 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310019 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310020 - N      | PSPX009176       | 0.9557                 | 0.183                                    | 214              | 2.32             | 71                            |                                       |
| 330310021 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310022 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310023 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310024 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310025 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               | 2.41 x 10 <sup>-3</sup>               |
| 330310026 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310027 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |

\* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.



**Product :** TN220-2-8  
**Project :** Central Farmers, ID

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

| Roll | Geocomposite Roll Number | Geonet Roll Number | Geotextile Roll Number |          | Ply Adhesion (lb/in) |         | Geocomposite Transmissivity* (m <sup>2</sup> /sec) |
|------|--------------------------|--------------------|------------------------|----------|----------------------|---------|--|
|      |                          |                    | Top                    | Bottom   | Minimum              | Average |  |
| 1    | 330310028                | 330310028 - N      | 3303.021               | 3303.002 |                      |         |  |
| 2    | 330310029                | 330310029 - N      | 3303.021               | 3303.002 |                      |         |  |
| 3    | 330310030                | 330310030 - N      | 3303.021               | 3303.002 | 1.62                 | 2.82    |  |
| 4    | 330310031                | 330310031 - N      | 3303.009               | 3303.016 |                      |         |  |
| 5    | 330310032                | 330310032 - N      | 3303.009               | 3303.016 |                      |         |  |
| 6    | 330310033                | 330310033 - N      | 3303.009               | 3303.016 |                      |         |  |
| 7    | 330310034                | 330310034 - N      | 3303.009               | 3303.016 |                      |         |  |
| 8    | 330310035                | 330310035 - N      | 3303.009               | 3303.016 |                      |         |  |
| 9    | 330310036                | 330310036 - N      | 3303.013               | 3303.006 |                      |         |  |
| 10   | 330310037                | 330310037 - N      | 3303.013               | 3303.006 |                      |         |  |
| 11   | 330310038                | 330310038 - N      | 3303.013               | 3303.006 |                      |         |  |
| 12   | 330310039                | 330310039 - N      | 3303.013               | 3303.006 |                      |         |  |
| 13   | 330310040                | 330310040 - N      | 3303.013               | 3303.006 | 1.47                 | 2.43    |  |
| 14   | 330310041                | 330310041 - N      | 3303.001               | 3303.020 |                      |         |  |
| 15   | 330310042                | 330310042 - N      | 3303.001               | 3303.020 |                      |         |  |
| 16   | 330310043                | 330310043 - N      | 3303.001               | 3303.020 |                      |         |  |
| 17   | 330310044                | 330310044 - N      | 3303.001               | 3303.020 |                      |         |  |
| 18   | 330310045                | 330310045 - N      | 3303.001               | 3303.020 |                      |         |  |
| 19   | 330310046                | 330310046 - N      | 3303.019               | 3303.011 |                      |         |  |
| 20   | 330310047                | 330310047 - N      | 3303.019               | 3303.011 |                      |         |  |
| 21   | 330310048                | 330310048 - N      | 3303.019               | 3303.011 |                      |         |  |
| 22   | 330310049                | 330310049 - N      | 3303.019               | 3303.011 |                      |         |  |
| 23   | 330310050                | 330310050 - N      | 3303.019               | 3303.011 | 1.58                 | 2.66    | 1.97 x 10 <sup>-4</sup>                            |
| 24   | 330310051                | 330310051 - N      | 3303.010               | 3303.022 |                      |         |  |
| 25   | 330310052                | 330310052 - N      | 3303.010               | 3303.022 |                      |         |  |
| 26   | 330310053                | 330310053 - N      | 3303.010               | 3303.022 |                      |         |  |
| 27   | 330310054                | 330310054 - N      | 3303.010               | 3303.022 |                      |         |  |

\* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.



**Product : TN220-2-8**  
**Project : Central Farmers, ID**

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

| Geonet Roll Number | Resin Lot Number | Geonet Density (gm/cc) | Mass Per Unit Area (lb/ft <sup>2</sup> ) | Thickness (mils) | Carbon Black (%) | Tensile Strength (MD) (lb/in) | Transmissivity* (m <sup>2</sup> /sec) |
|--------------------|------------------|------------------------|--|------------------|------------------|-------------------------------|---------------------------------------|
| 330310028 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310029 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310030 - N      | PSPX009176       | 0.9557                 | 0.186                                    | 216              | 2.56             | 73                            |                                       |
| 330310031 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310032 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310033 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310034 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310035 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310036 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310037 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310038 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310039 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310040 - N      | PSPX009176       | 0.9557                 | 0.180                                    | 211              | 2.43             | 68                            |                                       |
| 330310041 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310042 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310043 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310044 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310045 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310046 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310047 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310048 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310049 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310050 - N      | PSPX009176       | 0.9557                 | 0.188                                    | 220              | 2.50             | 76                            | 2.36 x 10 <sup>-3</sup>               |
| 330310051 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310052 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310053 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |
| 330310054 - N      | PSPX009176       | 0.9557                 |  |                  |                  |                               |                                       |

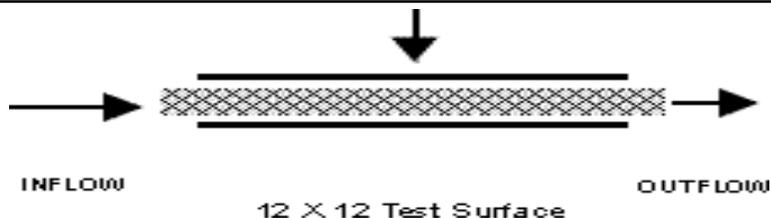
\* Transmissivity measured using water at 21 ± 2 °C (70 ± 4°F) with a gradient of 0.1 and a confining pressure of 10000 psf between steel plates after 15 minutes.



**Client:** Environmental Specialties International  
**Project:** Central Farmers, ID  
**Product:** TN220-2-8

**Job #** 3303

**Test Configuration:**



**Test Information:**

|                             |              |                                 |
|-----------------------------|--------------|---------------------------------|
| <b>Boundary Conditions:</b> | Steel Plate  | <b>Normal Load:</b> 10000 psf   |
|                             | Geocomposite | <b>Gradient:</b> 0.1 ft         |
|                             | Steel Plate  | <b>Seating Time:</b> 15 minutes |
|                             |              | <b>Flow Direction:</b> MD       |

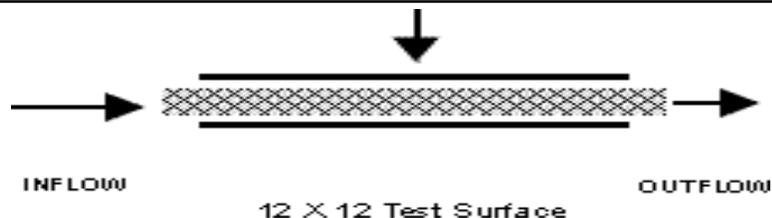
**Test Results:**

| Roll No.  | Pressure (psf) | Gradient, ft | Transmissivity, m <sup>2</sup> /sec |
|-----------|----------------|--------------|-------------------------------------|
|           |                |              | 15 minutes                          |
| 330310001 | 10000          | 0.1          | 1.94 x 10 <sup>-4</sup>             |
| 330310025 |                |              | 2.03 x 10 <sup>-4</sup>             |
| 330310050 |                |              | 1.97 x 10 <sup>-4</sup>             |

**Client:** Environmental Specialties International  
**Project:** Central Farmers, ID  
**Product:** TN220-2-8

**Job #** 3303

**Test Configuration:**



**Test Information:**

|                             |             |                                 |
|-----------------------------|-------------|---------------------------------|
| <b>Boundary Conditions:</b> | Steel Plate | <b>Normal Load:</b> 10000 psf   |
|                             | Geonet      | <b>Gradient:</b> 0.1 ft         |
|                             | Steel Plate | <b>Seating Time:</b> 15 minutes |
|                             |             | <b>Flow Direction:</b> MD       |

**Test Results:**

| Roll No.      | Pressure (psf) | Gradient, ft | Transmissivity, m <sup>2</sup> /sec |
|---------------|----------------|--------------|-------------------------------------|
|               |                |              | 15 minutes                          |
| 330310001 - N | 10000          | 0.1          | 2.32 x 10 <sup>-3</sup>             |
| 330310025 - N |                |              | 2.41 x 10 <sup>-3</sup>             |
| 330310050 - N |                |              | 2.36 x 10 <sup>-3</sup>             |



### POLYETHYLENE RESIN CERTIFICATION

**Customer Name :** Environmental Specialties International  
**Project Name :** Central Farmers, ID  
**Geocomposite Manufacturer :** SKAPS Industries  
**Geocomposite Production Plant :** Commerce, GA  
**Geocomposite Brand Name :** TN220-2-8

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

| Resin Supplier                    | Resin Production Plant | Resin Brand Name | Resin Lot Number | Property        | Test Method                | Units     | Resin Supplier Value | Tested Value* |
|-----------------------------------|------------------------|------------------|------------------|-----------------|----------------------------|-----------|----------------------|---------------|
| Chevron Phillips Chemical Company | Chevron, TX            | HDPE             | PSPX009176       | Density         | ASTM D 1505                | gm/cc     | 0.9532               | 0.9511        |
|                                   |                        |                  |                  | Melt Flow Index | ASTM D 1238 <sup>(a)</sup> | gm/10 min | 0.34                 | 0.32          |

(a) Condition 190/2.16  
\* Data from SKAPS Quality Control





**Engineered Synthetic  
Products, Inc.**

**Product : TN220-2-8**  
**Project : Central Farmers, ID**

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

| <b>GEOCOMP<br/>ROLL#</b> | <b>FABRIC<br/>ROLL#</b> | <b>WEIGHT<br/>oz/sq yd</b> | <b>MD<br/>TENSILE<br/>lbs.</b> | <b>XMD<br/>TENSILE<br/>lbs.</b> | <b>PUNCTURE<br/>lbs.</b> | <b>AOS<br/>us sieve</b> | <b>WATER-<br/>FLOW<br/>gpm/sq f</b> | <b>PERM-<br/>ITY<br/>sec<sup>-1</sup></b> |
|--------------------------|-------------------------|----------------------------|--------------------------------|---------------------------------|--------------------------|-------------------------|-------------------------------------|---|
| 330310001                | 3303.005                | 8.57                       | 233                            | 236                             | 137                      | 80                      | 115                                 | 1.53                                      |
|                          | 3303.012                | 8.22                       | 225                            | 230                             | 133                      | 80                      | 115                                 | 1.53                                      |
| 330310025                | 3303.003                | 8.14                       | 227                            | 232                             | 137                      | 80                      | 115                                 | 1.53                                      |
|                          | 3303.014                | 8.22                       | 225                            | 230                             | 133                      | 80                      | 115                                 | 1.53                                      |
| 330310050                | 3303.019                | 8.59                       | 235                            | 238                             | 133                      | 80                      | 115                                 | 1.53                                      |
|                          | 3303.011                | 8.22                       | 225                            | 230                             | 133                      | 80                      | 115                                 | 1.53                                      |

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 17, 2009 SUBMITTAL NO.: 56872-09C  
 PROJECT NO.: 56872 PROJECT NAME: Georgetown Canyon  
Remediation  
 CLIENT: Nu-West Industries ENGINEER: Norwest Corporation  
3010 Conda Road 136 E South Temple, 12<sup>th</sup> Floor  
Soda Springs, ID 83276 Salt Lake City, UT 84111  
 SUPPLIER: Skaps Industries, Inc SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER: \_\_\_\_\_

| QTY | SPEC. NO. & TITLE   | DWG. NO. | DESCRIPTION / LOCATION INSTALLED   |
|-----|---|----------|--|
| 1   | Attachment B - Section 4.0 Technical Specifications; Subsections 4.4 Geocomposite | N/A      | Skaps Transnet Product: TN 220-2-8<br>Material Delivery Checklist & Bill of Lading; - 14 rolls |
|     |   |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:  \_\_\_\_\_

*GEOCOMPOSITE*



Packing Slip

BOL

15107

Customer: 255  
Customer PO: 117  
Customer Name: Davison Spent - Baton Rouge, LA  
Ship To Name: Central Farmers

Order Number: 012740  
Due Date:  
Site Location: Athens W

| Len. Number   | Product # | Rolls | Product Qty in SY | Label | Load Order         |
|---------------|-----------|-------|-------------------|-------|--------------------|
| GL180-150X090 |           |       |                   | N/A   | 8 oz Environmental |
| 12740.01      |           | 1     | 1.150 Y2          | 0001  |                    |
| 12740.02      |           | 1     | 1.150 Y2          | 0001  |                    |

SHIPPED WITH COMMERCE

Carrier: Mason & Dixon Lines  
Appl. Time:  
Time In:  
Time Out:

**STRAIGHT BILL OF LADING  
ORIGINAL - NOT NEGOTIABLE**



571 Industrial Parkway  
Commerce, GA 30529  
706/336-7000 phone  
706/336-7007 fax

The shipper certifies that the herein-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

B.O.L. No. **1058F**

Shipper No. **15615**

PO No. **11774-Rev. 9**

Date **8/13/04**

Address of Carrier: **INCAE**

TO: **USA Central Terminal** FROM: **SKAPS Industries - Geonet Division**

Do not collect on Delivery unless otherwise specified. "COD" must appear on invoice. Do not collect on delivery unless otherwise specified.

Street: **571 Industrial Parkway** City: **Commerce, GA** Zip Code: **30529**

Destination: **Georgetown, MD** Zip Code: **21038**

Container No. **1** Seal No. **1** Vessel Name: **INCAE**

| No. Shipping Units  | HM | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Vol. (cu. ft.) | Weight (Lbs. and Fractions) |
|---|----|--|----------------|-----------------------------|
| <b>8 14</b>   |    | <b>Rolls of IN 220-2-8</b>   | <b>45.2945</b> | <b>13.513</b>               |
|   |    | <b>Box of 100</b>  |                |                             |
| <b>Carrier can collect the freight only from the Broker</b> |    |  |                |                             |

Class: **77.3**  Freight collect if box is ticked

Broker: **PLANNED DIRECT** NMFC: **49160**  Freight prepaid if box is ticked

RECEIVED: subject to the classifications and lawfully tied tariffs in effect on the date of this bill of lading, the property described above is received in apparent good order except as noted contents and condition of contents of packages unknown, broken, damaged, and weight as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property up to the point and subject to yield to the actual party of delivery at said destination. If no route otherwise to deliver to another carrier on the date of receipt hereunder, the carrier is not liable for loss of or damage to all or any of said property over all or any portion of said route to destination, and as to each party of any route hereunder, the carrier is not liable for loss of or damage to all or any of said property over all or any portion of said route to destination, and as to each party of any route hereunder, the carrier is not liable for loss of or damage to all or any of said property over all or any portion of said route to destination, and as to each party of any route hereunder, the carrier is not liable for loss of or damage to all or any of said property over all or any portion of said route to destination.

Shipper hereby certifies that he is familiar with all applicable laws, regulations, and tariffs, and that he is hereby agreed to by the shipper and accepted for forward and his assent.

SHIPPER: **SKAPS Industries - Commerce, GA 30529** CARRIER: **Smoat's Brothers**  
 PER: **DL** DATE: **DENNIS HUNSAKER**  
 EMERGENCY RESPONSE TELEPHONE NUMBER: **706-336-7000** DATE: **8-18-04**

\* See also the Uniform Rules and Regulations for the Bill of Lading Code of Federal Regulations, 49 CFR 212.11-11.2000. Material is transportation including storage equipment and services.





# SMOOT BROTHERS

transportation

PO Box 385  
 Brigham City, UT 84302  
 (435) 744-0119  
 MC259178

CONSIGNEE ADDRESS AND DESTINATION

*Farmington  
 2310 Central Business  
 Center Blvd, 2d*

SHIPPER, ADDRESS AND ORIGIN

*Shimpo 2nd Street  
 4th St & Commerce St*

DATE

*8-12-09*

BOL #

*13613 1316*

SHIPPED AS IS

RECEIVED AS IS

| NO.       | DESCRIPTION      | WEIGHT | RATE         | MILE | PREPAID COLLECT |  |
|-----------|------------------|--------|--------------|------|-----------------|--|
|           |                  |        |              |      | TOTAL           |  |
| <i>16</i> | <i>2N 70+9 5</i> |        | <i>3/100</i> |      |                 |  |

THESE FREIGHT CHARGES MUST BE PAID WITHIN SEVEN DAYS AS REQUIRED BY SECTION 223 OF PART II OF THE INTERSTATE COMMERCE COMMISSION. THIS FREIGHT BILL IS DESIGNED TO MEET THE REQUIREMENTS OF THE INTERSTATE COMMERCE COMMISSION.

CONSIGNEE

BY



PO Box 385  
 Brigham City, UT 84302  
 (435) 744-0119  
 MC259178

|  |  |                 |
|--|--|-----------------|
| CONSIGNEE ADDRESS AND DESTINATION<br>ESI - Central <del>Business</del> Farmers<br>Georgetown, Id | SHIPPER, ADDRESS AND ORIGIN<br>Skaps Industries<br>Athens, GA & Commerce, GA | DATE<br>8-17-09 |
|--|--|-----------------|

BOL # 15615 15586 SHIPPED AS IS  RECEIVED AS IS   
15107

| NO. | DESCRIPTION | WEIGHT | RATE    | MILE | PREPAID | COLLECT |
|-----|-------------|--------|---------|------|---------|---------|
|     |             |        |         |      | TOTAL   |         |
| 16  | TN 990-9-8  |        |         |      |         |         |
|     |             |        | 8/17/09 |      |         |         |
|     |             |        | to City |      |         |         |

THESE FREIGHT CHARGES MUST BE PAID WITHIN SEVEN DAYS AS REQUIRED BY SECTION 223 OF PART II OF THE INTERSTATE COMMERCE COMMISSION. THIS FREIGHT BILL IS DESIGNED TO MEET THE REQUIREMENTS OF THE INTERSTATE COMMERCE COMMISSION.

CONSIGNEE \_\_\_\_\_  
 BY \_\_\_\_\_

# Straight Bill of Lading (Customer Copy)

Original - Not Negotiable

**SKAPS Industries**

335 Athena Drive - Warehouse A001

Athens, GA 30601

Phone: 706-354-3700

Fax: 706-354-3737

|                   |         |
|-------------------|---------|
| Bill of Lading #: | 15107   |
| Sales Order #:    | 12740   |
| Customer PO #:    | 11774   |
| Date:             | 8/13/09 |

|   |   |
|---|---|
| <p><b>Sold To:</b><br/>                 Environ. Spec. - Baton Rouge, LA<br/>                 7943 Pecue Lane, Suite A<br/>                 Baton Rouge, LA 70809</p> | <p><b>Ship To:</b><br/>                 Central Farmers<br/>                 Georgetown, ID 83239<br/>                 Attn: Graydon Renshaw<br/>                 Tel: 775-842-4292</p> |
|---|---|

|               |             |                             |             |                 |
|---------------|-------------|-----------------------------|-------------|-----------------|
| Trailer # 199 | Seal # N/A  | Carrier Mason & Dixon Lines |             |                 |
| Product       | Total Rolls | Weight (LBS)                | Length (FT) | Square Yards    |
| GE180-180     | 2           | 1,189                       | 690         | 2,300.00        |
|               | <u>2</u>    | <u>1,189</u>                |             | <u>2,300.00</u> |

**Prepay & Add**

**Comments:**

Any discrepancies must be reported to SKAPS Industries within 7 days of receipt of goods.  
 Required delivery dates are subject to change

CARRIER CAN COLLECT FREIGHT ONLY FROM THE BROKER  
 SHIPPED WITH COMMERCE

Received at Athens, GA from SKAPS Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interest in all or any of said property, that every service rendered here under shall be subject to either: (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed here under between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries Subject to the above terms and conditions as to which party is the Shipper, Shipper h

|   |         |
|---|---------|
| SHIPPER SKAPS Industries - Athens, GA 30601         | CARRIER |
| PER <i>J. Allen</i>                                 | PER     |
| EMERGENCY RESPONSE 706-354-3700<br>TELEPHONE NUMBER | DATE    |

|                 |                  |                  |        |
|-----------------|------------------|------------------|--------|
| TIME IN: 8:45AM | TIME OUT: 8:51AM | NUMBER OF POLES: | PRO #: |
| DRIVER:         | PHONE:           | RECEIVED BY:     |        |

**Customer:** 235  
**Customer PO:** 11774  
**Customer Name:** Environ. Spec. - Baton Rouge, LA  
**Ship To Name:** Central Farmers

**Order Number:** 012740  
**Due Date:**  
**Site Location:** Athens W

| Item Number     | Product # | Rolls | Product Qty in SY | Label | Load Order        |
|-----------------|-----------|-------|-------------------|-------|-------------------|
| GE180-180 x 690 |           |       |                   | N/A   | 8 oz Environmenta |
| 12740.01        |           | 1     | 1,150 Y2          | 0001  |                   |
| 12740.02        |           | 1     | 1,150 Y2          | 0001  |                   |

SHIPPED WITH COMMERCE

**Carrier:** Mason & Dixon Lines  
**Appt Time:**  
**Time In:**  
**Time Out:**



# SKAPS Industries

571 Industrial Parkway  
Commerce, GA 30529  
Ph: 706-336-7000 Fax: 706-336-7007  
www.skaps.com e-mail: info@skaps.com

Shipper's # 13615

Job Name: ESI - Central Farmers  
Address: \_\_\_\_\_  
City, State, Zip: Georgetown, ID  
Contact: Graydon Renshaw  
Phone: 775-842-4292

Date Shipped: 8/13/2009

Cust. P.O. # 11774-Rev 2

Job # 3303

**DRIVER MUST CALL 24 HOURS PRIOR TO DELIVERY  
PLEASE FOLLOW THE DIRECTIONS MENTIONED BELOW**

Product Code: TN 220-2-8

| No | Roll#     | Sq. Ft. |
|----|-----------|---------|
| 1  | 330310001 | 3335    |
| 2  | 330310002 | 3335    |
| 3  | 330310003 | 3335    |
| 4  | 330310004 | 3335    |
| 5  | 330310005 | 3335    |
| 6  | 330310006 | 3335    |
| 7  | 330310007 | 3335    |
| 8  | 330310008 | 3335    |
| 9  | 330310009 | 3335    |
| 10 | 330310010 | 3335    |
| 11 | 330310011 | 3335    |
| 12 | 330310012 | 3335    |
| 13 | 330310013 | 3335    |
| 14 | 330310014 | 2590    |

|   |
|---|
| <b>Please Collect<br/>1 - Bag of Ties<br/>From the Driver</b>                       |
| Driver Sign Here If you received 1 bag  |
| <i>[Signature]</i>  |
| <i>If ties are not collected from driver, SKAPS will not assume responsibility.</i> |
| Received by: _____  |
| Sign: _____   |
| BOL#: _____   |

**DIRECTIONS :** From Soda Springs, ID take Hwy 30 South to Georgetown, ID. In Georgetown, turn east on Georgetown Canyon Road (Stringtown Road); from here the job is almost exactly 7 miles. The cyclone fenced area on the right is part of the job; the job trailer is inside the fence.

### Driver Requirements

- 1) For Monday delivery driver must call on Friday.
- 2) Driver must call 706-336-7000 when unloaded.
- 3) Driver must call and advise on any delay in transit.
- 4) A copy of this packing slip must accompany Freight invoice. Failure to do this will result in delayed payments.

Total Rolls: 14  
Total Sq. feet: 45,945  
Total Weight: 13,693

Truck Container #: \_\_\_\_\_  
Seal #: \_\_\_\_\_

Deliver by: \_\_\_\_\_  
Driver's Name: \_\_\_\_\_  
Driver's Sign: \_\_\_\_\_  
Driver's Cell Phone #: \_\_\_\_\_

**Mon - Tues : 8:00 am to 4:00 pm**

Trucking Co.: \_\_\_\_\_  
Trucking Co.'s Phone #: \_\_\_\_\_  
Broker: \_\_\_\_\_  
DATE: \_\_\_\_\_

*[Signature]*  
735 752 1977  
Mason Dixon  
8/13/2009

**CARRIER CAN COLLECT THE FREIGHT ONLY FROM THE BROKER**

SIGN HERE FOR SHIPPER  
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY.  
COMMERCE, GA 30529

Received at Commerce, GA from Skaps Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either (a) if the shipper noted herein is Skaps Industries as indicated by the designation of the "Shipper" to be Skaps Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties or (b) if the Shipper noted herein is not Skaps Industries then Skaps Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, Skaps Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by Skaps Industries.

Subject to the above terms and conditions to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

STRAIGHT BILL OF LADING  
ORIGINAL - NOT NEGOTIABLE



571 Industrial Parkway  
Commerce, GA 30529  
706/336-7000 phone  
706/336-7007 fax

This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

B.O.L. No. 10586  
Shipper No. 13615  
P.O. No. 11774-Rev 2  
Date 8/13/09

(Name of Carrier) (SCAC)

TO: ES2 - Central Farmers FROM: SKAPS Industries - Geonet Division  
Consignee Shipper

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name - or as otherwise provided in item 430, Section 1.

Street 571 Industrial Parkway  
Origin Commerce, GA Zip Code 30529

Destination Georgetown, ID Zip Code

Container No. Seal No. Vessel Number

| No. Shipping Units | HM | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Sq. Ft. | Weight (Subject to Correction) |
|--------------------|----|--|---------|--------------------------------|
| 8 14               |    | Rolls of TN 990-9-8  | 45,945  | 13,69.3                        |
| 1                  |    | Box of Ties  |         |                                |
|                    |    | Carrier can collect the freight only from the Broken                     |         |                                |

Broker: Mason Dixon Class: 77.5  Freight collect if box is ticked  
NMFC: 49160  Freight prepaid if box is ticked

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER SKAPS Industries - Commerce, GA 30529 CARRIER Smoots Brothers  
PER [Signature] PER DENNIS HUNSAKER  
EMERGENCY RESPONSE TELEPHONE NUMBER: 706-336-7000 DATE 8-13-09

\* Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations. Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (1 72 604).

**STRAIGHT BILL OF LADING  
ORIGINAL - NOT NEGOTIABLE**

This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.



571 Industrial Parkway  
Commerce, GA 30529  
706/336-7000 phone  
706/336-7007 fax

18583 B.O.L. No.

Shipper No. 13611

P.O. No. 11774-Rev 2

Date 8/12/09

LANDSTAR  
(Name of Carrier)

(SCAC)

**TO: Consignee** ESI - Central Farmers **FROM: Shipper** SKAPS Industries - Geonet Division

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name - or as otherwise provided in item 430, Section 1.

Street 571 Industrial Parkway  
Origin Commerce, GA Zip Code 30529

Destination Georgetown, ID Zip Code

Container No. Seal No. Vessel Number

| No. Shipping Units | HM | Kind of Packaging, Description of Articles, Special Marks and Exceptions | Sq. Ft.       | Weight (Subject to Correction) |
|--------------------|----|--|---------------|--------------------------------|
| <u>27</u>          |    | <u>Rolls of TV 920-2-8</u>   | <u>90,045</u> | <u>27,026</u>                  |
| <u>2</u>           |    | <u>Boxes of Ties</u>   |               |                                |
|                    |    | <u>Carrier Can collect the Freight Only from the Broken</u>              |               |                                |

Broker: Landstar

Class: 77.5  Freight collect if box is ticked  
NMFC: 49160  Freight prepaid if box is ticked

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination. If on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER SKAPS Industries - Commerce, GA 30529 CARRIER Landstar  
PER [Signature] PER [Signature]  
EMERGENCY RESPONSE TELEPHONE NUMBER: 706-336-7000 DATE 8/12/09

\* Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations. Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (1 72 604).



**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-17-09 TRUCK # 5  
 BILL OF LADING # 18586/15107 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE Geocomposite  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE   | DAMAGE/REMARKS |
|----|----------------------|--------------|-------------|----------------|
| 1  | 330310004            |              | 14.5x230    |                |
| 2  | 330310002            |              | "           |                |
| 3  | 330310014            |              | "           |                |
| 4  | 330310001            |              | "           |                |
| 5  | 330310003            |              | "           |                |
| 6  | 330310007            |              | "           |                |
| 7  | 330310008            |              | "           |                |
| 8  | 330310012            |              | "           |                |
| 9  | 330310013            |              | "           |                |
| 10 | 12740.2              |              | 690' x 180w |                |
| 1  | 330310009            |              | 14.5x230    |                |
| 2  | 330310006            |              | "           |                |
| 3  | 330310005            |              | "           |                |
| 4  | 330310010            |              | "           |                |
| 5  | 12740.1              |              | 690' x 180w |                |
| 6  | 33030011             |              | 14.5x230    |                |
| 7  |                      |              |             |                |
| 8  |                      |              |             |                |
| 9  |                      |              |             |                |

12740

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8/17/2009 TRUCK # No 5  
 BILL OF LADING # 18586 PROJECT NAME Nu-West Central Farmers  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE Geocomposite  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 330310004            |              | 14.5 x 230 | ✓              |
| 2  | 330310002            |              | "          | ✓              |
| 3  | 330310014            |              | "          | ✓              |
| 4  | 330310001            |              | "          | ✓              |
| 5  | 330310003            |              | "          | ✓              |
| 6  | 330310007            |              | "          | ✓              |
| 7  | 330310008            |              | "          | ✓              |
| 8  | 330310012            |              | "          | ✓              |
| 9  | 330310013            |              | "          | ✓              |
| 10 | 330310009            |              | "          | ✓              |
| 1  | 330310006            |              | "          | ✓              |
| 2  | 330310005            |              | "          | ✓              |
| 3  | 330310010            |              | "          | ✓              |
| 4  | 330310011            |              | "          | ✓              |
| 5  |                      |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |

FORM #5

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8-17-09 TRUCK # 752018  
 BILL OF LADING # 18583 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE Geocomposite  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE | DAMAGE/REMARKS                      |
|----|----------------------|--------------|-----------|-------------------------------------|
| 1  | 330310039            |              | 14.5x230  |                                     |
| 2  | 330310025            |              | "         |                                     |
| 3  | 330310038            |              | "         |                                     |
| 4  | 330310018            |              | "         |                                     |
| 5  | 330310022            |              | "         | protective cover damaged / Liner OK |
| 6  | 330310017            |              | "         |                                     |
| 7  | 330310036            |              | "         |                                     |
| 8  | 330310030            |              | "         |                                     |
| 9  | 330310042            |              | "         |                                     |
| 10 | 330310028            |              | "         |                                     |
| 1  | 330310027            |              | "         |                                     |
| 2  | 330310035            |              | "         |                                     |
| 3  | 330310034            |              | "         |                                     |
| 4  | 330310033            |              | "         |                                     |
| 5  | 330310032            |              | "         |                                     |
| 6  | 330310041            |              | "         |                                     |
| 7  | 330310043            |              | "         |                                     |
| 8  | 330310021            |              | "         |                                     |
| 9  | 330310019            |              | "         |                                     |

FORM #5

**MATERIAL DELIVERY//INVENTORY CHECKLIST**

DATE 8-17-09 TRUCK # 752018  
 BILL OF LADING # 18583 PROJECT NAME Nu West  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE Geocomposite  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER                | BATCH NUMBER | ROLL SIZE | DAMAGE/REMARKS |
|----|-------------------------------------|--------------|-----------|----------------|
| 1  | 330310020                           |              | 14.5x230  |                |
| 2  | 3303100 <del>20</del> <sup>27</sup> |              |           |                |
| 3  | 330310029                           |              |           |                |
| 4  | 330310026                           |              |           |                |
| 5  | 330310031                           |              |           |                |
| 6  | 330310024                           |              |           |                |
| 7  | Tag missing <sup>00,23</sup>        |              |           |                |
| 8  |                                     |              |           |                |
| 9  |                                     |              |           |                |
| 10 |                                     |              |           |                |
| 1  |                                     |              |           |                |
| 2  |                                     |              |           |                |
| 3  |                                     |              |           |                |
| 4  |                                     |              |           |                |
| 5  |                                     |              |           |                |
| 6  |                                     |              |           |                |
| 7  |                                     |              |           |                |
| 8  |                                     |              |           |                |
| 9  |                                     |              |           |                |

**MATERIAL DELIVERY/INVENTORY CHECKLIST**

DATE 8/17/2009 TRUCK # No 5  
 BILL OF LADING # 15107 PROJECT NAME Nu-West Central Farmers  
 PROJECT NUMBER 2009-4364 MATERIAL TYPE Geotextile, 8oz  
 LOCATION Georgetown Canyon

|    | COMPLETE ROLL NUMBER | BATCH NUMBER | ROLL SIZE  | DAMAGE/REMARKS |
|----|----------------------|--------------|------------|----------------|
| 1  | 12740.01             |              | 15' x 690' | ✓              |
| 2  | 12740.02             |              | 15' x 690' | ✓              |
| 3  |                      |              |            |                |
| 4  |                      |              |            |                |
| 5  |                      |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |
| 10 |                      |              |            |                |
| 1  |                      |              |            |                |
| 2  |                      |              |            |                |
| 3  |                      |              |            |                |
| 4  |                      |              |            |                |
| 5  |                      |              |            |                |
| 6  |                      |              |            |                |
| 7  |                      |              |            |                |
| 8  |                      |              |            |                |
| 9  |                      |              |            |                |

# STUKENHOLTZ LABORATORY, INC.

2924 Addison Ave. E., P.O. Box 353 Twin Falls  
208.734.3050, Fax: 734.3919 www.stukenholtz.com

1935

WILLIAMS, JAMES B  
CONSULTING SERVICES  
250 S 2ND WEST  
SODA SPRINGS ID 83276

208/547-3935 208/547-3022  
Report No.: 96899  
Date Received: 8/27/09  
Date Reported: 8/28/09

| SOIL TEST DATA      | Sample 1 | Sample 2 | Sample 1  | Sample 2               |
|---------------------|----------|----------|---|------------------------|
|                     |          |          | <b>Grower:</b>  | <b>WILLIAMS, JAMES</b> |
| pH                  | 8.0      | H        | <b>Sample Identity</b>                                    | <b>DUD HOLLOW COLL</b> |
| Salts, mmhos/cm     | 0.5      | VL       | <b>Crop</b>   | <b>GRASS</b>           |
| Chlorides, ppm      | 14       | L        | <b>Yield Goal</b>   | <b>2 T</b>             |
| Sodium, meq/100g    | 0.1      | VL       | <b>Acres</b>  |                        |
| CEC, meq/100g       | 13.6     | M        | <b>Prev. Crop T/Acre</b>                                  | <b>GRASS</b>           |
| Excess Lime, %      | 4.0      | M        | <b>Manure T/Acre</b>                                      |                        |
| Organic Matter, %   | 1.17     | M        | <b>Prev. Applied Nutrients</b>                            |                        |
| Organic N, lb/Acre  | 50       | M        | <b>RECOMMENDATIONS, lbs. Nutrients or Units Per Acre.</b> |                        |
| Ammonium - N, ppm   | 1.6      | VL       | Nitrogen  | 130                    |
| Nitrate - N, ppm    | 4        | VL       | P <sub>2</sub> O <sub>5</sub> - Phosphate                 | 55                     |
| Phosphorus, ppm     | 14       | M        | K <sub>2</sub> O - Potash                                 | 60                     |
| Potassium, ppm      | 85       | L        | Calcium   | 0                      |
| Calcium, meq/100g   | 12.1     | VH       | Magnesium   | 0                      |
| Magnesium, meq/100g | 1.1      | M        | Sulfate - Sulfur  | 30                     |
| Sulfate - S, ppm    | 4        | VL       | Zinc  | 0                      |
| Zinc, ppm           | 2.2      | H        | Iron  | 0                      |
| Iron, ppm           | 15.7     | H        | Manganese   | 0                      |
| Manganese, ppm      | 4.6      | M        | Copper  | 0                      |
| Copper, ppm         | 1.2      | M        | Boron   | 1                      |
| Boron, ppm          | 0.25     | VL       | Elemental Sulfur  | 50                     |

| RELATION OF CEC TO SOIL TEXTURE | SAMPLE | ACTUAL AND RECOMMENDED PERCENT OF CEC |                       |                  |                     |                    |                       |                 |                    |
|---------------------------------|--------|---------------------------------------|-----------------------|------------------|---------------------|--------------------|-----------------------|-----------------|--------------------|
|                                 |        | Actual % Potassium                    | Recommended Potassium | Actual % Calcium | Recommended Calcium | Actual % Magnesium | Recommended Magnesium | Actual % Sodium | Recommended Sodium |
| 0 - 5 Sand                      | 1      | 2.1                                   | 3.0 - 6.0 %           | 89.0             | 65 - 80 %           | 8.1                | 15 - 25 %             | 0.7             | < 3.0 %            |
| 5 - 12 Loamy Sand               |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 12 - 18 Sandy Loam              |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 18 - 24 Silt Loam               |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 24 - 36 Clay Loam               | 2      |                                       |                       |                  |                     |                    |                       |                 |                    |
| 36 + Clay                       |        |                                       |                       |                  |                     |                    |                       |                 |                    |

Crop1: Split application of N is advised.

# STUKENHOLTZ LABORATORY, INC.

2924 Addison Ave. E., P.O. Box 353 Twin Falls  
208.734.3050, Fax: 734.3919 www.stukenholtz.com

1935

WILLIAMS, JAMES B  
CONSULTING SERVICES  
250 S 2ND WEST  
SODA SPRINGS ID 83276

208/547-3935 208/547-3022  
Report No.: 96900  
Date Received: 8/27/09  
Date Reported: 8/28/09

| SOIL TEST DATA      | Sample 1 | Sample 2 | Sample 1  | Sample 2               |
|---------------------|----------|----------|---|------------------------|
|                     |          |          | <b>Grower:</b>  | <b>WILLIAMS, JAMES</b> |
| pH                  | 8.1      | H        | <b>Sample Identity</b>                                    | <b>DAN WOODY</b>       |
| Salts, mmhos/cm     | 0.5      | VL       | <b>Crop</b>   | <b>GRASS</b>           |
| Chlorides, ppm      | 14       | L        | <b>Yield Goal</b>   | <b>2 T</b>             |
| Sodium, meq/100g    | 0.1      | VL       | <b>Acres</b>  |                        |
| CEC, meq/100g       | 13.5     | M        | <b>Prev. Crop T/Acre</b>                                  | <b>GRASS</b>           |
| Excess Lime, %      | 11.7     | VH       | <b>Manure T/Acre</b>                                      |                        |
| Organic Matter, %   | 1.01     | M        | <b>Prev. Applied Nutrients</b>                            |                        |
| Organic N, lb/Acre  | 40       | L        | <b>RECOMMENDATIONS, lbs. Nutrients or Units Per Acre.</b> |                        |
| Ammonium - N, ppm   | 2.5      | VL       | Nitrogen  | 140                    |
| Nitrate - N, ppm    | 3        | VL       | P <sub>2</sub> O <sub>5</sub> - Phosphate                 | 110                    |
| Phosphorus, ppm     | 4        | VL       | K <sub>2</sub> O - Potash                                 | 50                     |
| Potassium, ppm      | 110      | L        | Calcium   | 0                      |
| Calcium, meq/100g   | 11.4     | VH       | Magnesium   | 0                      |
| Magnesium, meq/100g | 1.6      | M        | Sulfate - Sulfur  | 30                     |
| Sulfate - S, ppm    | 5        | L        | Zinc  | 7                      |
| Zinc, ppm           | 0.7      | L        | Iron  | 0                      |
| Iron, ppm           | 8.8      | M        | Manganese   | 0                      |
| Manganese, ppm      | 5.4      | H        | Copper  | 0                      |
| Copper, ppm         | 0.8      | M        | Boron   | 1                      |
| Boron, ppm          | 0.35     | L        | Elemental Sulfur  | 100                    |

| RELATION OF CEC TO SOIL TEXTURE | SAMPLE | ACTUAL AND RECOMMENDED PERCENT OF CEC |                       |                  |                     |                    |                       |                 |                    |
|---------------------------------|--------|---------------------------------------|-----------------------|------------------|---------------------|--------------------|-----------------------|-----------------|--------------------|
|                                 |        | Actual % Potassium                    | Recommended Potassium | Actual % Calcium | Recommended Calcium | Actual % Magnesium | Recommended Magnesium | Actual % Sodium | Recommended Sodium |
| 0 - 5 Sand                      | 1      | 2.7                                   | 3.0 - 6.0 %           | 84.4             | 65 - 80 %           | 11.9               | 15 - 25 %             | 0.7             | < 3.0 %            |
| 5 - 12 Loamy Sand               |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 12 - 18 Sandy Loam              | 2      |                                       |                       |                  |                     |                    |                       |                 |                    |
| 18 - 24 Silt Loam               |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 24 - 36 Clay Loam               |        |                                       |                       |                  |                     |                    |                       |                 |                    |
| 36 + Clay                       |        |                                       |                       |                  |                     |                    |                       |                 |                    |

Crop1: Split application of N is advised.

# STUKENHOLTZ LABORATORY INC.

08/28/2009

Dear Mr. Williams,

The following is the fertilizer and application rate recommended for the soil samples you sent us. Please let us know if you have any questions.

Lbs product/ acre

| Field          | 11-52-0 | 21-0-0 | 46-0-0 | 32% ZnSO4 | 14% Borate | Elemental Sulfur |
|----------------|---------|--------|--------|-----------|------------|------------------|
| DUD Hollow     | 105     | 125    | 200    | 0         | 7          | 50               |
| Dan Woody      | 210     | 125    | 195    | 22        | 7          | 100              |
| West Mill Dump | 135     | 125    | 205    | 0         | 7          | 75               |

Sincerely,  
Paul Stukenholtz

TAKE A ROLL IN THE GREAT  
**ANDERSON**  
 Hydroseeding

9943 Pocatello Creek Road  
 Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE \_\_\_\_\_ 20\_\_\_\_ PHONE 269-998-2363  
 SOLD TO Comestop-Rovers & Associates / Dan White  
 ADDRESS Georgetown Canyon Project  
 CITY Georgetown Canyon STATE ID ZIP 83239

CASH  CHECK CHK. NO.

| Quantity     | Description   | Ea. | Amount |
|--------------|---|-----|--------|
| <u>Acres</u> | <u>P.O. # 4024 5118</u>   |     |        |
| <u>2.295</u> | <u>10-16-09 Hydroseeded Slopes<br/>of Clarifier &amp; Furnace</u> |     |        |
|              |   |     |        |
|              |   |     |        |
|              |   |     |        |
|              |   |     |        |
| <u>* CEA</u> | <u>to verify area</u>   |     |        |

|               |  |
|---------------|--|
| Total Sq. Ft. |  |
| Price         |  |
| <b>TOTAL</b>  |  |

*Thank You*

**TERMS**

I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.

Signature [Signature]





TAKE A BOLL IN THE GRASS  
**ANDERSON**  
 Hydroseeding

9943 Pocatello Creek Road  
 Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE \_\_\_\_\_, 20\_\_\_\_

PHONE 269-998-2363

SOLD TO Conestoga - Rovers + Associates / Dan White

ADDRESS Georgetown Canyon Project

CITY Georgetown Canyon STATE ID ZIP 83239

CASH  CHECK CHK. NO.

| Quantity     | Description                              | Ea. | Amount |
|--------------|--|-----|--------|
| <u>Acres</u> | <u>P.O. # 40245118</u>                   |     |        |
|              | <u>10-20-09</u>                          |     |        |
|              | <u>All material have arrived on site</u> |     |        |
|              | <u>Applied 200 lbs/acre</u>              |     |        |
|              | <u>20-20-20 fertilizer on</u>            |     |        |
|              | <u>Furnace + Clarifier Slopes</u>        |     |        |
|              | <u>West end of Ore Slope</u>             |     |        |
|              | <u>will receive 508 lbs.</u>             |     |        |
|              | <u>more of 16-16-16 fertilizer</u>       |     |        |

Total Sq. Ft.

Price

TOTAL

*Thank You*

TERMS

I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.

Signature \_\_\_\_\_



TAKE A ROLL IN THE GRASS  
**ANDERSON**  
 Hydroseeding

9943 Pocatello Creek Road  
 Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE 10/22, 2009 PHONE 269-988-2363  
 SOLD TO Conestoga Roversland Associates (Dennis White)  
 ADDRESS Georgetown Canyon Project  
 CITY Georgetown STATE ID ZIP 83239

CASH  CHECK CHK. NO.

| Quantity | Description                                       | Ea. | Amount |
|----------|---|-----|--------|
|          | P.O. # 40245118                                   |     |        |
|          | 10-22-09  |     |        |
| 1.607    | Acres of Hydroseed                                |     |        |
|          | 3 Rolls of Curlex I Applied on Clarifier Area     |     |        |
|          | 12 Rolls of Premier Straw Applied on Furnace Area |     |        |

|               |  |
|---------------|--|
| Total Sq. Ft. |  |
| Price         |  |
| <b>TOTAL</b>  |  |

*Thank You*

**TERMS**

I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.

Signature [Signature]

TAKE A ROLL IN THE BELLS

# ANDERSON

## Hydroseeding

9943 Pocatello Creek Road  
Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE 10/23, 2009 PHONE \_\_\_\_\_

SOLD TO Conestoga Rovers & Associates (Don White)

ADDRESS Georgetown Canyon Project

CITY Georgetown STATE ID ZIP 83239

CASH  CHECK CHK. NO.

| Quantity | Description                                       | Ea. | Amount |
|----------|---|-----|--------|
|          | P.O. # 40245118                                   |     |        |
| 1.515    | Acres of hydroseed                                |     |        |
|          | 3 Rolls of Curlex on Clarifier                    |     |        |
|          | 32 Rolls of Premier Straw                         |     |        |
|          | Refertilized Ore Bank (refertilization completed) |     |        |
|          | Straw Matting completed                           |     |        |
|          | <b>Total Sq. Ft.</b>                              |     |        |
|          | <b>Price</b>                                      |     |        |
|          | <b>TOTAL</b>                                      |     |        |

*Thank You*

### TERMS

I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.

Signature \_\_\_\_\_

# ANDERSON Hydroseeding

9943 Pocatello Creek Road  
Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE 10/24 2009 PHONE \_\_\_\_\_  
 SOLD TO Conestoga Rovers & Associates (Dan White)  
 ADDRESS Georgetown Canyon Project  
 CITY Georgetown STATE ID ZIP 83239

CASH  CHECK CHK. NO.

| Quantity | Description  | Ea. | Amount |
|----------|--|-----|--------|
|          | P.O. # 40245118  |     |        |
| 2.754    | Acres of Hydroseed<br>(Fill area) (furnace area)<br>(Clarifier Area) |     |        |
|          |  |     |        |
|          |  |     |        |
|          |  |     |        |
|          |  |     |        |
|          |  |     |        |
|          |  |     |        |
|          |  |     |        |

*Thank You*

|               |  |
|---------------|--|
| Total Sq. Ft. |  |
| Price         |  |
| TOTAL         |  |

**TERMS**  
 I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.  
 Signature [Signature]



TAKE A ROLL IN THE GOLF  
**ANDERSON**  
 Hydroseeding

9943 Pocatello Creek Road  
 Pocatello, ID 83201

Noel 233-1745 221-1745 Todd 221-7333 233-6697

DATE 10/26 2009 PHONE \_\_\_\_\_

SOLD TO Conestoga Rovers & Associates (Dan White)

ADDRESS Georgetown Canyon Project

CITY ~~Pocatello~~ Georgetown STATE ID ZIP \_\_\_\_\_

CASH  CHECK CHK. NO.

| Quantity | Description   | Ea. | Amount |
|----------|---|-----|--------|
|          | P.O. # 40245118   |     |        |
| *229     | Acres seeded<br>(ore Bank Trench<br>part of parking area) |     |        |
| 13.414   | Acres of Seeding total                                    |     |        |
|          | - All seeding, straw matting<br>Completed                 |     |        |

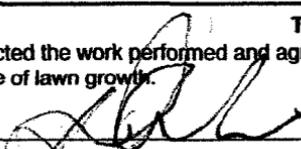
*Thank You*

|               |  |
|---------------|--|
| Total Sq. Ft. |  |
| Price         |  |
| <b>TOTAL</b>  |  |

**TERMS**

I have inspected the work performed and agree that it is satisfactory. I understand that there is no guarantee of lawn growth.

Signature \_\_\_\_\_



Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#2

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#1

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#4

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#3

200 lbs

**Legacy Seeds**

**CRA Georgetown Idaho Mix**

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#6

**Legacy Seeds**

**CRA Georgetown Idaho Mix**

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690 25Lb

#5

**Legacy Seeds**

**CRA Georgetown Idaho Mix**

KIND

- 1) Mountian Br
- 2) Indian Riceg
- 3) Slender Wh
- 4) Bluebunch W
- 5) Thickspike W
- 6) Sherman Big
- 7) Western Yarr
- 8) Idaho Fescue

OTHER CROP SEED :  
 INERT MATTER :  
 WEEDS :

NOXIOUS: NONE FO  
 BAG WEIGHT : 50Lb  
 AMS 690

**Legacy Seeds**

**CRA Georgetown Idaho Mix**

LOT: 69462

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountian Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/06/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%

NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50Lb NET  
 AMS 690

#7

175lbs

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

| KIND                     | PURE SEED | TOTAL GERM | ORIGIN | TEST DATE  |
|--------------------------|-----------|------------|--------|------------|
| 1) Mountian Brome        | 16.02%    | 94.00%     | WA     | 12/11/2008 |
| 2) Indian Ricegrass      | 14.12%    | 73.00%     | WA     | 11/08/2008 |
| 3) Slender Wheatgrass    | 13.35%    | 98.00%     | CN     | 01/26/2009 |
| 4) Bluebunch Wheatgrass  | 12.85%    | 91.00%     | WA     | 10/26/2008 |
| 5) Thickspike Wheatgrass | 12.61%    | 92.00%     | WA     | 10/26/2008 |
| 6) Sherman Big Bluegrass | 10.22%    | 98.00%     | WA     | 11/06/2008 |
| 7) Western Yarrow        | 8.11%     | 85.00%     | NZ     | 11/01/2008 |
| 8) Idaho Fescue          | 7.98%     | 86.00%     | ID     | 11/02/2008 |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%  
 NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50LB NET  
 AMS 690

#10

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

| KIND                     | PURE SEED | TOTAL GERM | ORIGIN | TEST DATE  |
|--------------------------|-----------|------------|--------|------------|
| 1) Mountian Brome        | 16.02%    | 94.00%     | WA     | 12/11/2008 |
| 2) Indian Ricegrass      | 14.12%    | 73.00%     | WA     | 11/08/2008 |
| 3) Slender Wheatgrass    | 13.35%    | 98.00%     | CN     | 01/26/2009 |
| 4) Bluebunch Wheatgrass  | 12.85%    | 91.00%     | WA     | 10/26/2008 |
| 5) Thickspike Wheatgrass | 12.61%    | 92.00%     | WA     | 10/26/2008 |
| 6) Sherman Big Bluegrass | 10.22%    | 98.00%     | WA     | 11/06/2008 |
| 7) Western Yarrow        | 8.11%     | 85.00%     | NZ     | 11/01/2008 |
| 8) Idaho Fescue          | 7.98%     | 86.00%     | ID     | 11/02/2008 |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%  
 NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50LB NET  
 AMS 690

#9

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

| KIND                     | PURE SEED | TOTAL GERM | ORIGIN | TEST DATE  |
|--------------------------|-----------|------------|--------|------------|
| 1) Mountian Brome        | 16.02%    | 94.00%     | WA     | 12/11/2008 |
| 2) Indian Ricegrass      | 14.12%    | 73.00%     | WA     | 11/08/2008 |
| 3) Slender Wheatgrass    | 13.35%    | 98.00%     | CN     | 01/26/2009 |
| 4) Bluebunch Wheatgrass  | 12.85%    | 91.00%     | WA     | 10/26/2008 |
| 5) Thickspike Wheatgrass | 12.61%    | 92.00%     | WA     | 10/26/2008 |
| 6) Sherman Big Bluegrass | 10.22%    | 98.00%     | WA     | 11/06/2008 |
| 7) Western Yarrow        | 8.11%     | 85.00%     | NZ     | 11/01/2008 |
| 8) Idaho Fescue          | 7.98%     | 86.00%     | ID     | 11/02/2008 |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%  
 NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50LB NET  
 AMS 690

#12

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69462

| KIND                     | PURE SEED | TOTAL GERM | ORIGIN | TEST DATE  |
|--------------------------|-----------|------------|--------|------------|
| 1) Mountian Brome        | 16.02%    | 94.00%     | WA     | 12/11/2008 |
| 2) Indian Ricegrass      | 14.12%    | 73.00%     | WA     | 11/08/2008 |
| 3) Slender Wheatgrass    | 13.35%    | 98.00%     | CN     | 01/26/2009 |
| 4) Bluebunch Wheatgrass  | 12.85%    | 91.00%     | WA     | 10/26/2008 |
| 5) Thickspike Wheatgrass | 12.61%    | 92.00%     | WA     | 10/26/2008 |
| 6) Sherman Big Bluegrass | 10.22%    | 98.00%     | WA     | 11/06/2008 |
| 7) Western Yarrow        | 8.11%     | 85.00%     | NZ     | 11/01/2008 |
| 8) Idaho Fescue          | 7.98%     | 86.00%     | ID     | 11/02/2008 |

OTHER CROP SEED : 0.92%  
 INERT MATTER : 3.72%  
 WEEDS : 0.11%  
 NOXIOUS: NONE FOUND  
 BAG WEIGHT : 50LB NET  
 AMS 690

#11

200lbs

Legacy Seeds

CRA Georgetown Idaho Mix

LOT: 69482

|    | <u>KIND</u>           | <u>PURE SEED</u> | <u>TOTAL GERM</u> | <u>ORIGIN</u> | <u>TEST DATE</u> |
|----|-----------------------|------------------|-------------------|---------------|------------------|
| 1) | Mountain Brome        | 16.02%           | 94.00%            | WA            | 12/11/2008       |
| 2) | Indian Ricegrass      | 14.12%           | 73.00%            | WA            | 11/08/2008       |
| 3) | Slender Wheatgrass    | 13.35%           | 98.00%            | CN            | 01/26/2009       |
| 4) | Bluebunch Wheatgrass  | 12.85%           | 91.00%            | WA            | 10/26/2008       |
| 5) | Thickspike Wheatgrass | 12.61%           | 92.00%            | WA            | 10/26/2008       |
| 6) | Sherman Big Bluegrass | 10.22%           | 98.00%            | WA            | 11/08/2008       |
| 7) | Western Yarrow        | 8.11%            | 85.00%            | NZ            | 11/01/2008       |
| 8) | Idaho Fescue          | 7.98%            | 86.00%            | ID            | 11/02/2008       |

OTHER CROP SEED : 0.92%  
INERT MATTER : 3.72%  
WEEDS : 0.11%

NOXIOUS: NONE FOUND  
BAG WEIGHT: 50Lb NET  
AMS 680

#13

#14 Seed Tag provided to JB  
on 10/16/2009

100 lbs

Agri Trend 888-342-7758 Richard

# 20-20-20

**WATER SOLUBLE CRYSTAL CONCENTRATE**  
with Micronutrients

## GUARANTEED ANALYSIS

|   |         |
|---|---------|
| Total Nitrogen (N).....   | 20%     |
| 2.4% Ammoniacal Nitrogen  |         |
| 4.6% Nitrate Nitrogen   |         |
| 13.0% Urea Nitrogen   |         |
| Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )..... | 20%     |
| Soluble Potash (K <sub>2</sub> O).....                          | 20%     |
| <b>Trace Minerals:</b>  |         |
| Boron (B).....  | 0.02%   |
| Copper (Cu).....  | 0.05%   |
| 0.05% Chelated Copper   |         |
| Iron (Fe).....  | 0.10%   |
| 0.10% Chelated Iron   |         |
| Manganese (Mn).....   | 0.05%   |
| 0.05% Chelated Manganese  |         |
| Molybdenum (Mo).....  | 0.0005% |
| Zinc (Zn).....  | 0.05%   |
| 0.05% Chelated Zinc   |         |

Derived From: Urea, Monoammonium Phosphate, Potassium Nitrate, Monopotassium Phosphate, Boric Acid, Sodium Molybdate and EDTA (Ethylenediaminetetraacetic Acid) Chelates of Copper, Iron, Manganese and Zinc.

NOTE: The addition of this product will buffer the final solution. The pH will drop 1 to 2 digits depending on water hardness and rates.

NOTE: When mixing solubles with other chemicals, all chemical labels should be read in their entirety to ensure both chemical compatibility, and compatibility based on the pH.

Net Contents 25 pounds, (11.35 kg)

Net Contents 50 pounds, (22.7 kg)

LOT NUMBER

022399



**AGRI TREND, INC.**

P. O. Box 25597 • Yuma, Arizona 85367-0597  
(520) 342-5852 • Fax (520) 342-9346

AT-0009

## AGRI TREND SOLUBLE FORMULATION FEEDING SUGGESTION CHART

| CROP                                | NO. OF TIMES TO APPLY | BEST TIME TO APPLY  | (Each Applic.) AMOUNT PER ACRE |
|-------------------------------------|-----------------------|---|--------------------------------|
| ALFALFA, CLOVER, ETC.               | 3                     | Apply desired formula when leaves appear after each cutting.  | 5 - 10 lbs.                    |
| SMALL GRAINS                        | 2                     | When 3' to 5', again in boot stage.   | 7 - 10 lbs.                    |
| ONIONS, SUGAR BEETS, BEETS, CARPOTS | 2                     | When 4' to 6', again when tubers develop.   | 5 - 10 lbs.                    |
| POTATOES                            | 4 to 6                | Apply with each insecticide spraying.   | 5 - 10 lbs.                    |
| TOMATOES, PEPPERS, ETC.             | 4 to 6                | Apply with each insecticide spraying.   | 3 - 5 lbs.                     |
| CORN, SWEET CORN, SORGHUM           | 2 to 3                | When 6' to 8', then at 3 week intervals.  | 5 - 10 lbs.                    |
| BEANS, PEAS, SOYBEANS               | 2 to 3                | When 6' to 8', (1st before flowering).  | 5 - 10 lbs.                    |
| RICE, COTTON                        | 2 to 4                | Rice after growth is well established. Cotton with each insecticide spraying.   | 5 - 10 lbs.                    |
| TOBACCO                             | 2 to 4                | Use 1 lb. per 25 gal. water for transplant solution — then spray every 3 weeks.   | 5 - 7 lbs.                     |
| MISC. VEGETABLES                    |                       | Each insecticide spraying.  | 5 - 10 lbs.                    |
| MELONS, SQUASH                      | 2 to 4                | With all insecticide spraying.  | 5 - 10 lbs.                    |
| BERRIES - GRAPES, STRAWBERRIES      |                       | Every 2 weeks after leaves appear the first season and once a month thereafter.   | 5 - 10 lbs.                    |
| CITRUS                              |                       | Apply at 7 - 10 day intervals. (Higher rate for full bearing trees.)  | 5 - 10 lbs.                    |
| FRUIT TREES AND NUT CROPS           | 3 to 6                | Add 1 lb. to each 30 gal. water at regular spraying.  |                                |
| SHRUBBERY, FLOWERS, GARDENS         |                       | Sprinkle solution at base on ground also. spray range — 1 lb. to 25 gal. water.   |                                |
| LAWNS                               | 3 to 5                | After raking in spring. Once every 2 or 3 weeks through early summer. 1 lb. to 25 gal. water (cover approx. 2,000 sq. ft.). |                                |

Manufacturer's and seller's obligation is limited to replacement of product for the quantity of defective material only. Neither seller nor manufacturer shall be liable for any injury, loss, or damage directly or consequently arising from the misuse or inability, to use the product.

**KEEP OUT OF REACH OF CHILDREN**

**SGS Rockford**  
 1208 West 50 South  
 Blackfoot, ID 83221 / (208)684-4444

**Consolidated Blend 372303056**  
 Not Loaded

ANDERSON HYDROSEEDING  
 208-233-1745  
 Bill To: % NOEL ANDERSON  
 9943 POCATELLO CREEK RD  
 POCATELLO, ID 83201

Field ID: 4248/All  
 Description:  
 Ship To: % NOEL ANDERSON  
 9943 POCATELLO CREEK RD  
 POCATELLO, ID 83201

Salesperson: kendallk  
 Date: 10/20/2009  
 Time: 12:55 PM  
 Crop:  
 Acre: 35  
 Placement:  
 Applicator:  
 Vehicle ID:

Comments: 3500 lbs of 16-16-16 Blend

| Product              | EPA Registration # | Rate/Acre  | Total     |
|----------------------|--------------------|------------|-----------|
| 46-00-00 UREA AG [T] |                    | 16.651 Lbs | 0.29 Tons |
| 11-52-00 (MAP) [T]   |                    | 14.574 Lbs | 0.26 Tons |
| 16-20-00 DRY [T]     |                    | 42.109 Lbs | 0.74 Tons |
| 00-00-60 MUR/GRN [T] |                    | 26.667 Lbs | 0.47 Tons |

| Lbs     | N  | P  | K  | S | SO | Ca | Mg | Zn | Fe | Mn | Cu | B |
|---------|----|----|----|---|----|----|----|----|----|----|----|---|
| Order.  | 16 | 16 | 16 |   |    |    |    |    |    |    |    |   |
| Blend.  | 16 | 16 | 16 |   | 6  |    |    |    |    |    |    |   |
| Analys. | 16 | 16 | 16 |   | 6  |    |    |    |    |    |    |   |

|               |                  |                   |                      |                           |
|---------------|------------------|-------------------|----------------------|---------------------------|
| Lbs/Acre: 100 | Lbs/Cu Ft: 61.43 | Cu Ft/Acre: 1.628 | Lbs/Batch: 3500/3500 | Acre/Batch: 35.000/35.000 |
|---------------|------------------|-------------------|----------------------|---------------------------|

1 Total Batches Total Product Blended = 3520 lbs

This ticket is shared with:

ANDERSON HYDROSEEDING    Regular 100    S-2 100    S-3 100

| Date | Scale# | Net | Balance | Comments                             |
|------|--------|-----|---------|--------------------------------------|
|      |        |     |         |                                      |
|      |        |     |         |                                      |
|      |        |     |         | - 41.06 lbs / 5 gal                  |
|      |        |     |         | - 9.13 5 gal parts / ac = 375 lbs/ac |
|      |        |     |         |                                      |
|      |        |     |         |                                      |
|      |        |     |         |                                      |
|      |        |     |         |                                      |
|      |        |     |         |                                      |

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

**SIMPLOT GROWER SOLUTIONS**  
ROCKFORD, IDAHO

3-20-09

1:57PM

DATE

1

Noel Anderson

GR.  
TR.  
NET

1980 1b GROSS

CUSTOMER

WORK ORDER #

MATERIAL

Nº 020608

DRIVER

TK #

WEIGHER INT.

WEIGHT

0.99 tons

**SIMPLOT GROWER SOLUTIONS**  
ROCKFORD, IDAHO

LOOP ID 8

1:47PM

10-20-09

DATE

1:50PM

10-20-09

INBOUND LOOP ID 8  
12240 1b

Noel Anderson

GR.  
TR.  
NET

12240 1b  
10720 1b  
1520 1b

CUSTOMER

WORK ORDER #

MATERIAL

Nº 020608

DRIVER

TK #

WEIGHER INT.

WEIGHT

0.76 tons



**NaturesOwn**  
We've Got You Covered

## Wood Cellulose Mulch

### TEST DATA

Natures Own Mulch is manufactured using only quality hand sorted newspaper, eliminating any possible synthetic plastic or other foreign materials that could inhibit germination or growth.

In application equipment, Natures Own Mulch is fast to load from easy to handle bales. The material mixes rapidly with water to form homogeneous slurry of water, seed and fertilizer. Natures Own Mulch remains in suspension during agitation and pumping, thus providing flowability for the applicator.

|                        |            |
|------------------------|------------|
| Water-Holding Capacity | 1377%      |
| Moisture Content       | 12% (+- 3) |
| Organic Matter         | >93%       |
| Ash Content            | <7%        |
| PH Range               | 5.90       |
| Boron                  | 20 ppm     |

**MULCH:** Natures Own Mulch is a wood-based cellulose fiber product, manufactured from recycled newspaper. The material contains no weed seeds and is heated in the manufacturing process to eliminate factors that would inhibit germination.

Natures Own Mulch is tested by reliable third party agriculture testing laboratory Stukenholtz Laboratory, Inc. of Twin Falls, Idaho.

Patrick Andrew  
Technical Consultant  
Hamilton Manufacturing



We've Got You Covered

Hamilton Manufacturing, Co. Inc.,

901 Russet Street • Twin Falls, Idaho 83301 USA • 208-733-9689 • 208-733-9447 Fax • 800-777-9689

E-mail: [info@hmi-mfg.com](mailto:info@hmi-mfg.com)

Web site: [www.hmi-mfg.com](http://www.hmi-mfg.com)

# Featured Products & Services

## Products and Services

Manufacturing quality erosion control products is our main focus. Our products are designed to meet a complex variety of erosion control and vegetation problems. For slope protection, channel lining, reclamation, turf reinforcement and specialized landscaping, Greenfix America has a product that provides the solutions. Optimum performance of all Greenfix America blankets can be expected when installed according to recommended specifications.

## Fiber Products

Our straw products contain California's highest quality straw, certified by the USDA to be free of Canadian Thistle and other noxious weeds. All straw blankets are made of high performance straw fiber with a longer fiber length that ensures a nutrient rich mulch. Coir (coconut fiber) fiber products contain 100 % high quality coconut fiber.

## Organic Net Products

The Greenfix America Organic Net blankets use the same fiber composition as our standard blankets with a natural reinforcement matrix in place of polypropylene netting. The bio-degradability of the blanket is an advantageous feature in ecologically sensitive areas. Additional features include, added water absorption, a woven net matrix that allows the strands to float independently of each other, reducing the risk of tenting and wildlife endangerment, making these blankets an environmentally friendly solution.

## Custom Manufactured Products

Greenfix America will design and manufacture a blanket to meet your specific project application. Our goal is to meet your unique challenges by providing effective solutions for different erosion and sediment control applications. We will maximize the dollars you spend by producing a blanket to meet your specification.

Greenfix America can provide independent laboratory testing for your custom manufactured products. Minimal charges apply depending upon the number of parameters tested. Please allow 3 to 4 days for analysis processing.



**NEW**

## Innovative Packaging

The Greenfix America 20 roll unit provides easier product shipping, handling, and storage. The unit can be handled easily with standard warehousing equipment in a variety of locations. The packages are durable and can be stored outdoors when covered with a Greenfix America bundle bag. Our specialized packaging style minimizes packaging waste.

## Quality Control Program

Prior to every production season, recurrent testing is performed on the entire product line. To ensure the minimum performance standards are being met, all products are tested annually for the following parameters ASTM D5261 Mass Per Unit Area, ASTM D5199 Thickness, ASTM D5035 Tensile and ASTM D5035 Elongation. This ensures quality standards are not affected by straw variations due to climate, growing, and harvest conditions.

Greenfix America's product quality standards are measured against advanced physical performance tolerances realized by natural environmental events. The quality assured erosion control products made available by Greenfix America set a standard that makes the conditional industry accepted standards environmentally nonconforming.

The performance qualification program accurately provides design performance values qualifying the selected materials for your project application. The design values are compiled from proven federally accepted large-scale laboratory tests intended to replicate actual field conditions, providing definitive engineering design values. Our product qualification program does not subscribe to Bench Scale material testing to interpret design values.

## Diverse TRM Products

Greenfix America offers a variety of TRM materials specifically configured to satisfy the many different approaches to slope and channel designing and marketing practices. Our TRM product development and material qualification program emphasizes the pre-vegetated life cycle of a project application.



## Green Spec

Greenfix Erosion Control Blanket Specification C/D  
Product Specifications (Word Processor Ready in CSI Format)  
Physical Property Compliance Certificates  
Installation Diagrams & Instructions  
Test Data Tables  
Product Comparison Tables  
Photo Galleries  
Product Selection Guidelines



## Online Services

Log on to [greenfix.com](http://greenfix.com) for fast easy access to the following links.

- Place An Order
- Request A Quote
- Print Product Information
- Obtain Individual Product Certificates.
- Send us a message. Tell us what you need.



**Definition:** Slope Interruption Devices (SID) are manufactured from straw that is wrapped in tubular black plastic netting. They are approximately 8 inches (200 mm) in diameter by 20-25 feet (7-8 m) long. Rolls are placed and staked along the contour of newly constructed or disturbed slopes.

**Purpose:** Slope Interruption Devices (SID) are intended to capture and keep sediment on the slopes. Straw wattles (SIDs) are useful to temporarily stabilize slopes by reducing soil creep and sheet and rill erosion until permanent vegetation can get established. Installed, **straw wattles shorten the slope length**, thereby interrupting the raveling and rilling processes, **and reduce the slope steepness**. They catch soil material that moves down the slope by the freeze/thaw processes. Organic matter and native seeds are trapped behind the wattles, which provide a stable medium for germination, logs trap fertile topsoil and retain moisture from rainfall, which aids in growth of tree seedlings planted along the upslope side of the wattles.

**Design Considerations:**

Sites appropriate for straw wattles are:

- Slopes susceptible to sheet and rill erosion;
- Slopes producing dry ravel;
- Slopes susceptible to freeze/thaw activity; or slopes difficult to vegetate because of soil movement. Straw logs are not intended for use in concentrated flow situations.

**Disadvantages:**

- Wattles only function for one or two seasons.
- If not installed properly with a sufficient trench, wattles may fail.
- Straw wattles may require maintenance to ensure that the stakes are holding and the wattles are still in contact with the soil. This is especially true on steep slopes in sandy soil.

**Advantages:**

- Straw wattles are a relatively low-cost solution to sheet and rill erosion problems.
- They can replace silt fences or straw bales on steep slopes.
- Rolls are a short-term solution to help establish native vegetation.
- Rolls store moisture for vegetation planted immediately upslope.

- Plastic netting will eventually photodegrade, eliminating the need for retrieval of materials after the straw has broken down.
- Straw becomes incorporated into the soil with time, adding organic material to the soil and retaining moisture for vegetation.

Straw wattles will last an average of one to two years. This is an important factor when planning the optimum length of time the slope will need mechanical stabilization.

Straw wattles can be staked with willow stakes if site conditions warrant and the moisture retained by the straw log will encourage willow establishment.

**Construction Specifications:**

**Consult Your Local Qualified Distributor or Engineer**  
(Construction Recommendation Available Upon Request)

**Inspection and Maintenance:**

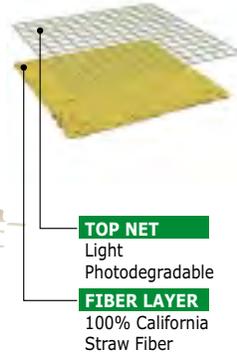
**See Complete Product Specifications**



# Products

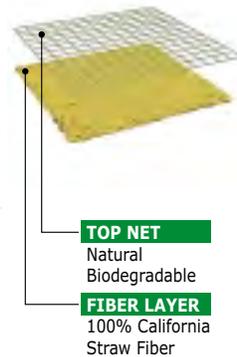
## Temporary Slope Protection

### Straw - Photodegradable



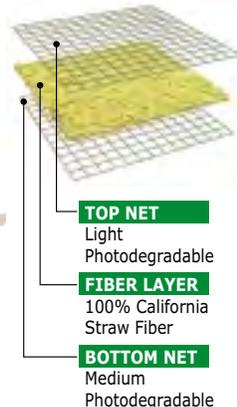
For Optimum performance this product should be installed with net up.

### Straw - Biodegradable

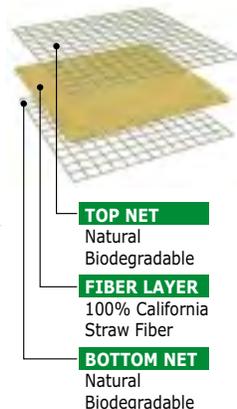


For Optimum performance this product should be installed with net up.

### Straw - Photodegradable



### Straw - Biodegradable



### WS05 Single Net Straw

| Fiber                                 | Straw   |
|---------------------------------------|---|
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.50 / .271   |
| Weight per Blanket (Pounds/Kilograms) | 30 / 13.6   |
| Functional Longevity (Months)         | 10  |
| Top Netting Type (Photodegradable)    | Light   |
| Bottom Netting Type                   | N/A   |
| Product Color Code                    |  |

### WS05B Single Organic Net Straw

| Fiber                                 | Straw   |
|---------------------------------------|---|
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.50 / .271   |
| Weight per Blanket (Pounds/Kilograms) | 30 / 13.6   |
| Functional Longevity (Months)         | 10  |
| Top Netting Type (Biodegradable)      | Natural   |
| Bottom Netting Type                   | N/A   |
| Product Color Code                    |  |

### WS072 Double Net Straw

| Fiber                                 | Straw   |
|---------------------------------------|---|
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 10-12   |
| Top Netting Type (Photodegradable)    | Light   |
| Bottom Netting Type (Photodegradable) | Medium  |
| Product Color Code                    |  |

### WS072B Double Organic Net Straw

| Fiber                                 | Straw   |
|---------------------------------------|---|
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 10-12   |
| Top Netting Type (Biodegradable)      | Natural   |
| Bottom Netting Type (Biodegradable)   | Natural   |
| Product Color Code                    |  |

## Supplement To General Installation Guidelines/ Slopes And Channels

**Subgrade / Slopes & Channels:** On slopes and channels, the site must be shaped to the design specifications (Slope gradient, Density of soil & etc.) The site must be groomed to be free of soil clods, clumps, rocks or equipment imprints of any kind that would prevent the blanket from lying flush against the surface contour.

**Seeding / Slopes & Channels:** For non soil filled applications on slopes and channels, hydro-seed, board cast or drill seed over prepared soil before blanket is deployed. Make sure to hydro-mulch after seeding and before the blanket is installed to ensure the seed is in direct contact with the soil. Seed mixes with adequate pure live seed ratios must be used to ensure proper germination ratios and successful vegetation establishment. Consult your local distributor or seed supplier to obtain a proper seed mix.

**Anchor Trench & Check Slots / Slopes & Channels:** Anchor trenches are required to securely fasten the blanket to the subgrade surface. Anchor trenches and intermediate check slots are typically 6-9 inches wide and 6-9 inches deep. The blanket is installed in the trench and fastened to the bottom with staples spaced 1-3 ft. apart. The anchor trenches and checks slots are then back filled and compacted in such a manner not to damage the blanket. (See Slope & Channel Isometric View)

**Anchor Trench / Slopes:** Anchor trenches should be installed at least 1 ft. beyond the crest of the slope. (See Longitudinal Anchor Trench Fig. 2)

**Anchor Trench / Channels:** In a channel anchor trenches are installed at the beginning of the channel. (See Initial Channel Anchor Trench Fig. 1 & Longitudinal Anchor Trench Fig. 2)

**Check Slots / Slopes:** For maximum performance of your product, an intermediate check slot may be required on long slopes that exceed one roll length. Intermediate check slots should be spaced approximately 20 – 60 ft. intervals down the slope depending on the blanket type, slope length and soil conditions. Consult your local distributor or blanket manufacturer directly to confirm the check slot installation procedure. (See Intermediate Check Slot Fig. 3)

**Check Slots / Channels:** In a channel, check slots are spaced approximately 25 – 60 ft. intervals down stream depending on flow conditions, channel gradient and time to vegetate. (See Intermediate Check Slot Fig. 3 & Cannel Isometric View) Field Joining And Anchoring: The blanket is rolled down the slope or channel loosely to maintain contact with the soil at all times. Side to side overlap between rolls are 3-4 inches minimum and anchored on 2-3 ft. intervals minimum. End to end splice overlap between rolls are 1-3 ft. minimum and anchored with two rows of staples on 1 ft. intervals minimum. Overlaps are shingled in the direction of flow.

Staple patterns will vary depending on application, soil type, slope or channel gradient and etc. (See Staple Pattern Guidelines) A rule of thumb for estimating the amount of staples required for a project is as follows:

Steep Slopes / 1:1 and greater . . . . .2-4 staples per sq. yd.

High Flow Channel . . . . .3-4 staples per sq. yd.

Low Flow Channel . . . . .2-3 staples per sq. yd.

Install additional staples as required to ensure the blanket is always in contact with the soil, regardless of suggested staple patterns.

**Anchoring Devices:** Use a 6 inch x 1 inch 11 gauge minimum metal staple in heavy compacted soil. In loose soil conditions use a 8 inch x 1 inch 11 gauge minimum metal staple. Other approved anchoring devices in loose soil conditions are as follows:

12 inch x 1.5 inch metal staples.

18 inch pins with 1.5 inch diameter washer.

12-30 inch J-Shape pins made from bent 1/4 inch wire or rebar.

Install staples or pins so that the top of the anchor is flush with the soil surface.

**Special Installation & Conditions:** The installation guidelines are recommendations only. You should always confirm the installation procedure with your local distributor or blanket manufacturer to ensure maximum performance of the product. All design specifications prepared by a qualified design consultant or engineer supersede these recommended guidelines.

Product selection software, which some manufactures claim to be design software, use versions of the universal soil loss equation, national rainfall and soil survey charts to fabricate a formula that will make a mathematical blanket type selection.

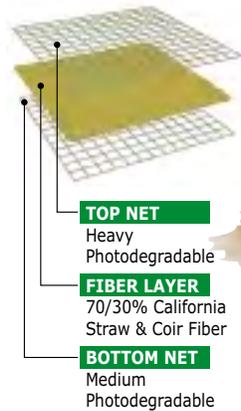
This approach to computerize product selection should never be used to select a blanket type for a specific project application because it circumvents the base line data collection process that all project specifiers regardless of scope are required to do if any hope of success is expected. This type of evaluation does not allow the specifiers to use site specific project data that is directly relevant to the application design and product performance.

The USLE is designed to calculate total tons of potential soil erosion from a site using historical regional data as factors in the equation. These assumptions do not and cannot quantify or guarantee product performance. Design software may be useful in channel design to determine or limit the potential shear stress forces the channel lining materials are subjected to.

## Long Term Slope and Channel Protection

### CFSO72R Double Net Straw Coconut

|                                       |   |
|---------------------------------------|---|
| <b>Fiber</b>                          | <b>Straw / Coir</b>   |
| Fiber Content                         | 70%-30%   |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 18-24   |
| Top Netting Type (Photodegradable)    | Heavy   |
| Bottom Netting Type (Photodegradable) | Medium  |
| Product Color Code                    |  |

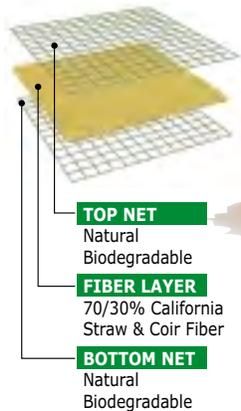


Straw/Coir - Photodegradable



### CFSO72B Double Organic Net Straw Coconut

|                                       |   |
|---------------------------------------|---|
| <b>Fiber</b>                          | <b>Straw / Coir</b>   |
| Fiber Content                         | 70%-30%   |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 18  |
| Top Netting Type (Biodegradable)      | Natural   |
| Bottom Netting Type (Biodegradable)   | Natural   |
| Product Color Code                    |  |

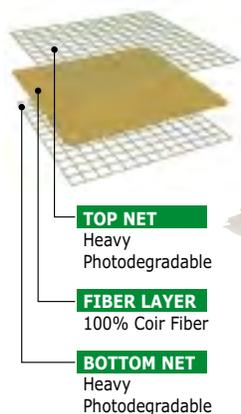


Straw/Coir - Biodegradable



### CFO72RR Double Net Coconut

|                                       |   |
|---------------------------------------|---|
| <b>Fiber</b>                          | <b>Coir</b>   |
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 36  |
| Top Netting Type (Photodegradable)    | Heavy   |
| Bottom Netting Type (Photodegradable) | Heavy   |
| Product Color Code                    |  |

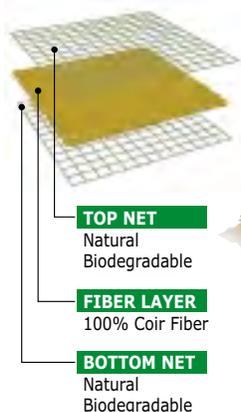


Coir - Photodegradable



### CFO72B Double Organic Net Coconut

|                                       |   |
|---------------------------------------|---|
| <b>Fiber</b>                          | <b>Coir</b>   |
| Fiber Content                         | 100%  |
| Width (Feet/Meters)                   | 8 / 2.4   |
| Length (Feet/Meters)                  | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)   | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters) | 0.70 / .379   |
| Weight per Blanket (Pounds/Kilograms) | 42 / 19.0   |
| Functional Longevity (Months)         | 24  |
| Top Netting Type (Biodegradable)      | Natural   |
| Bottom Netting Type (Biodegradable)   | Natural   |
| Product Color Code                    |  |



Coir - Biodegradable



# Products

## Permanent Turf Reinforcement Mats / Slopes and Channels

### Coir - Permanent

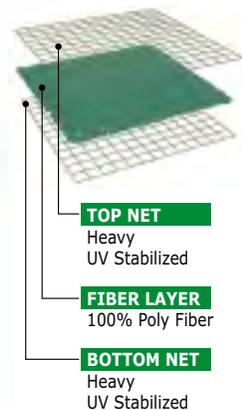


### CFG2000 Geogrid Reinforced Coconut (Patent Pending)

| <b>Fiber</b>                                      | <b>Coir</b>   |
|---|---|
| Fiber Content                                     | 100%  |
| Width (Feet/Meters)                               | 7.5 / 2.3   |
| Length (Feet/Meters)                              | 72.0 / 21.9   |
| Area (Square Yards / Square Meters)               | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters)             | .95 / .514  |
| Weight per Blanket (Pounds/Kilograms)             | 57 / 25.9   |
| Functional Longevity (Months)                     | 36+   |
| Top Net Type 1 (Permanent)                        | Biaxial Geogrid   |
| Type 2 (UV Stabilized Polypropylene)              | Heavy   |
| Bottom Netting Type (UV Stabilized Polypropylene) | Heavy   |
| Product Color Code                                |  |

Applications:  
 Vegetation Establishment With Composite TRM Construction  
 Green Engineering Embankment Reinforcement  
 High Velocity / High Shear Channel Designing  
 Steep Slope Stabilization

### Synthetic - Permanent

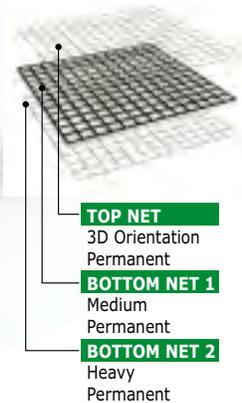


### GFP-12 Double Net Synthetic Fiber

| <b>Fiber</b>                                      | <b>Polypropylene</b>  |
|---|---|
| Fiber Content                                     | 100%  |
| Width (Feet/Meters)                               | 8 / 2.4   |
| Length (Feet/Meters)                              | 67.5 / 20.5   |
| Area (Square Yards / Square Meters)               | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters)             | 0.75 / .406   |
| Weight per Blanket (Pounds/Kilograms)             | 45 / 20.4   |
| Functional Longevity (Months)                     | Permanent   |
| Top Netting Type (UV Stabilized Polypropylene)    | Heavy   |
| Bottom Netting Type (UV Stabilized Polypropylene) | Heavy   |
| Product Color Code                                |  |

Applications:  
 Permanent Erosion Control of Slopes and Channels  
 Erosion Protection of Poorly Vegetated Surfaces  
 Turf Reinforcement of Properly Vegetated Surfaces

### 3D Synthetic - Permanent



### Trinter 3D Permanent Turf Reinforcement Mat

| <b>Fiber</b>                                | <b>N/A</b>  |
|---|---|
| Fiber Content                               | Open  |
| Width (Feet/Meters)                         | 6.56 / 2.0  |
| Length (Feet/Meters)                        | 83.0 / 25.3   |
| Area (Square Yards / Square Meters)         | 60 / 50   |
| Weight (Lbs. Sq. Yd. - Kg/Sq. Meters)       | 0.56 / .340   |
| Weight per Blanket (Pounds/Kilograms)       | 40 / 18   |
| Functional Longevity (Months)               | Permanent   |
| Top Net Type (3D Orientation / Permanent)   | Heavy   |
| Bottom Net Type 1 (UV Stabilized Permanent) | Medium  |
| Type 2 (UV Stabilized Permanent)            | Heavy   |
| Product Color Code                          |  |

Applications:  
 90% of the Matrix is Open and Available for Soil Filling and Root Entanglement  
 Hydraulic BFM Containment Structure  
 Increase Effectiveness of Hydraulically Applied Materials  
 Rapid Turf Reinforcement With Hydro-seeding

## Recommended Installation Guidelines

**Subgrade** - The first installation step is to make sure that the subgrade is properly prepared. Once the subgrade has been verified to be properly graded and compacted and generally free of ruts and projecting stones or clods, the blanket can be deployed. Generally, normal construction equipment should not cause significant rutting of the subgrade.

**Other Layers** - In some systems, another material such as mulch may underlie the blanket and therefore be placed first. When situations require the blanket to be laid on top of another material, care must be taken to prevent disruption of or damage to the underlying materials. Never use normal construction equipment directly on top of blanket.

**Seeding** - In temporary, degradable systems, seed is generally spread on or drilled or sprigged into the subgrade prior to unrolling of the blanket. Many long-term, nondegradable systems are unrolled, and filled with soil prior to seeding.

**Positioning and Anchoring** - In all cases, each blanket should be unrolled as close as possible to its intended final position to minimize the need for dragging which can dislocate underlying materials or dig up or disturb the prepared subgrade and/or seeding. Staking, pinning or stapling blankets to secure their position is commonly done with a frequency and at the relative locations required to assure stability on the terrain in question.

**Wind** - Large panels of blankets can be lifted up by gusts of wind if not properly secured. Deployed materials are most vulnerable prior to anchoring. Wind displacement can cause damage such as tearing or less obvious, but equally as problematic, damage such as loss of fibers. Identified damage should be patched. Liberal use of temporary weights such as dirt mounds or sandbags is the most common strategy to avoid wind pick-up.

## Field Joining and Anchoring

Proper installation of blankets is critical. Blanket panels are joined side to side and end to end by overlapping or "shingling" in the direction of flow. Overlaps are typically secured by staking, pinning, or stapling at regular spacings along the overlap. Longitudinal overlaps must be a minimum of 3" along the overlap length. Blanket ends may be spliced by overlapping 1' (in the direction of water flow) with the upstream blanket placed on top of the downstream blanket. This overlap should be anchored at 1' spacing across the width of the blanket.

Typically blankets are anchored with 11 ga. U-shaped staples, 6" or 8" long depending upon the looseness or compaction of the soil. Proper anchoring of rolled blankets also includes the following practices:

- Terminal trenches (typically 6 inches wide by 12 inches

deep) are made at the top and bottom (crest and toe) of all covered slopes and at the end of all lined channels.

- Intermediate trenches, or "check slots" (typically 6 inches wide by 6 inches deep) or two closely spaced rows of anchors may be used transverse to flows at intermittent points down a slope or along a channel to prevent continuous flows beneath the blankets.

- "Patterning" staking, pinning, or stapling of positioned blankets accomplishes uniform anchoring. The pattern depends on the steepness of the slope or channel as shown in staple guidelines.

### **Penetrations**

It is important that at the point of all penetrations through a blanket additional anchorage be provided. The most common penetration involves a pipe or manhole around which the blanket can be easily cut to fit closely and subsequently anchored. Penetrations and other structure interferences are notoriously prone to concentrated erosion. Therefore, special attention to detail is necessary when any of these features are encountered.

### **Repairs**

If a repair is required because the blanket has been accidentally damaged, a patch of the same base blanket type should be cut to fit over and sufficiently beyond the damaged area to permit joining to or anchoring through the parent blanket.

### **Backfilling**

Blankets which are installed prior to seeding must be subsequently seeded and, when directed, backfilled with soil. These blankets must be of the blanket type, meaning they must have an open structure to facilitate soil filling. Typically, once seeded, same day backfilling is preferred. Depending on the system design, the cover soil may be a special topsoil or simply general backfill. In either case, consideration must be made for the proper placement of the soil layer to completely fill the blanket without overfilling (which may prevent germination) or causing construction damage.

For Installation Assistance:



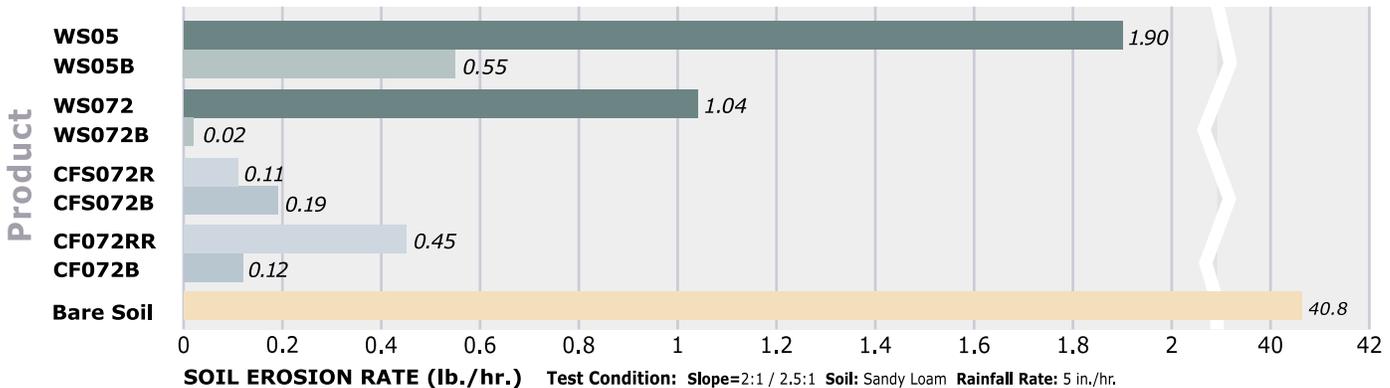
800-929-2184 (760) 348-7600  
Fax (760) 348-3097  
[www.greenfix.com](http://www.greenfix.com)

## PROPERTIES

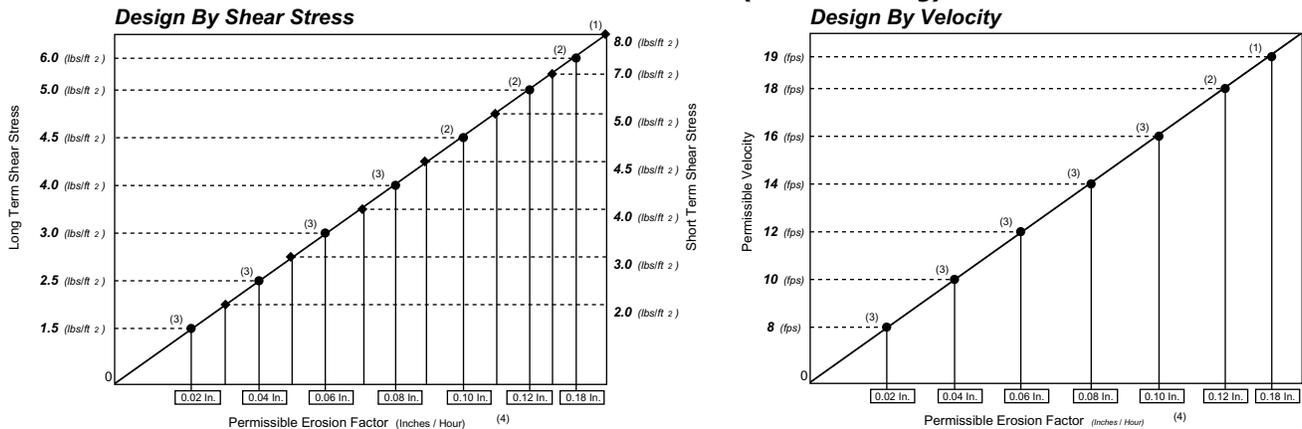
| Parameter/Method  | WS05          | WS05B          | WS072         | WS072B        | CFS072R        | CFS072B        | CF072RR             | CF072B              | CFG2000             | GFP12               | TRINTER             |
|---|---------------|----------------|---------------|---------------|----------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Netting Size (inches sq.) Top   | 0.625         | .50 +/-        | 0.625         | .50 +/-       | 0.625          | .50 +/-        | 0.625               | .50 +/-             | .50 X .60           | 0.625               | 0.30                |
| Bottom  | n/a           | n/a            | 0.625         | .50 +/-       | 0.625          | .50 +/-        | 0.625               | .50 +/-             | 0.625               | 0.625               | 0.30                |
| Net Weight (lbs./1000 sq. ft.) Top  | 1.6           | 9.3            | 1.6           | 9.3           | 3.0            | 9.3            | 3.0                 | 9.3                 | 31.0                | 3.0                 | 22.5                |
| Bottom  | n/a           | 9.3            | 1.6           | 9.3           | 1.6            | 9.3            | 3.0                 | 9.3                 | 3.0                 | 3.0                 | 22.5                |
| Slope Recommendation<br>Derived from lab testing<br>and field applications.                       | 2.5:1or<      | 2.5:1or<       | 2:1or<        | 2:1or<        | 1:1or<         | 1:1or<         | 1:1or><br>& Channel |
| 1 ASTM D5199 (mils) Min.<br>Thickness (inches) Min.   | 350<br>0.35   | 350<br>0.35    | 430<br>0.43   | 430<br>0.43   | 380<br>0.38    | 430<br>0.43    | 300<br>0.30         | 300<br>0.30         | 320<br>0.32         | 280<br>0.28         | 500<br>0.50         |
| 1 ASTM 5261 (Avg./lbs./ft. <sup>2</sup> )<br>Mass per Unit Area (Avg./grams/m <sup>2</sup> )      | 0.15<br>735   | 0.15<br>722    | 0.14<br>690   | 0.14<br>690   | 0.09<br>476    | 0.13<br>676    | 0.13<br>662         | 0.09<br>440         | 0.17<br>833         | 0.09<br>690         | 0.06<br>340         |
| 1 ASTM D5035 (Avg./lbs./ft.) MD<br>Tensile Strength @ Peak TD                                     | 73.2<br>60.0  | 303.6<br>339.6 | 140.4<br>126  | 450<br>555.6  | 206.4<br>183.6 | 496.8<br>505.2 | 266.4<br>234        | 560.4<br>548.4      | 1770<br>2071        | 503.2<br>483.4      | 314.4<br>242.4      |
| 1 ASTM D5035 (Avg. %) MD<br>Elongation @ Peak TD  | 10.9<br>8.7   | 6.8<br>2.8     | 12.4<br>9.3   | 3.6<br>2.7    | 13.4<br>9.6    | 2.1<br>2.2     | 13.4<br>11.1        | 2.2<br>2.5          | 17.1<br>18.1        | 25<br>24            | 27<br>20            |
| 2 Roughness Coefficient Mannings "n"  | 0.0165        | 0.0212         | 0.0174        | 0.0173        | 0.0177         | 0.0180         | 0.0159              | 0.0148              | 0.026               | 0.024               | 0.025               |
| 3 Light Penetration ECTC (Avg. %)   | 35            | -              | 11            | -             | 19             | 11             | 8                   | -                   | 8                   | 5                   | *                   |
| 3 Swell - ECTC (Avg. %)   | 70            | -              | 6             | -             | 25             | 19             | 5                   | -                   | 5                   | -                   | -                   |
| 3 ASTM D1117 (Avg. %)<br>Water Absorption   | 200           | -              | 365           | -             | 285            | 81             | 22                  | -                   | 22                  | -                   | -                   |
| 3 ASTM D4491 Permittivity (s-1)<br>Permeability (cm/s)  | 2.0<br>1.8    | -<br>-         | 4.7<br>2.5    | -<br>-        | 6.1<br>2.6     | 1.8<br>1.9     | 5.8<br>3.6          | -<br>-              | 5.8<br>3.6          | -<br>-              | -<br>-              |
| 4 Design (C) Factor ASTM D6549<br>5 Relative (C) Factor - SDSU<br>10 Yr. Storm Event (ASTM D6549) | 0.046<br>0.03 | 0.013<br>0.03  | 0.025<br>0.03 | 0.005<br>0.03 | 0.003<br>0.02  | 0.005<br>0.02  | 0.011<br>0.001      | 0.003<br>0.001      | 0.011<br>0.001      | 0.16<br>-           | *<br>*              |
| 4 Max. Permissible Shear (lbs/ft <sup>2</sup> )<br>Unvegetated Direct Sheer Value                 | N/A           | N/A            | N/A           | N/A           | 3.0            | 2.5            | 4.0                 | 3.0                 | 4.5                 | 3.0                 | 6.5                 |

1. Precision Geosynthetic Laboratories 2. Texas Transportation Institute 3. TRI Environmental, Inc. 4. Utah State Water Research Laboratory 5. San Diego State University Soil Erosion Research Laboratory  
N/A - Shear stress is a hydraulically applied force not an index property to be used for any type of conformance evaluation of straw fiber blankets.  
\* Parameter value will vary depending on integrated application (Soil filling, Hydro Mulching, Vegetated, Non-vegetated and Etc.).

## SLOPE SOIL EROSION RATE



## CFG2000 APPLICATION & DESIGN CHART (Patent Pending)



**Test Conditions**  
2000-2001 Independent University Research Laboratory Testing.  
Soil Type - Sandy Loam  
High Velocity Flow - Maximum flume velocity & shear.

**Legend**  
● Long Term  
◆ Short Term

(1) Max Flume velocity & shear (19.5 fps) - Duration < 2 Hrs.  
(2) Long duration test 50 hours minimum - Velocity & shear constant at 18 fps including 2 hour peak flow (19.5 fps.).  
(3) Short duration test - Velocity & shear increasing every 30 minutes up to 18 fps.  
(4) Erosion Factors based on direct measurement of soil loss during 50 hour test - Unvegetated state.



**Nu-West Industries  
Central Farmers Fertilizer Facility  
Georgetown Canyon, ID  
Earthwork Observations & Density Test Results Summary  
Ore Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location                                 | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|--|-----------------------|
| 1                   | 1                 | 7/16/09        | 8"          | 15.4        | 6.7      | 136.1     | 127.5     | 117.0          | 109.0%           | Slurry Pit, W side center                | Lift No 1             |
| 2                   | 2                 | 7/16/09        | 8"          | 15.4        | 7.3      | 138.2     | 128.7     | 117.0          | 110.0%           | Slurry Pit, N side center                | Lift No 1             |
| 3                   | 3                 | 7/16/09        | 8"          | 15.4        | 7.3      | 140.1     | 130.6     | 117.0          | 111.6%           | Slurry Pit, W side center                | Lift No 1             |
| 4                   | 4                 | 7/16/09        | 8"          | 15.4        | 6.6      | 136.1     | 127.7     | 117.0          | 109.1%           | Slurry Pit, center 20' N of S end        | Lift No 1             |
| 5                   | 5                 | 7/16/09        | 8"          | 15.4        | 7.9      | 137.1     | 127.1     | 117.0          | 108.6%           | Slurry Pit, SW corner                    | Lift No 1             |
| 6                   | 6                 | 7/16/09        | 8"          | 15.4        | 7.7      | 135.8     | 126.1     | 117.0          | 107.8%           | Slurry Pit, SE corner, edge of haul road | Lift No 1             |
| 7                   | 1                 | 7/23/09        | 8"          | 15.4        | 5.7      | 132.6     | 125.4     | 117.0          | 107.2%           | Slurry Pit, NW corner                    | Lift No 2             |
| 8                   | 2                 | 7/23/09        | 8"          | 15.4        | 5.1      | 136.8     | 130.1     | 117.0          | 111.2%           | Slurry Pit, N center                     | Lift No 2             |
| 9                   | 3                 | 7/23/09        | 8"          | 15.4        | 6.3      | 135.4     | 127.4     | 117.0          | 108.9%           | Slurry Pit, W edge                       | Lift No 2             |
| 10                  | 4                 | 7/23/09        | 8"          | 15.4        | 6.8      | 131.1     | 122.7     | 117.0          | 104.9%           | Slurry Pit, 50' NE of SW corner          | Lift No 2             |
| 11                  | 5                 | 7/23/09        | 8"          | 15.4        | 6.8      | 140.6     | 131.6     | 117.0          | 112.5%           | Slurry Pit, SW corner                    | Lift No 2             |
| 12                  | 6                 | 7/23/09        | 8"          | 15.4        | 5.4      | 130.2     | 123.5     | 117.0          | 105.6%           | Slurry Pit, S center                     | Lift No 2             |
| 13                  | 7                 | 7/23/09        | 8"          | 15.4        | 9.5      | 133.3     | 121.7     | 117.0          | 104.0%           | Furnace, NW corner                       | Lift No 3             |
| 14                  | 8                 | 7/23/09        | 8"          | 15.4        | 8.2      | 134.2     | 124.1     | 117.0          | 106.1%           | Furnace, N side                          | Lift No 3             |
| 15                  | 9                 | 7/23/09        | 8"          | 15.4        | 8.0      | 129.6     | 120.0     | 117.0          | 102.6%           | Furnace, S side center                   | Lift No 3             |
| 16                  | 10                | 7/23/09        | 8"          | 15.4        | 9.7      | 133.7     | 121.8     | 117.0          | 104.1%           | Furnace, E side center                   | Lift No 3             |
| 17                  | 1                 | 7/28/09        | 8"          | 15.4        | 8.2      | N/A       | 109.3     | 117.0          | 93.4%            | Slurry Pit, NE edge                      | Lift No 4             |
| 18                  | 2                 | 7/28/09        | 8"          | 15.4        | 8.3      | 121.6     | 112.2     | 117.0          | 95.9%            | Slurry Pit, N center                     | Lift No 4             |
| 19                  | 3                 | 7/28/09        | 8"          | 15.4        | 8.3      | 114.4     | 105.6     | 117.0          | 90.3%            | Slurry Pit, E edge                       | Lift No 4             |
| 20                  | 4                 | 7/28/09        | 8"          | 15.4        | 8.3      | 121.6     | 112.3     | 117.0          | 96.0%            | Slurry Pit, E edge                       | Lift No 4             |



**Nu-West Industries  
Central Farmers Fertilizer Facility  
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Earthwork Observations & Density Test Results Summary  
Ore Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location                | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|-------------------------|-----------------------|
| 21                  | 5                 | 7/28/09        | 8"          | 15.4        | 9.0      | 123.0     | 112.8     | 117.0          | 96.4%            | Slurry Pit, SE edge     | Lift No 4             |
| 22                  | 6                 | 7/28/09        | 8"          | 15.4        | 8.1      | 123.0     | 113.8     | 117.0          | 97.3%            | Slurry Pit, S edge      | Lift No 4             |
| 23                  | 7                 | 7/28/09        | 8"          | 15.4        | 9.2      | 116.2     | 106.4     | 117.0          | 90.9%            | Slurry Pit, SW edge     | Lift No 4             |
| 24                  | 8                 | 7/28/09        | 8"          | 15.4        | 9.8      | 112.6     | 102.5     | 117.0          | 87.6%            | Slurry Pit, SW edge     | Lift No 4             |
| 25                  | 9                 | 7/28/09        | 8"          | 15.4        | 10.2     | 121.4     | 110.1     | 117.0          | 94.1%            | Furnace, N center slope | Lift No 6             |
| 26                  | 10                | 7/28/09        | 8"          | 15.4        | 9.2      | 124.2     | 113.7     | 117.0          | 97.2%            | Furnace, N center slope | Lift No 6             |
| 27                  | 11                | 7/28/09        | 8"          | 15.4        | 10.3     | 123.2     | 111.7     | 117.0          | 95.5%            | Furnace, NE Slope       | Lift No 6             |
| 28                  | 12                | 7/28/09        | 8"          | 15.4        | 10.6     | N/A       | 108.2     | 117.0          | 92.5%            | Furnace, SE Slope       | Lift No 6             |
| 29                  | 13                | 7/28/09        | 8"          | 15.4        | 9.6      | 121.5     | 110.9     | 117.0          | 94.8%            | Furnace, SE Slope       | Lift No 6             |
| 30                  | 14                | 7/28/09        | 8"          | 15.4        | 10.9     | 119.3     | 107.6     | 117.0          | 92.0%            | Furnace, S center slope | Lift No 6             |
| 31                  | 1                 | 7/30/09        | 8"          | 15.4        | 11.4     | 133.5     | 119.9     | 117.0          | 102.5%           | Furnace, W side         | Lift No 9             |
| 32                  | 2                 | 7/30/09        | 8"          | 15.4        | 11.6     | 131.3     | 117.7     | 117.0          | 100.6%           | Furnace, N side         | Lift No 9             |
| 33                  | 3                 | 7/30/09        | 8"          | 15.4        | 10.8     | 134.6     | 121.5     | 117.0          | 103.8%           | Furnace, S side         | Lift No 9             |
| 34                  | 4                 | 7/30/09        | 8"          | 15.4        | 12.5     | 131.4     | 116.8     | 117.0          | 99.8%            | Furnace, E side         | Lift No 9             |
| 35                  | 5                 | 7/30/09        | 8"          | 15.4        | 10.5     | 134.3     | 121.5     | 117.0          | 103.8%           | Furnace, NW side        | Lift No 9             |
| 36                  | 6                 | 7/30/09        | 8"          | 15.4        | 9.5      | 127.1     | 116.1     | 117.0          | 99.2%            | Slurry Pit, S edge      | Lift No 3             |
| 37                  | 7                 | 7/30/09        | 8"          | 15.4        | 9.0      | 138.4     | 126.9     | 117.0          | 108.5%           | Slurry Pit, SE edge     | Lift No 3             |
| 38                  | 8                 | 7/30/09        | 8"          | 15.4        | 8.4      | 120.7     | 111.4     | 117.0          | 95.2%            | Slurry Pit, NE edge     | Lift No 3             |
| 39                  | 9                 | 7/30/09        | 8"          | 15.4        | 7.8      | 133.5     | 123.9     | 117.0          | 105.9%           | Slurry Pit, NW edge     | Lift No 3             |
| 40                  | 10                | 7/30/09        | 8"          | 15.4        | 7.6      | 122.6     | 113.9     | 117.0          | 97.4%            | Slurry Pit, SW edge     | Lift No 3             |



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Ore Material**

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|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|---------------------|-----------------------|
| 41                  | 11                | 7/30/09        | 8"          | 15.4        | 9.5      | 129.1     | 117.9     | 117.0          | 100.8%           | Slurry Pit, SW edge | Lift No 3             |
| 42                  | 1                 | 8/3/09         | 8"          | 15.4        | 10.2     | 129.3     | 117.4     | 117.0          | 100.3%           | Slurry Pit, SW edge | Lift No 5             |
| 43                  | 2                 | 8/3/09         | 8"          | 15.4        | 7.0      | 133.0     | 124.4     | 117.0          | 106.3%           | Slurry Pit, SW edge | Lift No 6             |
| 44                  | 3                 | 8/3/09         | 8"          | 15.4        | 10.6     | 131.6     | 119.0     | 117.0          | 101.7%           | Slurry Pit, center  | Lift No 5             |
| 45                  | 4                 | 8/3/09         | 8"          | 15.4        | 7.3      | 129.4     | 120.6     | 117.0          | 103.1%           | Slurry Pit, center  | Lift No 6             |
| 46                  | 5                 | 8/3/09         | 8"          | 15.4        | 9.5      | 133.6     | 122.0     | 117.0          | 104.3%           | Slurry Pit, NW edge | Lift No 5             |
| 47                  | 6                 | 8/3/09         | 8"          | 15.4        | 7.4      | 130.7     | 121.7     | 117.0          | 104.0%           | Slurry Pit, NW edge | Lift No 6             |
| 48                  | 7                 | 8/3/09         | 8"          | 15.4        | 10.6     | 131.9     | 119.2     | 117.0          | 101.9%           | Slurry Pit, NE edge | Lift No 5             |
| 49                  | 8                 | 8/3/09         | 8"          | 15.4        | 7.6      | 127.8     | 118.8     | 117.0          | 101.5%           | Slurry Pit, NE edge | Lift No 6             |
| 50                  | 9                 | 8/3/09         | 8"          | 15.4        | 9.2      | 133.1     | 121.9     | 117.0          | 104.2%           | Slurry Pit, SE edge | Lift No 5             |
| 51                  | 10                | 8/3/09         | 8"          | 15.4        | 6.3      | 135.2     | 127.2     | 117.0          | 108.7%           | Slurry Pit, SE edge | Lift No 6             |
| 52                  | 11                | 8/3/09         | 8"          | 15.4        | 10.6     | 129.6     | 117.2     | 117.0          | 100.2%           | Slurry Pit, S edge  | Lift No 4             |
| 53                  | 12                | 8/3/09         | 8"          | 15.4        | 7.1      | 140.0     | 130.7     | 117.0          | 111.7%           | Slurry Pit, S edge  | Lift No 5             |
| 54                  | 13                | 8/3/09         | 8"          | 15.4        | 8.9      | 135.3     | 124.2     | 117.0          | 106.2%           | Furnace, W side     | Lift No 11            |
| 55                  | 14                | 8/3/09         | 8"          | 15.4        | 8.9      | 123.8     | 113.7     | 117.0          | 97.2%            | Furnace, S side     | Lift No 11            |
| 56                  | 15                | 8/3/09         | 8"          | 15.4        | 11.0     | 133.8     | 120.5     | 117.0          | 103.0%           | Furnace, SW side    | Lift No 11            |
| 57                  | 16                | 8/3/09         | 8"          | 15.4        | 9.0      | 136.8     | 125.6     | 117.0          | 107.4%           | Furnace, NW side    | Lift No 11            |
| 58                  | 1                 | 8/5/09         | 8"          | 15.4        | 7.0      | 124.1     | 116.0     | 117.0          | 99.1%            | Furnace, W side     | Lift No 13            |
| 59                  | 2                 | 8/5/09         | 8"          | 15.4        | 9.0      | 131.0     | 120.3     | 117.0          | 102.8%           | Furnace, E side     | Lift No 13            |
| 60                  | 3                 | 8/5/09         | 8"          | 15.4        | 8.5      | 124.9     | 115.1     | 117.0          | 98.4%            | Furnace, E side     | Lift No 13            |



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|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------------------|-----------------------|
| 61                  | 4                 | 8/5/09         | 8"          | 15.4        | 9.0      | 122.8     | 112.7     | 117.0          | 96.3%            | Furnace, SE side                   | Lift No 13            |
| 62                  | 5                 | 8/5/09         | 8"          | 15.4        | 7.6      | 132.3     | 123.0     | 117.0          | 105.1%           | Furnace, N side                    | Lift No 13            |
| 63                  | 6                 | 8/5/09         | 8"          | 15.4        | 10.9     | 137.0     | 123.5     | 117.0          | 105.6%           | Slurry Pit, S edge (at GT-2)       | Lift No 3             |
| 64                  | 7                 | 8/5/09         | 8"          | 15.4        | 11.0     | 137.2     | 123.6     | 117.0          | 105.6%           | Slurry Pit, S edge (at GT-2)       | Lift No 2             |
| 65                  | 8                 | 8/5/09         | 8"          | 15.4        | 12.0     | 135.1     | 120.6     | 117.0          | 103.1%           | Slurry Pit, S edge (at GT-2)       | Lift No 1             |
| 66                  | 9                 | 8/5/09         | 8"          | 15.4        | 9.8      | 135.7     | 123.5     | 117.0          | 105.6%           | Slurry Pit, N edge (at GT-7 & 8)   | Lift No 3             |
| 67                  | 10                | 8/5/09         | 8"          | 15.4        | 11.9     | 136.3     | 121.8     | 117.0          | 104.1%           | Slurry Pit, N edge (at GT-7 & 8)   | Lift No 2             |
| 68                  | 11                | 8/5/09         | 8"          | 15.4        | 11.3     | 134.0     | 120.4     | 117.0          | 102.9%           | Slurry Pit, N edge (at GT-7 & 8)   | Lift No 1             |
| 69                  | 12                | 8/5/09         | 8"          | 15.4        | 11.0     | 135.6     | 122.2     | 117.0          | 104.4%           | Slurry Pit, N edge                 | Lift No 7             |
| 70                  | 1                 | 8/20/09        | 8"          | 15.4        | 6.4      | 134.1     | 126.0     | 117.0          | 107.7%           | Clarifier, center                  | Lift No 2             |
| 71                  | 2                 | 8/20/09        | 8"          | 15.4        | 4.3      | 132.6     | 127.1     | 117.0          | 108.6%           | Clarifier, center                  | Lift No 1             |
| 72                  | 3                 | 8/20/09        | 8"          | 15.4        | 7.1      | 127.7     | 119.2     | 117.0          | 101.9%           | Clarifier, 30' E of center         | Lift No 1             |
| 73                  | 1                 | 8/21/09        | 8"          | 15.4        | 10.2     | 141.0     | 127.9     | 117.0          | 109.3%           | Clarifier, 20' SW of concrete wall | Lift No 5             |
| 74                  | 2                 | 8/21/09        | 8"          | 15.4        | 11.1     | 136.6     | 122.9     | 117.0          | 105.0%           | Clarifier, 20' W of concrete wall  | Lift No 5             |
| 75                  | 3                 | 8/21/09        | 8"          | 15.4        | 9.7      | 133.9     | 122.1     | 117.0          | 104.4%           | Clarifier, center                  | Lift No 5             |
| 76                  | 4                 | 8/21/09        | 8"          | 15.4        | 9.0      | 141.8     | 130.1     | 117.0          | 111.2%           | Clarifier, 25' E of concrete wall  | Lift No 5             |
| 77                  | 5                 | 8/21/09        | 8"          | 15.4        | 8.8      | 133.7     | 127.4     | 117.0          | 108.9%           | Clarifier, 30' E of concrete wall  | Lift No 4             |
| 78                  | 6                 | 8/21/09        | 8"          | 15.4        | 10.6     | 134.6     | 121.7     | 117.0          | 104.0%           | Clarifier, 40' W of concrete wall  | Lift No 4             |
| 79                  | 7                 | 8/21/09        | 8"          | 15.4        | 9.5      | 134.8     | 123.2     | 117.0          | 105.3%           | Clarifier, 25' SW of concrete wall | Lift No 4             |
| 80                  | 8                 | 8/21/09        | 8"          | 15.4        | 9.8      | 136.6     | 124.5     | 117.0          | 106.4%           | Clarifier, 20' SW of concrete wall | Lift No 4             |



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|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------------------|-----------------------|
| 81                  | 9                 | 8/21/09        | 8"          | 15.4        | 10.0     | 137.0     | 124.6     | 117.0          | 106.5%           | Clarifier, 25' SW of concrete wall | Lift No 3             |
| 82                  | 10                | 8/21/09        | 8"          | 15.4        | 9.2      | 139.0     | 127.3     | 117.0          | 108.8%           | Clarifier, 20' SW of concrete wall | Lift No 3             |
| 83                  | 11                | 8/21/09        | 8"          | 15.4        | 9.2      | 134.3     | 122.9     | 117.0          | 105.0%           | Clarifier, center                  | Lift No 3             |
| 84                  | 12                | 8/21/09        | 8"          | 15.4        | 7.2      | 125.9     | 117.4     | 117.0          | 100.3%           | Clarifier, 40' W of concrete wall  | Lift No 3             |
| 85                  | 13                | 8/21/09        | 8"          | 15.4        | 6.4      | 132.4     | 124.5     | 117.0          | 106.4%           | Clarifier, 25' E of concrete wall  | Lift No 6             |
| 86                  | 14                | 8/21/09        | 8"          | 15.4        | 8.9      | 142.3     | 130.7     | 117.0          | 111.7%           | Clarifier, 20' SE of concrete wall | Lift No 6             |
| 87                  | 15                | 8/21/09        | 8"          | 15.4        | 9.6      | 141.4     | 129.0     | 117.0          | 110.3%           | Clarifier, 30' N of concrete wall  | Lift No 6             |
| 88                  | 16                | 8/21/09        | 8"          | 15.4        | 7.5      | 142.3     | 132.2     | 117.0          | 113.0%           | Clarifier, 30' NW of concrete wall | Lift No 6             |
| 89                  | 1                 | 8/26/09        | 8"          | 15.4        | 12.5     | 126.4     | 112.3     | 117.0          | 96.0%            | Clarifier, 25' SW of concrete wall | Lift No 9             |
| 90                  | 2                 | 8/26/09        | 8"          | 15.4        | 11.3     | 134.8     | 121.1     | 117.0          | 103.5%           | Clarifier, 30' SE of concrete wall | Lift No 9             |
| 91                  | 3                 | 8/26/09        | 8"          | 15.4        | 11.0     | 127.8     | 115.2     | 117.0          | 98.5%            | Clarifier, 20' W of concrete wall  | Lift No 9             |
| 92                  | 4                 | 8/26/09        | 8"          | 15.4        | 9.1      | 128.7     | 118.0     | 117.0          | 100.9%           | Clarifier, 20' E of concrete wall  | Lift No 9             |
| 93                  | 5                 | 8/26/09        | 8"          | 15.4        | 12.8     | 127.7     | 113.3     | 117.0          | 96.8%            | Clarifier, 35' SE of concrete wall | Lift No 8             |
| 94                  | 6                 | 8/26/09        | 8"          | 15.4        | 8.3      | 130.3     | 120.3     | 117.0          | 102.8%           | Clarifier, 30' NE of concrete wall | Lift No 8             |
| 95                  | 7                 | 8/26/09        | 8"          | 15.4        | 8.5      | 135.5     | 124.8     | 117.0          | 106.7%           | Clarifier, center                  | Lift No 8             |
| 96                  | 8                 | 8/26/09        | 8"          | 15.4        | 9.5      | 135.3     | 123.5     | 117.0          | 105.6%           | Clarifier, 25' SW of concrete wall | Lift No 8             |
| 97                  | 9                 | 8/26/09        | 8"          | 15.4        | 6.7      | 133.6     | 125.2     | 117.0          | 107.0%           | Clarifier, 35' SE of concrete wall | Lift No 7             |
| 98                  | 10                | 8/26/09        | 8"          | 15.4        | 8.8      | 136.5     | 125.4     | 117.0          | 107.2%           | Clarifier, center                  | Lift No 7             |
| 99                  | 11                | 8/26/09        | 8"          | 15.4        | 7.2      | 141.4     | 131.9     | 117.0          | 112.7%           | Clarifier, 30' NE of concrete wall | Lift No 7             |
| 100                 | 12                | 8/26/09        | 8"          | 15.4        | 8.4      | 137.1     | 126.3     | 117.0          | 107.9%           | Clarifier, 25' SW of concrete wall | Lift No 7             |



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|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------------------|-----------------------|
| 101                 | 1                 | 8/27/09        | 8"          | 15.4        | 11.1     | 133.2     | 119.9     | 117.0          | 102.5%           | Clarifier, 15' SW of concrete wall | Lift No 10            |
| 102                 | 2                 | 8/27/09        | 8"          | 15.4        | 7.5      | 141.9     | 132.0     | 117.0          | 112.8%           | Clarifier, 15' W of concrete wall  | Lift No 10            |
| 103                 | 3                 | 8/27/09        | 8"          | 15.4        | 13.2     | 122.6     | 108.3     | 117.0          | 92.6%            | Clarifier, 20' S of center         | Lift No 10            |
| 104                 | 4                 | 8/27/09        | 8"          | 15.4        | 12.1     | 133.2     | 118.8     | 117.0          | 101.5%           | Clarifier, 23' S of center         | Lift No 10            |
| 105                 | 5                 | 8/27/09        | 8"          | 15.4        | 6.3      | 137.7     | 129.5     | 117.0          | 110.7%           | Clarifier, 10' E of concrete wall  | Lift No 10            |
| 106                 | 1                 | 8/31/09        | 8"          | 15.4        | 9.3      | 130.6     | 119.5     | 117.0          | 102.1%           | Clarifier, SE corner               | Lift No 13            |
| 107                 | 2                 | 8/31/09        | 8"          | 15.4        | 8.6      | 134.0     | 123.4     | 117.0          | 105.5%           | Clarifier, center                  | Lift No 13            |
| 108                 | 3                 | 8/31/09        | 8"          | 15.4        | 6.8      | 123.5     | 115.6     | 117.0          | 98.8%            | Clarifier, SW corner               | Lift No 13            |
| 109                 | 4                 | 8/31/09        | 8"          | 15.4        | 7.3      | 130.8     | 121.9     | 117.0          | 104.2%           | Clarifier, N corner                | Lift No 13            |
| 110                 | 5                 | 8/31/09        | 8"          | 15.4        | 10.1     | 127.0     | 115.4     | 117.0          | 98.6%            | Clarifier, NE corner               | Lift No 13            |
| 111                 | 6                 | 8/31/09        | 8"          | 15.4        | 11.5     | 135.7     | 121.8     | 117.0          | 104.1%           | Clarifier, N corner                | Lift No 12            |
| 112                 | 7                 | 8/31/09        | 8"          | 15.4        | 12.6     | 134.5     | 119.4     | 117.0          | 102.1%           | Clarifier, NW corner               | Lift No 12            |
| 113                 | 8                 | 8/31/09        | 8"          | 15.4        | 9.9      | 140.3     | 127.8     | 117.0          | 109.2%           | Clarifier, SW corner               | Lift No 12            |
| 114                 | 9                 | 8/31/09        | 8"          | 15.4        | 11.3     | 137.6     | 123.7     | 117.0          | 105.7%           | Clarifier, SE corner               | Lift No 12            |
| 115                 | 10                | 8/31/09        | 8"          | 15.4        | 9.8      | 139.4     | 126.9     | 117.0          | 108.5%           | Clarifier, NE corner               | Lift No 12            |
| 116                 | 11                | 8/31/09        | 8"          | 15.4        | 8.8      | 126.2     | 115.9     | 117.0          | 99.1%            | Clarifier, N corner                | Lift No 12            |
| 117                 | 12                | 8/31/09        | 8"          | 15.4        | 10.5     | 131.4     | 118.9     | 117.0          | 101.6%           | Clarifier, SW corner               | Lift No 11            |
| 118                 | 13                | 8/31/09        | 8"          | 15.4        | 10.3     | 132.0     | 119.7     | 117.0          | 102.3%           | Clarifier, SE corner               | Lift No 11            |
| 119                 | 14                | 8/31/09        | 8"          | 15.4        | 8.8      | 137.3     | 126.2     | 117.0          | 107.9%           | Clarifier, NE corner               | Lift No 11            |
| 120                 | 15                | 8/31/09        | 8"          | 15.4        | 7.6      | 125.9     | 117.0     | 117.0          | 100.0%           | Clarifier, N corner                | Lift No 11            |



**Nu-West Industries  
Central Farmers Fertilizer Facility  
Georgetown Canyon, ID  
Earthwork Observations & Density Test Results Summary  
Ore Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location                           | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------------------|-----------------------|
| 121                 | 16                | 8/31/09        | 8"          | 15.4        | 12.3     | 135.7     | 120.9     | 117.0          | 103.3%           | Clarifier, NW corner               | Lift No 11            |
| 122                 | 17                | 8/31/09        | 8"          | 15.4        | 12.6     | 135.2     | 120.1     | 117.0          | 102.6%           | Clarifier, W corner                | Lift No 11            |
| 123                 | 18                | 8/31/09        | 8"          | 15.4        | 12.5     | 136.0     | 120.9     | 117.0          | 103.3%           | Clarifier, N corner                | Lift No 13            |
| 124                 | 1                 | 9/9/09         | 8"          | 15.4        | 6.3      | 131.3     | 123.6     | 117.0          | 105.6%           | Clarifier, 20' SW of concrete wall | Lift No 15            |
| 125                 | 2                 | 9/9/09         | 8"          | 15.4        | 7.4      | 130.4     | 121.4     | 117.0          | 103.8%           | Clarifier, 25' S of concrete wall  | Lift No 15            |
| 126                 | 3                 | 9/9/09         | 8"          | 15.4        | 7.6      | 132.3     | 122.9     | 117.0          | 105.0%           | Clarifier, 20' E of concrete wall  | Lift No 15            |
| 127                 | 4                 | 9/9/09         | 8"          | 15.4        | 7.5      | 132.3     | 123.0     | 117.0          | 105.1%           | Clarifier, 20' NE of concrete wall | Lift No 15            |
| 128                 | 5                 | 9/9/09         | 8"          | 15.4        | 6.2      | 136.0     | 128.0     | 117.0          | 109.4%           | Clarifier, center                  | Lift No 15            |
| 129                 | 6                 | 9/9/09         | 8"          | 15.4        | 5.6      | 127.0     | 120.3     | 117.0          | 102.8%           | Clarifier, 20' W of concrete wall  | Lift No 15            |
| 130                 | 7                 | 9/9/09         | 8"          | 15.4        | 11.6     | 136.6     | 122.4     | 117.0          | 104.6%           | Clarifier, 20' SW of concrete wall | Lift No 14            |
| 131                 | 8                 | 9/9/09         | 8"          | 15.4        | 11.9     | 135.3     | 120.9     | 117.0          | 103.3%           | Clarifier, 25' S of concrete wall  | Lift No 14            |
| 132                 | 9                 | 9/9/09         | 8"          | 15.4        | 12.1     | 132.3     | 118.0     | 117.0          | 100.9%           | Clarifier, 20' E of concrete wall  | Lift No 14            |
| 133                 | 10                | 9/9/09         | 8"          | 15.4        | 11.7     | 134.6     | 120.5     | 117.0          | 103.0%           | Clarifier, 20' NE of concrete wall | Lift No 14            |
| 134                 | 11                | 9/9/09         | 8"          | 15.4        | 11.6     | 137.2     | 123.0     | 117.0          | 105.1%           | Clarifier, center                  | Lift No 14            |
| 135                 | 12                | 9/9/09         | 8"          | 15.4        | 9.7      | 135.8     | 123.8     | 117.0          | 105.8%           | Clarifier, 20' W of concrete wall  | Lift No 14            |
| 136                 | 1                 | 9/11/09        | 8"          | 15.4        | 6.0      | 127.5     | 120.2     | 117.0          | 102.7%           | Ore Area, West side                | Top Lift              |
| 137                 | 2                 | 9/11/09        | 8"          | 15.4        | 4.7      | 131.6     | 125.8     | 117.0          | 107.5%           | Ore Area, center                   | Top Lift              |
| 138                 | 3                 | 9/11/09        | 8"          | 15.4        | 6.1      | 132.0     | 123.5     | 117.0          | 105.6%           | Ore Area, East side                | Top Lift              |
| 139                 | 1                 | 9/11/09        | 8"          | 15.4        | 9.8      | 135.1     | 123.1     | 117.0          | 105.2%           | Clarifier, SE corner               | Lift No 16            |
| 140                 | 2                 | 9/11/09        | 8"          | 15.4        | 10.3     | 132.0     | 119.7     | 117.0          | 102.3%           | Clarifier, E corner                | Lift No 16            |



**Nu-West Industries**  
**Central Farmers Fertilizer Facility**  
 Georgetown Canyon, ID  
**Earthwork Observations & Density Test Results Summary**  
**Ore Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location               | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------|-----------------------|
| 141                 | 3                 | 9/11/09        | 8"          | 15.4        | 9.5      | 136.0     | 124.3     | 117.0          | 106.2%           | Clarifier, NE corner   | Lift No 16            |
| 142                 | 4                 | 9/11/09        | 8"          | 15.4        | 11.5     | 134.9     | 120.9     | 117.0          | 103.3%           | Clarifier, N corner    | Lift No 16            |
| 143                 | 5                 | 9/11/09        | 8"          | 15.4        | 8.8      | 134.3     | 123.4     | 117.0          | 105.5%           | Clarifier, W corner    | Lift No 16            |
| 144                 | 6                 | 9/11/09        | 8"          | 15.4        | 10.9     | 137.9     | 124.3     | 117.0          | 106.2%           | Clarifier, SW corner   | Lift No 16            |
| 145                 | 7                 | 9/11/09        | 8"          | 15.4        | 10.4     | 137.3     | 124.4     | 117.0          | 106.3%           | Clarifier, S middle    | Lift No 17            |
| 146                 | 8                 | 9/11/09        | 8"          | 15.4        | 9.5      | 138.1     | 126.1     | 117.0          | 107.8%           | Clarifier, NW middle   | Lift No 17            |
| 147                 | 9                 | 9/11/09        | 8"          | 15.4        | 11.6     | 136.0     | 121.8     | 117.0          | 104.1%           | Clarifier, NE middle   | Lift No 17            |
| 148                 | 10                | 9/11/09        | 8"          | 15.4        | 11.1     | 138.3     | 124.4     | 117.0          | 106.3%           | Clarifier, SE middle   | Lift No 17            |
| 149                 | 11                | 9/11/09        | 8"          | 15.4        | 9.5      | 136.0     | 124.1     | 117.0          | 106.1%           | Clarifier, E of center | Lift No 18            |
| 150                 | 12                | 9/11/09        | 8"          | 15.4        | 9.9      | 139.3     | 126.7     | 117.0          | 108.3%           | Clarifier, W of center | Lift No 18            |

**Notes:**

- 1) All testing performed by Harper-Leavitt Engineering (HLE) of Blackfoot, ID
- 2) Testing performed with Troxler nuclear density gauge, according to ASTM D698 - 95% rel. compaction (minimum) required per specifications.
- 3) Material placed in 1-foot thick loose lifts and rolled with a minimum 4 passes with a smooth drum vibratory compactor (40,000 lb machine)



**Nu-West Industries**  
**Central Farmers Fertilizer Facility**  
**Georgetown Canyon, ID**  
**Earthwork Observations & Density Test Results Summary**  
**Bulk Fill Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location                     | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------------|-----------------------|
| 1                   | 4                 | 8/20/09        | 8"          | 12.1        | 5.3      | 140.6     | 133.6     | 129.7          | 103.0%           | Fill N of Furnace, center    | Lift No 2             |
| 2                   | 5                 | 8/20/09        | 10"         | 12.1        | 6.5      | 131.5     | 123.5     | 129.7          | 95.2%            | Fill N of Furnace, S end     | Lift No 1             |
| 3                   | 6                 | 8/20/09        | 8"          | 12.1        | 6.9      | 126.8     | 118.6     | 129.7          | 91.4%            | Fill N of Furnace, SE corner | Lift No 1             |
| 4                   | 1                 | 9/21/09        | 6"          | 12.1        | 4.6      | 131.2     | 125.4     | 129.7          | 96.7%            | Fill N of Furnace, NE corner | Top Lift              |
| 5                   | 2                 | 9/21/09        | 6"          | 12.1        | 6.9      | 139.0     | 130.0     | 129.7          | 100.2%           | Fill N of Furnace, E side    | Top Lift              |
| 6                   | 3                 | 9/21/09        | 6"          | 12.1        | 6.2      | 138.4     | 130.3     | 129.7          | 100.5%           | Fill N of Furnace, SE corner | Top Lift              |
| 7                   | 4                 | 9/21/09        | 6"          | 12.1        | 4.7      | 146.4     | 139.8     | 129.7          | 107.8%           | Fill N of Furnace, SW corner | Top Lift              |
| 8                   | 5                 | 9/21/09        | 6"          | 12.1        | 4.8      | 144.3     | 137.7     | 129.7          | 106.2%           | Fill N of Furnace, NW corner | Top Lift              |
| 9                   | 6                 | 9/21/09        | 6"          | 12.1        | 5.5      | 136.0     | 128.9     | 129.7          | 99.4%            | Fill N of Furnace, center    | Top Lift              |

**Notes:**

- 1) All testing performed by Harper-Leavitt Engineering (HLE) of Blackfoot, ID
- 2) Testing performed with Troxler nuclear density gauge, according to ASTM D698 - 90% rel. compaction (minimum) required per JB.
- 3) No laboratory proctor run for bulk fill material, excavated from the Dud Hollow borrow source. HLE used proctor from select screened fill material and added 9 PCF, assuming 30% more rock in the unscreened material and that each 10% additional rock adds 3 PCF to the maximum dry density.
- 4) Material placed in 1-foot thick loose lifts and rolled with a minimum 4 passes with a smooth drum compactor (40,000 lb machine)



**Nu-West Industries  
Central Farmers Fertilizer Facility  
Georgetown Canyon, ID  
Earthwork Observations & Density Test Results Summary  
Select Fill Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location  | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|---|-----------------------|
| 1                   | 1                 | 8/26/09        | 12"         | 12.1        | 12.7     | 116.9     | 103.2     | 120.7          | 85.5%            | Slurry Pit Anchor Trench, SE corner             | Top / Lift No 3       |
| 2                   | 2                 | 8/26/09        | 12"         | 12.1        | 9.5      | 115.7     | 105.6     | 120.7          | 87.5%            | Slurry Pit Anchor Trench, Furnace               | Top / Lift No 3       |
| 3                   | 3                 | 8/26/09        | 6"          | 12.1        | 10.4     | 127.3     | 115.3     | 120.7          | 95.5%            | Slurry Pit Anchor Trench, N of Furnace          | Top / Lift No 3       |
| 4                   | 4                 | 8/26/09        | 6"          | 12.1        | 11.6     | 127.8     | 114.5     | 120.7          | 94.9%            | Slurry Pit Anchor Trench, E side, center        | Top / Lift No 3       |
| 5                   | 5                 | 8/26/09        | 12"         | 12.1        | 11.5     | 125.0     | 112.1     | 120.7          | 92.9%            | Slurry Pit Anchor Trench, E side, center        | Top / Lift No 3       |
| 6                   | 6                 | 8/26/09        | 6"          | 12.1        | 9.8      | 127.4     | 116.0     | 120.7          | 96.1%            | Slurry Pit Anchor Trench, NE corner             | Top / Lift No 3       |
| 7                   | 7                 | 8/26/09        | 6"          | 12.1        | 9.3      | 125.3     | 114.7     | 120.7          | 95.0%            | Slurry Pit Anchor Trench, N end                 | Top / Lift No 3       |
| 8                   | 8                 | 8/26/09        | 6"          | 12.1        | 13.1     | 115.3     | 101.9     | 120.7          | 84.4%            | Slurry Pit Anchor Trench, NW corner             | Top / Lift No 3       |
| 9                   | 9                 | 8/26/09        | 6"          | 12.1        | 21.0     | 115.5     | 95.4      | 120.7          | 79.0%            | Slurry Pit Anchor Trench, W side, center        | Lift No 2             |
| 10                  | 1                 | 8/27/09        | 8"          | 12.1        | 9.7      | 131.9     | 120.7     | 120.7          | 100.0%           | Slurry Pit Anchor Trench, W side, 40' S of GT-8 | Top / Lift No 3       |
| 11                  | 2                 | 8/27/09        | 8"          | 12.1        | 9.1      | 135.9     | 124.6     | 120.7          | 103.2%           | Slurry Pit Anchor Trench, W side, center        | Top / Lift No 3       |
| 12                  | 3                 | 8/27/09        | 8"          | 12.1        | 8.3      | 132.4     | 122.3     | 120.7          | 101.3%           | Slurry Pit Anchor Trench, SW corner             | Top / Lift No 3       |
| 13                  | 4                 | 8/27/09        | 8"          | 12.1        | 10.1     | 129.1     | 117.3     | 120.7          | 97.2%            | Slurry Pit Anchor Trench, 60' N of S end        | Top / Lift No 3       |
| 14                  | 1                 | 9/21/09        | 6"          | 12.1        | 10.2     | 126.8     | 115.1     | 120.7          | 95.4%            | Clarifier Anchor Trench, NW side                | Top / Lift No 3       |
| 15                  | 2                 | 9/21/09        | 6"          | 12.1        | 10.5     | 132.0     | 119.5     | 120.7          | 99.0%            | Clarifier Anchor Trench, N side                 | Top / Lift No 3       |
| 16                  | 3                 | 9/21/09        | 6"          | 12.1        | 8.1      | 131.7     | 121.8     | 120.7          | 100.9%           | Clarifier Anchor Trench, NE side                | Top / Lift No 3       |
| 17                  | 4                 | 9/21/09        | 6"          | 12.1        | 8.1      | 130.5     | 120.7     | 120.7          | 100.0%           | Clarifier Anchor Trench, SE side                | Top / Lift No 3       |
| 18                  | 5                 | 9/21/09        | 6"          | 12.1        | 8.1      | 124.0     | 114.8     | 120.7          | 95.1%            | Clarifier Anchor Trench, SW side                | Top / Lift No 3       |
| 19                  | 1                 | 9/23/09        | 8"          | 12.1        | 9.5      | 138.4     | 126.4     | 120.7          | 104.7%           | Ore Area Anchor Trench, SE corner               | Top / Lift No 3       |
| 20                  | 2                 | 9/23/09        | 8"          | 12.1        | 9.5      | 133.8     | 122.3     | 120.7          | 101.3%           | Ore Area Anchor Trench, NE corner               | Top / Lift No 3       |



**Nu-West Industries**  
**Central Farmers Fertilizer Facility**  
**Georgetown Canyon, ID**  
**Earthwork Observations & Density Test Results Summary**  
**Select Fill Material**

| Cumulative Test No. | Original Test No. | Date Performed | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location                       | Elevation or Lift No. |
|---------------------|-------------------|----------------|-------------|-------------|----------|-----------|-----------|----------------|------------------|--------------------------------|-----------------------|
| 21                  | 3                 | 9/23/09        | 8"          | 12.1        | 9.5      | 135.1     | 123.3     | 120.7          | 102.2%           | Ore Area Anchor Trench, N side | Top / Lift No 3       |
| 22                  | 4                 | 9/23/09        | 8"          | 12.1        | 8.5      | 128.6     | 118.5     | 120.7          | 98.2%            | Ore Area Anchor Trench, W side | Top / Lift No 3       |

**Notes:**

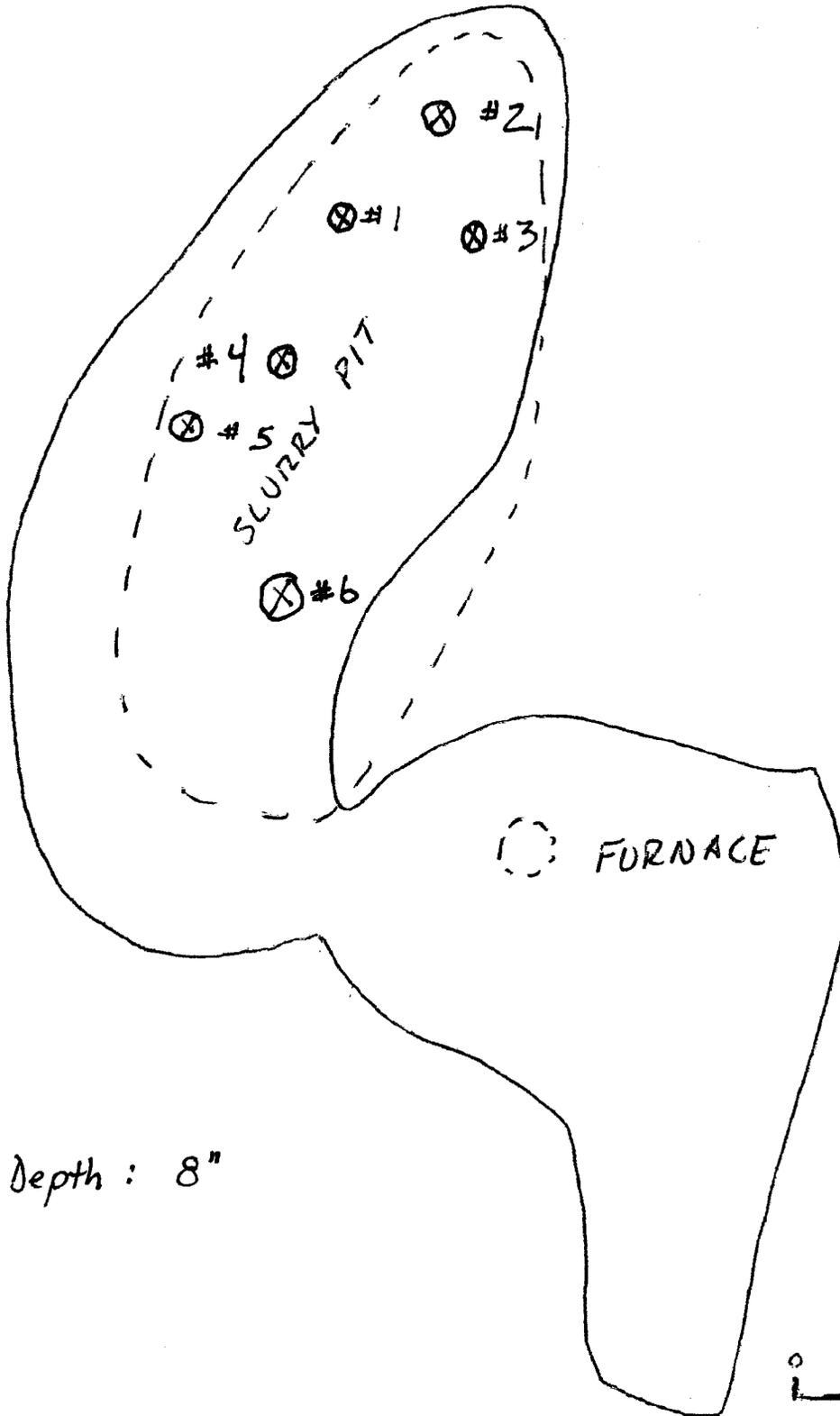
- 1) All testing performed by Harper-Leavitt Engineering (HLE) of Blackfoot, ID
- 2) Testing performed with Troxler nuclear density gauge, according to ASTM D698 - 95% rel. compaction (minimum) required per specifications.
- 3) Material placed in 8" to 12" thick loose lifts and compacted with a minimum 4 passes with jumping jack/walk behind compactor. Top lift rolled with a smooth drum vibratory compactor.



# DENSITY TESTS



7/16/2009  
DATE  
First Lift - 12" to 18"  
LIFT



Density Depth : 8"

0 80' 160'  
SCALE

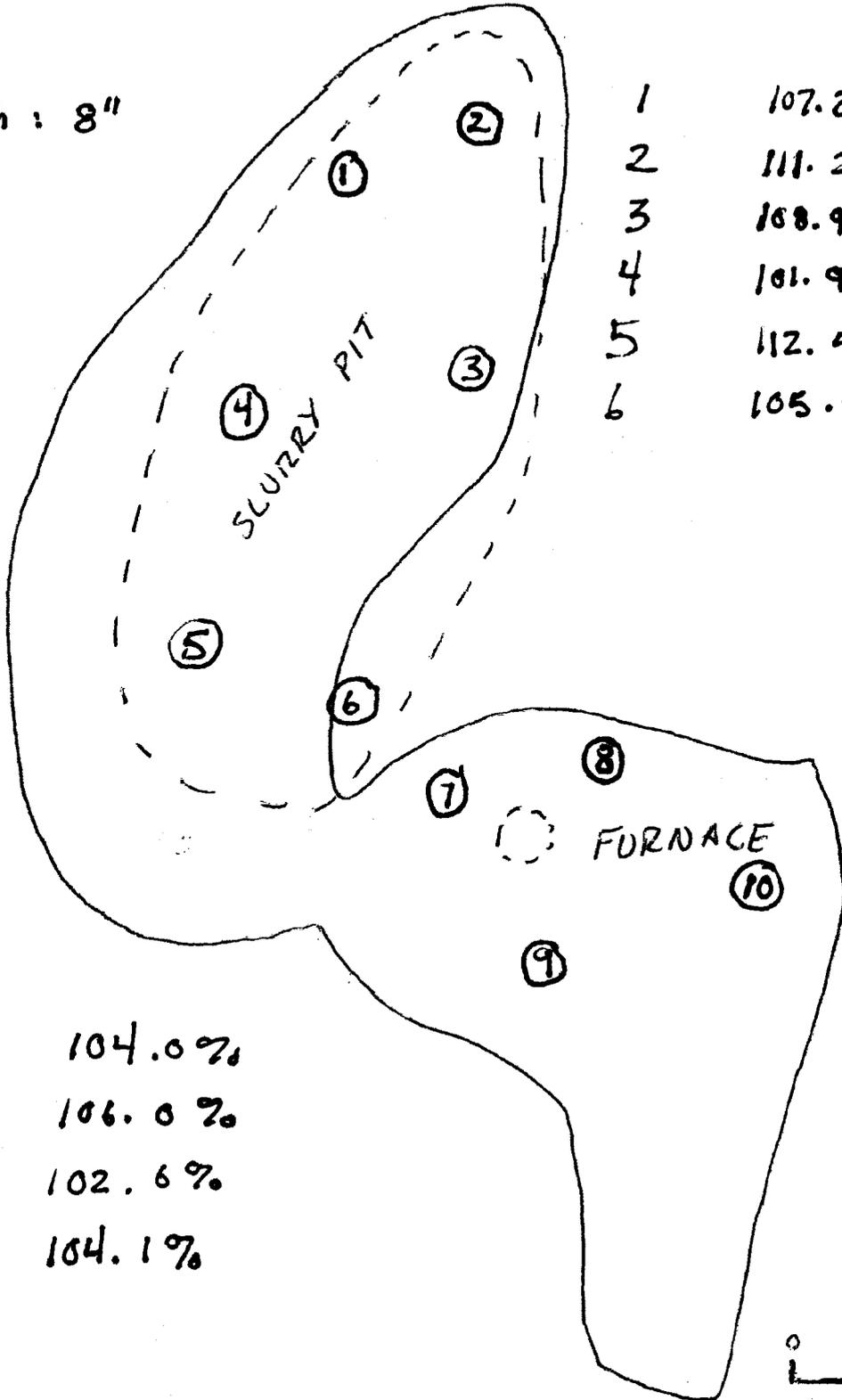


# DENSITY TESTS



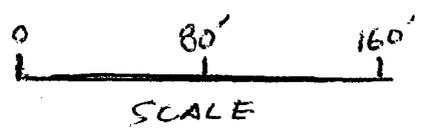
7/23/2009  
DATE  
Slurry Pit No 2 / Furnace No 3  
LIFT

Test Depth : 8"



|   |        |
|---|--------|
| 1 | 107.2% |
| 2 | 111.2% |
| 3 | 108.9% |
| 4 | 101.9% |
| 5 | 112.5% |
| 6 | 105.5% |

|    |        |
|----|--------|
| 7  | 104.0% |
| 8  | 106.0% |
| 9  | 102.6% |
| 10 | 104.1% |





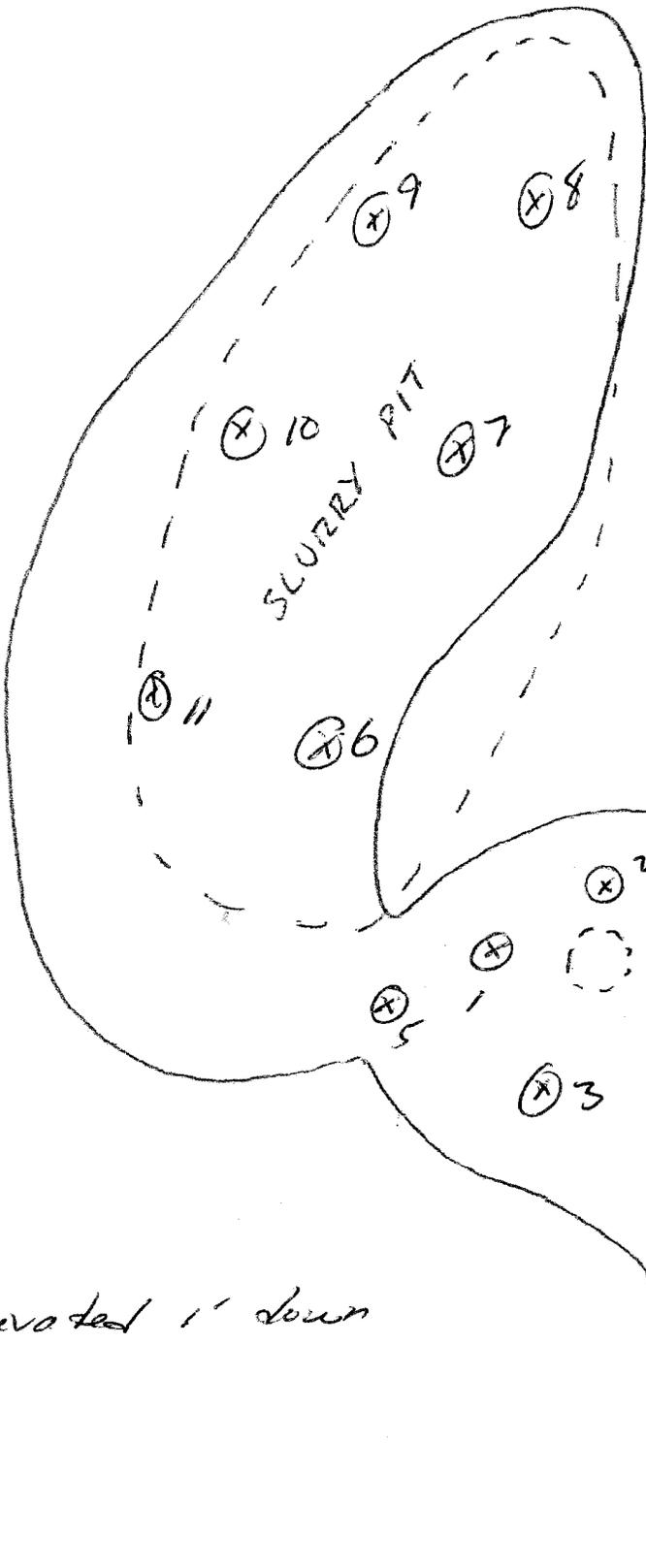
# DENSITY TESTS



7-30-09

#3 on slurry - #9 on furnace

DATE



|   |       | LIFT |                               |
|---|-------|------|-------------------------------|
| ① | 102.5 | 11.4 |                               |
| ② | 100.6 | 11.6 |                               |
| ③ | 103.9 | 10.8 |                               |
| ④ | 99.8  | 12.5 |                               |
| ⑤ |       |      | } get from slurry             |
| ⑥ |       |      |                               |
| ⑦ |       |      |                               |
| ⑧ |       |      |                               |
| ⑨ | 105.1 | 7.8  | } dig down 1' on cover to get |
| ⑩ | 97.3  | 7.6  |                               |
| ⑪ | 100.8 | 9.5  |                               |

⑤ excavated 1' down



HARPER-LEAVITT ENGINEERING, INC.  
PROFESSIONAL ENGINEERS & LAND SURVEYORS

800 W. Judicial Street  
Blackfoot, Idaho 83221  
(208) 785-2977

985 N. Capital Avenue  
Idaho Falls, Idaho 83405  
(208) 524-0212

## EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS

|  |                                  |                      |
|--|----------------------------------|----------------------|
| JOB NAME & LOCATION: <i>CRA Services George town</i> | JOB #: <i>09-096</i>             | DATE: <i>7/28/09</i> |
| MATERIAL SOURCE & TYPE: <i>Black Sand, Clay</i>      | GAUGE S/N:                       | TECH: <i>CT</i>      |
| WEATHER: <i>Sunny</i>                                | SPECIFIED COMPACTION: <i>95%</i> |                      |
| COMMENTS:  |                                  |                      |

| Test No. | Probe Depth | Opt. Moist. | Moist. %    | Wet Dens.    | Dry Dens.    | Proct./ Marsh. | Relative Comp. % | Location                            | Elevation |
|----------|-------------|-------------|-------------|--------------|--------------|----------------|------------------|-------------------------------------|-----------|
| 1        | <i>8"</i>   | <i>15.4</i> |             |              |              | <i>117</i>     |                  | <del><i>W edge slurry pit</i></del> | <i>+4</i> |
| 2        |             |             | <i>8.3</i>  | <i>121.6</i> | <i>112.2</i> |                | <i>95.9</i>      | <i>N center slurry pit</i>          | <i>+4</i> |
| 3        |             |             | <i>8.3</i>  | <i>111.4</i> | <i>105.6</i> |                | <i>90.3</i>      | <i>E edge slurry pit</i>            | <i>+4</i> |
| 4        |             |             | <i>8.3</i>  | <i>121.6</i> | <i>112.3</i> |                | <i>96.0</i>      | <i>E edge slurry pit</i>            | <i>+4</i> |
| 5        |             |             | <i>9.0</i>  | <i>123.0</i> | <i>112.8</i> |                | <i>96.4</i>      | <i>SE Edge Slurry Pit</i>           | <i>+4</i> |
| 6        |             |             | <i>8.1</i>  | <i>123.0</i> | <i>113.8</i> |                | <i>97.2</i>      | <i>S Edge Slurry Pit</i>            | <i>+4</i> |
| 7        |             |             | <i>9.2</i>  | <i>116.2</i> | <i>106.4</i> |                | <i>90.9</i>      | <i>SW Edge Slurry Pit</i>           | <i>+4</i> |
| 8        |             |             | <i>9.8</i>  | <i>112.6</i> | <i>102.5</i> |                | <i>87.6</i>      | <i>SW Edge Slurry Pit</i>           | <i>+4</i> |
| 9        |             |             | <i>10.2</i> | <i>121.4</i> | <i>110.1</i> |                | <i>94.1</i>      | <i>N center slope Furnace</i>       | <i>+6</i> |
| 10       |             |             | <i>9.2</i>  | <i>124.2</i> | <i>113.7</i> |                | <i>97.2</i>      | <i>N center slope Furnace</i>       | <i>+6</i> |
| 11       |             |             | <i>10.3</i> | <i>123.2</i> | <i>111.7</i> |                | <i>95.5</i>      | <i>NE slope Furnace</i>             | <i>+6</i> |
| 12       |             |             | <i>9.6</i>  | <i>121.5</i> | <i>110.9</i> |                | <i>94.8</i>      | <i>SE slope Furnace</i>             | <i>+6</i> |
|          |             |             | <i>10.9</i> | <i>119.3</i> | <i>107.6</i> |                | <i>91.9</i>      | <i>S center slope Furnace</i>       | <i>+6</i> |

# DENSITY TESTS

All @ 8" depth

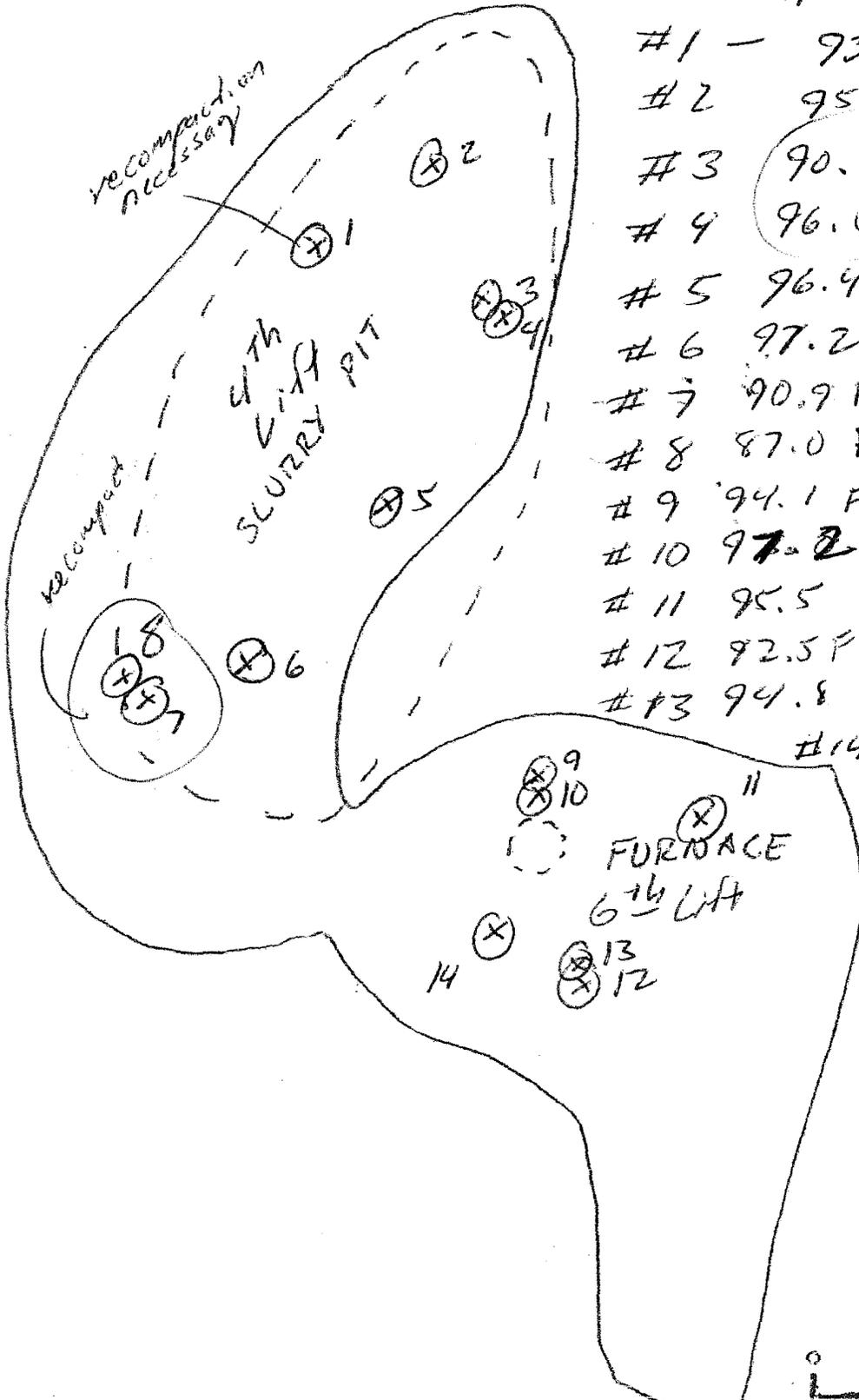
7-28-09

DATE

Lift 4 on Slurry/Lift 6 on furnace

LIFT

| #   | Density         | Notes | LIFT           |
|-----|-----------------|-------|----------------|
| #1  | 93.4            |       | 8.2            |
| #2  | 95.9            |       | 8.3            |
| #3  | 90.3            | F     | 8.3 > 4' apart |
| #4  | 96.0            |       | 8.3            |
| #5  | 96.4            |       | 9.0            |
| #6  | 97.2            |       | 8.1            |
| #7  | 90.9            | F     | 9.2 > 8' apart |
| #8  | 87.0            | F     | 9.8            |
| #9  | 94.1            | F     | 10.2 > 3ft     |
| #10 | <del>97.2</del> |       | 9.2 > 3ft      |
| #11 | 95.5            |       | 10.3           |
| #12 | 92.5            | F     | 10.6 > 6.5ft   |
| #13 | 94.8            |       | 9.6            |
| #14 | 91.9            |       | 10.9           |



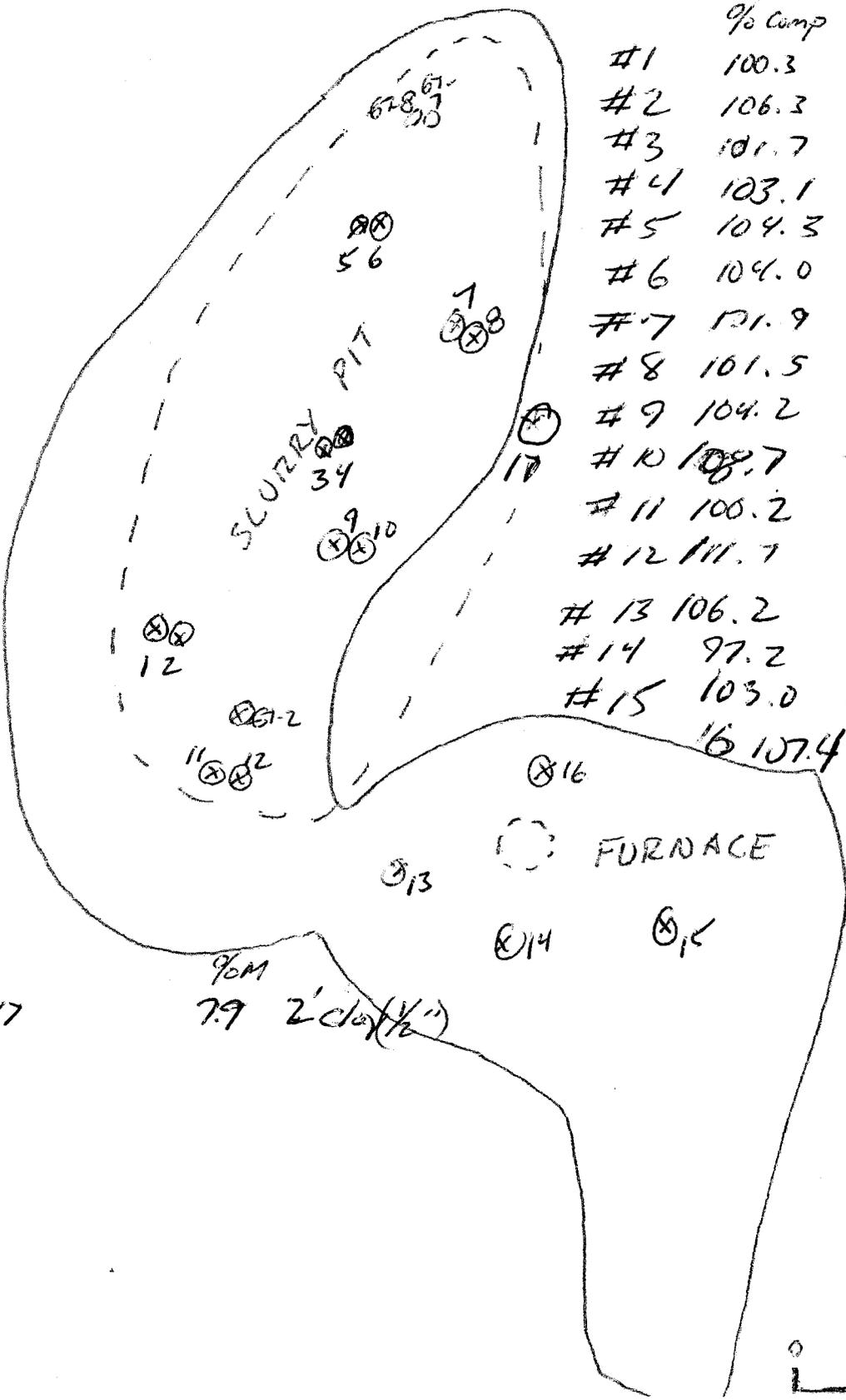
# DENSITY TESTS



8-3-09

DATE

#5/6 on slurry - #11 on furnace



|     | % Comp | LIFT | Lift #        |
|-----|--------|------|---------------|
| #1  | 100.3  | 10.2 | 5             |
| #2  | 106.3  | 7.3  | 6             |
| #3  | 101.7  | 10.6 | 5             |
| #4  | 103.1  | 7.3  | 6             |
| #5  | 104.3  | 9.5  | 5             |
| #6  | 104.0  | 7.9  | 6             |
| #7  | 101.9  | 10.6 | 5             |
| #8  | 101.5  | 7.6  | 6             |
| #9  | 104.2  | 9.2  | 5             |
| #10 | 108.7  | 6.3  | 6             |
| #11 | 100.2  | 10.6 | (4) extension |
| #12 | 111.7  | 7.1  | (5) extension |
| #13 | 106.2  | 8.9  | 11            |
| #14 | 97.2   | 8.9  | 11            |
| #15 | 103.0  | 11.0 | 11            |
| #16 | 107.4  | 9.0  | 11            |

#17

90M  
7.9 2' dia (1/2")

FURNACE



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Idaho Falls, Idaho 83405  
(208) 524-0212

EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS

|   |                                  |                     |
|---|----------------------------------|---------------------|
| JOB NAME & LOCATION: <i>CRA Georgetown</i>        | JOB #: <i>09-096</i>             | DATE: <i>8/3/09</i> |
| MATERIAL SOURCE & TYPE: <i>Black Sanding Clay</i> | GAUGE S/N:                       | TECH: <i>LT</i>     |
| WEATHER: <i>Sunny</i>                             | SPECIFIED COMPACTION: <i>95%</i> |                     |
| COMMENTS:   |                                  |                     |

4546

| Test No. | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location          | Elevation        |
|----------|-------------|-------------|----------|-----------|-----------|----------------|------------------|-------------------|------------------|
| 1        | 8"          | 15.4        | 10.2     | 129.3     | 117.4     | 117.0          | 100.3            | SW slurry pit     | +5 From Existing |
| 2        |             |             | 7.0      | 133.0     | 124.4     |                | 106.3            | SW slurry pit     | +6               |
| 3        |             |             | 10.6     | 131.6     | 119.0     |                | 101.7            | Center slurry pit | +5               |
| 4        |             |             | 7.3      | 129.4     | 120.6     |                | 103.1            | Center slurry pit | +6               |
| 5        |             |             | 9.5      | 133.6     | 122.0     |                | 104.3            | NW - slurry pit   | +5               |
| 6        |             |             | 7.4      | 130.7     | 121.7     |                | 104.0            | NW slurry pit     | +6               |
| 7        |             |             | 10.6     | 131.9     | 119.8     |                | 101.9            | NE slurry pit     | +5               |
| 8        |             |             | 7.6      | 127.8     | 118.8     |                | 101.5            | NE slurry pit     | +6               |
| 9        |             |             | 9.2      | 133.1     | 121.9     |                | 104.2            | SE slurry pit     | +5               |
| 10       | ✓           |             | 6.3      | 135.2     | 127.2     |                | 108.7            | SE - slurry pit   | +6               |
| 11       |             |             | 10.6     | 129.6     | 117.2     | ✓              | 100.2            | Sand slurry pit   | +6               |
| 12       |             |             | 7.7      | 140.0     | 130.7     |                | 111.7            | Sand slurry pit   |                  |



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EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS

|  |                           |                        |
|--|---------------------------|------------------------|
| JOB NAME & LOCATION: CIRA Georgetown     | JOB #: 07-096             | DATE: 8/5/09           |
| MATERIAL SOURCE & TYPE: Black Sandy Clay | GAUGE S/N:                | TECH: <del>CT</del> CT |
| WEATHER: Partly Cloudy                   | SPECIFIED COMPACTION: 95% |                        |
| COMMENTS:                                |                           |                        |

| Test No. | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location          | Elevation   |
|----------|-------------|-------------|----------|-----------|-----------|----------------|------------------|-------------------|-------------|
| 1        | 8"          | 15.1        | 7.0      | 124.1     | 116.0     | 117            | 99.1             | W side Furnace    | +13 From    |
| 2        | ↓           | ↓           | 9.0      | 131.0     | 120.3     | ↓              | 102.8            | E side Furnace    | +13 ↓       |
| 3        | ↓           | ↓           | 8.5      | 124.9     | 115.1     | ↓              | 98.4             | E side Furnace    | +13 ↓       |
| 4        | ↓           | ↓           | 9.0      | 122.8     | 112.7     | ↓              | 96.4             | SE side Furnace   | +13 ↓       |
| 5        | ↓           | ↓           | 7.6      | 132.3     | 123.0     | ↓              | 105.1            | N side Furnace    | +13         |
| 6        | ↓           | ↓           |          | 127       |           | ↓              | 6                |                   |             |
| 7        | ↓           | ↓           | 10.9     | 137.0     | 123.5     | ↓              | 105.6            | S side Slurry Pit | +3 Existing |
| 8        | ↓           | ↓           | 11.0     | 137.2     | 123.6     | ↓              | 105.6            | S side Slurry Pit | +2 ↓        |
| 9        | ↓           | ↓           | 12.0     | 135.1     | 120.6     | ↓              | 103.1            | S side Slurry Pit | +1 ↓        |
| 10       | ↓           | ↓           | 9.8      | 135.7     | 123.5     | ↓              | 103.6            | N side Slurry Pit | +3 ↓        |
| 11       | ↓           | ↓           | 11.9     | 136.3     | 121.8     | ↓              | 104.1            | N side Slurry Pit | +2 ↓        |
| 12       | ↓           | ↓           | 11.3     | 134.0     | 120.4     | ↓              | 102.9            | N side Slurry Pit | +1 ↓        |
|          |             |             | 11.0     | 135.6     | 122.2     |                | 104.5            | N side Slurry Pit | +7 ↓        |

# DENSITY TESTS

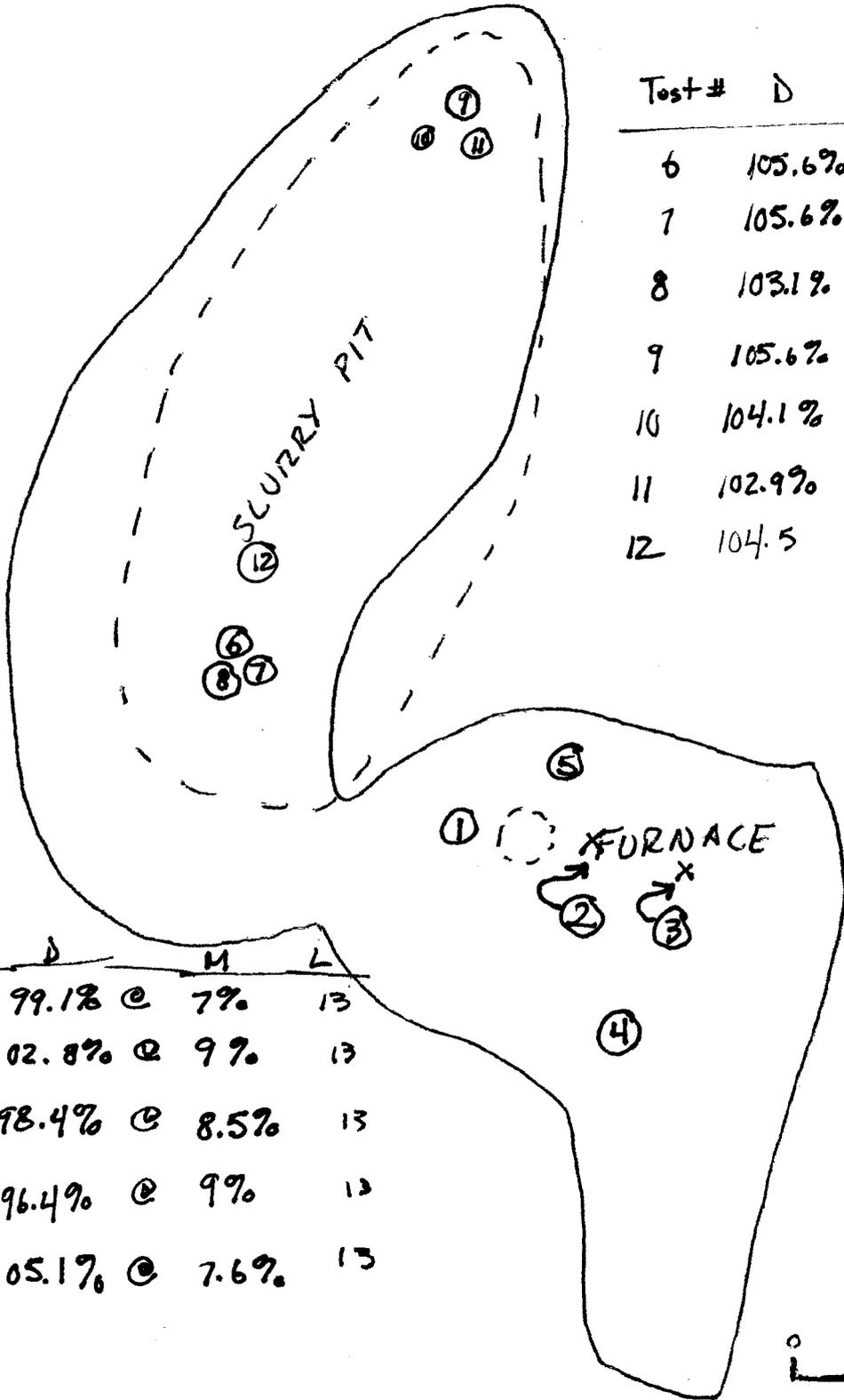


8/5/2009

DATE

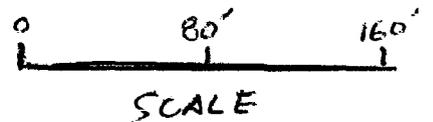
As Listed, Below

LIFT

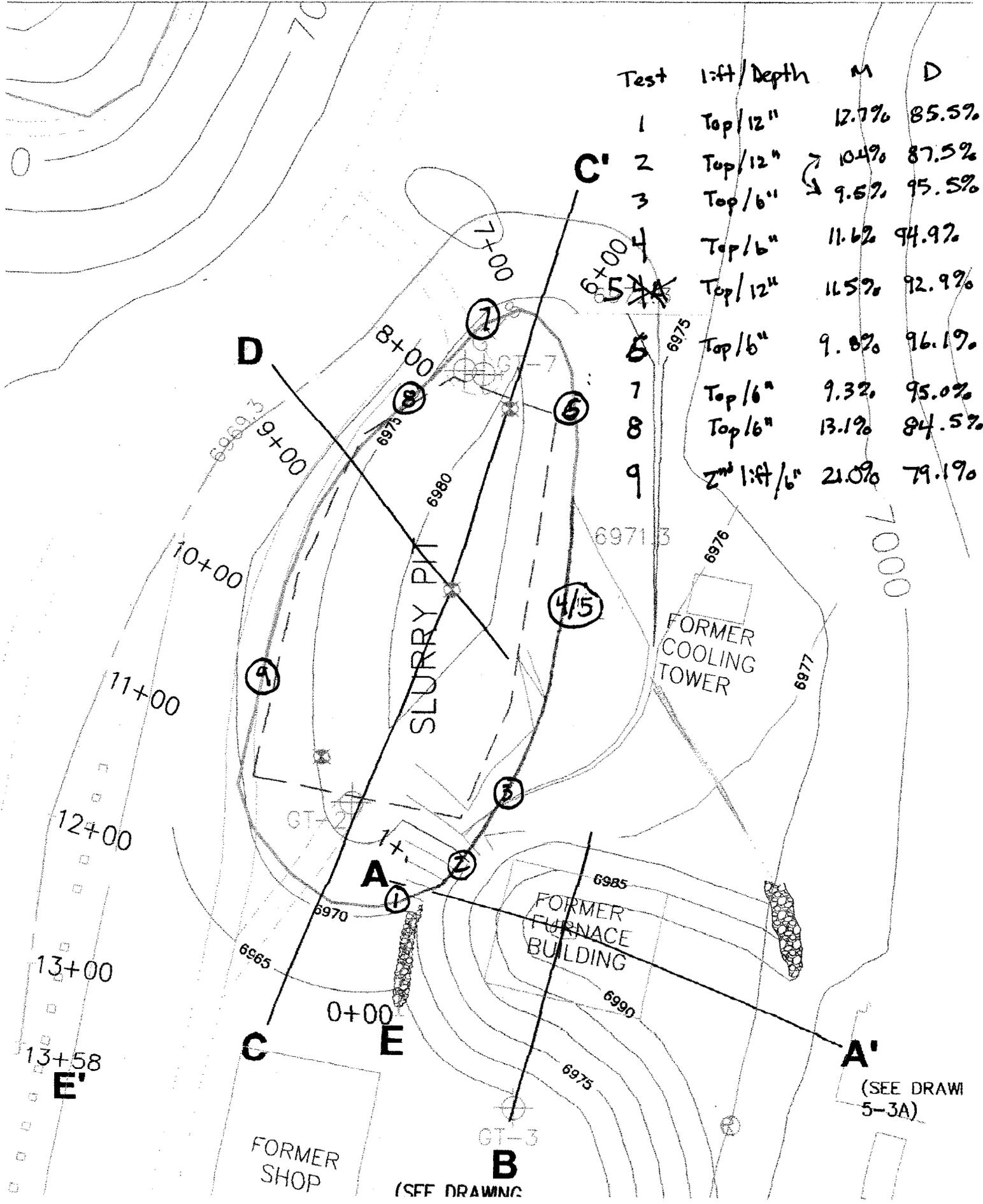


| Test # | D      | M     | L |
|--------|--------|-------|---|
| 6      | 105.6% | 10.9% | 3 |
| 7      | 105.6% | 11.0% | 2 |
| 8      | 103.1% | 12.0% | 1 |
| 9      | 105.6% | 9.8%  | 3 |
| 10     | 104.1% | 11.9% | 2 |
| 11     | 102.9% | 11.3% | 1 |
| 12     | 104.5  | 11.0% | 7 |

| Test # | D        | M    | L  |
|--------|----------|------|----|
| 1      | 99.1% @  | 7%   | 13 |
| 2      | 102.8% @ | 9%   | 13 |
| 3      | 98.4% @  | 8.5% | 13 |
| 4      | 96.4% @  | 9%   | 13 |
| 5      | 105.1% @ | 7.6% | 13 |





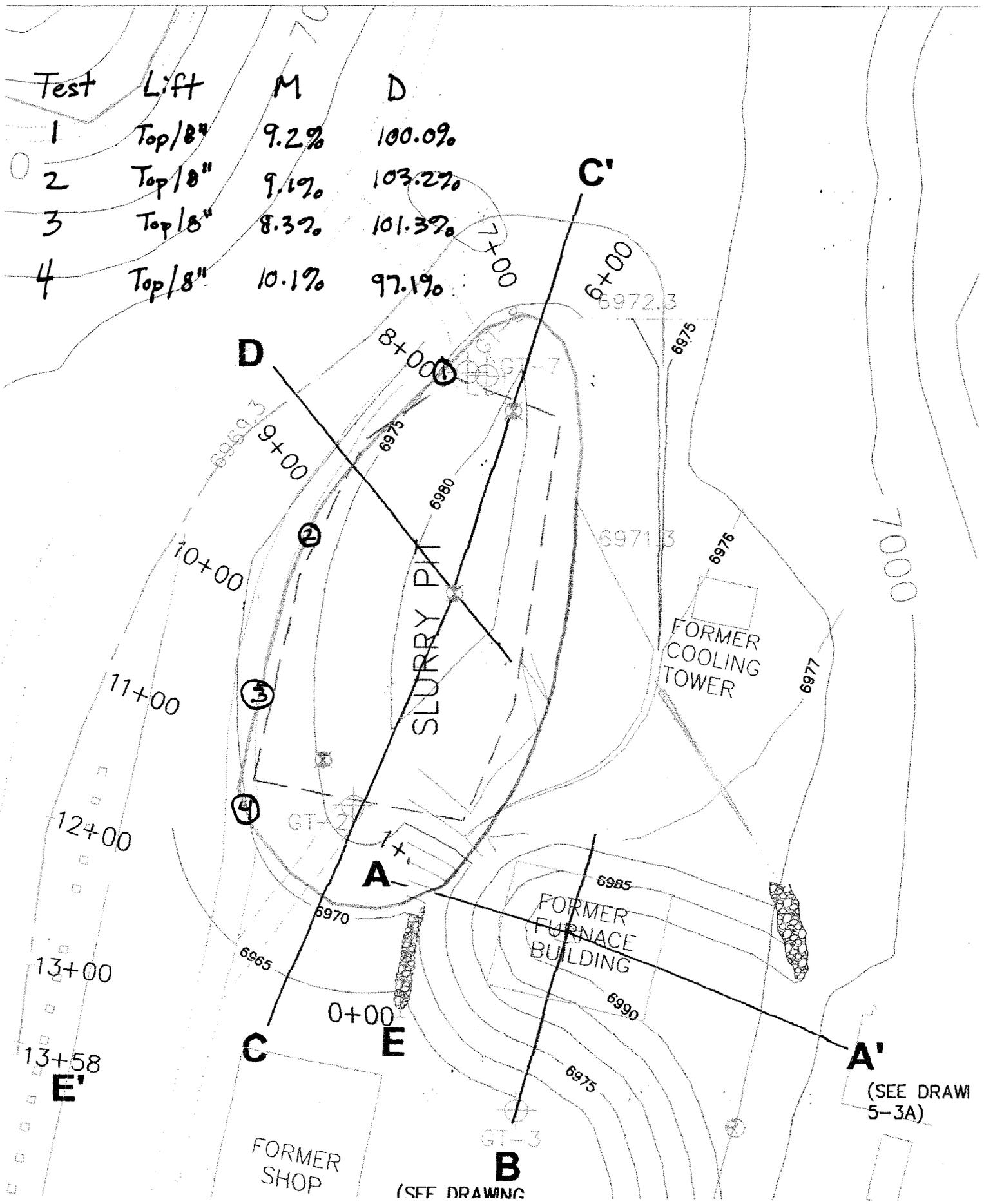


| Test         | 1:ft/Depth         | M                | D                |
|--------------|--------------------|------------------|------------------|
| 1            | Top/12"            | 12.7%            | 85.5%            |
| 2            | Top/12"            | 10.4%            | 87.5%            |
| 3            | Top/6"             | 9.5%             | 95.5%            |
| 4            | Top/6"             | 11.6%            | 94.9%            |
| <del>5</del> | <del>Top/12"</del> | <del>11.5%</del> | <del>92.9%</del> |
| 6            | Top/6"             | 9.8%             | 96.1%            |
| 7            | Top/6"             | 9.3%             | 95.0%            |
| 8            | Top/6"             | 13.1%            | 84.5%            |
| 9            | 2nd 1:ft/6"        | 21.0%            | 79.1%            |

(SEE DRAWING 5-3A)

(SEE DRAWING)

| Test | Lift   | M     | D      |
|------|--------|-------|--------|
| 1    | Top/8" | 9.2%  | 100.0% |
| 2    | Top/8" | 9.1%  | 103.2% |
| 3    | Top/8" | 8.3%  | 101.3% |
| 4    | Top/8" | 10.1% | 97.1%  |



(SEE DRAWING 5-3A)

(SEE DRAWING





# COMPACTION TESTING

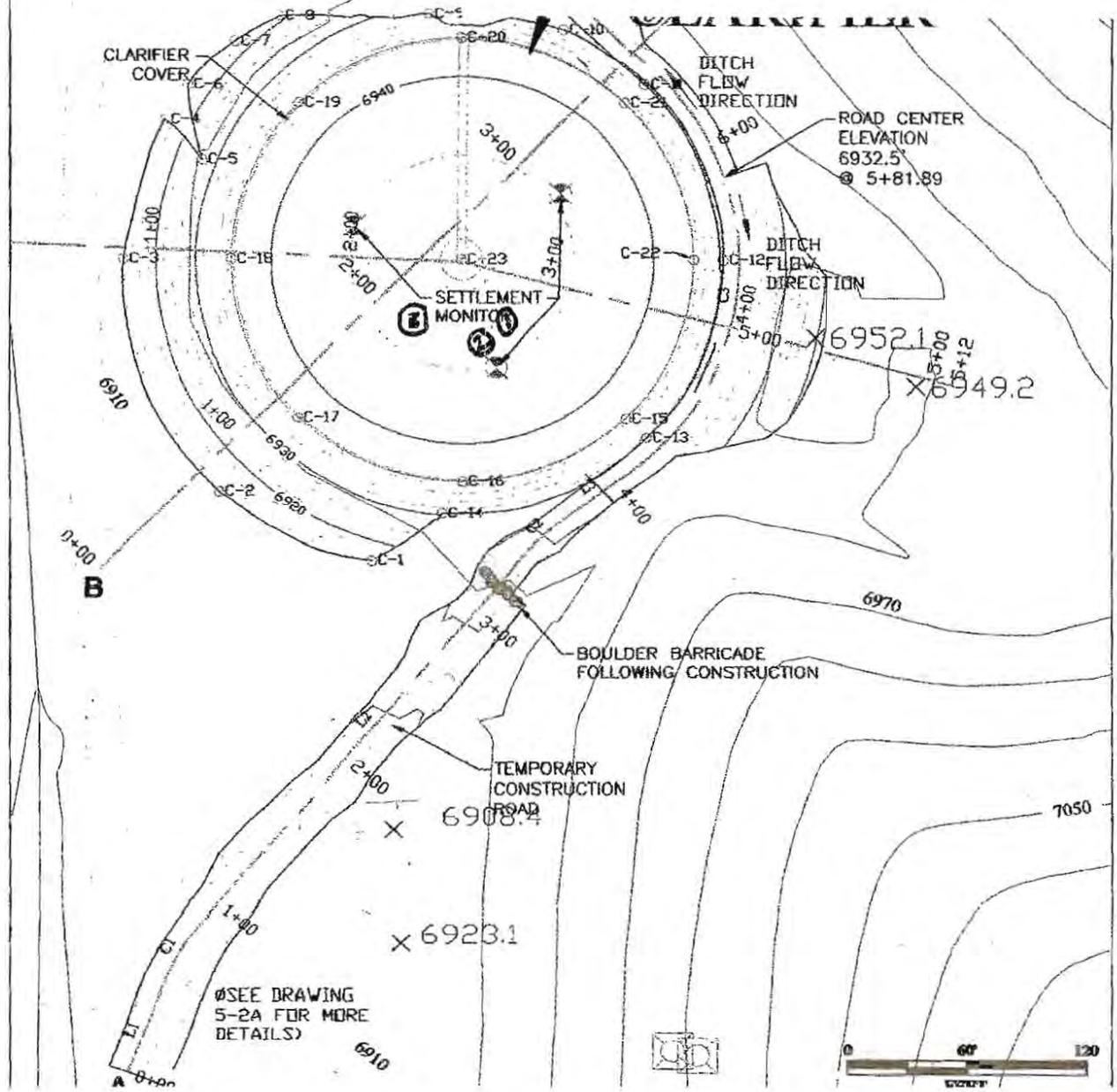
## LIFT NUMBER

| POINT | MOISTURE | %    | COMPACTION |
|-------|----------|------|------------|
| Test  | Lift     | M    | D          |
| 1     | 2        | 6.4% | 107.0%     |
| 2     | 1        | 4.3% | 108.6%     |
| 3     | 1        | 7.1% | 101.9%     |

Note

Tests @ 9" B6

6918.6 X



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EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS  
 ASTM D2922 & D3017 - AASHTO T238 & T239

Reviewed by:

|  |                         |                      |
|--|-------------------------|----------------------|
| JOB NAME & LOCATION: <i>CRA Georgetown</i> | JOB #: <i>2009.096</i>  | DATE: <i>8/24/09</i> |
| MATERIAL SOURCE & TYPE: <i>local soils</i> | GAUGE S/N: <i>31206</i> | TECH: <i>FS</i>      |
| WEATHER: <i>Clear warm</i>                 | SPECIFIED COMPACTION:   |                      |
| COMMENTS: <i>inside of Clarifice</i>       |                         |                      |

| Test No. | Probe Depth | Opt. Moist.           | Moist. %              | Wet Dens.              | Dry Dens.              | Proct./ Marsh.         | Relative Comp. %       | Location                    | Elevation                  |
|----------|-------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|-----------------------------|----------------------------|
| 1        | <i>8"</i>   | <i>15<sup>4</sup></i> | <i>10<sup>2</sup></i> | <i>141<sup>0</sup></i> | <i>127<sup>9</sup></i> | <i>117<sup>0</sup></i> | <i>109<sup>3</sup></i> | <i>20' SW of Conc. Ring</i> | <i>5<sup>th</sup> Lift</i> |
| 2        |             |                       | <i>11<sup>1</sup></i> | <i>136<sup>6</sup></i> | <i>122<sup>9</sup></i> |                        | <i>105<sup>0</sup></i> | <i>20' W of "</i>           | <i>"</i>                   |
| 3        |             |                       | <i>9<sup>2</sup></i>  | <i>133<sup>2</sup></i> | <i>122<sup>4</sup></i> |                        | <i>104<sup>4</sup></i> | <i>Center</i>               | <i>"</i>                   |
| 4        |             |                       | <i>9<sup>0</sup></i>  | <i>141<sup>8</sup></i> | <i>130<sup>1</sup></i> |                        | <i>111<sup>2</sup></i> | <i>25' E of Conc. Ring</i>  | <i>"</i>                   |
| 5        |             |                       | <i>8<sup>8</sup></i>  | <i>133<sup>7</sup></i> | <i>127<sup>4</sup></i> |                        | <i>108<sup>2</sup></i> | <i>30' " " "</i>            | <i>4<sup>th</sup></i>      |
| 6        |             |                       | <i>10<sup>0</sup></i> | <i>134<sup>6</sup></i> | <i>121<sup>7</sup></i> |                        | <i>104<sup>2</sup></i> | <i>40' W " "</i>            | <i>"</i>                   |
| 7        |             |                       | <i>9<sup>5</sup></i>  | <i>134<sup>8</sup></i> | <i>123<sup>2</sup></i> |                        | <i>105<sup>3</sup></i> | <i>25' SW " "</i>           | <i>"</i>                   |
| 8        |             |                       | <i>9<sup>8</sup></i>  | <i>136<sup>6</sup></i> | <i>124<sup>5</sup></i> |                        | <i>106<sup>4</sup></i> | <i>20' " " "</i>            | <i>"</i>                   |
| 9        |             |                       | <i>10<sup>0</sup></i> | <i>137<sup>0</sup></i> | <i>124<sup>6</sup></i> |                        | <i>106<sup>5</sup></i> | <i>25' SW " "</i>           | <i>3<sup>rd</sup></i>      |
| 10       |             |                       | <i>9<sup>2</sup></i>  | <i>139<sup>0</sup></i> | <i>127<sup>2</sup></i> |                        | <i>108<sup>8</sup></i> | <i>20' " " "</i>            |                            |
| 11       |             |                       | <i>9<sup>2</sup></i>  | <i>134<sup>3</sup></i> | <i>122<sup>9</sup></i> |                        | <i>105<sup>1</sup></i> | <i>Center</i>               |                            |
|          |             |                       | <i>7<sup>2</sup></i>  | <i>125<sup>9</sup></i> | <i>117<sup>4</sup></i> | <i>and</i>             | <i>100<sup>4</sup></i> | <i>110' ... C ... D ...</i> |                            |



# COMPACTION TESTING

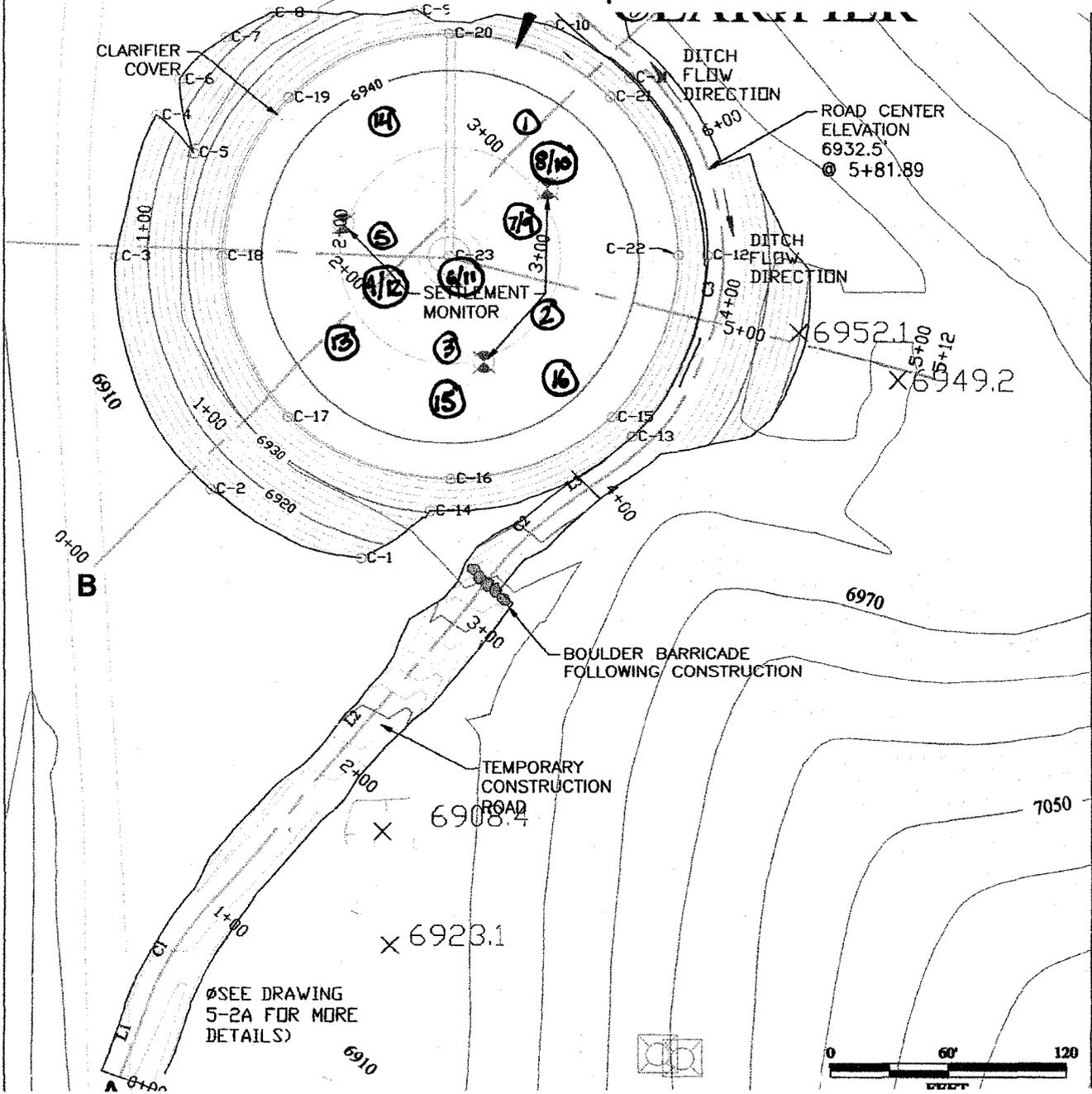
## LIFT NUMBER

POINT MOISTURE % COMPACTION

| Test | Lift | M    | D     | Test | Lift | M    | D     |
|------|------|------|-------|------|------|------|-------|
| 1    | 5    | 10.2 | 109.3 | 9    | 3    | 10.0 | 106.5 |
| 2    | 5    | 11.1 | 105.0 | 10   | 3    | 9.2  | 108.8 |
| 3    | 5    | 9.7  | 104.4 | 11   | 3    | 9.2  | 105.1 |
| 4    | 5    | 9.0  | 111.2 | 12   | 3    | 7.2  | 100.4 |
| 5    | 4    | 8.8  | 108.9 | 13   | 6    | 6.4  | 106.4 |
| 6    | 4    | 10.6 | 104.0 | 14   | 6    | 8.9  | 111.7 |
| 7    | 4    | 9.5  | 105.3 | 15   | 6    | 9.6  | 110.3 |
| 8    | 4    | 9.9  | 106.4 | 16   | 6    | 7.5  | 113.1 |

Test Depth

8"



6918.6 X

ROAD CENTER ELEVATION  
6932.5'  
@ 5+81.89

X 6952.1  
X 6949.2

BOULDER BARRICADE  
FOLLOWING CONSTRUCTION

TEMPORARY  
CONSTRUCTION  
ROAD

SEE DRAWING  
5-2A FOR MORE  
DETAILS)



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**EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS**

ASTM D2922 & D3017 - AASHTO T238 & T239

Reviewed by: \_\_\_\_\_

|   |  |                      |
|---|--|----------------------|
| JOB NAME & LOCATION: <i>CRA - Georgetown Canyon</i>       | JOB #: <i>2009.096</i>                   | DATE: <i>8-26-09</i> |
| MATERIAL SOURCE & TYPE: <i>Black Sandy Clay 5% Gravel</i> | GAUGE S/N: <i>29870</i>                  | TECH: <i>FS</i>      |
| WEATHER: <i>Clear Warm</i>                                | SPECIFIED COMPACTION: <i>95% of D698</i> |                      |
| COMMENTS: <i>Classifier Fill</i>                          |  |                      |

| Test No. | Probe Depth | Opt. Moist.     | Moist. %        | Wet Dens.        | Dry Dens.        | Proct./ Marsh.   | Relative Comp. % | Location             | Elevation |
|----------|-------------|-----------------|-----------------|------------------|------------------|------------------|------------------|----------------------|-----------|
| 1        | 8"          | 15 <sup>4</sup> | 12 <sup>5</sup> | 126 <sup>4</sup> | 112 <sup>3</sup> | 117 <sup>0</sup> | 96 <sup>2</sup>  | 25' SW of Conc. Ring | Lift 9    |
| 2        |             |                 | 11 <sup>3</sup> | 134 <sup>8</sup> | 121 <sup>1</sup> |                  | 103 <sup>5</sup> | 30' SE of Center     | "         |
| 3        |             |                 | 11 <sup>0</sup> | 127 <sup>8</sup> | 115 <sup>2</sup> |                  | 98 <sup>4</sup>  | 20' W of Center      | "         |
| 4        |             |                 | 9 <sup>1</sup>  | 128 <sup>7</sup> | 118 <sup>0</sup> |                  | 100 <sup>8</sup> | 20' E of Conc Ring   | "         |
| 5        |             |                 | 12 <sup>8</sup> | 127 <sup>7</sup> | 113 <sup>3</sup> |                  | 96 <sup>8</sup>  | 35' SE of " "        | Lift 8    |
| 6        |             |                 | 8 <sup>3</sup>  | 130 <sup>3</sup> | 120 <sup>3</sup> |                  | 102 <sup>8</sup> | 30' NE " " "         | "         |
| 7        |             |                 | 8 <sup>5</sup>  | 135 <sup>5</sup> | 124 <sup>8</sup> |                  | 106 <sup>7</sup> | Center               | "         |
| 8        | 6"          |                 | 9 <sup>5</sup>  | 135 <sup>3</sup> | 123 <sup>5</sup> |                  | 105 <sup>6</sup> | 25' SW of Conc. Ring | "         |
| 9        | 8"          |                 | 6 <sup>7</sup>  | 133 <sup>6</sup> | 125 <sup>3</sup> |                  | 107 <sup>2</sup> | Test 5 spot          | Lift 7    |
| 10       |             |                 | 8 <sup>8</sup>  | 136 <sup>5</sup> | 125 <sup>4</sup> |                  | 107 <sup>2</sup> | Test 7 "             | "         |
| 11       |             |                 | 7 <sup>3</sup>  | 141 <sup>4</sup> | 131 <sup>9</sup> |                  | 112 <sup>8</sup> | Test 6 "             | "         |
| 12       |             |                 | 8 <sup>4</sup>  | 137 <sup>1</sup> | 126 <sup>3</sup> |                  | 107 <sup>9</sup> | Test 2 "             | "         |

# COMPACTION TESTING

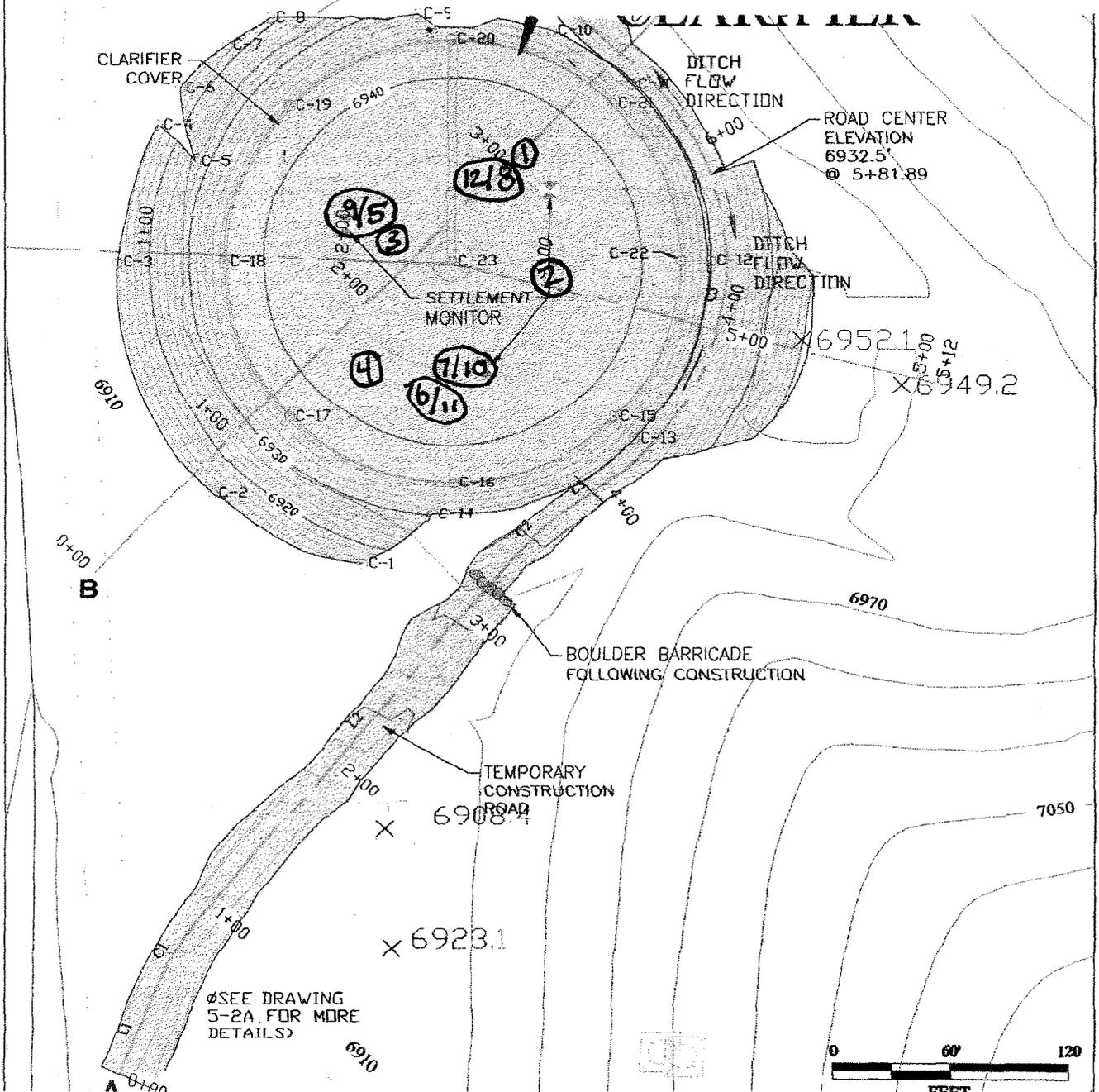
## LIFT NUMBER

Test Depth: 8"

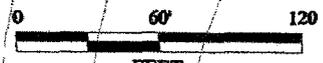
6920

6918.6 X

| POINT | LIFT | MOISTURE % |        | % COMPACTION |             |
|-------|------|------------|--------|--------------|-------------|
|       |      | M          | D      | Test Lift    | M D         |
| 1     | 9    | 12.5%      | 96.0%  | 7 8          | 8.5% 106.7% |
| 2     | 9    | 11.3%      | 103.5% | 8 8          | 9.5% 105.6% |
| 3     | 9    | 11.0%      | 98.4%  | 9 7          | 6.7% 107.0% |
| 4     | 9    | 7.1%       | 100.8% | 10 7         | 8.8% 107.2% |
| 5     | 8    | 12.8%      | 96.8%  | 11 7         | 7.2% 112.8% |
| 6     | 8    | 8.3%       | 102.8% | 12 7         | 8.6% 107.9% |

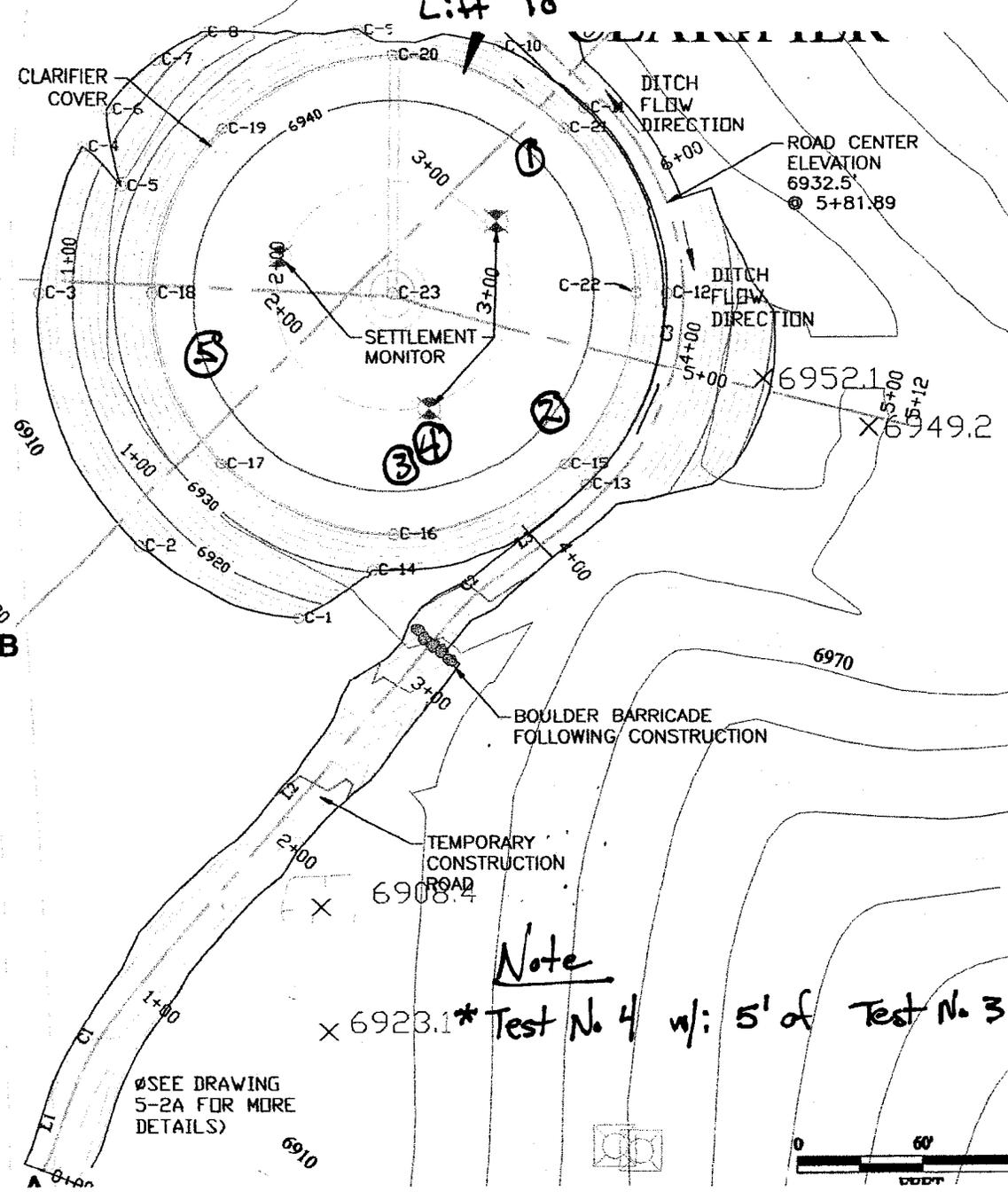


SEE DRAWING 5-2A FOR MORE DETAILS



COMPACTION TESTING  
LIFT NUMBER

| POINT | MOISTURE | % COMPACTION |
|-------|----------|--------------|
| 1     | 11.1%    | 99.3%        |
| 2     | 7.5%     | 109.3%       |
| 3*    | 13.2%    | 82.8%        |
| 4     | 12.1%    | 98.5%        |
| 5     | 6.3%     | 107.3%       |



LIFT 10

Note  
\* Test No 4 w/ 5' of Test No 3

SEE DRAWING 5-2A FOR MORE DETAILS







PAGE 1 OF 1

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EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS

|  |                                  |                               |
|--|----------------------------------|-------------------------------|
| JOB NAME & LOCATION: <i>Georgetown</i>               | JOB #: <i>09-</i>                | DATE: <i>8/31/09</i>          |
| MATERIAL SOURCE & TYPE: <i>Black Sandy silt/clay</i> | GAUGE S/N: <i>29070</i>          | TECH: <del>LS</del> <i>LS</i> |
| WEATHER: <i>Sunny</i>                                | SPECIFIED COMPACTION: <i>95%</i> |                               |
| COMMENTS: <i>Clarifier</i>                           |                                  |                               |

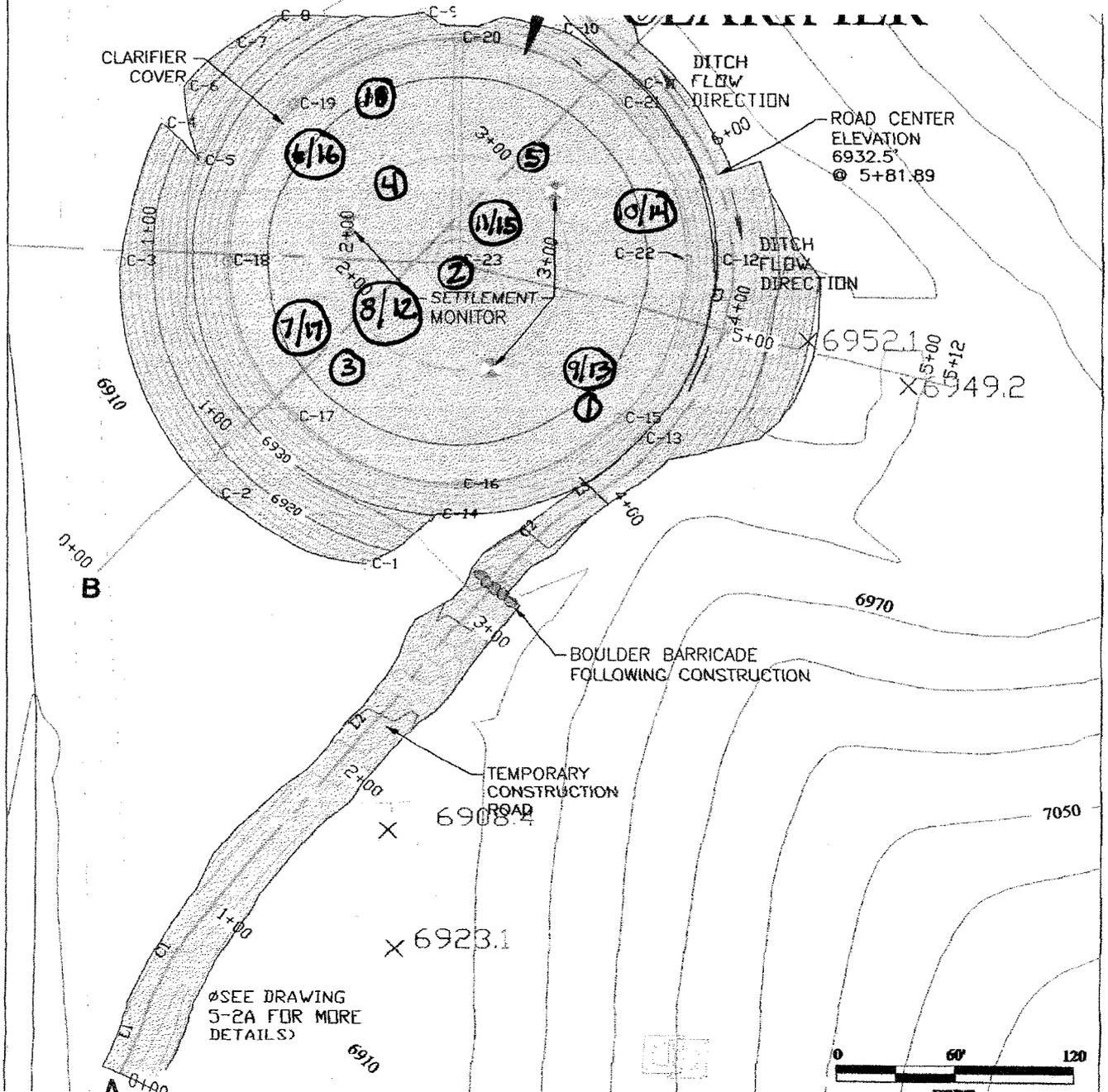
| Test No. | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location  | Elevation |         |
|----------|-------------|-------------|----------|-----------|-----------|----------------|------------------|-----------|-----------|---------|
| 1        | 8"          | 15.4        | 10.5     | 136.4     | 118.9     | 117.0          | 101.6            | SW corner | LIFT 11   |         |
| 2        | ↓           | ↓           | 10.3     | 132.0     | 119.7     | ↓              | 102.3            | SE corner | ↓         |         |
| 3        |             |             | 8.8      | 137.3     | 126.2     |                | 107.9            | NE corner |           |         |
| 4        |             |             | 7.6      | 125.9     | 117.0     |                | 100.0            | N corner  |           |         |
| 5        |             |             | 12.3     | 135.7     | 120.9     |                | 102.3            | NW corner |           |         |
| 6        |             |             | 12.6     | 135.2     | 120.1     |                | 102.6            | W corner  |           |         |
| 7        |             |             | 12.5     | 136.0     | 120.9     |                | 103.9            | N corner  |           | LIFT 13 |
| 8        |             |             |          |           |           |                |                  |           |           |         |
| 9        |             |             |          |           |           |                |                  |           |           |         |
| 10       |             |             |          |           |           |                |                  |           |           |         |
| 11       |             |             |          |           |           |                |                  |           |           |         |
| 12       |             |             |          |           |           |                |                  |           |           |         |

# COMPACTION TESTING

LIFT NUMBER

Test Depth: 8"

| POINT | MOISTURE % | % COMPACTION |       |      |    |      |       |
|-------|------------|--------------|-------|------|----|------|-------|
| Test  | L          | M            | D     | Test | L  | M    | D     |
| 1     | 13         | 9.3          | 102.1 | 10   | 12 | 9.8  | 108.5 |
| 2     | 13         | 8.6          | 105.5 | 11   | 12 | 8.8  | 99.1  |
| 3     | 13         | 6.8          | 98.8  | 12   | 11 | 10.5 | 101.6 |
| 4     | 13         | 7.3          | 104.2 | 13   | 11 | 10.3 | 102.3 |
| 5     | 13         | 10.1         | 98.6  | 14   | 11 | 8.8  | 107.9 |
| 6     | 12         | 11.5         | 104.1 | 15   | 11 | 7.6  | 100.0 |
| 7     | 12         | 12.6         | 102.0 | 16   | 11 | 12.3 | 103.3 |
| 8     | 12         | 9.9          | 109.2 | 17   | 11 | 12.6 | 102.6 |
| 9     | 12         | 11.3         | 105.7 | 18   | 13 | 12.5 | 103.4 |



SEE DRAWING 5-2A FOR MORE DETAILS

HARPER-LEAVITT ENGINEERING, INC.  
PROFESSIONAL ENGINEERS & LAND SURVEYORS

800 W. Judicial Street  
Blackfoot, Idaho 83221  
(208) 785-2977

985 N. Capital Avenue  
Idaho Falls, Idaho 83405  
(208) 524-0212

EARTHWORK OBSERVATIONS AND DENSITY TEST RESULTS

|   |                                  |                      |
|---|----------------------------------|----------------------|
| JOB NAME & LOCATION: <i>Georgetown</i>    | JOB #: <i>09-096</i>             | DATE: <i>9/11/09</i> |
| MATERIAL SOURCE & TYPE: <i>Sandy Clay</i> | GAUGE S/N: <i>29870</i>          | TECH: <i>LS</i>      |
| WEATHER: <i>Sunny</i>                     | SPECIFIED COMPACTION: <i>95%</i> |                      |
| COMMENTS: <i>Clarifier</i>                |                                  |                      |

| Test No. | Probe Depth | Opt. Moist. | Moist. % | Wet Dens. | Dry Dens. | Proct./ Marsh. | Relative Comp. % | Location               | Elevation |
|----------|-------------|-------------|----------|-----------|-----------|----------------|------------------|------------------------|-----------|
| 1        | 2"          | 15.4        | 9.8      | 135.1     | 123.1     | 117.0          | 105.2            | SE corner Clarifier    | LiA 16    |
| 2        | ↓           |             | 10.3     | 132.0     | 119.7     |                | 102.3            | E side Clarifier       | ↓         |
| 3        | ↓           |             | 9.5      | 136.0     | 124.3     |                | 106.2            | NE side Clarifier      | ↓         |
| 4        | ↓           |             | 11.5     | 134.9     | 120.9     |                | 103.4            | N side Clarifier       | ↓         |
| 5        | ↓           |             | 8.8      | 134.3     | 123.4     |                | 105.5            | W side Clarifier       | ↓         |
| 6        | ↓           |             | 10.9     | 137.9     | 124.3     |                | 106.2            | SW side Clarifier      | ↓         |
| 7        | ↓           |             | 10.4     | 137.3     | 124.4     |                | 106.3            | South middle Clarifier | LiA 17    |
| 8        | ↓           |             | 9.5      | 138.1     | 126.1     |                | 107.8            | NW middle Clarifier    | ↓         |
| 9        | ↓           |             | 11.6     | 136.0     | 121.8     |                | 104.1            | NE middle Clarifier    | ↓         |
| 10       | ↓           |             | 11.1     | 138.3     | 124.4     |                | 106.3            | SE middle Clarifier    | ↓         |
| 11       |             |             | 9.5      | 136.0     | 124.1     |                | 106.1            | E center Clarifier     | LiA 18    |
| 12       |             |             | 9.9      | 139.3     | 126.7     |                | 108.3            | W center Clarifier     | ↓         |

# COMPACTION TESTING

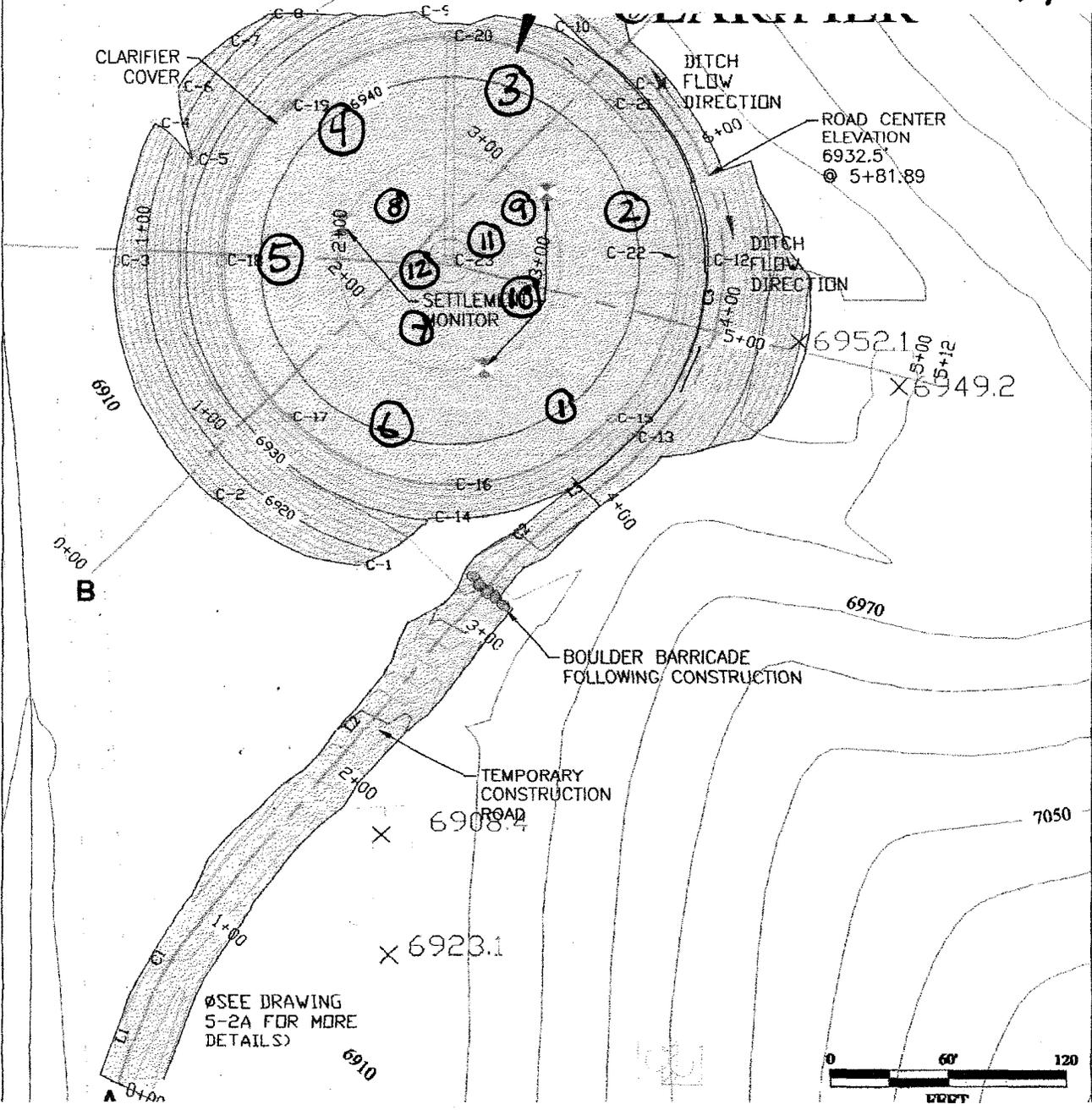
LIFT NUMBER

Test Depth: 8"

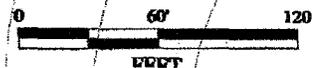
6920

6918.6 X

| POINT | MOISTURE |      |       | % COMPACTION |    |      |       |
|-------|----------|------|-------|--------------|----|------|-------|
|       | L        | M    | D     | Test         | L  | M    | D     |
| 1     | 16       | 9.8  | 105.2 | 7            | 17 | 10.4 | 106.3 |
| 2     | 16       | 10.3 | 102.3 | 8            | 17 | 9.5  | 107.8 |
| 3     | 16       | 9.5  | 106.2 | 9            | 17 | 11.6 | 104.1 |
| 4     | 16       | 11.5 | 103.4 | 10           | 17 | 11.1 | 106.3 |
| 5     | 16       | 8.8  | 105.5 | 11           | 18 | 9.5  | 106.1 |
| 6     | 16       | 10.9 | 106.2 | 12           | 18 | 9.9  | 108.3 |



ØSEE DRAWING  
S-2A FOR MORE  
DETAILS





# COMPACTION TESTING

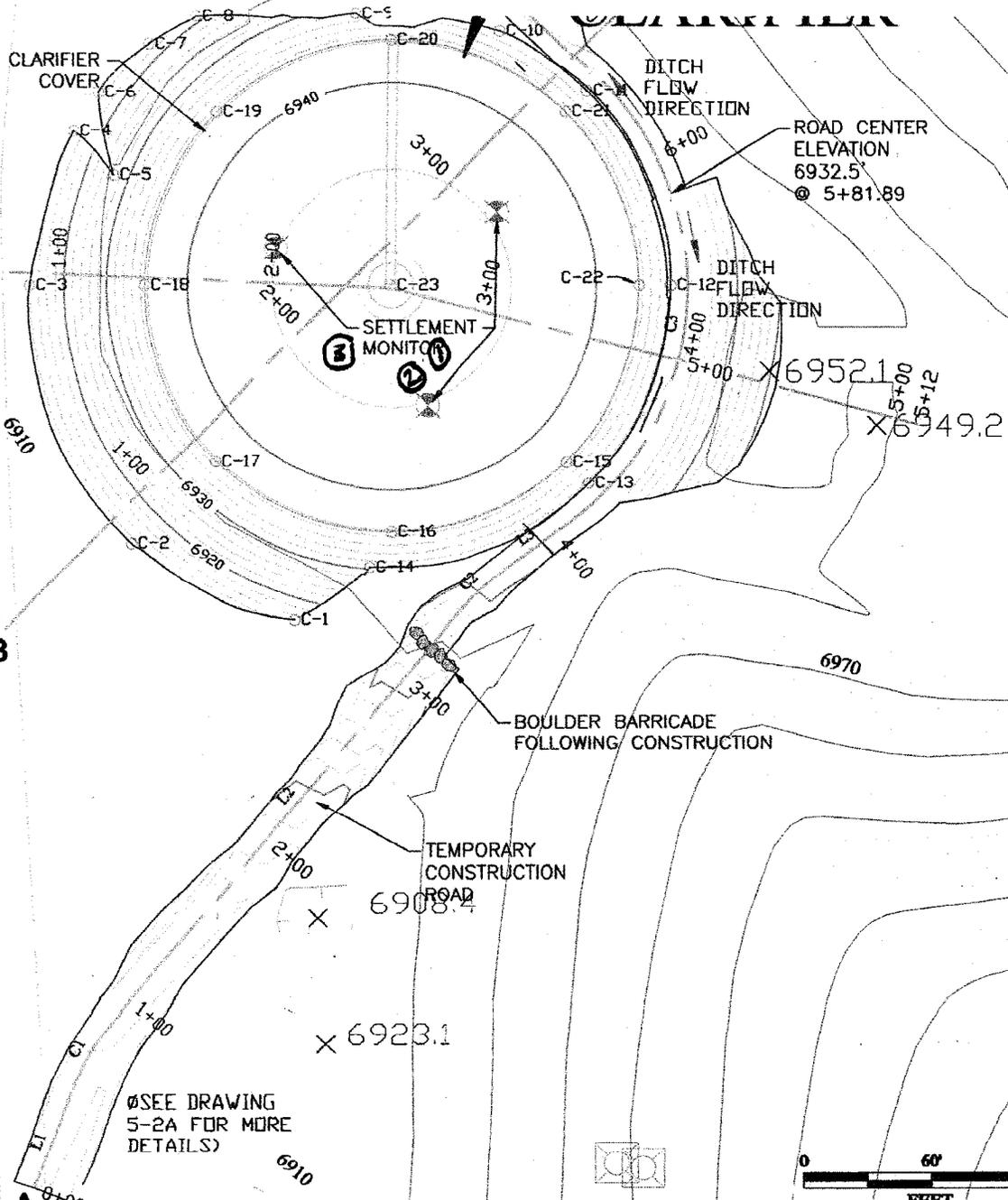
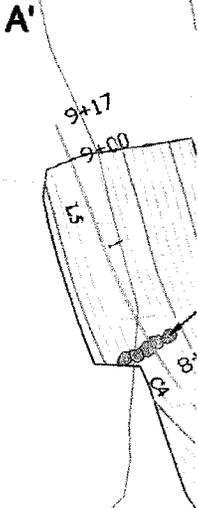
## LIFT NUMBER

| POINT | MOISTURE | % COMPACTION |        |
|-------|----------|--------------|--------|
| Test  | Lift     | M            | D      |
| 1     | 2        | 6.4%         | 107.0% |
| 2     | 1        | 4.3%         | 108.6% |
| 3     | 1        | 7.1%         | 101.9% |

**Note**

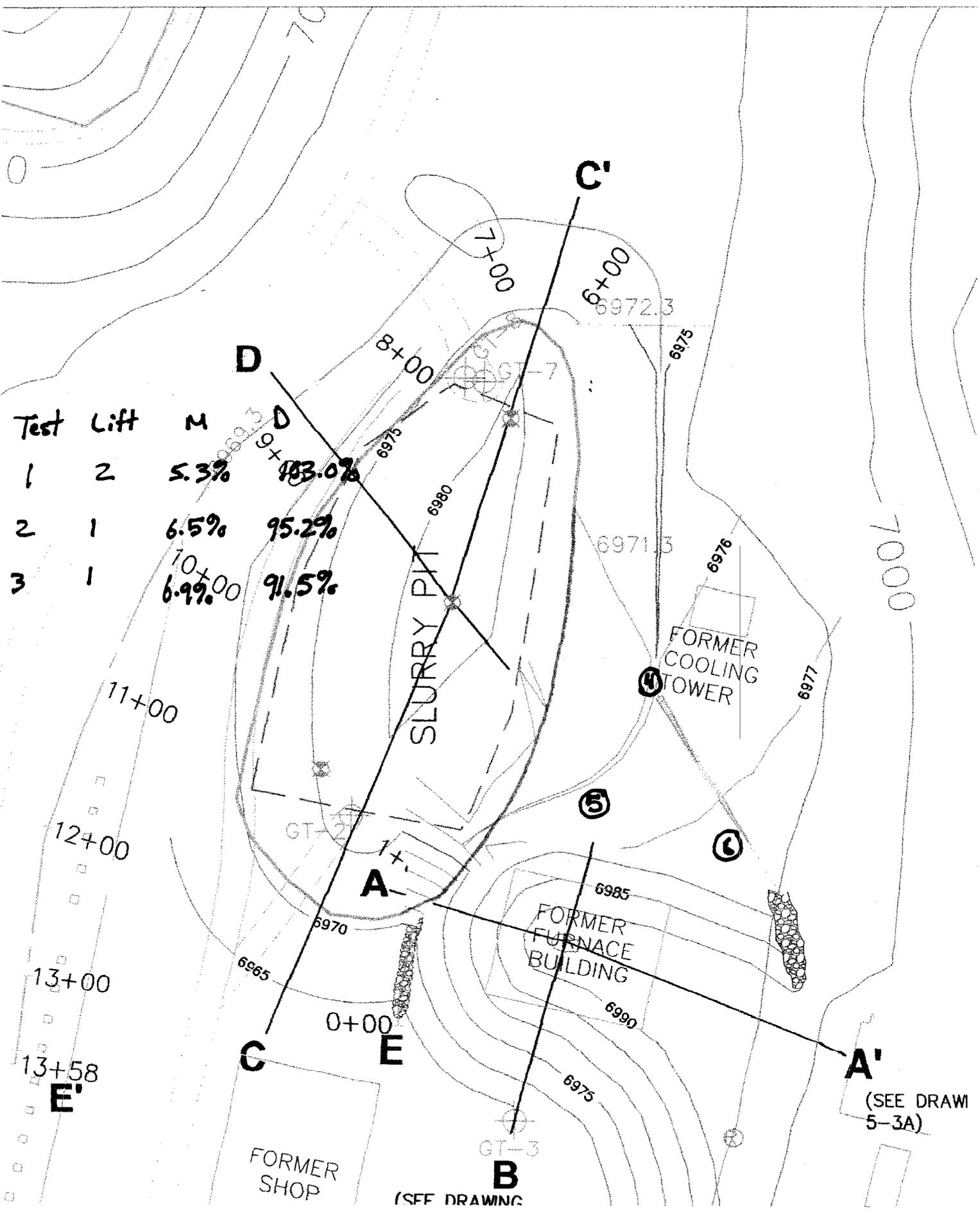
Tests @ 8" B<sub>G</sub>

6918.6 X



ØSEE DRAWING 5-2A FOR MORE DETAILS





| Test | Lift | M    | D     |
|------|------|------|-------|
| 1    | 2    | 5.3% | 83.0% |
| 2    | 1    | 6.5% | 95.2% |
| 3    | 1    | 6.9% | 91.5% |

11+00  
12+00  
13+00  
13+58  
E'

D

C

A

E

C'

B

A'

SLURRY PIT

FORMER COOLING TOWER

FORMER FURNACE BUILDING

FORMER SHOP

(SEE DRAWING

(SEE DRAWING 5-3A)

7+00

6+00

8+00

11+00

12+00

13+00

13+58

9+00

10+00

0+00

6971.3

6972.3

6985

6990

6975

6970

6965

6976

6977

7000

GT-3

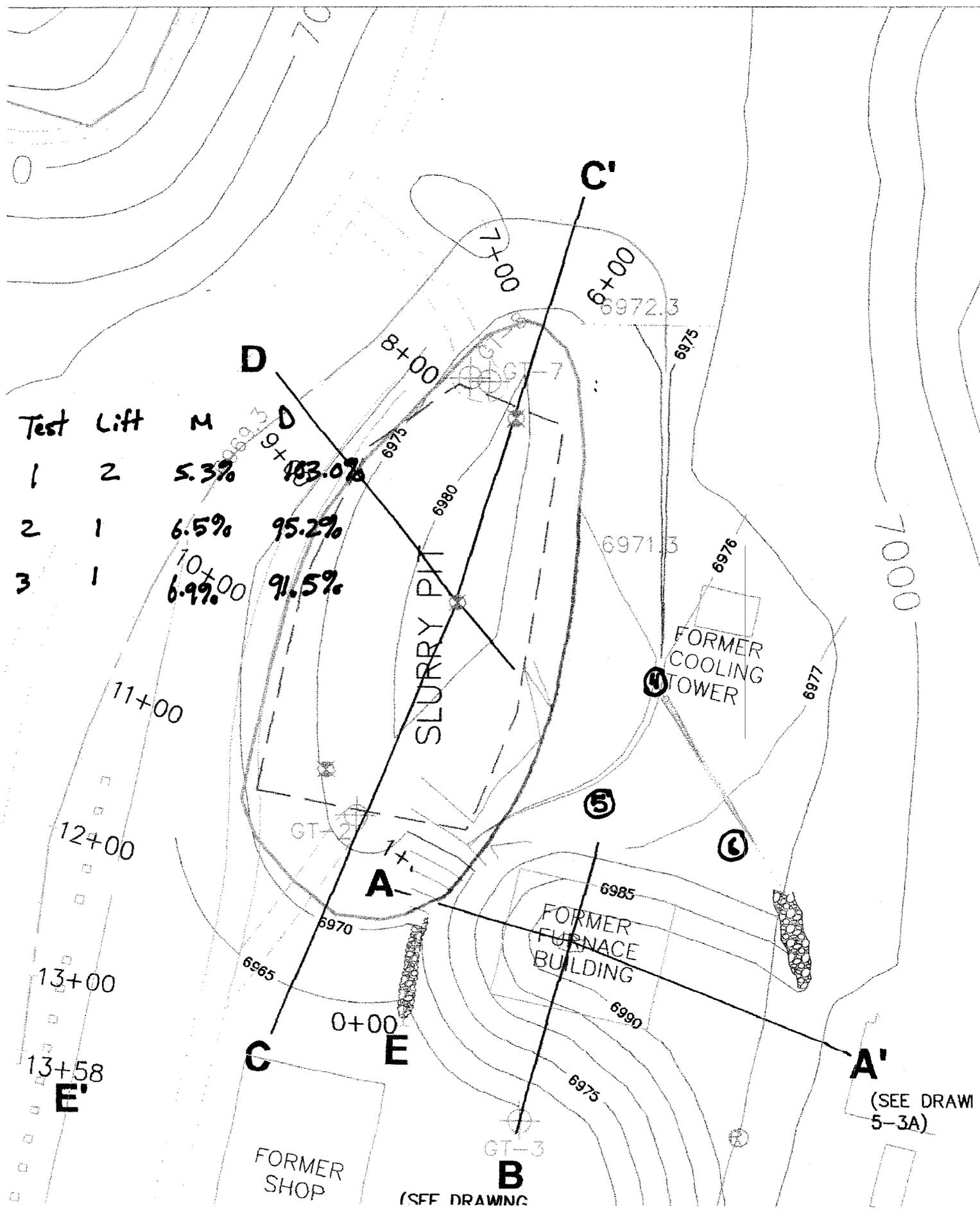
GT-2

GT-7

5

6

4





# COMPACTION TESTING

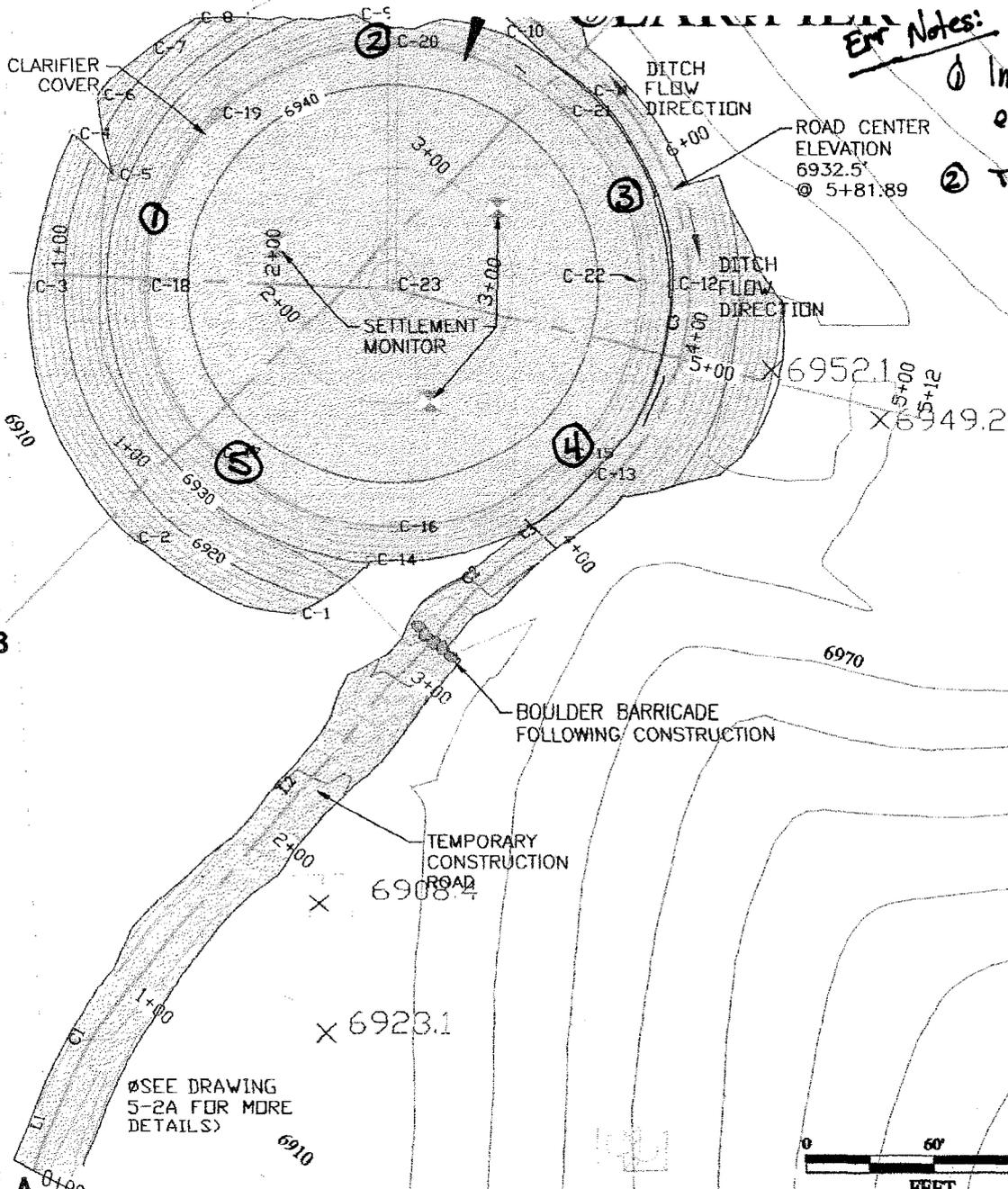
## LIFT NUMBER

| POINT | MOISTURE | % COMPACTION                 |
|-------|----------|------------------------------|
| 1     | 10.2     | 92.9% <sup>DN</sup> 95.4%    |
| 2     | 10.5     | 99.0%                        |
| 3     | 8.1      | 100.9%                       |
| 4     | 8.1      | 100.0%                       |
| 5     | 8.0      | 94.7%<br>95.1% <sup>DN</sup> |

### Notes:

- Test Depth: 6"
- Top Lift of anchor trench

6918.6 X

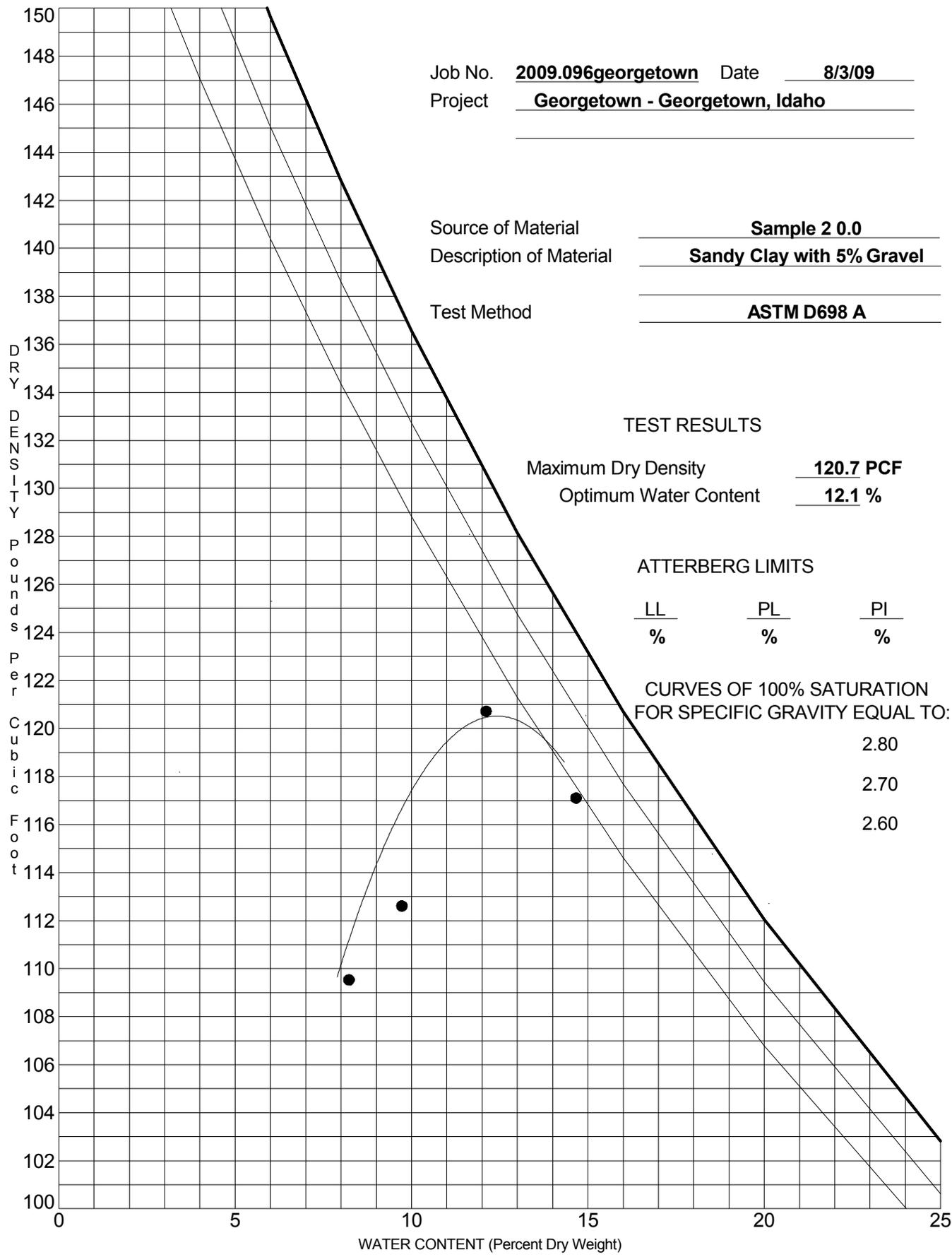


### Err Notes:

- ① Incorrect proctor entered
- ② Typo

SEE DRAWING 5-2A FOR MORE DETAILS





Job No. 2009.096georgetown Date 8/3/09  
 Project Georgetown - Georgetown, Idaho

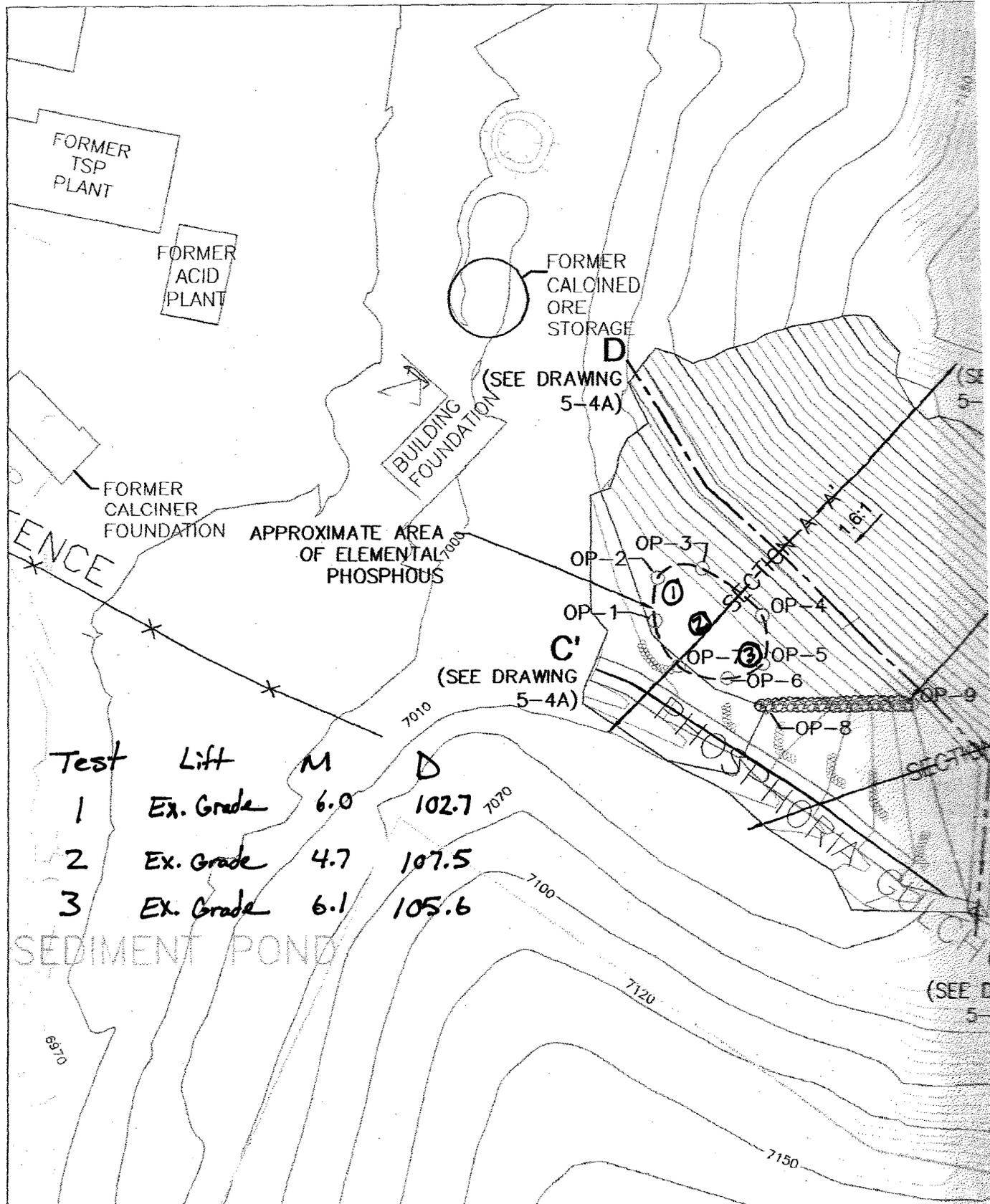
Source of Material Sample 2 0.0  
 Description of Material Sandy Clay with 5% Gravel  
 Test Method ASTM D698 A

**MOISTURE-DENSITY RELATIONSHIP**

Harper-Leavitt Engineering  
 Idaho Falls, Idaho 83221

Figure No. 1





**DESIGN LIMITATIONS:**

1. HCN AND PH3 GAS PRODUCTION CANNOT BE QUANTIFIED; THEREFORE THE ENGINEER'S CERTIFICATION CANNOT BE

PREPARED BY:



**CONESTOGA-ROVERS  
& ASSOCIATES**

4141 Davis Creek Court  
Kalamazoo, MI 49001-0838  
Telephone: (269) 344-1230 Fax: (269) 344-8558  
www.CRAworld.com

**SUBMITTAL**

DATE: August 19, 2009

SUBMITTAL NO.: 56872-13

PROJECT NO.: 56872

PROJECT NAME: Georgetown Canyon  
Remediation

CLIENT: Nu-West Industries  
3010 Conda Road  
Soda Springs, ID 83276

ENGINEER: Norwest Corporation  
136 E South Temple, 12<sup>th</sup> Floor  
Salt Lake City, UT 84111

SUPPLIER:

SUBCONTRACTOR: Environment Specialties  
International, Inc (ESI)

MANUFACTURER:

| QTY | SPEC. NO. & TITLE   | DWG. NO. | DESCRIPTION/ LOCATION INSTALLED  |
|-----|---|----------|--|
| 1   | Attachment B - Appendix B<br>Construction QCA Plan; Subsection<br>4.3.1.3 Site and Subgrade Preparation | N/A      | Certificate of Acceptance of Ore Subgrade Surface<br>Slurry Pit<br>Accepted by Darren Jorgensen (Norwest) and<br>Edgar Melia (ESI) |
|     |   |          |  |

CONSTRUCTION MANAGER'S / ENGINEER'S REVIEW AND APPROVAL:

COPY TO: Howard Stich (CRA)  
Regis Seng (CRA)

COMPLETED BY: Dan White  
[Please Print]

SIGNED:

**CERTIFICATE OF ACCEPTANCE  
OF ORE OR SOIL SUBGRADE SURFACE**

PROJECT NAME: Nu West

PROJECT NUMBER: 2009-4364

OWNER: Nu West

LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of Nu West,  
have visually observed the soil subgrade surface described below, and found it to be an acceptable  
surface on which to install geomembrane. This certification is based on observations of the surface  
of the subgrade only.

Area Being Accepted: Anchor Trench + slurry pit  
area according to plans

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 08-19-2009.

Signature: 

Name: EDGAR MELIA.

Title: ESI-LINER

**CQA Construction manager:**

Date: 8-19-09

Signature: 

Name: Darren Jorgensen

Title: CQA CM (Norwest)

**CERTIFICATE OF ACCEPTANCE  
OF ORE OR SOIL SUBGRADE SURFACE**

PROJECT NAME: Nu West

PROJECT NUMBER: 2009-4364

OWNER: Nu West

LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of Nu West,  
have visually observed the soil subgrade surface described below, and found it to be an acceptable  
surface on which to install geomembrane. This certification is based on observations of the surface  
of the subgrade only.

Area Being Accepted: Anchor trench & clarifier  
area according to plans

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 09-16-09

Signature: [Signature]

Name: ISMAEL BUITRON

Title: SUPERINTENDENT

**CQA Construction manager:**

Date: 9-16-09

Signature: [Signature]

Name: Darren Jorgensen

Title: CQA CM (Norwest)

**CERTIFICATE OF ACCEPTANCE  
OF ORE OR SOIL SUBGRADE SURFACE**

PROJECT NAME: Nu West  
PROJECT NUMBER: 2009-4364  
OWNER: Nu West  
LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of \_\_\_\_\_  
have visually observed the soil subgrade surface described below, and found it to be an acceptable  
surface on which to install geomembrane. This certification is based on observations of the surface  
of the subgrade only.

Area Being Accepted: Anchor trench & ore pile  
area according to plans

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 09-17-09  
Signature: [Signature]  
Name: ISMAEL BUITRON  
Title: SUPERINTENDENT

**CQA Construction manager:**

Date: 9-17-09  
Signature: [Signature]  
Name: Darren Jorgensen  
Title: CQA CM (Norwest)

**CERTIFICATE OF LINER ACCEPTANCE**

PROJECT NAME: Nu West  
PROJECT NUMBER: 2009-4364  
OWNER: Nu-West  
LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of \_\_\_\_\_  
have visually observed the geomembrane described below, and found it to be of acceptable  
construction on which to install final cover materials as detailed in the final design plans and  
specifications.

Area Being Accepted: Entire cover of slurry pit  
area

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 08/24/2009  
Signature: [Signature]  
Name: EDGAR MEDIK  
Title: LINER SUPERINTENDENT

**Contractor:**

Date: 8/24/2009  
Signature: [Signature]  
Name: Dan White  
Title: Project Engineer - CRA

CQA Construction Manager Dave Jensen Date 8-23-09

**CERTIFICATE OF LINER ACCEPTANCE**

PROJECT NAME: Nu West

PROJECT NUMBER: 2009-4364

OWNER: Nu West

LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of \_\_\_\_\_  
have visually observed the geomembrane described below, and found it to be of acceptable  
construction on which to install final cover materials as detailed in the final design plans and  
specifications.

Area Being Accepted: Clarifier cover

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 09-18-09

Signature: [Signature]

Name: ISMAEL BUITRON

Title: SUPERINTENDENT

**Contractor:**

Date: 9-18-2009

Signature: [Signature]

Name: Dan E. White

Title: Engineer

CQA Construction Manager Darren Jensen Date 9-18-09

**CERTIFICATE OF LINER ACCEPTANCE**

PROJECT NAME: Nu-West  
PROJECT NUMBER: 2009-4364  
OWNER: Nu-West  
LOCATION: Georgetown Canyon

I, the undersigned, a duly appointed representative of \_\_\_\_\_  
have visually observed the geomembrane described below, and found it to be of acceptable  
construction on which to install final cover materials as detailed in the final design plans and  
specifications.

Area Being Accepted: Ore Pile cover

**GEOSYNTHETIC LINER  
REPRESENTATIVE:**

Date: 09-18-09  
Signature: [Signature]  
Name: ISMAEL BUITRON  
Title: SUPERINTENDENT

**Contractor:**

Date: 9-18-2009  
Signature: [Signature]  
Name: Dan E. White  
Title: Engineer

CQA Construction Manager Darren Jensen Date 9-18-09

Slurry

FORM #6

PAGE 1 OF 8

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL

| DATE/TIME    | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH        | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|--------------|--------------|-------------|---------------------|-------------|-------------------------|
| 8/19/09 1:40 | 1            | 0000 2022   | 90'                 | 15'         |                         |
| 8-19-09 1:50 | 2            | 0000 2022   | 60'                 | 15'         |                         |
| 8-19-09 1:55 | 3            | 0000 2012   | 41'                 | 15'         |                         |
| 8-19-09 2:00 | 4            | 0000 2012   | 109'                | 15'         |                         |
| 8-19-09 2:12 | 5            | 0000 2021   | 107'                | 15'         |                         |
| 8-19-09 2:20 | 6            | 0000 2021   | 43'                 | 15'         |                         |
| 8-19-09 2:35 | 7            | 0000 2023   | 79'                 | 15'         |                         |
| 8-19-09 2:39 | 8            | 0000 2023   | <del>121'</del> 71' | 15'         |                         |
| 8-19-09 2:49 | 9            | 0000 2035   | 52'                 | 15'         |                         |

slurry

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL

| DATE/TIME       | PANEL NUMBER          | ROLL NUMBER | PANEL LENGTH          | PANEL WIDTH | COMMENTS/PANEL LOCATION          |
|-----------------|-----------------------|-------------|-----------------------|-------------|----------------------------------|
| 2:55<br>8-19-09 | 10                    | 0000 2035   | 98'                   | 15'         | Panel #10 North edge @ 100' mark |
| 3:07<br>8-19-09 | 11                    | 0000 2039   | 36'                   | 15'         | Panel #11 North edge @ 100' mark |
| 3:10<br>8-19-09 | 12                    | 0000 2039   | 58'<br><del>70'</del> | 15'         | Panels 12 + 14 segm @ GT2        |
| 3:15<br>8-19-09 | 13                    | 0000 2039   | 56'                   | 15'         |                                  |
| 3:25<br>8-19-09 | 14                    | 0000 2038   | 31'                   | 15'         | Panels 12 + 14 segm @ GT2        |
| 3:32<br>8-19-09 | <del>15</del><br>4415 | 0000 2038   | 119'                  | 15'         |                                  |
| 3:44<br>8-19-09 | 16                    | 0000 2028   | 40'                   | 15'         |                                  |
| 3:50<br>8-19-09 | 17                    | 0000 2028   | 110'                  | 15'         | North edge @ 150' mark           |
| 4:06<br>8-19-09 | 18                    | 0000 2026   | 58'                   | 15'         |                                  |

5/14/09

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
~~20-09~~

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION    |
|-----------|--------------|-------------|--------------|-------------|----------------------------|
| 8:26      | 19           | 0000 2026   | 92'          | 15'         |                            |
| 8:30      | 20           | 0000 2040   | 84'          | 15'         |                            |
| 8:36      | 21           | 0000 2040   | 66'          | 15'         |                            |
| 8:48      | 22           | 0000 1988   | 111'         | 15'         |                            |
| 8:51      | 23           | 0000 1988   | 39'          | 15'         |                            |
| 9:00      | 24           | 0000 1993   | 140'         | 15'         |                            |
| 9:03      | 25           | 0000 1993   | 10'          | 15'         | North edge of panel @ 200' |
| 9:10      | 26           | 0000 1983   | 150'         | 15'         | North edge of panel @ 200' |
| 9:19      | 27           | 0000 1985   | 21'          | 15'         | North edge of panel @ 200' |

Slurry

PANEL PLACEMENT FORM

PROJECT NAME: Ny West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
7-20-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION                               |
|-----------|--------------|-------------|--------------|-------------|---|
| 9:23      | 28           | 0000 1985   | 129'         | 15'         |   |
| 9:31      | 29           | 0000 1994   | 55'          | 15'         |   |
| 9:34      | 30           | 0000 1994   | 95'          | 15'         |   |
| 9:44      | 31           | 0000 2011   | 94'          | 15'         |   |
| 9:50      | 32           | 0000 2011   | 56'          | 15'         |   |
| 10:00     | 33           | 0000 1995   | 138'         | 15'         |   |
| 10:05     | 34           | 0000 1995   | 12'          | 15'         |   |
| 11:30     | 35           | 0000 1990   | 45'          | 15'         | Added additional GCL to panel #1 due to anchor trench |
| 12:00     | 36           | 0000 1990   | 105'         | 15'         |   |

Slurry

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
8-20-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION   |
|-----------|--------------|-------------|--------------|-------------|---|
| 12:30     | 37           | 2042        | 68'          | 15'         |   |
| 1:38      | 38           | 2042        | 82'          | 15'         |   |
| 1:43      | 39           | 2020        | 109'         | 15'         |   |
| 1:47      | 40           | 2020        | 41'          | 15'         |   |
| 1:55      | 41           | 2027        | 145'         | 15'         | P 39 & P 41 slight tear under 6" on seam edge added extra bentonite |
| 1:57      | 42           | 2027        | 5'           | 15'         | North edge @ 300'   |
| 2:01      | 43           | 2037        | 150'         | 15'         | North edge @ 300'   |
| 2:10      | 44           | 1989        | 28'          | 15'         | North edge @ 300'   |
| 2:15      | 45           | 1989        | 122'         | 15'         |   |

slurry

PANEL PLACEMENT FORM

PROJECT NAME: N<sub>4</sub> West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
3-20-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH          | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|-----------------------|-------------|-------------------------|
| 2:23      | 46           | 1986        | 62'                   | 15'         |                         |
| 2:28      | 47           | 1986        | <del>88'</del><br>81' | 15'         |                         |
| 2:30      | 48           | 1986        | 7'                    | 15'         |                         |
| 2:35      | 49           | 1987        | 90'                   | 15'         |                         |
| 2:40      | 50           | 1987        | 60'                   | 15'         |                         |
| 2:44      | 51           | 1997        | 97'                   | 15'         |                         |
| 2:48      | 52           | 1997        | <del>53'</del><br>43' | 15'         |                         |
| 2:50      | 53           | 1997        | 10'                   | 15'         |                         |
| 2:54      | 54           | 1998        | 114'                  | 15'         |                         |

Slurry

PANEL PLACEMENT FORM

PROJECT NAME: Ny West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
8-20-09

| DATE/TIME       | PANEL NUMBER  | ROLL NUMBER     | PANEL LENGTH          | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------------|---------------|-----------------|-----------------------|-------------|-------------------------|
| 2:57            | 55            | 1998            | 36'                   | 15'         |                         |
| 3:04            | 56            | 1996            | 97'                   | 15'         |                         |
| 3:08            | 57            | 1996            | <del>53'</del><br>43' | 15'         | Northside @ 400' mark   |
| 3:09            | 58            | 1996            | 10'                   | 15'         |                         |
| 3:16            | 59            | 2004            | 89'                   | 15'         |                         |
| 3:21            | 60            | 2004            | 61'                   | 15'         |                         |
| 3:28            | 61            | 1999            | 52'                   | 15'         |                         |
| <del>3:32</del> | <del>62</del> | <del>1999</del> |                       |             |                         |

Slurry

PANEL PLACEMENT FORM

PROJECT NAME: Ny West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
8-21-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH   | PANEL WIDTH | COMMENTS/PANEL LOCATION     |
|-----------|--------------|-------------|----------------|-------------|-----------------------------|
| 8:16      | 62           | 1999        | 98'            | 15'         |                             |
| 8:25      | 63           | 2000        | <del>96'</del> | 15'         |                             |
| 8:28      | 64           | 2000        | 11'            | 15'         |                             |
| 8:30      | 65           | 2000        | 45'            | 15'         |                             |
| 8:41      | 66           | 1992        | 44'            | 15'         |                             |
| 8:45      | 67           | 1992        | 9'             | 15'         |                             |
| 8:48      | 68           | 1992        | 55'            | 15'         |                             |
| 8:50      | 69           | 1992        | 17'            | 15'         | Last GCL panel on north end |
| 8:52      | 70           | 1992        | 17'            | 15'         | Last GCL panel on north end |

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME:

Central Farmers, Georgetown ID

PROJECT NO.

09-08-1169

PAGE

1

of

4

| Date    | Panel # | Roll # | Panel Length | Panel Width | GCL    | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|--------|-------------------------|
| 8-19-09 | 1       | 2022   | 90           | 14.5        | 1305   |                         |
| 8-19-09 | 2       | 2022   | 60           | 14.5        | 870    |                         |
| 8-19-09 | 3       | 2012   | 41           | 14.5        | 594.5  |                         |
| 8-19-09 | 4       | 2012   | 109          | 14.5        | 1580.5 |                         |
| 8-19-09 | 5       | 2021   | 107          | 14.5        | 1551.5 |                         |
| 8-19-09 | 6       | 2021   | 93           | 14.5        | 623.5  |                         |
| 8-19-09 | 7       | 2023   | 79           | 14.5        | 1145.5 |                         |
| 8-19-09 | 8       | 2023   | 71           | 14.5        | 1029.5 |                         |
| 8-19-09 | 9       | 2035   | 52           | 14.5        | 754    |                         |
| 8-19-09 | 10      | 2035   | 98           | 14.5        | 1421   |                         |
| 8-19-09 | 11      | 2039   | 36           | 14.5        | 522    |                         |
| 8-19-09 | 12      | 2039   | 58           | 14.5        | 841    |                         |
| 8-19-09 | 13      | 2039   | 56           | 14.5        | 812    |                         |
| 8-19-09 | 14      | 2038   | 31           | 14.5        | 449.5  |                         |
| 8-19-09 | 15      | 2038   | 119          | 14.5        | 1725.5 |                         |
| 8-19-09 | 16      | 2028   | 40           | 14.5        | 580    |                         |
| 8-19-09 | 17      | 2028   | 110          | 14.5        | 1595   |                         |
| 8-19-09 | 18      | 2026   | 60           | 14.5        | 870    |                         |
|         |         |        |              |             |        |                         |
|         |         |        |              |             |        |                         |

~~18,328 SF.~~

18,270 SF

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: Central Farmers; Georgetown, ID

PROJECT NO. 09-08-1169

PAGE 2 of 4

| Date    | Panel # | Roll # | Panel Length | Panel Width | GCL                 | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|---------------------|-------------------------|
| 8-20-09 | 19      | 2026   | 92           | 14.5        | 1334                |                         |
| 8-20-09 | 20      | 2040   | 20           | 14.5        | <del>1218</del> 290 |                         |
| 8-20-09 | 21      | 2040   | 66           | 14.5        | 957                 |                         |
| 8-20-09 | 22      | 1988   | 111          | 14.5        | 1609.5              |                         |
| 8-20-09 | 23      | 1988   | 39           | 14.5        | 565.5               |                         |
| 8-20-09 | 24      | 1993   | 140          | 14.5        | 2030                |                         |
| 8-20-09 | 25      | 1993   | 10           | 14.5        | 145                 |                         |
| 8-20-09 | 26      | 1983   | 150          | 14.5        | 2175                |                         |
| 8-20-09 | 27      | 1985   | 21           | 14.5        | 304.5               |                         |
| 8-20-09 | 28      | 1985   | 129          | 14.5        | 1870.5              |                         |
| 8-20-09 | 29      | 1994   | 55           | 14.5        | 797.5               |                         |
| 8-20-09 | 30      | 1994   | 95           | 14.5        | 1377.5              |                         |
| 8-20-09 | 31      | 2011   | 94           | 14.5        | 1363                |                         |
| 8-20-09 | 32      | 2011   | 56           | 14.5        | 812                 |                         |
| 8-20-09 | 33      | 1995   | 138          | 14.5        | 2001                |                         |
| 8-20-09 | 34      | 1995   | 12           | 14.5        | 174                 |                         |
| 8-20-09 | 35      | 1990   | 45           | 14.5        | 652.5               |                         |
| 8-20-09 | 36      | 1990   | 105          | 14.5        | 1522.5              |                         |
| 8-20-09 | 37      | 2042   | 68           | 14.5        | 986                 |                         |
| 8-20-09 | 38      | 2042   | 82           | 14.5        | 1189                |                         |

~~23,062 SF~~  
22,156 SF

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: Central Farmers, Georgetown, ID

PROJECT NO. 09-08-1169

PAGE 3 of 4

| Date    | Panel # | Roll # | Panel Length | Panel Width | GCL    | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|--------|-------------------------|
| 8-20-09 | 39      | 2020   | 109          | 14.5        | 1580.5 |                         |
| 8-20-09 | 40      | 2020   | 41           | 14.5        | 594.5  |                         |
| 8-20-09 | 41      | 2027   | 145          | 14.5        | 2102.5 |                         |
| 8-20-09 | 42      | 2027   | 5            | 14.5        | 72.5   |                         |
| 8-20-09 | 43      | 2037   | 150          | 14.5        | 2175   |                         |
| 8-20-09 | 44      | 1989   | 28           | 14.5        | 406    |                         |
| 8-20-09 | 45      | 1989   | 122          | 14.5        | 1769   |                         |
| 8-20-09 | 46      | 1986   | 62           | 14.5        | 899    |                         |
| 8-20-09 | 47      | 1986   | 81           | 14.5        | 1174.5 |                         |
| 8-20-09 | 48      | 1986   | 7            | 14.5        | 101.5  |                         |
| 8-20-09 | 49      | 1987   | 90           | 14.5        | 1305   |                         |
| 8-20-09 | 50      | 1987   | 60           | 14.5        | 870    |                         |
| 8-20-09 | 51      | 1997   | 97           | 14.5        | 1406.5 |                         |
| 8-20-09 | 52      | 1997   | 43           | 14.5        | 623.5  |                         |
| 8-20-09 | 53      | 1997   | 10           | 14.5        | 145    |                         |
| 8-20-09 | 54      | 1998   | 114          | 14.5        | 1653   |                         |
| 8-20-09 | 55      | 1998   | 36           | 14.5        | 522    |                         |
| 8-20-09 | 56      | 1996   | 97           | 14.5        | 1406.5 |                         |
| 8-20-09 | 57      | 1996   | 43           | 14.5        | 623.5  |                         |
| 8-20-09 | 58      | 1996   | 10           | 14.5        | 145    |                         |

19,575 SF. ✓

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME:

Central Farmers, Georgetown, ID

PROJECT NO.

09-08-1169

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| Date    | Panel # | Roll # | Panel Length | Panel Width | Comments/Panel Location       |
|---------|---------|--------|--------------|-------------|-------------------------------|
| 8-20-09 | 59      | 2004   | 89           | 14.5        | 1290.5                        |
| 8-20-09 | 60      | 2004   | 61           | 14.5        | 884.5                         |
| 8-20-09 | 61      | 1999   | 52           | 14.5        | 754                           |
|         |         |        |              |             |                               |
| 8-21-09 | 62      | 1999   | 98           | 14.5        | 1421                          |
| 8-21-09 | 63      | 2000   | 96           | 14.5        | 1392                          |
| 8-21-09 | 64      | 2000   | 11           | 14.5        | 159.5                         |
| 8-21-09 | 65      | 2000   | 45           | 14.5        | 652.5                         |
| 8-21-09 | 66      | 1992   | 44           | 14.5        | 638                           |
| 8-21-09 | 67      | 2000   | 9            | 14.5        | 130.5                         |
| 8-21-09 | 68      | 1992   | 55           | 14.5        | 797.5                         |
| 8-21-09 | 69      | 1992   | 17           | 7.25        | 123.25                        |
| 8-21-09 | 70      | 1992   | 17           | 7.25        | 123.25                        |
|         |         |        |              |             |                               |
|         |         |        |              |             |                               |
|         |         |        |              |             |                               |
|         |         |        |              |             | TOTAL = <del>69,295 SF.</del> |
|         |         |        |              |             | 68,367.5 SF                   |
|         |         |        |              |             |                               |
|         |         |        |              |             |                               |

2,929 SF. ✓

~~8,367 SF~~ 5,437.5 SF



clarifier

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
9-16-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|--------------|-------------|-------------------------|
| 1:27      | 1            | 2001        | 150'         | 15'         |                         |
| 1:29      | 2            | 2007        | 100'         |             |                         |
| 1:32      | 3            | 2010        | 150'         |             |                         |
| 1:34      | 4            | 2041        | 150'         |             |                         |
| 1:36      | 5            | 2009        | 150'         |             |                         |
| 1:37      | 6            | 2013        | 96'          |             |                         |
| 1:41      | 7            | 2013        | 54'          |             |                         |
| 1:48      | 8            | 2014        | 34'          |             |                         |
| 1:55      | 9            | 2014        | 82'          |             |                         |

Clarification

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
9-16-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|--------------|-------------|-------------------------|
| 2:00      | 10           | 2014        | 34'          | 15'         |                         |
| 3:00      | 11           | 2025        | 150'         |             |                         |
| 3:17      | 12           | 2024        | 150'         |             |                         |
| 3:27      | 13           | 2033        | 150'         |             |                         |
| 3:39      | 14           | 2043        | 70'          |             |                         |
| 3:51      | 15           | 2043        | 80'          |             |                         |
| 3:58      | 16           | 2034        | 69'          |             |                         |
| 4:05      | 17           | 2034        | 24'          |             |                         |
| 4:10      | 18           | 2034        | 32'          |             |                         |

Clarifier

PAGE 3 OF 5 FORM #6

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
9-16-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |                 |
|-----------|--------------|-------------|--------------|-------------|-------------------------|-----------------|
| 4:15      | 19           | 2034        | 25'          | 15'         |                         |                 |
| 5:05      | 20           | 2007        | 20'          | }           |                         |                 |
| 5:07      | 21           | 2007        | 28'          |             |                         |                 |
| 5:25      | 22           | 2018        | 14'          |             |                         |                 |
| 9-17-09   |              |             |              |             |                         | North of center |
| 8:10      | 23           | 2018        | 136'         |             |                         |                 |
| 8:15      | 24           | 2008        | 150'         |             |                         |                 |
| 8:23      | 25           | 1984        | 150'         |             |                         |                 |
| 8:29      | 26           | 2003        | 150'         |             |                         |                 |
| 8:35      | 27           | 1991        | 150'         |             |                         |                 |

*Christie*

PAGE 4 OF 5 FORM #6

**PANEL PLACEMENT FORM**

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
9-17-09

| DATE/<br>TIME | PANEL<br>NUMBER | ROLL<br>NUMBER | PANEL<br>LENGTH | PANEL<br>WIDTH | COMMENTS/PANEL LOCATION |
|---------------|-----------------|----------------|-----------------|----------------|-------------------------|
|               | 28              | 2006           | 110'            | 15'            |                         |
|               | 29              | 2006           | 40'             | 15'            |                         |
|               | 30              | 2002           | 54'             | }              |                         |
|               | 31              | 2002           | 90'             |                |                         |
|               | 32              | 2015           | 80'             |                |                         |
|               | 33              | 2015           | 66'             |                |                         |
|               | 34              | 2016           | 150'            |                |                         |
|               | 35              | 2005           | 50'             |                |                         |
|               | 36              | 2005           | 100'            |                |                         |

Clarifier

PANEL PLACEMENT FORM

PROJECT NAME: Nu West  
9-17-09

PROJECT NUMBER: 2009-4364

MATERIAL DESCRIPTION: GCL

| DATE/<br>TIME | PANEL<br>NUMBER | ROLL<br>NUMBER | PANEL<br>LENGTH | PANEL<br>WIDTH | COMMENTS/PANEL LOCATION |
|---------------|-----------------|----------------|-----------------|----------------|-------------------------|
|               | 37              | 2031           | 78'             | 15'            |                         |
|               | 38              | 2031           | 72'             | 15'            |                         |
|               | 39              | 2032           | 66'             | 1              |                         |
| 12:00         | 40              | 2032           | 84'             | 1              |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |
|               |                 |                |                 |                |                         |

PANEL PLACEMENT FORM

PROJECT NAME: N<sub>4</sub> West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GCL  
7-19-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|--------------|-------------|-------------------------|
| 2:55      | 1            | 2030        | 63'          | 15'         |                         |
| }         | 2            | 2030        | 46'          | }           |                         |
|           | 3            | 2030        | 36'          |             |                         |
|           | 4            | 2029        | 50'          |             |                         |
|           | 5            | 2029        | 100'         |             |                         |
|           | 6            | 2036        | 110          |             |                         |
| 3:45      | 701          |             |              |             |                         |
|           |              |             |              |             |                         |
|           |              |             |              |             |                         |
|           |              |             |              |             |                         |

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: **CENTRAL FARMERS REMEDIATION  
(CLARIFIER)**

PROJECT NO. **09-08-1169**

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of

| Date    | Panel # | Roll # | Panel Length | Panel Width | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|-------------------------|
| 9/16/09 | P-01    | 2001   | 150'         | 14.0        | <b>BENTONITE</b>        |
| "       | P-02    | 2007   | 100          | 14.0        |                         |
| "       | P-03    | 2010   | 150'         | 14.0        |                         |
| "       | P-04    | 2041   | 150'         | 14.0        |                         |
| "       | P-05    | 2009   | 150'         | 14.0        |                         |
| "       | P-06    | 2013   | 96           | 14.0        |                         |
| "       | P-07    | 2013   | 54'          | 14.0        |                         |
| "       | P-08    | 2014   | 34           | 14.0        |                         |
| "       | P-09    | 2014   | 82           | 14.0        |                         |
| "       | P-10    | 2014   | 30           | 14.0        |                         |
| "       | P-11    | 2025   | 150'         | 14.0        |                         |
| "       | P-12    | 2024   | 150'         | 14.0        |                         |
| "       | P-13    | 2033   | 150'         | 14.0        |                         |
| "       | P-14    | 2043   | 70           | 14.0        |                         |
| "       | P-15    | 2043   | 80'          | 14.0        |                         |
| "       | P-16    | 2034   | 24           | 14.0        |                         |
| "       | P-17    | 2034   | 17           | 14.0        |                         |
| "       | P-18    | 2034   | 32           | 14.0        |                         |
| "       | P-19    | 2034   | 24           | 14.0        |                         |
| "       | P-20    | 2007   | 20           | 14.0        |                         |

PANEL PLACEMENT FORM

PROJECT NAME: CENTRAL FARMERS REMEDIATION  
(CLARIFIER)

PROJECT NO. 09-08-1169

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of

| Date    | Panel # | Roll # | Panel Length | Panel Width | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|-------------------------|
| 9/17/04 | P- 23   | 2018   | 136'         | 14.0        |                         |
| "       | P- 24   | 2008   | 150'         | 14.0        |                         |
| "       | P- 25   | 1984   | 150'         | 14.0        |                         |
| "       | P- 26   | 2003   | 150'         | 14.0        |                         |
| "       | P- 27   | 1991   | 150'         | 14.0        |                         |
| "       | P- 28   | 2006   | 110'         | 14.0        |                         |
| "       | P- 29   | 2006   | 40'          | 14.0        |                         |
| "       | P- 30   | 2002   | 54'          | 14.0        |                         |
| "       | P- 31   | 2002   | 90'          | 14.0        |                         |
| "       | P- 32   | 2015   | 80'          | 14.0        |                         |
| "       | P- 33   | 2015   | 66'          | 14.0        |                         |
| "       | P- 34   | 2016   | 150'         | 14.0        |                         |
| "       | P- 35   | 2005   | 50'          | 14.0        |                         |
| "       | P- 36   | 2005   | 100'         | 14.0        |                         |
| "       | P- 37   | 2031   | 78'          | 14.0        |                         |
| "       | P- 38   | 2031   | 72'          | 14.0        |                         |
| "       | P- 39   | 2032   | 66'          | 14.0        |                         |
| "       | P- 40   | 2032   | 84'          | 14.0        |                         |
|         |         |        |              |             |                         |
|         |         |        |              |             |                         |







Slurry

PAGE 1 OF 3 FORM #6

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/TIME       | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------------|--------------|-------------|--------------|-------------|-------------------------|
| 5:00<br>9-19-09 | P-1          | 8996        | 97'          | 22.5        |                         |
|                 | P-2          | 8996        | 108'         | 22.5        |                         |
|                 | P-3          | 8996        | 118'         | 22.5        |                         |
|                 | P-4          | 9059        | 120'         | 22.5        |                         |
|                 | P-5          | 9059        | 135'         | 22.5        |                         |
|                 | P-6          | 9059        | 79'          | 22.5        | P6 + P7 meet GT2        |
|                 | P-7          | 9059        | 82'          | 22.5        |                         |
| 5:45<br>9-19-08 | P-8          | 9059        | 173'         | 22.5        |                         |
|                 |              |             |              |             |                         |

Slurry

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML  
8-20-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|--------------|-------------|-------------------------|
| 10:21     | P-9          | 8996        | 182'         | 22.5'       | P9 + P10 join @ 175'    |
| 10:27     | P-10         | 8996        | 183'         | 22.5        |                         |
| 10:44     | P-11         | 9036        | 187'         | 22.5        |                         |
| 10:55     | P-12         | 9036        | 192'         | 22.5        |                         |
| 3:41      | P-13         | 9036        | 194'         | 22.5        |                         |
| 4:00      | P-14         | 9036        | 119'         | 22.5        |                         |
| 4:09      | P-15         | 9040        | 75'          | 22.5        |                         |
| 4:21      | P-16         | 9040        | 194'         | 22.5        |                         |
| 4:28      | P-17         | 9040        | 185'         | 22.5        |                         |

slurry

PANEL PLACEMENT FORM

8-21-09  
 PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML  
~~2-20-09~~

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION    |
|-----------|--------------|-------------|--------------|-------------|----------------------------|
| 7:30      | P-18         | 9040        | 157'         | 22.5'       | Northedge @ 350' mark      |
| 7:38      | P-19         | 9040        | 173'         | 22.5'       |                            |
| 7:48      | P-20         | 9037        | 85'          | 22.5'       |                            |
| 7:56      | P-21         | 9037        | 141'         | 22.5'       |                            |
| 9:12      | P-22         | 9037        | 118'         | 22.5'       |                            |
| 7:16      | P-23         | 9037        | 101'         | 22.5'       |                            |
| 7:23      | P-24         | 9037        | 75'          | 22.5'       | Last FML panel on northend |
| 7:40      | Cap          | 9037        | 22           | 4'          | Added for anchor trench    |

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME:

Central Farmers, Georgetown, ID

PROJECT NO.

09-08-1169

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| Date    | Panel # | Roll # | Panel Length | Panel Width | 40 MIL | Comments/Panel Location |
|---------|---------|--------|--------------|-------------|--------|-------------------------|
| 8-19-09 | 1       | 8996   | 97           | 22.5        | 2182.5 |                         |
| 8-19-09 | 2       | 8996   | 108          | 22.5        | 2430   |                         |
| 8-19-09 | 3       | 8996   | 118          | 22.5        | 2655   |                         |
| 8-19-09 | 4       | 9059   | 120          | 22.5        | 2700   | 20,520 SF ✓             |
| 8-19-09 | 5       | 9059   | 135          | 22.5        | 3037.5 |                         |
| 8-19-09 | 6       | 9059   | 79           | 22.5        | 1777.5 |                         |
| 8-19-09 | 7       | 9059   | 82           | 22.5        | 1845   |                         |
| 8-19-09 | 8       | 9059   | 173          | 22.5        | 3842.5 |                         |
|         |         |        |              |             |        |                         |
|         |         |        |              |             |        |                         |
|         |         |        |              |             |        |                         |
| 8-20-09 | 9       | 8996   | 182          | 22.5        | 4095   | 33,998 SF ✓             |
| 8-20-09 | 10      | 8996   | 183          | 22.5        | 4117.5 |                         |
| 8-20-09 | 11      | 9036   | 187          | 22.5        | 4207.5 |                         |
| 8-20-09 | 12      | 9036   | 192          | 22.5        | 4320   |                         |
| 8-20-09 | 13      | 9036   | 194          | 22.5        | 4365   |                         |
| 8-20-09 | 14      | 9036   | 119          | 22.5        | 2677.5 |                         |
| 8-20-09 | 15      | 9040   | 75           | 22.5        | 1687.5 |                         |
| 8-20-09 | 16      | 9040   | 194          | 22.5        | 4365   |                         |
| 8-20-09 | 17      | 9040   | 185          | 22.5        | 4162.5 |                         |
|         |         |        |              |             |        |                         |





ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: CENTRAL FARMERS REMEDIATION  
(CLARIFIER)

PROJECT NO. 09-08-1169

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| Date        | Panel # | Roll #    | Panel Length | Panel Width | Comments/Panel Location          |
|-------------|---------|-----------|--------------|-------------|----------------------------------|
| 9/17/09     | 08      | 103149024 | 250' / 244   | 22          | 5,434                            |
|             | 09      | 103149024 | 244' / 232   | 22          | 5,236                            |
|             | 10      | 103149045 | 232' / 210   | 22          | 4,862                            |
|             | 11      | 103149024 | 210' / 176   | 22          | 4,246                            |
|             | 12      | 103149005 | 176' / 112   | 22          | 3,168                            |
|             | 13      | 103149005 | 52           | 12          | 624                              |
|             | 14      | 103149045 | 60           | 12          | 720                              |
|             |         |           |              |             | TOTAL TODAY: 24,290 SF.          |
|             |         |           |              |             | TOTAL TO DATE <u>148,292</u> SF. |
| 40 mil HDPE |         |           |              |             |                                  |



T083/06

# Demtech Services, Inc.

Placerville, California, USA

## CALIBRATION CERTIFICATE

Customer Name: ESI

Tensiometer Model: Pro-Tester T-0100

Device Calibrated: S-Type load cell  
Range: 0 - 750 lbs. Tension

Calibration Apparatus:

Model No: M2405-750#

Reference load cell (S/N 204781)

Serial No: 205333

Dead Weight:

Reference Cell:

A/D Module Model No: T-029

W1 2

R1 2

A/D Module Serial No: 1205205333

W2 152

R2 152

Channel No: N/A

W3 302

R3 302

Indicator reading with no load: 0

Offset: 6.738281

Scale: 4.984212

Applied Force lbs.

Cell Response:

Deviation Error:

|     |
|-----|
| 2   |
| 52  |
| 102 |
| 152 |
| 202 |
| 252 |
| 302 |

|     |
|-----|
| 2   |
| 52  |
| 102 |
| 152 |
| 202 |
| 252 |
| 302 |

|      |
|------|
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F  
Excitation Voltage: 5 V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Calibration Technician: DM  
Dem P Ceto

Date: 02/15/08

Demtech Services, Inc.  
Placerville, California, USA

**CALIBRATION CERTIFICATE**

**Environmental Specialties Int'l**

Tensiometer Model: Pro-Tester T-0100

Device Calibrated: S-Type load cell Calibration Apparatus: Pro-Cal unit, model TC-0100/A  
Range: 0 - 750 lbs. Tension

Model No: M2405-750#

Serial No: 236057

A/D Module Model No: T-029 Dead Weight: W1 2 Reference Cell: R1 2  
A/D Module Serial No: 5008236057 W2 152 R2 152  
Channel No: N/A W3 302 R3 302

Indicator reading with no load: 0

Offset: 4.804459 Scale: 5.044404

Applied Force lbs.

|     |
|-----|
| 2   |
| 52  |
| 102 |
| 152 |
| 202 |
| 252 |
| 302 |

Cell Response:

|     |
|-----|
| 2   |
| 52  |
| 102 |
| 152 |
| 202 |
| 252 |
| 302 |

Deviation Error:

|      |
|------|
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |
| 0.00 |

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F  
Excitation Voltage: 5 V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Matt Roy  
Matthew B

Date: 02/25/09

**TRIAL WELD INFORMATION**

Slurry  
 PROJECT NAME: Ny West

PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/<br>TIME    | AMBIENT<br>TEMP      | QC<br>INITIAL | MACHINE<br>NUMBER | SEAMER<br>INITIAL | EXTRUSION WELDS <u>28</u> |      |                 |      |            |      | FUSION WELDS <u>95</u>         |                  |                          | PASS/<br>FAIL | Tester<br>George<br>COMMENTS |                   |  |
|------------------|----------------------|---------------|-------------------|-------------------|---------------------------|------|-----------------|------|------------|------|--------------------------------|------------------|--------------------------|---------------|------------------------------|-------------------|--|
|                  |                      |               |                   |                   | BARREL<br>TEMP            |      | PREHEAT<br>TEMP |      | WEDGE TEMP |      | MEASURED<br>SPEED<br>FT/MIN/HR | SPEED<br>SETTING | PEEL VALUES<br>LBS./INCH |               |                              |                   |  |
|                  |                      |               |                   |                   | SET                       | PYRO | SET             | PYRO | SET        | PYRO |                                |                  | Ext.<br><u>58</u>        |               |                              | Fus.<br><u>55</u> |  |
| 4:21<br>8-17-09  | 73°<br><del>82</del> | D.J.          | 0839              | J.M.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 70 81 72<br>72 82 68     | P             | Detailed                     |                   |  |
| 5:50<br>8-17-09  | 76°                  | D.J.          | 0836              | R.H.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 71 71 70<br>67 69 74     | P             |                              |                   |  |
| 10:30<br>8-20-09 | 60°                  | D.J.          | 0836              | R.H.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 68 63 67<br>70 67 70     | P             |                              |                   |  |
| 10:38<br>8-20-09 | 60°                  | D.J.          | 0839              | J.M.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 63 61 65<br>66 65 66     | P             |                              |                   |  |
| 3:40<br>8-20-09  | 85°                  | D.J.          | 0839              | J.M.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 60 60 65<br>63 60 62     | P             |                              |                   |  |
| 4:00<br>8-20-09  | 85°                  | D.J.          | 0836              | R.H.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 61 65 60<br>58 60 58     | P             |                              |                   |  |
| 7:40<br>8-21-09  | 40°                  | D.J.          | 0839              | R.H.              |                           |      |                 |      | 830°       |      | 650'                           | 650'             | 84 77 85<br>86 78 84     | P             |                              |                   |  |
| 7:50<br>8-21-09  | 40°                  | D.J.          | 0836              | J.M.              |                           |      |                 |      | 850°       |      | 650'                           | 650'             | 85 80 84<br>85 82 80     | P             |                              |                   |  |
| 2:42<br>8-22-09  | 70°                  | D.J.          | 0520              | J.N.              | 450°                      | 400° |                 |      |            |      | shear                          |                  | 68 66 68<br>77 71 73     | P             |                              |                   |  |

TRIAL WELD INFORMATION

Clarifier & Ore Pit  
PROJECT NAME: Ny West

PROJECT NUMBER: 2009-4364

MATERIAL DESCRIPTION: FML

| DATE/<br>TIME    | AMBIENT<br>TEMP | QC<br>INITIAL | MACHINE<br>NUMBER | SEAMER<br>INITIAL | EXTRUSION WELDS |      |                 |      | FUSION WELDS |      |                             |                  | PEEL VALUES<br>LBS./INCH | PASS/<br>FAIL | Comments                     |
|------------------|-----------------|---------------|-------------------|-------------------|-----------------|------|-----------------|------|--------------|------|-----------------------------|------------------|--------------------------|---------------|------------------------------|
|                  |                 |               |                   |                   | BARREL<br>TEMP  |      | PREHEAT<br>TEMP |      | WEDGE TEMP   |      | MEASURED<br>SPEED<br>FT/MIN | SPEED<br>SETTING |                          |               |                              |
|                  |                 |               |                   |                   | SET             | PYRO | SET             | PYRO | SET          | PYRO |                             |                  |                          |               |                              |
| 9-16-09<br>11:30 | 80              | D.J.          | 1210              | EB                |                 |      |                 |      | 830°         |      | 650'                        | 650'             | 83 72 79<br>77 77 77     | P             | Tester<br>Victor<br>Detailed |
| 17:15            | 80              | D.J.          | 1209              | JC                |                 |      |                 |      | 830°         |      | 550'                        | 550'             | 70 68 70<br>70 71 67     | P             |                              |
| 9-17-09<br>8:09  | 60              | D.J.          | 1210              | EB                |                 |      |                 |      | 830°         |      | 650'                        | 650'             | 92 86 87<br>75 89 91     | P             |                              |
| 8:09             | 60              | D.J.          | 1209              | JC                |                 |      |                 |      | 830°         |      | 550'                        | 550'             | 87 94 94<br>96 93 93     | P             |                              |
| 15:00            | 84              | D.J.          | 1210              | EB                |                 |      |                 |      | 830°         |      | 650'                        | 650'             | 68 72 66<br>67 70 69     | P             |                              |
|                  |                 |               |                   |                   |                 |      |                 |      |              |      |                             |                  |                          |               |                              |

**TRIAL WELD INFORMATION**

Clarifier

PROJECT NAME: Ny West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/<br>TIME   | AMBIENT<br>TEMP | QC<br>INITIAL | MACHINE<br>NUMBER | SEAMER<br>INITIAL | EXTRUSION WELDS |      |                 |      | FUSION WELDS |      |                   |                      | PEEL VALUES<br>LBS./INCH | PASS/<br>FAIL | TESTER<br>VICTOR<br>COMMENTS |
|-----------------|-----------------|---------------|-------------------|-------------------|-----------------|------|-----------------|------|--------------|------|-------------------|----------------------|--------------------------|---------------|------------------------------|
|                 |                 |               |                   |                   | BARREL<br>TEMP  |      | PREHEAT<br>TEMP |      | WEDGE TEMP   |      | MEASURED<br>SPEED | SPEED<br>SETTING     |                          |               |                              |
|                 |                 |               |                   |                   | SET             | PYRO | SET             | PYRO | SET          | PYRO | FT/MIN            |                      |                          |               |                              |
| 9-16-09<br>1:30 | 80              | D.J.          | 1210              | EB                |                 |      |                 |      | 830°         |      | 650'              | 650'                 | 83 72 79<br>77 77 77     | P             | Detailed                     |
| 17:15           | 80              | D.J.          | 1209              | JC                |                 |      |                 | 830° |              | 550' | 550'              | 74 68 70<br>70 71 67 | P                        |               |                              |
| 9-17-09<br>8:07 | 60              | D.J.          | 1210              | EB                |                 |      |                 | 830° |              | 650' | 650'              | 92 86 87<br>75 89 91 | P                        |               |                              |
| 8:09            | 60              | D.J.          | 1209              | JC                |                 |      |                 | 830° |              | 550' | 550'              | 87 74 94<br>96 93 93 | P                        |               |                              |
|                 |                 |               |                   |                   |                 |      |                 |      |              |      |                   |                      |                          |               |                              |
|                 |                 |               |                   |                   |                 |      |                 |      |              |      |                   |                      |                          |               |                              |









PANEL SEAMING FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/TIME | SEAM NUMBER | PANEL NUMBERS            | SEAM LENGTH         | SEAMER INITIALS | MACHINE NUMBER | TEMP SETTING | WEATHER | WINDS | AMBIENT TEMP | DES TEST P/F | COMMENTS          |  |
|-----------|-------------|--------------------------|---------------------|-----------------|----------------|--------------|---------|-------|--------------|--------------|-------------------|--|
| 8-19-09   | 6:31        | 1/2 <del>1637/1207</del> | 97'                 | RH              | 839            | 850°         | Clear   | 0-10  | 64°          | P            |                   |  |
|           | 6:27        | 2/3 8796                 | 108'                | JM              | 836            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 6:28        | 3/4 9059                 | 118'<br>144'        | RH              | 839            | 850°         |         | 0-10  | 64°          | P            | Panel 8796 + 9059 |  |
|           | 6:23        | 4/5 9059                 | <del>110</del> 120' | JM              | 836            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 6:00        | 5/6 9059                 | 79'                 | RH              | 839            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 5:37        | 5/7 9059                 | 82'                 | RH              | 839            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 5:20        | 6/8 9059                 | 79'                 | RH              | 839            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 5:47        | 7/8 9059                 | 82'                 | RH              | 839            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           | 5:18        | 6/7 9059                 | 22.5                | JM              | 836            | 850°         |         | 0-10  | 64°          | P            |                   |  |
|           |             | Same seam as #           |                     |                 |                |              |         |       |              |              |                   |  |



PANEL SEAMING FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML  
8-21-09

| DATE/TIME | SEAM NUMBER | PANEL NUMBERS | SEAM LENGTH | SEAMER INITIALS | MACHINE NUMBER | TEMP SETTING | WEATHER | WINDS | AMBIENT TEMP | DES TEST P/F | COMMENTS |
|-----------|-------------|---------------|-------------|-----------------|----------------|--------------|---------|-------|--------------|--------------|----------|
| 7:50      | 17/18       | Sgmk          | 157'        | RH              | 839            | 850°         | Clear   | 0-10  | 75°          | P            |          |
| 8:12      | 18/19       |               | 73'         | JM              | 836            |              |         |       |              | P            |          |
| 8:20      | 18/20       |               | 85'         | JM              | 836            |              |         |       |              | P            |          |
| 8:20      | 19/21       |               | 73'         | RH              | 839            |              |         |       |              | P            |          |
| 8:30      | 20/21       |               | 85'         | RH              | 839            |              |         |       |              | P            |          |
| 8:03      | 18/19       |               | 22'         | JM              | 836            |              |         |       |              | P            |          |
| 9:14      | 21/22       |               | 141'        | RH              | 839            |              |         |       |              | P            |          |
| 9:32      | 22/23       |               | 101'        | RH              | 839            |              |         |       |              | P            |          |
| 9:45      | 23/24       |               | 75'         | RH              | 839            |              |         |       |              | P            |          |
| 9:53      | 24/cap      |               | 22'         | RH              | 839            |              |         |       |              | P            |          |
| 8:03      | 19/20       |               | 22'         | JM              | 836            |              |         |       |              | P            |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |
|           |             |               |             |                 |                |              |         |       |              |              |          |

1

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: Central Farmers Remediation  
Georgetown, ID

PROJECT NO. 09-08-1189

PAGE

1

OF

| Date    | Seam #         | Machine ID # | E-Extrusion<br>W-Wedge | Seam Length | Seamer ID | Weld Time |       | Comments |
|---------|----------------|--------------|------------------------|-------------|-----------|-----------|-------|----------|
|         |                |              |                        |             |           | Start     | Stop  |          |
| 8-19-09 | 1/2            | 839          | W                      | 97'         | JM        | 6:31      | 6:47  |          |
| 8-19-09 | 2/3            | 836          | W                      | 108'        | RH        | 6:27      | 6:39  |          |
| 8-19-09 | 3/4            | 839          | W                      | 118'        | RH        | 6:13 pm   | 6:28  |          |
| 8-19-09 | 4/5            | 836          | W                      | 120'        | JM        | 6:10 pm   | 6:23  |          |
| 8-19-09 | 5/6            | 839          | W                      | 79'         | RH        | 5:51 pm   | 6:06  |          |
| 8-19-09 | 5/8            | 839          | W                      | 82'         | RH        | 6:00      | 6:10  |          |
| 8-19-09 | 6/8            | 839          | W                      | 75'         | JM        | 5:30 pm   | 5:40  |          |
| 8-19-09 | 7/8            | 839          | W                      | 82'         | JM        | 5:40      | 5:47  |          |
| 8-19-09 | 6/7            | 839          | W                      | 221         | JM        | 5:15      | 5:18  |          |
|         | <del>8/8</del> |              |                        |             |           |           |       |          |
| 8-20-09 | 8/9            | 839          | W                      | 173'        | JM        | 10:45     | 11:05 |          |
| —       | 9/10           | 836          | W                      | 182'        | RH        | 10:42     | 11:04 |          |
| —       | 10/11          | 839          | W                      | 183'        | JM        | 11:08     | 11:32 |          |
| —       | 11/12          | 836          | W                      | 187'        | RH        | 11:10     | 11:40 |          |
| —       | 12/13          | 839          | W                      | 192'        | JM        | 4:00      | 4:25  |          |
| —       | 13/14          | 836          | W                      | 119'        | RH        | 4:41      | 4:48  |          |
| —       | 13/15          | 836          | W                      | 75'         | RH        | 4:27      | 4:41  |          |
| —       | 14/15          | 836          | W                      | 22'         | RH        | 4:18      | 4:21  |          |
| —       | 14/16          | 839          | W                      | 119'        | RH        | 4:52      | 5:03  |          |
| —       | 15/16          | 839          | W                      | 75'         | RH        | 5:03      | 5:10  |          |
| —       | 16/17          | 839          | W                      | 185'        | RH        | 5:15      | 5:34  |          |



Classifier

PANEL SEAMING FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: GEL FML

| DATE/TIME       | SEAM NUMBER | PANEL NUMBERS | SEAM LENGTH | SEAMER INITIALS | MACHINE NUMBER | TEMP SETTING | WEATHER | WINDS | AMBIENT TEMP | DES TEST P/F | % of COMMENTS  |
|-----------------|-------------|---------------|-------------|-----------------|----------------|--------------|---------|-------|--------------|--------------|----------------|
| 9-16-09<br>3:00 | 1/2         | 9005          | 244'        | EB              | 1210           | 830°         | Cloudy  | Ø     | 80           | P            | Center panel 1 |
| 4:20            | 2/3         | 9058          | 232'        | EB              | 1210           | 830°         |         | 0-10  | 65           | P            |                |
| 5:42            | 3/4         | 9058          | 210'        | EB              | 1210           | 830°         |         | 0-10  | 65           | P            |                |
| 5:41            | 4/5         | 9058          | 172'        | EB              | 1209           | 830°         |         |       |              | P            |                |
| 6:09            | 5/6         | 9058          | 96'         | JC              | 1209           |              |         |       |              | P            |                |
| 6:29            | 5/7         | 9058          | 30'96"      | JC              | 1209           |              |         |       |              | P            |                |
| 6:07            | 6/7         | 9058          | 11'         | JC              | 1209           |              |         |       |              | P            |                |
| 9:30            | 1/8         | 9024          | 250'        | EB              | 1210           | 830°         | Clear   |       | 75           | P            |                |
| 9:20            | 8/9         | 9024          | 238'240'    | JC              | 1209           |              |         |       | 75           | P            |                |
| 10:00           | 9/10        | 9045          | 235'        | EB              | 1210           |              |         |       |              | P            |                |
| 10:40           | 10/11       | 9024          | 210'        | JC              | 1209           |              |         |       |              | P            |                |
| 11:55           | 11/12       | 9005          | 176'        | EB              | 1210           |              |         |       |              | P            |                |
| 12:30           | 12/13       | 9005          | 52'         | EB              | 1210           |              |         |       |              | P            |                |
| 12:15           | 13/14       | 9005          | 60'         | JC              | 1209           |              |         |       |              | P            |                |
| 12:23           | 12/14       | 9005          | 17'         | EB              | 1210           |              |         |       |              | P            |                |









NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/TIME       | SEAM NUMBER      | TESTER INITIALS | AIR TESTING     |               |               |               |                 | COMPLETE Y/N    | V BOX COMPLETE Y/N | LOCATION/COMMENTS |
|-----------------|------------------|-----------------|-----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|-------------------|
|                 |                  |                 | PRESSURE        |               |               | TIME          |                 |                 |                    |                   |
|                 |                  |                 | START           | END           | +/-           | START         | END             |                 |                    |                   |
| <del>8:01</del> | <del>P7/P8</del> | <del>VM</del>   | <del>8:01</del> | <del>30</del> | <del>29</del> | <del>-1</del> | <del>8:01</del> | <del>8:06</del> | <del>Y</del>       |                   |
| 8:02            | 6/8              | VM              | 30              | 30            |               | 8:02          | 8:07            | Y               |                    |                   |
| 8:03            | 6/7              | VM              | 30              | 30            |               | 8:03          | 8:08            | Y               | North of GT2       |                   |
| 8:16            | 6/7              | VM              | 30              | 27            | -3            | 8:16          | 8:21            | Y               | South of GT2       |                   |
| 8:15            | 5/6              | VM              | 30              | 30            |               | 8:15          | 8:20            | Y               |                    |                   |
| 8:17            | 5/7              | VM              | 30              | 30            |               | 8:17          | 8:22            | Y               |                    |                   |
| 8:25            | 4/5              | VM              | 30              | 29            | -1            | 8:25          | 8:30            | Y               |                    |                   |
| 8:26            | 3/4              | VM              | 30              | 30            |               | 8:26          | 8:31            | Y               |                    |                   |
| 8:27            | 2/3              | VM              | 30              | 27            | -3            | 8:27          | 8:32            | Y               |                    |                   |
| 8:30            | 1/2              | VM              | 30              | 30            |               | 8:30          | 8:35            | Y               |                    |                   |
| 12:33           | 11/12            | VM              | 30              | 30            |               | 12:33         | 12:38           | Y               |                    |                   |
| 12:31           | 11/12            | VM              | 30              | 28            | -2            | 12:31         | 12:36           | Y               |                    |                   |
| 12:26           | 11/12            | VM              | 30              | 30            |               | 12:26         | 12:31           | Y               |                    |                   |
| 12:27           | 11/12            | VM              | 30              | 30            |               | 12:27         | 12:32           | Y               |                    |                   |
| 12:19           | 10/11            | VM              | 30              | 28            | -2            | 12:19         | 12:24           | Y               |                    |                   |
| 12:18           | 9/10             | VM              | 30              | 29            | -1            | 12:18         | 12:23           | Y               |                    |                   |
| 12:30           | 11/12            | VM              | 30              | 30            |               | 12:30         | 12:35           | Y               |                    |                   |

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: N<sub>4</sub> West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/TIME | SEAM NUMBER | TESTER INITIALS | AIR TESTING |     |     |       |       | COMPLETE Y/N | V BOX COMPLETE Y/N | LOCATION/COMMENTS |
|-----------|-------------|-----------------|-------------|-----|-----|-------|-------|--------------|--------------------|-------------------|
|           |             |                 | PRESSURE    |     |     | TIME  |       |              |                    |                   |
|           |             |                 | START       | END | +/- | START | END   |              |                    |                   |
| 8-21-09   | 12/13       | VM              | 30          | 28  | -2  | 10:10 | 10:15 | Y            |                    |                   |
|           | 13/15       | VM              | 30          | 30  |     | 9:52  | 9:57  | Y            |                    |                   |
|           | 15/16       | VM              | 30          | 30  |     | 9:56  | 10:07 | Y            |                    |                   |
|           | 14/15       | VM              | 30          | 28  | -2  | 9:54  | 9:59  | Y            |                    |                   |
|           | 14/16       | VM              | 30          | 28  | -2  | 9:57  | 10:02 | Y            |                    |                   |
|           | 13/14       | VM              | 30          | 29  | -1  | 9:53  | 9:58  | Y            |                    |                   |
|           | 13/14       | VM              | 30          | 30  |     | 10:00 | 10:05 | Y            |                    |                   |
|           | 13/14       | VM              | 30          | 30  |     | 10:01 | 10:06 | Y            |                    |                   |
|           | 16/17       | VM              | 30          | 28  | -2  | 10:12 | 10:17 | Y            |                    |                   |
|           | 12/18       | VM              | 30          | 30  |     | 10:14 | 10:19 | Y            |                    |                   |
|           | 18/19       | VM              | 30          | 30  |     | 10:20 | 10:25 | Y            |                    |                   |
|           | 18/20       | VM              | 30          | 28  | -2  | 10:30 | 10:35 | Y            |                    |                   |
|           | 19/20       | VM              | 30          | 28  | -2  | 10:31 | 10:36 | Y            |                    |                   |
|           | 19/21       | VM              | 30          | 30  |     | 10:22 | 10:27 | Y            |                    |                   |
|           | 20/21       | VM              | 30          | 28  | -2  | 10:32 | 10:37 | Y            |                    |                   |
|           | 21/22       | VM              | 30          | 30  |     | 10:43 | 10:48 | Y            |                    |                   |
|           | 22/23       | VM              | 30          | 30  |     | 11:05 | 11:10 | Y            |                    |                   |
|           | 22/23       | VM              | 30          | 30  |     | 11:04 | 11:09 | Y            |                    |                   |
|           | 22/23       | VM              | 30          | 30  |     | 11:03 | 11:08 | Y            |                    |                   |

23/24  
 24/25





ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

PAGE \_\_\_\_\_

of \_\_\_\_\_

| Date    | Seam # | Tester ID | Air Testing |     |       |       | Complete<br>Y/N | V Box<br>Complete<br>Y/N | Location/Comments |
|---------|--------|-----------|-------------|-----|-------|-------|-----------------|--------------------------|-------------------|
|         |        |           | Pressure    |     | Time  |       |                 |                          |                   |
|         |        |           | Start       | End | Start | End   |                 |                          |                   |
| 8-21-09 | 12/13  | VM        | 30          | 28  | 10:10 | 10:15 | Y               |                          |                   |
| —       | 13/15  | VM        | 30          | 30  | 9:52  | 9:57  | Y               |                          |                   |
| —       | 15/16  | VM        | 30          | 30  | 9:56  | 10:07 | X               |                          |                   |
| —       | 14/15  | VM        | 30          | 28  | 9:54  | 9:59  | X               |                          |                   |
| —       | 14/16  | VM        | 30          | 28  | 9:57  | 10:02 | X               |                          |                   |
| —       | 13/14  | VM        | 30          | 29  | 9:53  | 9:58  | Y               |                          |                   |
| —       | 13/14  | VM        | 30          | 30  | 10:00 | 10:05 | Y               |                          |                   |
| —       | 13/14  | VM        | 30          | 30  | 10:01 | 10:06 | X               |                          |                   |
| —       | 16/17  | VM        | 30          | 28  | 10:12 | 10:17 | X               |                          |                   |
| —       | 17/18  | VM        | 30          | 30  | 10:14 | 10:19 | Y               |                          |                   |
| —       | 18/19  | VM        | 30          | 30  | 10:20 | 10:25 | X               |                          |                   |
| —       | 18/20  | VM        | 30          | 28  | 10:30 | 10:35 | X               |                          |                   |
| —       | 19/20  | VM        | 30          | 30  | 10:22 | 10:27 | Y               |                          |                   |
| —       | 19/21  | VM        | 30          | 28  | 10:31 | 10:36 | X               |                          |                   |
| —       | 20/21  | VM        | 30          | 28  | 10:32 | 10:37 | Y               |                          |                   |
| —       | 21/22  | VM        | 30          | 30  | 10:43 | 10:48 | Y               |                          |                   |
| —       | 22/23  | VM        | 30          | 30  | 11:05 | 11:10 | Y               |                          |                   |
| —       | 22/23  | VM        | 30          | 30  | 11:04 | 11:09 | Y               |                          |                   |
| —       | 22/23  | VM        | 30          | 30  | 11:03 | 11:08 | X               |                          |                   |
| —       | 23/24  | VM        | 30          | 28  | 11:13 | 11:18 | Y               |                          |                   |
| —       | 24/CAP | VM        | 30          | 30  | 11:18 | 11:23 | Y               |                          |                   |

Clarifier

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Ny West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE/TIME | SEAM NUMBER | TESTER INITIALS | AIR TESTING |       |     |       |     | COMPLETE Y/N | V BOX COMPLETE Y/N | LOCATION/COMMENTS |
|-----------|-------------|-----------------|-------------|-------|-----|-------|-----|--------------|--------------------|-------------------|
|           |             |                 | PRESSURE    |       |     | TIME  |     |              |                    |                   |
|           |             |                 | START       | END   | +/- | START | END |              |                    |                   |
| 9-17-09   | 1/2         | BRS             | 8:00        | 8:05  |     | 30    | 30  | Y            |                    |                   |
|           | 3/4         | BRS             | 8:20        | 8:25  | -1  | 30    | 29  | Y            |                    |                   |
|           | 4/5         | BRS             | 8:30        | 8:35  | -2  | 30    | 28  | Y            |                    |                   |
|           | 5/6         | BRS             | 8:40        | 8:45  |     | 30    | 30  | Y            |                    |                   |
|           | 6/7         | BRS             | 8:41        | 8:48  |     | 30    | 30  | Y            |                    |                   |
|           | 5/7         | BRS             | 8:42        | 8:47  |     | 30    | 30  | Y            |                    |                   |
|           | 1/8         | BRS             | 9:00        | 10:00 |     | 30    | 30  | Y            |                    |                   |
|           | 8/9         | BRS             | 9:57        | 10:02 |     | 30    | 30  | Y            |                    |                   |
|           | 9/10        | BRS             | 1:47        | 1:52  |     | 30    | 30  | Y            |                    |                   |
|           | 10/11       | BRS             | 1:45        | 1:50  |     | 30    | 30  | Y            |                    |                   |
|           | 10/11       | BRS             | 1:46        | 1:51  |     | 30    | 30  | Y            |                    |                   |
|           | 11/12       | BRS             | 2:08        | 2:13  | -1  | 30    | 29  | Y            |                    |                   |
|           | 12/13       | BRS             | 2:11        | 2:16  |     | 30    | 30  | Y            |                    |                   |
|           | 12/14       | BRS             | 2:16        | 2:21  |     | 30    | 30  | Y            |                    |                   |
|           |             |                 |             |       |     |       |     |              |                    |                   |
|           |             |                 |             |       |     |       |     |              |                    |                   |
|           |             |                 |             |       |     |       |     |              |                    |                   |
|           |             |                 |             |       |     |       |     |              |                    |                   |

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: CENTRAL FARMERS REMEDIATION  
(CLARIFIER)

PROJECT NO. 09-08-1169

PAGE

1

of

1

| Date    | Seam # | Tester ID       | Air Testing |     |       |       | Complete Y/N | V Box Complete Y/N | Location/Comments |
|---------|--------|-----------------|-------------|-----|-------|-------|--------------|--------------------|-------------------|
|         |        |                 | Pressure    |     | Time  |       |              |                    |                   |
|         |        |                 | Start       | End | Start | End   |              |                    |                   |
| 9/17/09 | 1/2    | BRAULIO R-SILVA | 30          | 30  | 08:00 | 08:05 | (Y)          |                    |                   |
| "       | 2/3    | "               | 30          | 30  | 08:02 | 08:07 | (Y)          |                    |                   |
| "       | 3/4    | "               | 30          | 30  | 08:20 | 08:25 | (N)          |                    | Bos. E. to 64' W. |
| "       | 3/4    | "               | 30          | 30  | 08:21 | 08:26 | (N)          |                    | 64' W. to 180'    |
| "       | 3/4    | "               | 30          | 30  | 08:23 | 08:28 | (Y)          |                    | 180' W. to EOS    |
| "       | 4/5    | "               | 30          | 30  | 08:30 | 08:35 | (Y)          |                    |                   |
| "       | 5/6    | BRAULIO R-SILVA | 30          | 30  | 08:40 | 08:45 | (Y)          |                    |                   |
| "       | 5/7    | "               | 30          | 30  | 08:42 | 08:47 | (Y)          |                    |                   |
| "       | 6/7    | "               | 30          | 30  | 08:41 | 08:46 | (Y)          |                    |                   |
| 9/17/09 | 1/8    | "               | 30          | 30  | 09:56 | 10:01 | (Y)          |                    |                   |
| "       | 8/9    | "               | 30          | 30  | 09:57 | 10:02 | (Y)          |                    |                   |
| "       | 9/10   | "               | 30          | 30  | 13:47 | 13:52 | (Y)          |                    |                   |
| "       | 10/11  | BRAULIO R-SILVA | 30          | 30  | 13:46 | 13:51 | (N)          |                    | Bos. E. to 86' W. |
| "       | 10/11  | "               | 30          | 30  | 13:45 | 13:50 | (Y)          |                    | 86' W. to EOS.    |
| "       | 11/12  | "               | 30          | 30  | 14:07 | 14:12 | (N)          |                    | Bos. E. to 6' W.  |
| "       | 11/12  | "               | 30          | 30  | 14:08 | 14:13 | (Y)          |                    | 6' W. to EOS.     |
| "       | 13/14  | "               | 30          | 30  | 14:12 | 14:17 | (Y)          |                    |                   |
| "       | 12/14  | "               | 30          | 30  | 14:16 | 14:21 | (Y)          |                    |                   |
| "       | 12/13  | "               | 30          | 30  | 14:21 | 14:26 | (Y)          |                    |                   |





PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: Geo C.  
8-22-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH             | PANEL WIDTH | COMMENTS/PANEL LOCATION    |
|-----------|--------------|-------------|--------------------------|-------------|----------------------------|
| 0730      | 1            | 0012        | 60'                      | 14.5'       | Panels laid south to north |
|           | 2            | 0012        | 101'                     |             |                            |
|           | 3            | 0012        | 70'                      |             |                            |
|           | 4            | 0036        | 35'                      |             |                            |
|           | 5            | 0036        | 110'                     |             |                            |
|           | 6            | 0037        | 66'                      |             |                            |
|           | 7            | 0011        | <del>52'</del><br>32'45" |             |                            |
|           | 8            | 0011        | 155'                     |             |                            |
| 9:10      | 9            | 0011        | <del>40'</del><br>30'    |             |                            |

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: Geo C.  
8-22-09

| DATE/TIME | PANEL NUMBER  | ROLL NUMBER | PANEL LENGTH           | PANEL WIDTH | COMMENTS/PANEL LOCATION                                       |
|-----------|---------------|-------------|------------------------|-------------|---|
| 9:10      | 10            | 0001        | 89'                    | 14.5'       |   |
|           | <del>11</del> | 0001        | 129'                   |             |   |
|           | 12            | 00038       | 81'                    |             | Used ground GT2   |
|           | 13            | 0038        | 71'                    |             | Used ground GT2   |
|           | 14            | 00038       | <del>110'</del><br>65' |             | Panel on north side of GT2 west side of west slope 150' north |
|           | 15            | 0005        | 164'                   |             | North side of GT2 east slope                                  |
|           | 16            | 0005        | 40'                    |             | North & east side of GT2                                      |
|           | 17            | 0017        | 67'                    |             |   |
| 10:00     | 18            | 0017        | 160'                   |             |   |

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: Geo C  
8-22-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH          | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|-----------------------|-------------|-------------------------|
| 10:00     | 19           | 0018        | 188'                  | 14.5'       |                         |
|           | 20           | 0018        | 35'                   |             | Next to panel 18        |
|           | 21           | 0033        | 195'                  |             |                         |
|           | 22           | 0033        | 32'                   |             | North edge @ 200'       |
|           | 23           | 0027        | 161'                  |             | North edge @ 200'       |
|           | 24           | 0027        | <del>66'</del><br>43' |             | North edge @ 200'       |
|           | 25           | 0028        | 149'                  |             |                         |
|           | 26           | 0028        | 77'                   |             |                         |
| 12:00     | 27           | 0030        | 132'                  |             |                         |

PANEL PLACEMENT FORM

PROJECT NAME: N<sub>y</sub> West PROJECT NUMBER: 2009.4364 MATERIAL DESCRIPTION: Geo. C.  
8-23-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION |
|-----------|--------------|-------------|--------------|-------------|-------------------------|
| 0730      | 28           | 0030        | 82'          | 14.5'       |                         |
|           | 29           | 0041        | 118'         |             | West slope @ 150' mark  |
|           | 30           | 0041        | 93'          |             |                         |
|           | 31           | 0042        | 119'         |             |                         |
|           | 32           | 0042        | 117'         |             |                         |
|           | 33           | 0019        | 121'         |             |                         |
|           | 34           | 0019        | 106'         |             |                         |
|           | 35           | 0035        | 133'         |             |                         |
| 0945      | 36           | 0035        | 94'          |             |                         |

PANEL PLACEMENT FORM

PROJECT NAME: N<sub>4</sub> West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: Geo C.  
8-23-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION               |
|-----------|--------------|-------------|--------------|-------------|---------------------------------------|
| 9:45      | 37           | 0007        | 162'         | 14.5'       |                                       |
|           | 38           | 0007        | 65'          |             | East slope @ 150' mark<br>North ledge |
|           | 39           | 0025        | 50'          |             | East slope @ 150' mark<br>North ledge |
|           | 40           | 0025        | 80'          |             | East slope                            |
|           | 41           | 0025        | 100'         |             | East slope                            |
|           | 42           | 0013        | 73'          |             | East slope<br>North ledge @ 300'      |
|           | 43           | 0013        | 89'          |             | East slope                            |
|           | 44           | 0013        | 44'          |             | East slope                            |
| 11:00     | 45           | 0022        | 92'          |             | East slope                            |

PANEL PLACEMENT FORM

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: Geo C.  
8-23-09

| DATE/TIME | PANEL NUMBER | ROLL NUMBER | PANEL LENGTH | PANEL WIDTH | COMMENTS/PANEL LOCATION                     |
|-----------|--------------|-------------|--------------|-------------|---|
| 11:00     | 46           | 0022        | 138'         | 14'5"       |   |
| 1:45      | 47           | 0032        | 35'          | }           |   |
|           | 48           | 0032        | 149'         |             |   |
|           | 49           | 0032        | 16'          |             |   |
|           | 50           | 0032        | 30'          |             |   |
|           | 51           | 0039        | 98'          |             |   |
|           | 52           | 0039        | 128'         |             |   |
|           | 53           | 0023        | 57'          |             |   |
| 3:00      | 54           | 0023        | 56'          |             | A North side @ 400' mark<br>Around RT 7 + 8 |

~~3:30~~

Tension meter  
 # 093/06

**DESTRUCTIVE TEST LOG**

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE  | SAMPLE I.D. | SEAM NUMBER | MACHINE NUMBER | SEAMER INITIALS | I O I O I O             |               |    |    |    |    | PASS/FAIL | DATE TO LAB PKG. SLIP #1 | LAB PASS/FAIL | LOCATION/COMMENTS |      |      |        |  |
|---|-------------|-------------|----------------|-----------------|-------------------------|---------------|----|----|----|----|-----------|--------------------------|---------------|-------------------|------|------|--------|--|
|   |             |             |                |                 | PEEL VALUES (LBS./INCH) |               |    |    |    |    |           |                          |               |                   |      |      |        |  |
| 8-20-09   | DS-1        | 4/5         | 836            | JM              | 66                      | 68            | 62 | 66 | 71 | 67 | P         | 9-20-09                  | P             | P-4               | P-5  | 72'E | 75' N  |  |
| 8-20-09   | DS-2        | 6/8         | 839            | RH              | <del>71</del>           | <del>68</del> |    |    |    |    |           | 9-20-09                  | P             | P-6               | P-8  | 90'E | 120' N |  |
|   |             |             |                |                 | 68                      | 67            | 67 | 69 | 66 | 65 | P         |                          |               |                   |      |      |        |  |
|   |             |             |                |                 |                         |               |    |    |    |    |           | #2                       |               |                   |      |      |        |  |
| 8-21-09   | DS-3        | 10/11       | 839            | JM              | 87                      | 88            | 84 | 82 | 88 | 86 |           | 9-21-09                  |               | P-10              | P-11 | 75'E | 190' N |  |
| 8-21-09   | DS-4        | 13/14       | 836            | RH              | 84                      | 87            | 83 | 84 | 80 | 82 |           | 9-21-09                  |               | P-13              | P-14 | 50'E | 250' N |  |
| 8-21-09   | DS-5        | 17/18       | <del>839</del> | RH              | 71                      | 64            | 71 | 61 | 68 | 60 |           | 9-21-09                  |               | P-17              | P-18 | 60'E | 330' N |  |
| 8-21-09   | DS-6        | 21/22       | 839            | RH              | 66                      | 68            | 58 | 69 | 60 | 60 |           | 9-21-09                  |               | P-21              | P-22 | 75'E | 400' N |  |
| <p>TRI Log # for DS1 &amp; DS2 is #E2333-47-09 results on 8-21-0</p> <p>TRI Log # for DS5, DS6, DS4, DS3 #E2333-49-01 results on 8-22-0</p> |             |             |                |                 |                         |               |    |    |    |    |           |                          |               |                   |      |      |        |  |











August 21, 2009

**Mail To:**

**Attn: Mr. John Brown**  
**GET**  
 3630 E. Cascade Way  
 Salt Lake City, UT 84109

E-mail: strater4@comcast.net  
 CC E-mail: djorgensen@norwestcorp.com

Dear Mr. Brown:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

**Bill To:**

**<= Same**  
**Project # : 23-4364**

**Project:** Central Farmers  
**TRI Job Reference Number:** E2333-47-09  
**Material(s) Tested:** 2 Heat Fusion Weld Seam(s)  
**Test(s) Requested:** SAME DAY Peel and Shear  
 (ASTM D 6392/GRI GM19/D 4437/NSF 54)

| <b>Codes</b> |  |
|--------------|--|
| AD           | Adhesion failure (100% Peel)                                   |
| BRK          | Break in sheeting away from Seam edge                          |
| SE           | Break in sheeting at edge of seam                              |
| AD-BRK       | Break in sheeting after some adhesion failure - partial peel   |
| SIP          | Separation in the plane of the sheet (leaving the bond intact) |
| FTB          | Film tearing bond (all non "AD" failures)                      |
| NON-FTB      | 100% peel  |

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Jennifer Tenney  
 Project Manager  
 Geosynthetic Services Division  
[www.GeosyntheticTesting.com](http://www.GeosyntheticTesting.com)



**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS**

TRI Client: GET  
Project: Central Farmers

*40 mil  
Passing GRI =  
Shear = 60 lb/in  
Peel = 50 lb/in*

Material: 40 mil LLDPE  
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)  
TRI Log #: E2333-47-09

| PARAMETER  | TEST REPLICATE NUMBER        |      |      |      |      | MEAN |                     |
|------------|------------------------------|------|------|------|------|------|---------------------|
|            | 1                            | 2    | 3    | 4    | 5    |      |                     |
| Sample ID: | DS-1                         |      |      |      |      |      |                     |
| Weld:      | Heat Fusion                  |      |      |      |      |      |                     |
| Side A     | Peel Strength (ppi)          | 79 ✓ | 79 ✓ | 73 ✓ | 77 ✓ | 82 ✓ | Peel A<br><b>78</b> |
|            | Peel Incursion (%)           | <10  | <10  | <10  | <10  | <10  |                     |
|            | Peel Locus of Failure Code   | SE   | SE   | SE   | SE   | SE   |                     |
|            | Peel NSF Failure Code        | FTB  | FTB  | FTB  | FTB  | FTB  |                     |
| Side B     | Peel Strength (ppi)          | 81 ✓ | 95 ✓ | 80 ✓ | 82 ✓ | 78   | Peel B<br><b>83</b> |
|            | Peel Incursion (%)           | <10  | <10  | <10  | <10  | <10  |                     |
|            | Peel Locus of Failure Code   | SE   | SE   | SE   | SE   | SE   |                     |
|            | Peel NSF Failure Code        | FTB  | FTB  | FTB  | FTB  | FTB  |                     |
|            | Shear Strength (ppi)         | 95 ✓ | 98 ✓ | 93 ✓ | 94 ✓ | 100  | Shear<br><b>96</b>  |
|            | Shear Elongation @ Break (%) | >50  | >50  | >50  | >50  | >50  |                     |
| Sample ID: | DS-2                         |      |      |      |      |      |                     |
| Weld:      | Heat Fusion                  |      |      |      |      |      |                     |
| Side A     | Peel Strength (ppi)          | 78 ✓ | 76 ✓ | 76 ✓ | 74 ✓ | 77 ✓ | Peel A<br><b>76</b> |
|            | Peel Incursion (%)           | <10  | <10  | <10  | <10  | <10  |                     |
|            | Peel Locus of Failure Code   | SE   | SE   | SE   | SE   | SE   |                     |
|            | Peel NSF Failure Code        | FTB  | FTB  | FTB  | FTB  | FTB  |                     |
| Side B     | Peel Strength (ppi)          | 80 ✓ | 81 ✓ | 79 ✓ | 78 ✓ | 77 ✓ | Peel B<br><b>79</b> |
|            | Peel Incursion (%)           | <10  | <10  | <10  | <10  | <10  |                     |
|            | Peel Locus of Failure Code   | SE   | SE   | SE   | SE   | SE   |                     |
|            | Peel NSF Failure Code        | FTB  | FTB  | FTB  | FTB  | FTB  |                     |
|            | Shear Strength (ppi)         | 91 ✓ | 93 ✓ | 92 ✓ | 94 ✓ | 91   | Shear<br><b>92</b>  |
|            | Shear Elongation @ Break (%) | >50  | >50  | >50  | >50  | >50  |                     |

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

*Pass  
J.A.  
8-21-09*

Tension meter  
 # 083/06

DESTRUCTIVE TEST LOG

PROJECT NAME: Nu West PROJECT NUMBER: 2009-4364 MATERIAL DESCRIPTION: FML

| DATE  | SAMPLE I.D. | SEAM NUMBER | MACHINE NUMBER | SEAMER INITIALS | PEEL VALUES (LBS /INCH) |               |    |    |    |    | PASS/ FAIL | DATE TO LAB PKG. SLIP #1 | LAB PASS/ FAIL | LOCATION/COMMENTS |      |      |        |  |
|---|-------------|-------------|----------------|-----------------|-------------------------|---------------|----|----|----|----|------------|--------------------------|----------------|-------------------|------|------|--------|--|
|   |             |             |                |                 | I                       | O             | I  | O  | I  | O  |            |                          |                |                   |      |      |        |  |
| 8-20-09   | DS-1        | 4/5         | 836            | JM              | 66                      | 68            | 62 | 66 | 71 | 67 | P          | 7-20-09                  | P              | P-4               | P-5  | 72'E | 75' N  |  |
| 8-20-09   | DS-2        | 6/8         | 839            | RH              | <del>71</del> 68        | <del>68</del> |    |    |    |    |            | 7-20-09                  | P              | P-6               | P-8  | 90'E | 120' N |  |
|   |             |             |                |                 | 68                      | 67            | 67 | 69 | 66 | 65 | P          |                          |                |                   |      |      |        |  |
|   |             |             |                |                 |                         |               |    |    |    |    |            | # 2                      |                |                   |      |      |        |  |
| 8-21-09   | DS-3        | 10/11       | 839            | JM              | 87                      | 88            | 84 | 82 | 88 | 86 |            | 7-21-09                  |                | P-10              | P-11 | 75'E | 190' N |  |
| 8-21-09   | DS-4        | 13/14       | 836            | RH              | 84                      | 87            | 83 | 84 | 80 | 82 |            | 7-21-09                  |                | P-13              | P-14 | 50'E | 250' N |  |
| 8-21-09   | DS-5        | 17/18       | <del>839</del> | RH              | 71                      | 64            | 71 | 61 | 68 | 60 |            | 7-21-09                  |                | P-17              | P-18 | 60'E | 330' N |  |
| 8-21-09   | DS-6        | 21/22       | 839            | RH              | 66                      | 68            | 58 | 69 | 60 | 60 |            | 7-21-09                  |                | P-21              | P-22 | 75'E | 400' N |  |
| TRI Log # for DS1 + DS2 is # E2333-47-09 results on 8-21-09       |             |             |                |                 |                         |               |    |    |    |    |            |                          |                |                   |      |      |        |  |
| TRI Log # for DS5, DS6, DS4, DS3 # E2333-49-01 results on 8-22-09 |             |             |                |                 |                         |               |    |    |    |    |            |                          |                |                   |      |      |        |  |



August 22, 2009

**Mail To:**

**Attn: Mr. John Brown**  
**GET**  
3630 E. Cascade Way  
Salt Lake City, UT 84109

E-mail: strater4@comcast.net  
CC E-mail: djorgensen@norwestcorp.com

**Bill To:**

**<= Same**  
**Project # : 23-4364**

Dear Mr. Brown:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

|                           |   |
|---------------------------|---|
| Project:                  | <b>Central Farmers</b>  |
| TRI Job Reference Number: | E2333-49-01   |
| Material(s) Tested:       | 4 Heat Fusion Weld Seam(s)                                      |
| Test(s) Requested:        | SAME DAY Peel and Shear<br>(ASTM D 6392/GRI GM19/D 4437/NSF 54) |

| <b>Codes</b> |  |
|--------------|--|
| AD           | Adhesion failure (100% Peel)                                   |
| BRK          | Break in sheeting away from Seam edge                          |
| SE           | Break in sheeting at edge of seam                              |
| AD-BRK       | Break in sheeting after some adhesion failure - partial peel   |
| SIP          | Separation in the plane of the sheet (leaving the bond intact) |
| FTB          | Film tearing bond (all non "AD" failures)                      |
| NON-FTB      | 100% peel  |

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Jennifer Tenney  
Project Manager  
Geosynthetic Services Division  
www.GeosyntheticTesting.com



**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS**

TRI Client: GET

Project: Central Farmers

Material: 40 mil LLDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2333-49-01

| PARAMETER                         | TEST REPLICATE NUMBER |     |     |     |     | MEAN   |
|-----------------------------------|-----------------------|-----|-----|-----|-----|--------|
|                                   | 1                     | 2   | 3   | 4   | 5   |        |
| Sample ID:                        | DS-3                  |     |     |     |     |        |
| Weld:                             | Heat Fusion           |     |     |     |     |        |
|                                   |                       |     |     |     |     | Peel A |
| Side A Peel Strength (ppi)        | 81                    | 83  | 79  | 84  | 80  | 81     |
| Side A Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side A Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side A Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Peel B |
| Side B Peel Strength (ppi)        | 86                    | 85  | 85  | 86  | 86  | 86     |
| Side B Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side B Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side B Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Shear  |
| Shear Strength (ppi)              | 91                    | 89  | 103 | 102 | 99  | 97     |
| Shear Elongation @ Break (%)      | >50                   | >50 | >50 | >50 | >50 |        |
| Sample ID:                        | DS-4                  |     |     |     |     |        |
| Weld:                             | Heat Fusion           |     |     |     |     |        |
|                                   |                       |     |     |     |     | Peel A |
| Side A Peel Strength (ppi)        | 87                    | 86  | 83  | 81  | 79  | 83     |
| Side A Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side A Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side A Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Peel B |
| Side B Peel Strength (ppi)        | 78                    | 84  | 83  | 83  | 80  | 82     |
| Side B Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side B Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side B Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Shear  |
| Shear Strength (ppi)              | 102                   | 96  | 99  | 99  | 101 | 99     |
| Shear Elongation @ Break (%)      | >50                   | >50 | >50 | >50 | >50 |        |

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS**

TRI Client: GET

Project: Central Farmers

Material: 40 mil LLDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2333-49-01

| PARAMETER                         | TEST REPLICATE NUMBER |     |     |     |     | MEAN   |
|-----------------------------------|-----------------------|-----|-----|-----|-----|--------|
|                                   | 1                     | 2   | 3   | 4   | 5   |        |
| Sample ID:                        | DS-5                  |     |     |     |     |        |
| Weld:                             | Heat Fusion           |     |     |     |     |        |
|                                   |                       |     |     |     |     | Peel A |
| Side A Peel Strength (ppi)        | 79                    | 79  | 81  | 84  | 81  | 81     |
| Side A Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side A Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side A Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Peel B |
| Side B Peel Strength (ppi)        | 76                    | 80  | 79  | 80  | 81  | 79     |
| Side B Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side B Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side B Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Shear  |
| Shear Strength (ppi)              | 86                    | 90  | 86  | 91  | 90  | 89     |
| Shear Elongation @ Break (%)      | >50                   | >50 | >50 | >50 | >50 |        |
| Sample ID:                        | DS-6                  |     |     |     |     |        |
| Weld:                             | Heat Fusion           |     |     |     |     |        |
|                                   |                       |     |     |     |     | Peel A |
| Side A Peel Strength (ppi)        | 80                    | 83  | 83  | 82  | 81  | 82     |
| Side A Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side A Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side A Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Peel B |
| Side B Peel Strength (ppi)        | 84                    | 87  | 82  | 88  | 82  | 85     |
| Side B Peel Incursion (%)         | <10                   | <10 | <10 | <10 | <10 |        |
| Side B Peel Locus of Failure Code | SE                    | SE  | SE  | SE  | SE  |        |
| Side B Peel NSF Failure Code      | FTB                   | FTB | FTB | FTB | FTB |        |
|                                   |                       |     |     |     |     | Shear  |
| Shear Strength (ppi)              | 99                    | 109 | 98  | 93  | 86  | 97     |
| Shear Elongation @ Break (%)      | >50                   | >50 | >50 | >50 | >50 |        |

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



**SHIPPING ADDRESS:**  
**TRI/Environmental, Inc.**  
 A Texas Research International Company  
 9063 Bee Caves Road, Austin, Texas 78733-6201

**GEOSYNTHETIC TESTING LABORATORIES**  
**1-800-880-8378**  
**FAX: 512 263 2558**

**CHAIN OF CUSTODY/TEST REQUEST FORM - DESTRUCTIVE SEAMS**

Page \_\_\_ of \_\_\_

|                           |  |   |
|---------------------------|--|---|
| <b>REPORT RESULTS TO:</b> | <b>Client Contact:</b> John Brown                    | <b>Client Phone/Fax:</b> 801-463-0902     |
|                           | <b>Client Company:</b> GET                           | <b>Client Field Phone/Fax:</b>            |
|                           | <b>Project Name:</b> Central Farmers                 | <b>Project Number:</b> 23-4364            |
|                           | <b>Client Mailing Address:</b> 3630 E. Cascade Way   | <b>E-mail:</b> djorgensen@corwestcorp.com |
|                           | <b>Client City, State, Zip:</b> Salt Lake City 84109 | <b>Shipped by:</b> J <b>Date:</b>         |

|                         |  |                                     |
|-------------------------|--|-------------------------------------|
| <b>SEND INVOICE TO:</b> | <b>COMPLETE ONLY IF DIFFERENT FROM ABOVE</b> | <b>E-mail:</b> strater4@comcast.net |
|                         | <b>Client Contact:</b>                       | <b>Fax:</b>                         |
|                         | <b>Client Company:</b>                       | <b>Client P.O. #:</b> 23-4364       |
|                         | <b>Client Mailing Address:</b>               | <b>E-mail:</b>                      |
|                         | <b>Client City, State, Zip:</b>              | <b>Shipped by:</b> <b>Date:</b>     |

| Geomembrane Seams     |      | Top Panel No. | Bottom Panel No. | Machine Number | Thickness/Resin Type (ex: 60 HDPE) | Weld Type | Welder (personnel) | Date / Time Sampled |
|-----------------------|------|---------------|------------------|----------------|------------------------------------|-----------|--------------------|---------------------|
| Sample Identification |      |               |                  |                |                                    |           |                    |                     |
| 1                     | DS-1 | 5             | 4                | 836            | 40                                 | Fusion    | JM                 | 8-20-09             |
| 2                     | DS-2 | 8             | 6                | 839            | 40                                 | Fusion    | JM                 | 8-20-09             |
| 3                     |      |               |                  |                |                                    |           |                    |                     |
| 4                     |      |               |                  |                |                                    |           |                    |                     |
| 5                     |      |               |                  |                |                                    |           |                    |                     |
| 6                     |      |               |                  |                |                                    |           |                    |                     |
| 7                     |      |               |                  |                |                                    |           |                    |                     |
| 8                     |      |               |                  |                |                                    |           |                    |                     |
| 9                     |      |               |                  |                |                                    |           |                    |                     |
| 10                    |      |               |                  |                |                                    |           |                    |                     |

Remarks:

Standard Test Methods: ASTM D 6392, D4437, D6214, other \_\_\_\_\_ ) Please circle requested test procedure  
**PLEASE CONTACT TRI WITH QUESTIONS REGARDING APPROPRIATE TEST PROCEDURES**

|                      |                  |
|----------------------|------------------|
| "As-Received" Notes: | TRI Log. Number: |
|                      | Due Date:        |

PLEASE AUTHORIZE BY SIGNING AND DATING BELOW.

NAME: Dana Jorgensen SIGNATURE/DATE: 8-20-09



September 18, 2009

**Mail To:**

**Attn: Mr. John Brown**  
**GET**  
 3630 E. Cascade Way  
 Salt Lake City, UT 84109

E-mail: strater4@comcast.net  
 CC E-mail: djorgensen@norwestcorp.com

Dear Mr. Brown:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

**Bill To:**

**<= Same**  
**Project # : 23-4364**

Project: **Central Farmers**

TRI Job Reference Number: E2334-07-06

Material(s) Tested: 3 Heat Fusion Weld Seam(s)

Test(s) Requested: **SAME DAY Peel and Shear**  
 (ASTM D 6392/GRI GM19/D 4437/NSF 54)

| <b>Codes</b> |  |
|--------------|--|
| AD           | Adhesion failure (100% Peel)                                   |
| BRK          | Break in sheeting away from Seam edge                          |
| SE           | Break in sheeting at edge of seam                              |
| AD-BRK       | Break in sheeting after some adhesion failure - partial peel   |
| SIP          | Separation in the plane of the sheet (leaving the bond intact) |
| FTB          | Film tearing bond (all non "AD" failures)                      |
| NON-FTB      | 100% peel  |

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Jennifer Tenney  
 Project Manager  
 Geosynthetic Services Division  
 www.GeosyntheticTesting.com



**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS**

TRI Client: GET  
 Project: Central Farmers

Material: 40 mil LLDPE  
 SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)  
 TRI Log #: E2334-07-06

| PARAMETER  | TEST REPLICATE NUMBER        |     |     |     |     | MEAN |              |
|------------|------------------------------|-----|-----|-----|-----|------|--------------|
|            | 1                            | 2   | 3   | 4   | 5   |      |              |
| Sample ID: | DS-01                        |     |     |     |     |      |              |
| Weld:      | Heat Fusion                  |     |     |     |     |      |              |
| Side A     | Peel Strength (ppi)          | 81  | 84  | 79  | 83  | 86   | Peel A<br>83 |
|            | Peel Incursion (%)           | <10 | <10 | <10 | <10 | <10  |              |
|            | Peel Locus of Failure Code   | SE  | SE  | SE  | SE  | SE   |              |
|            | Peel NSF Failure Code        | FTB | FTB | FTB | FTB | FTB  |              |
| Side B     | Peel Strength (ppi)          | 81  | 78  | 81  | 82  | 79   | Peel B<br>80 |
|            | Peel Incursion (%)           | <10 | <10 | <10 | <10 | <10  |              |
|            | Peel Locus of Failure Code   | SE  | SE  | SE  | SE  | SE   |              |
|            | Peel NSF Failure Code        | FTB | FTB | FTB | FTB | FTB  |              |
|            | Shear Strength (ppi)         | 98  | 99  | 94  | 95  | 98   | Shear<br>97  |
|            | Shear Elongation @ Break (%) | >50 | >50 | >50 | >50 | >50  |              |
| Sample ID: | DS-02                        |     |     |     |     |      |              |
| Weld:      | Heat Fusion                  |     |     |     |     |      |              |
| Side A     | Peel Strength (ppi)          | 82  | 81  | 82  | 82  | 99   | Peel A<br>85 |
|            | Peel Incursion (%)           | <10 | <10 | <10 | <10 | <10  |              |
|            | Peel Locus of Failure Code   | SE  | SE  | SE  | SE  | SE   |              |
|            | Peel NSF Failure Code        | FTB | FTB | FTB | FTB | FTB  |              |
| Side B     | Peel Strength (ppi)          | 80  | 78  | 82  | 85  | 82   | Peel B<br>81 |
|            | Peel Incursion (%)           | <10 | <10 | <10 | <10 | <10  |              |
|            | Peel Locus of Failure Code   | SE  | SE  | SE  | SE  | SE   |              |
|            | Peel NSF Failure Code        | FTB | FTB | FTB | FTB | FTB  |              |
|            | Shear Strength (ppi)         | 99  | 98  | 102 | 97  | 91   | Shear<br>97  |
|            | Shear Elongation @ Break (%) | >50 | >50 | >50 | >50 | >50  |              |

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS**

TRI Client: GET  
 Project: Central Farmers

Material: 40 mil LLDPE  
 SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)  
 TRI Log #: E2334-07-06

| PARAMETER                    | TEST REPLICATE NUMBER      |     |        |     |        | MEAN        |              |
|------------------------------|----------------------------|-----|--------|-----|--------|-------------|--------------|
|                              | 1                          | 2   | 3      | 4   | 5      |             |              |
| Sample ID:                   | DS-03                      |     |        |     |        |             |              |
| Weld:                        | Heat Fusion                |     |        |     |        |             |              |
| Side A                       | Peel Strength (ppi)        | 82  | 80     | 80  | 81     | 83          | Peel A<br>81 |
|                              | Peel Incursion (%)         | <10 | <10    | <10 | <10    | <10         |              |
|                              | Peel Locus of Failure Code | SE  | SE     | SE  | SE     | SE          |              |
|                              | Peel NSF Failure Code      | FTB | FTB    | FTB | FTB    | FTB         |              |
| Side B                       | Peel Strength (ppi)        | 78  | 74     | 80  | 81     | 81          | Peel B<br>79 |
|                              | Peel Incursion (%)         | <10 | 25     | <10 | 25     | <10         |              |
|                              | Peel Locus of Failure Code | SE  | AD-BRK | SE  | AD-BRK | SE          |              |
|                              | Peel NSF Failure Code      | FTB | FTB    | FTB | FTB    | FTB         |              |
| Shear Strength (ppi)         | 100                        | 82  | 84     | 81  | 85     | Shear<br>86 |              |
| Shear Elongation @ Break (%) | >50                        | >50 | >50    | >50 | >50    |             |              |

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Dave *[Signature]*  
8-22-09

REPAIR REPORT

Project Name: Central Farmers Remediation  
Georgetown, ID Ny West

PROJECT NO. 08-09-1186  
2009-4364

PAGE 1 of 1

| Repair # | Field Seam | Panel # | Repair Date | Repair Crew | Machine # | V. TEST<br>15 seconds<br>Non-Destructive Test<br>Date | Test Crew | Non-<br>Destructive<br>Test P/F | Comments   |
|----------|------------|---------|-------------|-------------|-----------|---|-----------|---------------------------------|------------|
| 1        | 4/5        |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | DS-1 5x2   |
| 2        | 5/6/7      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | T JOIN 2x2 |
| 3        | 6/7        |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | BOOT 5x4   |
| 4        | 6/8        |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | DS-2 5x2   |
| 5        | 6/7/8      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | T JOIN 2x2 |
| 6        | 10/4       |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | DS-3 5x2   |
| 7        | 11/12      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 8        | 11/12      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 9        | 11/12      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 10       | 11/12      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 11       | 13/14      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | DS-4 5x2   |
| 12       | 13/14/15   |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | T JOIN 2x2 |
| 13       | 14/15/16   |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | T JOIN 2x2 |
| 14       |            | 16      | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 15       |            | 16      | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 16       |            | 16      | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 2x2  |
| 17       | 13/14      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 5x2  |
| 18       | 13/14      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 5x2  |
| 19       | 12/13      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | PATCH 5x2  |
| 20       | 12/13      |         | 8/22/09     | RC          | 520       | 8/22/09   | VM        | P                               | DS-5 5x2   |







**ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.**

**ACCEPTANCE FOR WORK COMPLETED**

PROJECT: CENTRAL FARMERS REMEDIATION  
LOCATION: GEORGETOWN ID  
DATE: 09/19/09  
PROJECT NO. 09-08-1169

**Billing Information**

Owner

Representative: NU-WEST INDUSTRIES

Owner: NU-WEST INDUSTRIES

Billing

Address: 65 S. MAIN ST GEORGETOWN ID.

The undersigned, as owner or authorized agent for owner, states that he has inspected the below listed project and found it completed in accordance with engineering design specifications.

|   |                                  |
|---|----------------------------------|
| Material Type: <u>40 MIL HDT</u>            | Total Sq. Ft.: <u>54,892 SF.</u> |
| Material Type: <u>BENTONIX</u>              | Total Sq. Ft.: <u>54,892 SF.</u> |
| Material Type: <u>GEOCOMPOSITE DIS TH20</u> | Total Sq. Ft.: <u>54,892 SF.</u> |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Material Type: _____                        | Total Sq. Ft.: _____             |
| Rain Flap SF: _____                         | Textured/Smooth Weld: _____      |
| Rain Flap Weld: _____                       | Tie-In Weld: _____               |
| Boots: _____                                |                                  |

COMMENTS:

ISMAEL BOITRON  
ESI Representative

Dan White (CRA)  
Owner/Contractor

Dana Ferguson  
QA/QC

Note:

Final quantities for invoice to be surveyed by third party surveyor contracted by CRA.

**PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING**

|   |                       |
|---|-----------------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.  | Project Number:       |
| Owner: <i>Nu-West</i>   | Location:             |
| CQA Construction Manager:   | Date: <i>10-19-09</i> |
| Reference CQA Inspection Data Sheet:  |                       |
| Problem Identification: <i>Anderson hydroseeding is applying the fertilizer at a rate of 100 lbs NPK per acre instead of 300 lbs/acre.</i>  |                       |
| Location of Problem: <i>Clarifier, furnace slopes, slopes in phosphoria on north side.</i>  |                       |
| Brief Description of Cause of Problem: <i>Hydro seeders claim the 20-20-20 is concentrated so 100 lbs/acre NPK is sufficient but did not provide adequate proof claim. Claim the 300 lb mix will tear up their equipment</i>    |                       |
| How and When Problem was Discovered: <i>Application rate discovered on 10-16-09 at approx 15:30 - take cut sheet to CRA and request verification. Dan White unable to verify. Corrective action taken at 10:30 on 10-19-09.</i> |                       |
| Suggested Corrective Action: <i>Suggest that Anderson go back and broadcast <del>200</del> additional pounds 20-20-20 per acre to Clarifier / furnace / Phosphoria or no payment.</i>   |                       |
| Documentation of Correction: (include where, who made correction, when work was completed, and quality of final result)   |                       |

**CQA REPRESENTATIVE**

*J.B. Brown*  
 Signature  
*J.B. Brown*  
 Name

*10-19-09*  
 Date  
*CQA Officer*  
 Title

**PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING**

|  |                                 |
|--|---------------------------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.   | Project Number:                 |
| Owner: <i>Nu-West</i>  | Location: <i>Slurry Pit Cap</i> |
| CQA Construction Manager: <i>JB Brown</i>  | Date: <i>8-21-09</i>            |
| Reference CQA Inspection Data Sheet:   |                                 |
| Problem Identification: <i>The welding rod for 40 mil LLDPE<br/>is actually HDPE welding rod.</i>  |                                 |
| Location of Problem: <i>Slurry cover FML</i>   |                                 |
| Brief Description of Cause of Problem:<br><i>Liner company sent incorrect welding rod.</i>   |                                 |
| How and When Problem was Discovered:<br><i>Discovered right before making any extrusion<br/>welds</i>  |                                 |
| Suggested Corrective Action:<br><i>Go to SLC and get correct welding<br/>rod material</i>  |                                 |
| Documentation of Correction: (include where, who made correction, when work was completed, and<br>quality of final result)<br><i>Work resumed on 8-22-09 @ ~ 1400<br/>after liner crew chief returned from<br/>SLC with correct welding rod.</i> |                                 |

**CQA REPRESENTATIVE**

*J. B. Brown*  
\_\_\_\_\_  
Signature  
*JB Brown*  
\_\_\_\_\_  
Name

*8-22-09*  
\_\_\_\_\_  
Date  
*CQA officer*  
\_\_\_\_\_  
Title

PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING

|  |                  |
|--|------------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.   | Project Number:  |
| Owner: Nu-West   | Location: CF 67C |
| CQA Construction Manager: JB Brown   | Date: 7-28-09    |
| Reference CQA Inspection Data Sheet:   |                  |
| Problem Identification: Compaction just under the mark (95%)<br>on the west side of the slurry pit and occasional<br>spots on furnace. Missed lift # 3 on slurry pit.  |                  |
| Location of Problem: Slurry Cover / Furnace Cover.   |                  |
| Brief Description of Cause of Problem:<br>Ore was mixed w/ fair amount of soil on<br>the third/ fourth lift. This has likely affected<br>the actual compaction curve, and while the cover<br>is extremely dense when driving stake for Troxler |                  |
| How and When Problem was Discovered: the curve for ore not met<br>Compaction appears good however.<br>at the time of testing and discussed w/ CQA  |                  |
| Suggested Corrective Action: Mornings of 7-29-09 - CQA sent out<br>water truck and compactor on slurry and<br>furnace. We will peel back lift in 6 locations<br>and test lift 3 on slurry pit.   |                  |
| Documentation of Correction: (include where, who made correction, when work was completed, and<br>quality of final result)<br>7-29-09 Compactor and water truck on<br>slurry from 7:25 - 9:50 AM.<br>- Troxler testing - lift # 3 on           |                  |

CQA REPRESENTATIVE

J. Brown  
Signature  
JB Brown  
Name

7-29-09  
Date  
CQA Officer  
Title

**PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING**

|  |                                 |
|--|---------------------------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.   | Project Number:                 |
| Owner: <i>Nu-West</i>  | Location: <i>CF 67C Project</i> |
| CQA Construction Manager:  | Date: <i>7-25-09</i>            |
| Reference CQA Inspection Data Sheet:   |                                 |
| Problem Identification: <i>Will need to extend the cover<br/>to the south based on TP-46, TP 46A,<br/>TP-46B</i>   |                                 |
| Location of Problem: <i>South end of slurry pit.</i>   |                                 |
| Brief Description of Cause of Problem:<br><i>Encountered flow in TP-46, 46A, 46B<br/>TP 46-C is clean</i>  |                                 |
| How and When Problem was Discovered:<br><i>Test Pits on 7-24-09</i>  |                                 |
| Suggested Corrective Action:<br><i>Extend liner to PT. N 316411<br/>E 899945</i>   |                                 |
| Documentation of Correction: (include where, who made correction, when work was completed, and<br>quality of final result)<br><i>JB made correction - measured out in<br/>field and on drawing</i> |                                 |

**CQA REPRESENTATIVE**

*J. S. D.*  
\_\_\_\_\_  
Signature  
*JB Brown*  
\_\_\_\_\_  
Name

*7-25-09*  
\_\_\_\_\_  
Date  
*CQA Officer*  
\_\_\_\_\_  
Title

**PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING**

|   |                                  |
|---|----------------------------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.  | Project Number:                  |
| Owner: <i>Nu-West</i>   | Location: <i>Georgetown Cyn.</i> |
| CQA Construction Manager:   | Date: <i>7-25-09</i>             |
| Reference CQA Inspection Data Sheet:  |                                  |
| Problem Identification: <i>Test pit #'s don't match up w/<br/>plotted coords. Surveyors only marked "test<br/>pit" on stakes-</i>   |                                  |
| Location of Problem: <i>Slurry pit anchor trench - north-east<br/>south areas of alignment</i>  |                                  |
| Brief Description of Cause of Problem:<br><i>Surveyors didn't mark stakes w/ test<br/>pit # - one stake either not set or<br/>run over between furnace and slurry (#44)</i> |                                  |
| How and When Problem was Discovered:<br><i>Discovered on 7-24 and rectified on<br/>7-25 by plotting on map and measuring<br/>distance between test pits on ground</i>       |                                  |
| Suggested Corrective Action:<br><i>Renumber test pits 45 and 46-A-B-C</i>   |                                  |
| Documentation of Correction: (include where, who made correction, when work was completed, and<br>quality of final result)<br><i>Corrected by JB Brown</i>                  |                                  |

**CQA REPRESENTATIVE**

*J.B. Brown*  
\_\_\_\_\_  
Signature  
*JB Brown*  
\_\_\_\_\_  
Name

*7-25-09*  
\_\_\_\_\_  
Date  
*CQA Officer*  
\_\_\_\_\_  
Title

**PROBLEM IDENTIFICATION AND CORRECTIVE MEASURES REPORTING**

|  |                                   |                 |
|--|-----------------------------------|-----------------|
| Project Name: CENTRAL FARMERS FERTILIZER FACILITY<br>GEORGETOWN CANYON, IDAHO NU-WEST INDUSTRIES,<br>INC. and NU-WEST MINING, INC.   |                                   | Project Number: |
| Owner: <i>Nu-West</i>  | Location: <i>Phosphoria Gulch</i> |                 |
| CQA Construction Manager: <i>JB Brown</i>  | Date: <i>7-21-09</i>              |                 |
| Reference CQA Inspection Data Sheet:   |                                   |                 |
| Problem Identification: <i>Rocks and stumps, tree materials<br/>sent down to slurry cover mixed in<br/>sparingly in ore</i>  |                                   |                 |
| Location of Problem: <i>Slurry cover</i>   |                                   |                 |
| Brief Description of Cause of Problem:<br><i>Difficulty sorting materials from ore<br/>slope.</i>  |                                   |                 |
| How and When Problem was Discovered:<br><i>Visual during spread of ore lift #2.</i>  |                                   |                 |
| Suggested Corrective Action:<br><i>Have cat skin rocks and stumps/tree<br/>branches/rocks to edge of work and<br/>discard.</i>   |                                   |                 |
| Documentation of Correction: (include where, who made correction, when work was completed, and<br>quality of final result)<br><i>JB made correction - discuss w/ Regis/<br/>Dan and Pete (excavator operator) and<br/>Kevin (cat operator)</i> |                                   |                 |

**CQA REPRESENTATIVE**

*JB Brown*  
Signature  
*JB Brown*  
Name

*7-21-09*  
Date  
*CQA Officer*  
Title

## John S. Brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Friday, July 10, 2009 1:45 PM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** mark.jeffers@deq.idaho.gov; mhart@agrium.com; kritter@norwestcorp.com; JBWillia@agrium.com; cemmons@norwestcorp.com; hstich@croworld.com; wbauman@croworld.com  
**Subject:** Central Farmers Remedial Action Progress Update  
**Attachments:** 071009 CF REMEDIAL CONSTRUCTION PROGRESS TRACKING.pdf

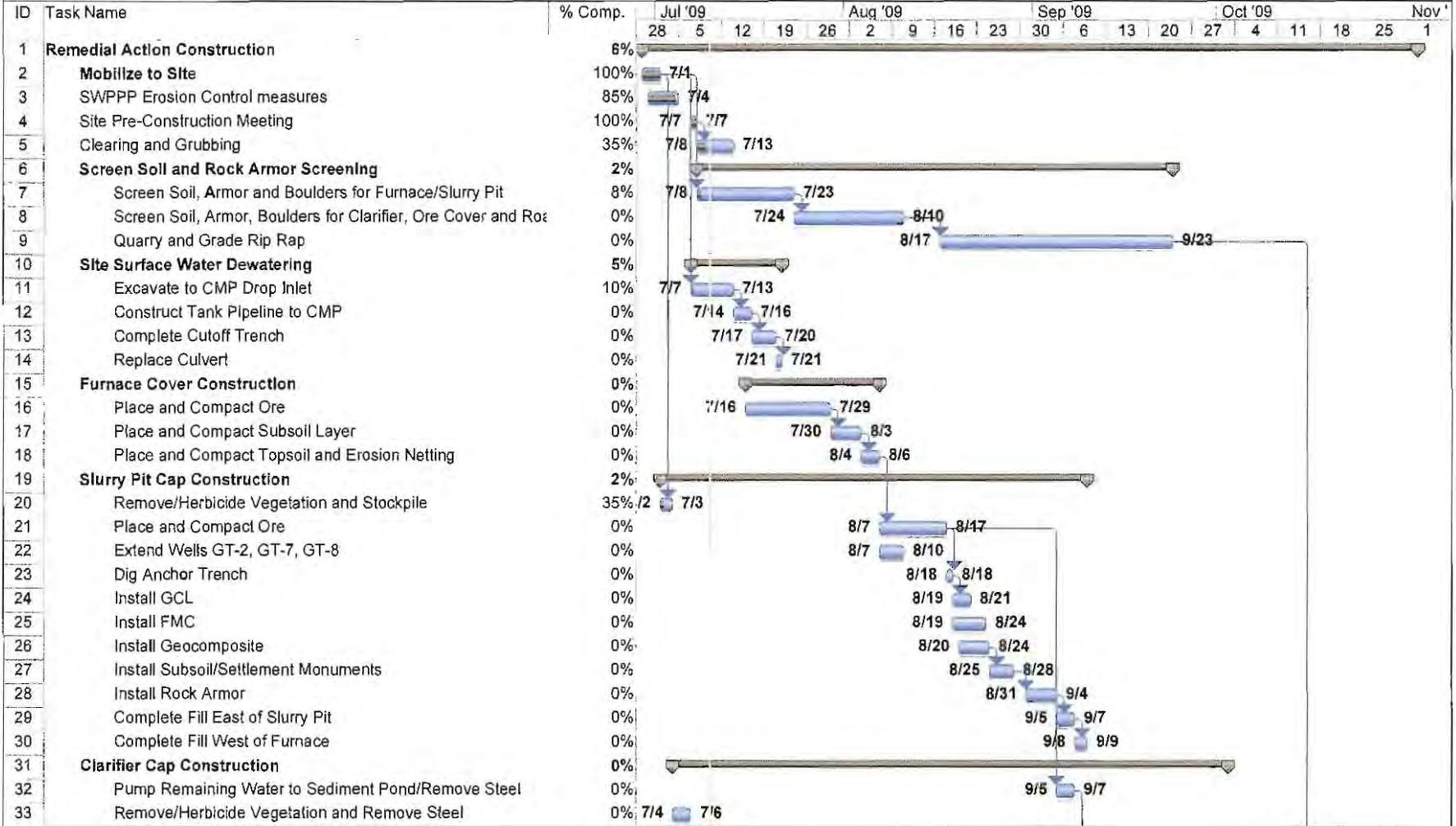
Mark,  
On behalf of Nu-West, please find attached the updated progress schedule detailing percent complete of the tasks required to implement the remedial actions for the site. We began mobilization to the site on June 29 and currently have most of the equipment required for the job. Work on the project began in earnest following the preconstruction meeting on July 7. Air monitoring is being implemented for HCN and PH3 on intrusive work, predominantly at the Tank Spring excavations. We are currently dewatering, grubbing and generating cover using the screen. BMP's are in place.

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,

JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



Project: 071009 CF remedial action co  
Date: Fri 7/10/09

|               |  |                         |  |                  |  |
|---------------|--|-------------------------|--|------------------|--|
| Task          |  | Rolled Up Task          |  | External Tasks   |  |
| Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
| Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
| Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
| Summary       |  | Split                   |  |                  |  |

## john brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Tuesday, December 22, 2009 9:11 AM  
**To:** strater4@comcast.net  
**Subject:** FW: CF GTC Weekly Progress Update  
**Attachments:** 071809 CF REMEDIAL CONSTRUCTION PROGRESS TRACKING.pdf

---

**From:** John S. Brown [mailto:strater4@comcast.net]  
**Sent:** Saturday, July 18, 2009 9:57 AM  
**To:** mhart@agrium.com  
**Cc:** pkos@norwestcorp.com; kritter@norwestcorp.com; cemmons@norwestcorp.com; JBWillia@agrium.com; hstich@craworld.com; White, Dan  
**Subject:** CF GTC Weekly Progress Update

All,

Please find attached an updated schedule for the Central Farmers Georgetown Canyon Remedial Action. Current estimate is about 10 percent completed.

### Activities

Activity highlights over the past week include:

- Daily H&S briefings and work activity/progress meetings;
- Updating of site map from survey on 2' contours;
- Finish clearing and grubbing and herbiciding the slurry pit cover and furnace area;
- Complete dewatering of wet areas east of slurry pit and rock placement for base;
- Establishment of haulage roads and traffic patterns;
- SWPPP amendments, inspections and training;
- Acceptance of materials for Tank spring drainage construction;
- Survey of centerline and offsets for Tanks Spring, furnace toe, anchor trench alignment;
- Transporting and watering and compacting first ore lift on the slurry pit cover;
- Acquisition of 6 Troxler readings on the first slurry lift, all passing the 95 percent compaction requirement;
- Placement and survey of 4 settlement markers on the slurry pit cover to assess settlement during loading;
- Excavation and screening of borrow materials - to date:
  - Approximately 1800 yds screened select fill;
  - Approximately 1500 yds of armor rock and boulders;
  - Approx 500 yds of bulk select fill.
- Dozing, excavating and hauling ore from Phosphoria;
- Pipe welding;
- Coordination with SS Phosphate for truck haulage;
- Mag chloride of GT Canyon Road

### Problems and Resolutions

Problems that occurred during the week and resolution of these problems included:

- Space limitations for loading out of Phosphoria worked out with Larry Simmons and coordination of truck hauls through work zones.
- Map translation issues for CRA, surveyor, JB that was remedied with new map from Norwest.
- Survey location discrepancies on Tank Spring that were resolved via email
- Screen Plant problems include the need to swap out screens which was handed by equipment supplier on site with approx half day of down time.
- Wet borrow materials plugging screen that was remedied with 40 pound weighted steel to break up dirt clods, manufactured on site.
- Equipment breakdowns or swap outs of equipment including replacement of loader, dozer next day, water truck breakdown, truck breakdown. None of these issues delayed the work, water truck was repaired today.
- The current topography including swale to the east of the furnace needs minor design change to meet grade. Current design will not mesh with grades indicated on revised topographic map and will require JB and Paul to work out grade fit to hillside.

### **Next Week**

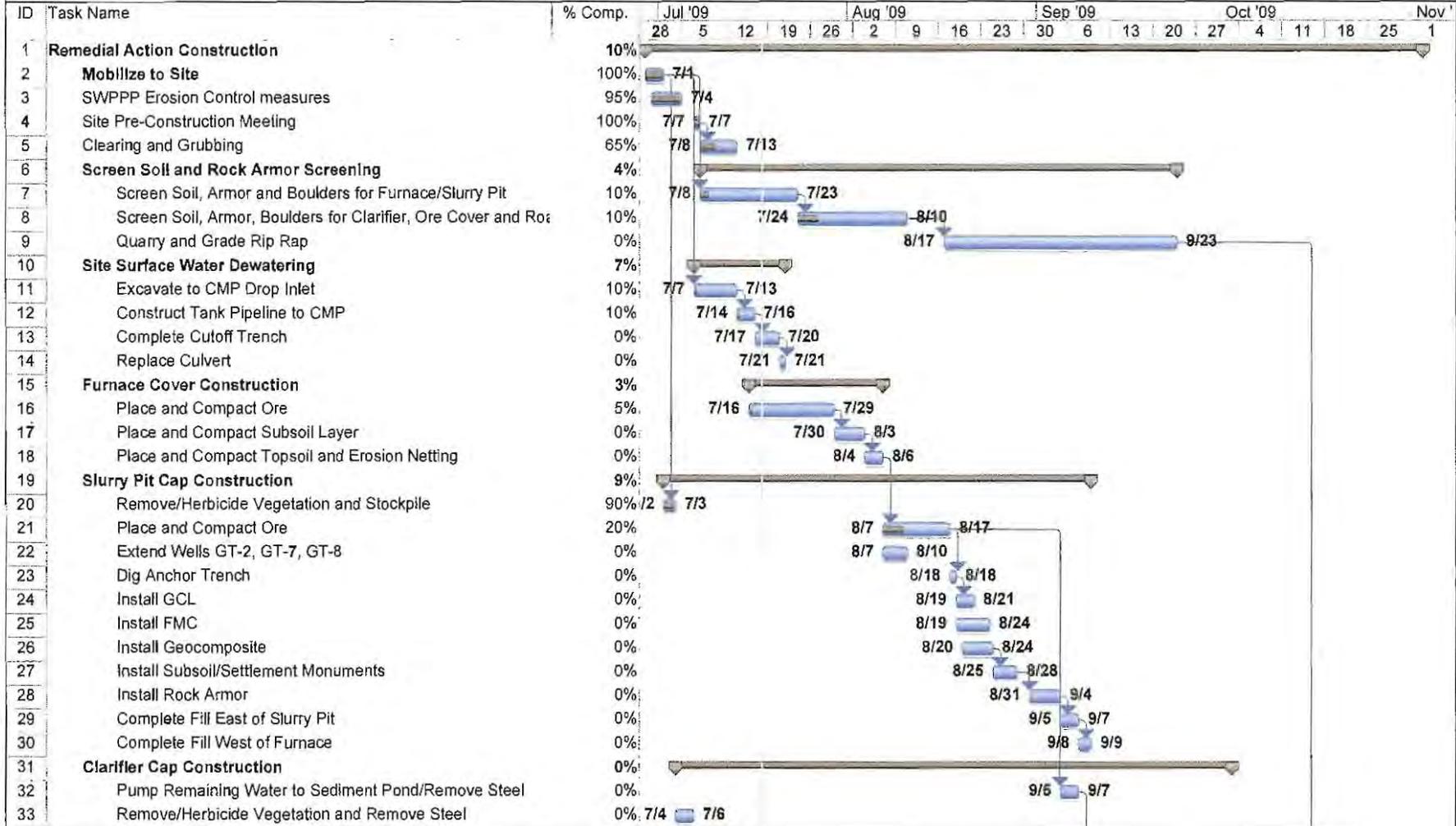
Next week's activities include updated report to IDEQ (7/24/09), hauling ore, excavation of borrow materials, compaction, excavation of Tank Spring and placement of material as designed, pumping, surveying, raising well top elevations, compaction testing, monitoring, coordination with SS Phosphate.

Please contact me via email if you have any questions regarding this transmittal.

Best Regards,

JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



|  |               |  |                         |  |                  |  |
|--|---------------|--|-------------------------|--|------------------|--|
| Project: 071809 CF remedial action co<br>Date: Sat 7/18/09 | Task          |  | Rolled Up Task          |  | External Tasks   |  |
|  | Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
|  | Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
|  | Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
|  | Summary       |  | Split                   |  |                  |  |



john brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Saturday, July 25, 2009 3:43 PM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** kritter@norwestcorp.com; pkos@norwestcorp.com; JBWillia@agrium.com; mhart@agrium.com; Regis Seng; White, Dan; hstich@croworld.com; cemmons@norwestcorp.com  
**Subject:** Central Farmers Fertilizer Georgetown Canyon Remedial Activities Update and Progress  
**Attachments:** 072509 CF remedial action construction progress schedule.mpp

Mark,

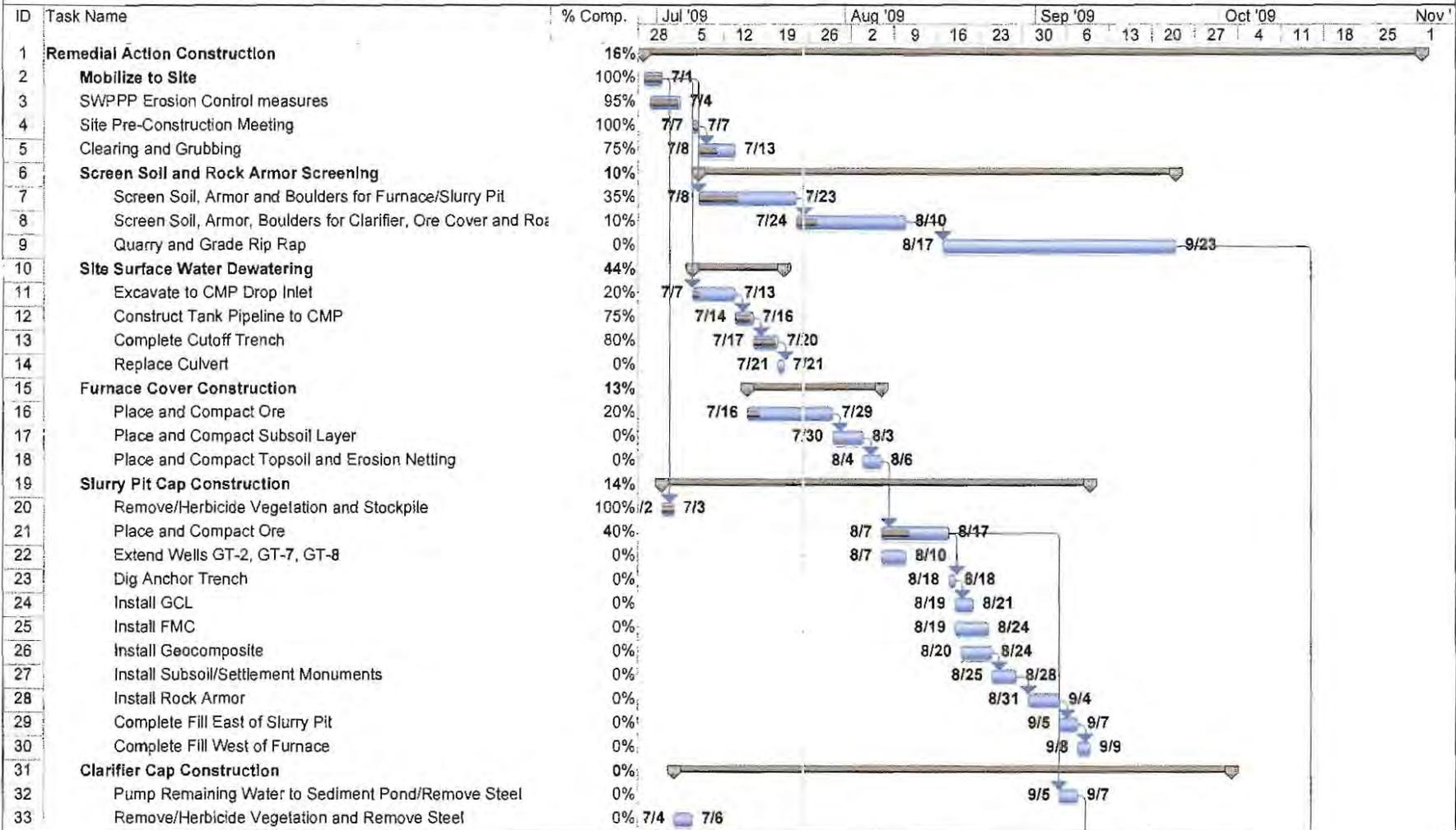
On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Work on the site currently includes installation of the dewatering measures for Tank Spring, grubbing, cleaning ore from Phosphoria and ore hauls from Phosphoria Gulch, screening materials from Dud Hollow, compaction of ore on the slurry pit and furnace and compaction testing and surveying, among the many activities. SS Phosphate is also hauling ore to Soda Springs, as last fall. We have not encountered phosphine or HCN in any of our trenching work.

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,

JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



Project: 072509 CF remedial action co  
Date: Sat 7/25/09

|               |  |                         |  |                  |  |
|---------------|--|-------------------------|--|------------------|--|
| Task          |  | Rolled Up Task          |  | External Tasks   |  |
| Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
| Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
| Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
| Summary       |  | Split                   |  |                  |  |



## John S. Brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Friday, August 07, 2009 9:25 AM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** mhart@agrium.com; kritter@norwestcorp.com; JBWillia@agrium.com; cemmons@norwestcorp.com; pkos@norwestcorp.com; dtanner@deq.state.id.us; strater4@comcast.net  
**Subject:** Central Farmers Remedial Action Construction Progress Update  
**Attachments:** 080709 CF remedial action construction progress schedule.pdf

Mark,

On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Approximately one-third of the project is completed. Since our last update, work to complete the remedial actions at the site included:

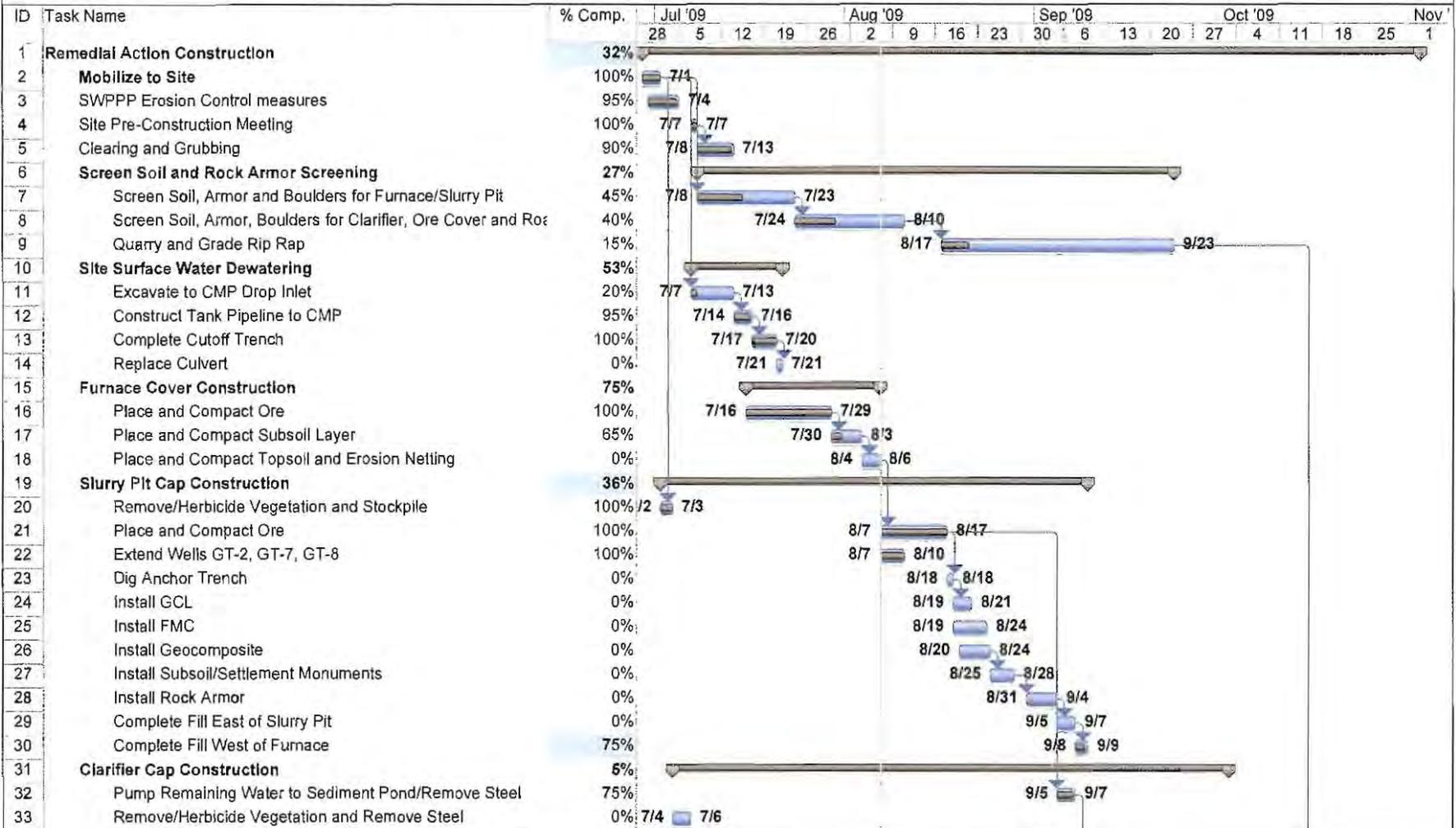
- Ore excavation, transport, placement, grading and compaction of ore in one-foot lifts on the slurry pit and surrounding the furnace;
- Placement of outer clay beyond the anchor trench alignment around the slurry pit;
- Screening of the required class materials from Dud Hollow to complete the covers;
- Surveying and compaction testing;
- Extension of monitor wells GT-2, GT-7 and GT-8;
- Bentonite shell capping of the furnace;
- Final surface grading completion of the Tank Spring pipeline and drainage trench;
- Final subgrade cuts on slurry pit and furnace;
- As-built subgrade survey of furnace;
- IDEQ site inspection with Doug Tanner, Mark Jeffers and Mitch Hart (Agrium)
- Grubbing and dewatering at the clarifier;
- Placement of subsoil in one-foot lifts on the furnace, and;
- Routine H&S daily meetings and monitoring. We have not encountered phosphine or HCN in any excavation work and dust level concentrations have not exceeded action levels.

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,

JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



|   |               |  |                         |  |                  |  |
|---|---------------|--|-------------------------|--|------------------|--|
| Project: 080709 CF remedial action co<br>Date: Fri 8/7/09 | Task          |  | Rolled Up Task          |  | External Tasks   |  |
|   | Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
|   | Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
|   | Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
|   | Summary       |  | Split                   |  |                  |  |



## John S. Brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Saturday, August 22, 2009 4:49 PM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** mhart@agrium.com; JBWillia@agrium.com; kritter@norwestcorp.com; Douglas.Tanner@deq.idaho.gov; cemmons@norwestcorp.com; White, Dan; Regis Seng (rseng@croworld.com); hstich@croworld.com; pkos@norwestcorp.com  
**Subject:** Central Farmers Georgetown Canyon RA Construction Progress Update  
**Attachments:** 082209 CF REMEDIAL CONSTRUCTION PROGRESS TRACKING.pdf

Mark,

On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Approximately 58 percent of the project is completed. Since our last update to you on August 7, work to complete the remedial actions at the site included:

- Daily H&S briefings and work activity/progress meetings;
- SWPPP inspections;
- Discussion with IDEQ regarding clarifier cover design and clarifier cap modifications;
- Shaping and subgrade surveying of the ore surface on the slurry pit cover;
- Screening of slurry surface and additional watering and compaction of ore and rock/wood removal to prep for liner;
- Removal of survey settlement targets from slurry ore subgrade;
- Transporting and placement of 2 one-foot lifts of subsoil on furnace;
- Placement and compaction of topsoil layer on furnace cover and removal of large rocks from surface;
- As-built survey on furnace cover;
- Survey of Tank Springs channel alignment;
- Grade surveys;
- Material stockpile surveys;
- CQA surveying;
- Excavation and screening and surveying of borrow materials generated from Dud Hollow;
- Dozing, excavating and hauling ore from Phosphoria;
- Coordination with SS Phosphate for truck haulage;
- Set up frac tank and begin pumping from GT-Deep for construction water and dust control water;
- Pumping of remaining water from the clarifier to the sediment pond;
- Grubbing from inside clarifier and removal of metal;
- Hauling, placement and compaction of reject ore into the clarifier to stabilize sludge;
- Drilling southwest corner of Phosphoria Gulch in preparation for blasting ~5000 yards of rip rap and armor;
- Blasting and quarrying limestone;
- Hauling, placement, dozing and compaction of bulk soil in fill area north of furnace to grade;
- Excavation of the anchor trench around slurry pit;
- Setting new bench alignment within Phosphoria Gulch on north slope in native soil;
- Receipt of roll certificates and logging in of accepted geomembranes for caps;
- IDEQ site inspection on August 20 with Doug Tanner, Mark Jeffers and Mitch Hart (Agrium);
- Subgrade acceptance and placement of GCL on slurry pit subgrade surface;
- Placement of the FML (LLDPE) on the GCL layer;
- On-site liner CQA oversight;
- Obtaining and testing destruct samples from FML;

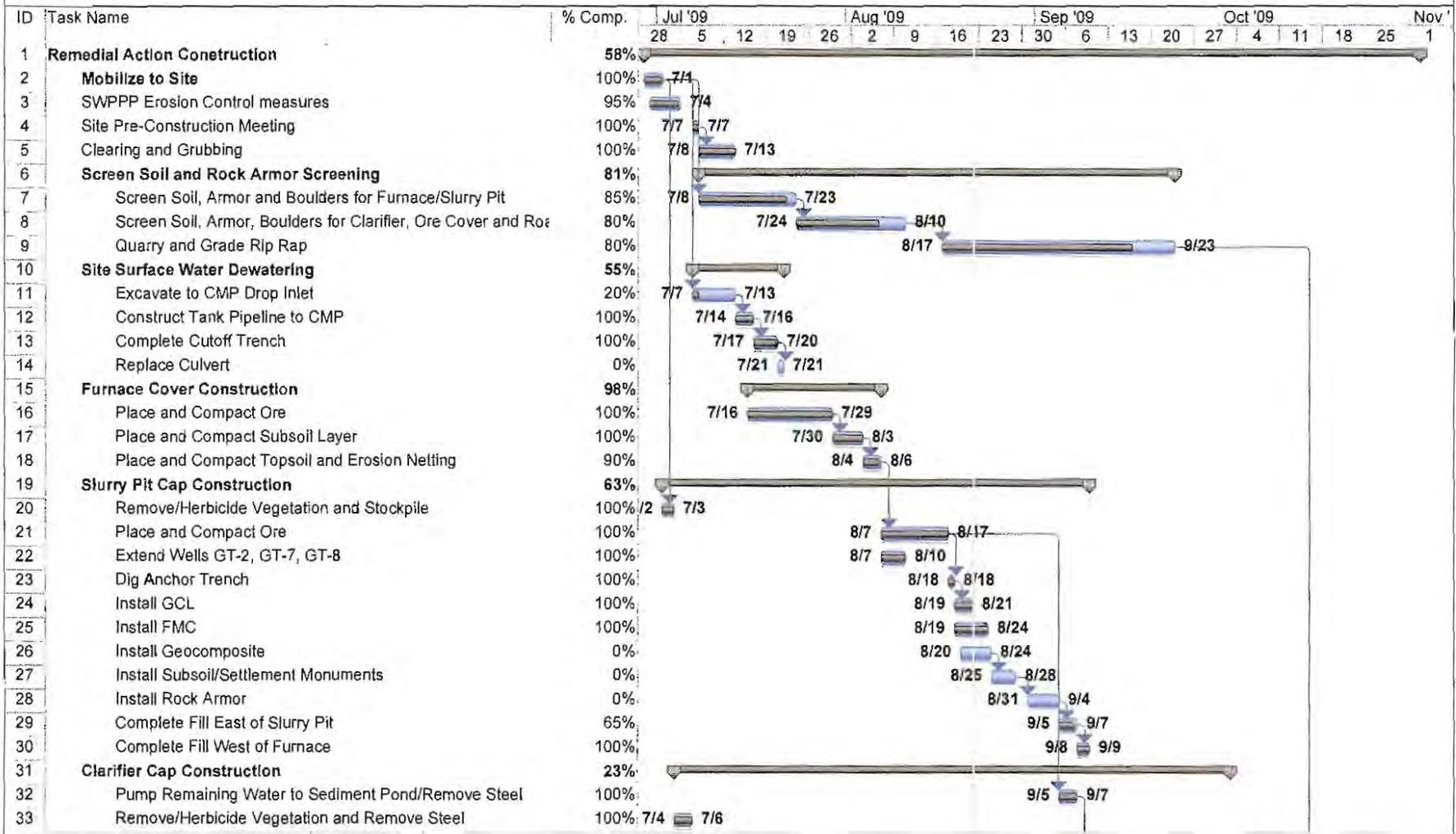
- Outside laboratory testing and reporting (all tests passed peel and shear benchmarks);
- Anchor trench compaction, and;
- Routine H&S daily monitoring. We have not encountered phosphine or HCN in any excavation work and dust level concentrations have not exceeded action levels.

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,

JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



|  |               |  |                         |  |                  |  |
|--|---------------|--|-------------------------|--|------------------|--|
| Project: 082209 CF remedial action co<br>Date: Sat 8/22/09 | Task          |  | Rolled Up Task          |  | External Tasks   |  |
|  | Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
|  | Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
|  | Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
|  | Summary       |  | Split                   |  |                  |  |



## John S. Brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Saturday, September 12, 2009 11:08 AM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** mhart@agrium.com; cemmons@norwestcorp.com; JBWillia@agrium.com; kritter@norwestcorp.com; Douglas.Tanner@deq.idaho.gov; Darren Jorgensen (djorgensen@norwestcorp.com)  
**Subject:** Central Farmers Remedial Action Construction Progress Update  
**Attachments:** 091209 CF remedial action construction progress schedule.pdf

Mark,

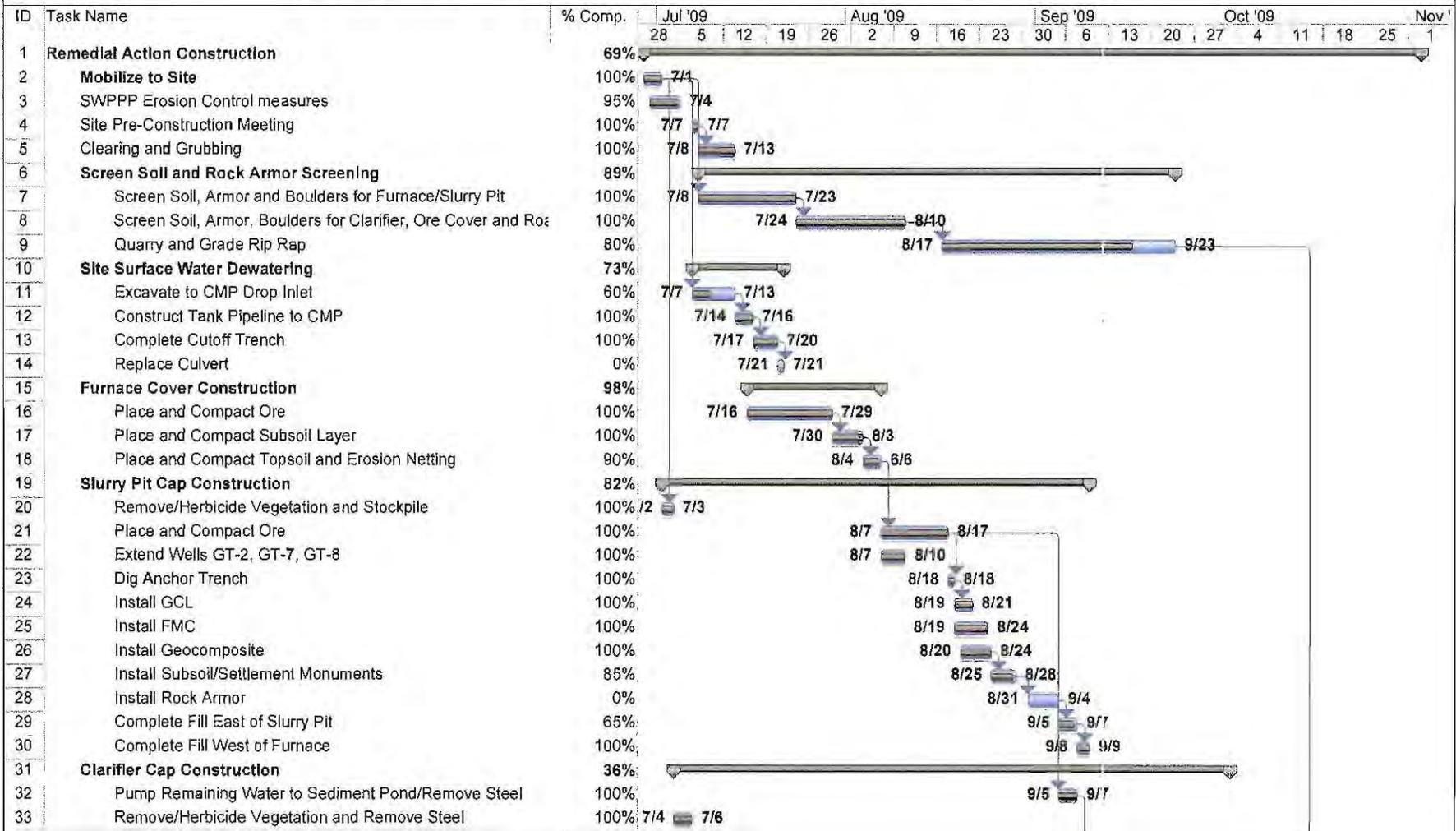
On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Nearly 70 percent of the project is done. Since our last update to you on August 22, work at the site included:

- Daily H&S briefings and work activity/progress meetings;
- IDEQ and Forest Service site inspection on August 26 including Bruce Olenick, Dennis Duehren, Sherri Clark and Doug Tanner;
- SWPPP inspections;
- Fugitive dust control;
- Anchor trench compaction and compaction testing at the slurry pit cover;
- Placement of the geocomposite layer on the slurry geomembrane cover;
- On-site liner CQA oversight;
- Transporting and placement and track compaction of one-foot lift of ½ inch minus cushion soil on slurry cover;
- Transporting and placement and track compaction of 1-foot lift of 3 inch minus soil and monument placements on slurry cover;
- As-built survey on slurry pit anchor trench and geocomposite tail;
- Survey and excavation of Tank Springs channel above drop inlet;
- CQA survey results analysis and material calculations of as-built slurry ore subgrade and furnace cover;
- Completion of excavation and screening of borrow materials from Dud Hollow;
- Winterizing Dud Hollow and reconnecting historic site bypass road through borrow area;
- Dozing, excavating and hauling ore from Phosphoria Gulch;
- Coordination with SS Phosphate for truck haulage;
- Surveying at the clarifier;
- Hauling, placement and compaction and compaction testing of reject ore and sludge in the clarifier;
- Hauling ore from Phosphoria Gulch to clarifier;
- Placement, grading and compaction, and compaction testing of up to 19 lifts of ore within clarifier;
- Placement and compaction of ore to one foot above clarifier concrete ring;
- Drainage excavation and grading around the north end of clarifier;
- Hauling of boulders to clarifier;
- Test pit excavation to native soil and logging and survey in the ore area to define the north extent of the phosphorus and finalize anchor trench alignment;
- Hauling, placement, dozing and compaction of bulk soil in fill area north of furnace to grade;
- Cutting bench within Phosphoria Gulch on north slope of canyon in native soil;
- Routine H&S daily monitoring at the clarifier and during test pit excavations. We have not encountered phosphine or HCN in any excavation work and dust level concentrations have not exceeded action levels, and
- Labor Day Break Sept 3<sup>rd</sup> through Sept 8;

Please contact me if you have any questions regarding this schedule or the work in progress. Also, we expect that liner installation on the clarifier will commence September 16 if you would like to visit the site to observe, let me know!

Best Regards,  
JB

## UPDATED REMEDIAL ACTION PLAN SCHEDULE CENTRAL FARMERS FERTILIZER FACILITY GEORGETOWN CANYON IDAHO



|  |               |  |                         |  |                  |  |
|--|---------------|--|-------------------------|--|------------------|--|
| Project: 091209 CF remedial action co<br>Date: Sat 9/12/09 | Task          |  | Rolled Up Task          |  | External Tasks   |  |
|  | Critical Task |  | Rolled Up Critical Task |  | Project Summary  |  |
|  | Progress      |  | Rolled Up Milestone     |  | Group By Summary |  |
|  | Milestone     |  | Rolled Up Progress      |  | Deadline         |  |
|  | Summary       |  | Split                   |  |                  |  |



## John S. Brown

---

**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Friday, September 25, 2009 1:32 PM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** Douglas.Tanner@deq.idaho.gov; mhart@agrium.com; JBWillia@agrium.com; pkos@norwestcorp.com; kritter@norwestcorp.com; cemmons@norwestcorp.com  
**Subject:** Central Farmers Remedial Action Construction Progress Update  
**Attachments:** 092509 CF Progress update.pdf

Mark,

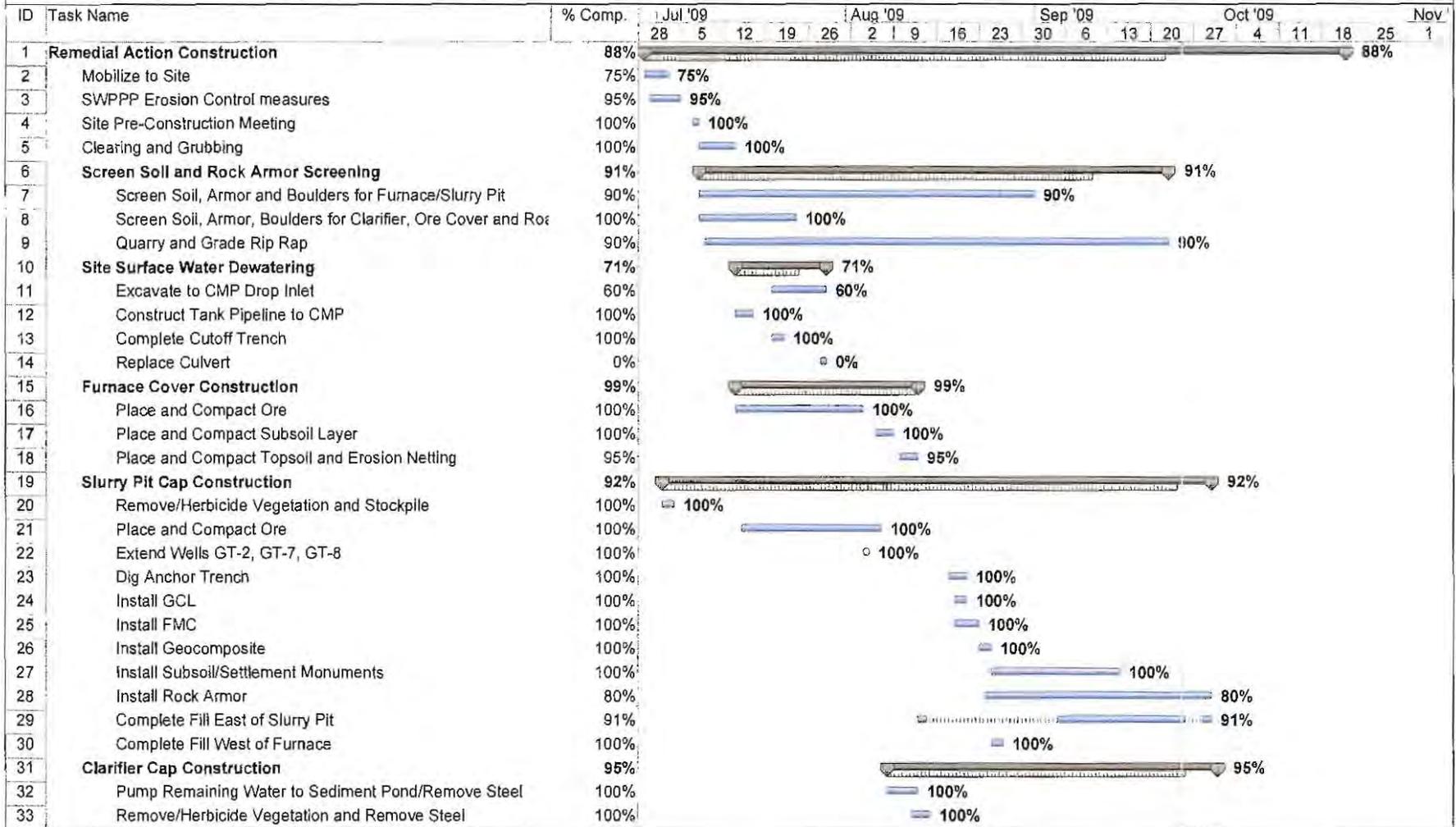
On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Nearly 88 percent of the project is done. Since our last update to you on September 12, work at the site included:

- Daily H&S briefings and work activity/progress meetings;
- IDEQ and Forest Service site walk to discuss the CMP bypass channel design;
- SWPPP inspections;
- Fugitive dust control;
- Placement of most of the armor on the slurry cover;
- Completion of armor materials screening from Dud Hollow and Phosphoria;
- Surveying at the clarifier;
- Surveying at the ore cover;
- Survey of fill north of furnace cover;
- Liner CQA oversight;
- Completion of the hauling, placement and compaction and compaction testing of reject ore and sludge in the clarifier – all tests passed compaction requirements;
- Surveying, hauling, placement, dozing and compaction of bulk soil in fill area north of furnace to grade;
- More work on the bench within Phosphoria Gulch on north slope of canyon in native soil and grading of the ore to complete slope drainage;
- Completion of the anchor trench and installation of the GCL, LLDPE and geocomposite on the clarifier;
- Destructive testing on the clarifier liner - all tests passed;
- Compaction testing of the clarifier anchor trench;
- Placement of monuments, cushion soil and subsoil at the clarifier;
- Completion of the anchor trench and installation of the GCL, LLDPE and geocomposite on the ore cover;
- Destructive testing on the ore cover liner - all tests passed;
- Compaction testing of the ore cover anchor trench;
- Placement of cushion soil and subsoil at the ore cover;
- Routine H&S daily monitoring at the clarifier and ore cover during excavations. We have not encountered phosphine or HCN in any excavation work and dust level concentrations have not exceeded action levels.

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,  
JB

2009 REMEDIAL ACTION CONSTRUCTION PROGRESS SCHEDULE - CENTRAL FARMERS GEORGETOWN CANYON FACILITY



Project: 092509 CF remedial action cc  
Date: Fri 9/25/09

|                   |  |                    |  |                    |  |
|-------------------|--|--------------------|--|--------------------|--|
| Critical          |  | Baseline           |  | Project Summary    |  |
| Critical Split    |  | Baseline Split     |  | External Tasks     |  |
| Critical Progress |  | Baseline Milestone |  | External Milestone |  |
| Task              |  | Milestone          |  | Deadline           |  |
| Split             |  | Summary Progress   |  |                    |  |
| Task Progress     |  | Summary            |  |                    |  |

2009 REMEDIAL ACTION CONSTRUCTION PROGRESS SCHEDULE - CENTRAL FARMERS GEORGETOWN CANYON FACILITY

| ID | Task Name                            | % Comp.    | Jul '09 |   |    |    |    | Aug '09 |   |    |    |    | Sep '09 |    |    |    | Oct '09 |    |    |    | Nov '09 |  |
|----|--------------------------------------|------------|---------|---|----|----|----|---------|---|----|----|----|---------|----|----|----|---------|----|----|----|---------|--|
|    |                                      |            | 28      | 5 | 12 | 19 | 26 | 2       | 9 | 16 | 23 | 30 | 6       | 13 | 20 | 27 | 4       | 11 | 18 | 25 | 1       |  |
| 34 | Place and Compact Ore                | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 35 | Dig Anchor Trench                    | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 36 | Install GCL                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 37 | Install FMC                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 38 | Install Geocomposite                 | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 39 | Install Subsoil/Settlement Monuments | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 40 | Place Subsoil                        | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 41 | Place Topsoil                        | 60%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 42 | Improve Drainage Around Clarifier    | 40%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 43 | <b>Ore Storage Area Reclamation</b>  | <b>81%</b> |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 44 | Install GCL                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 45 | Install FMC                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 46 | Install Geocomposite                 | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 47 | Install Soil Cover and Boulders      | 80%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 48 | Grade Roads Above Ore Pile Slope     | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 49 | Excavate Terraces/Ditches            | 85%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 50 | Place Brush Barrier/Traffic Boulders | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 51 | <b>Site Reclamation</b>              | <b>5%</b>  |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 52 | Reclaim Haul Roads                   | 20%        |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 53 | Reclaim Borrow Area                  | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 54 | Fertilize and Seed Site/Covers       | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 55 | Fertilize and Seed Haul Roads        | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |
| 56 | Cleanup/Demob                        | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |    |         |    |    |    |         |  |

Project: 092509 CF remedial action co  
Date: Fri 9/25/09

|                   |  |                    |  |                    |  |
|-------------------|--|--------------------|--|--------------------|--|
| Critical          |  | Baseline           |  | Project Summary    |  |
| Critical Split    |  | Baseline Split     |  | External Tasks     |  |
| Critical Progress |  | Baseline Milestone |  | External Milestone |  |
| Task              |  | Milestone          |  | Deadline           |  |
| Split             |  | Summary Progress   |  |                    |  |
| Task Progress     |  | Summary            |  |                    |  |

## John S. Brown

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**From:** John S. Brown [strater4@comcast.net]  
**Sent:** Friday, October 09, 2009 1:14 PM  
**To:** mark.jeffers@deq.idaho.gov  
**Cc:** Douglas.Tanner@deq.idaho.gov; mhart@agrium.com; JBWillia@agrium.com; kritter@norwestcorp.com; White, Dan; Regis Seng (rseng@croworld.com); pkos@norwestcorp.com; cemmons@norwestcorp.com  
**Subject:** Central Farmers Remedial Action Construction Progress Update  
**Attachments:** 100909 CF Progress update.pdf

Mark,

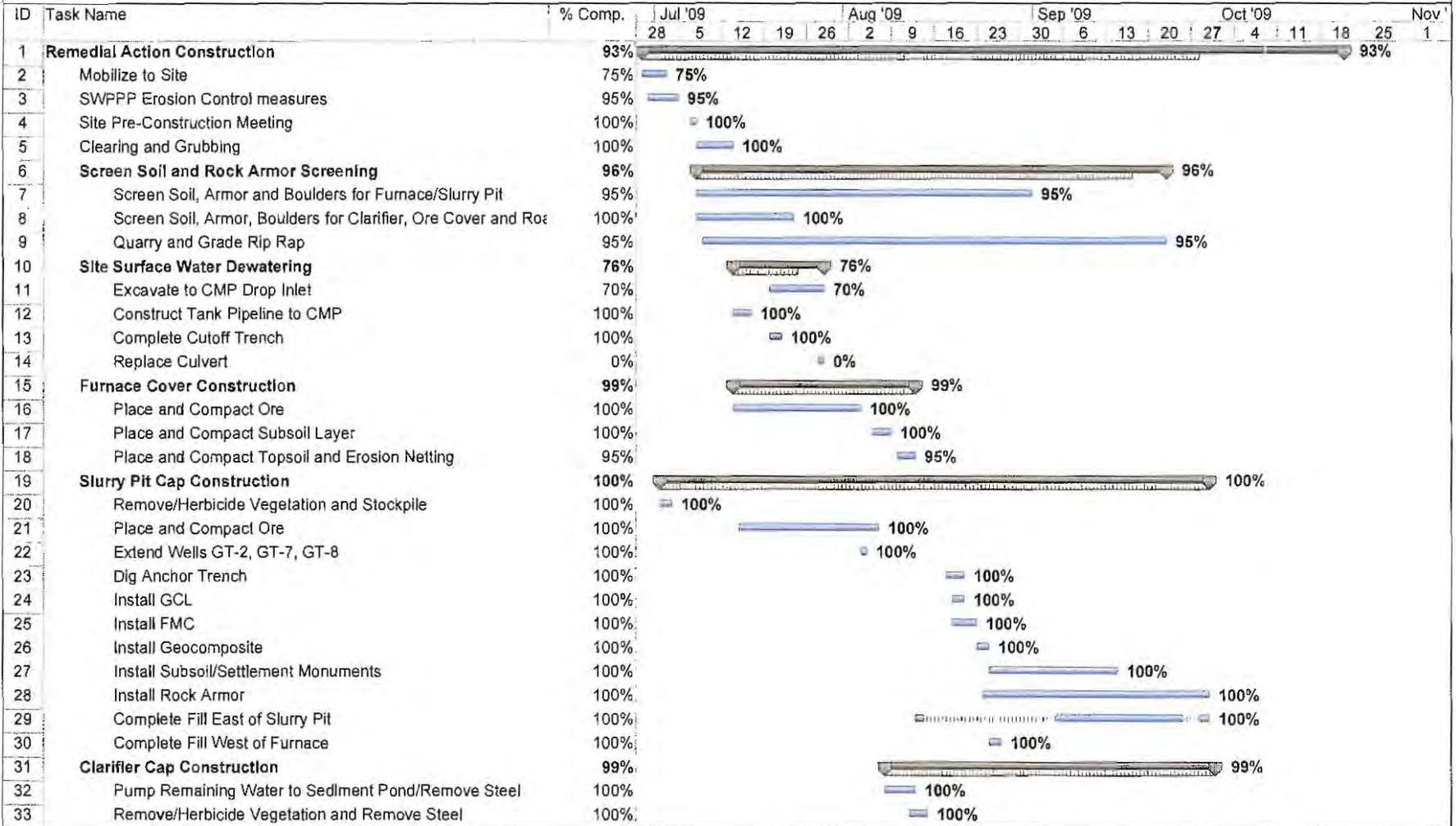
On behalf of Nu-West, please find attached the updated progress schedule detailing the percent complete of the tasks required to implement the remedial actions for the site. Approximately 93 percent of the project is done. Since our last update to you on September 25, work at the site included:

- Daily H&S briefings and work activity/progress meetings;
- SWPPP inspections;
- Fugitive dust control;
- Rip rap gradation with grizzly;
- Completion of the armor placement on the slurry cover;
- CQA Surveying at the clarifier;
- CQA Surveying of armor rock at the slurry pit;
- Drainage improvement, fabric and rip rap placement and culvert installation for the clarifier;
- CQA Surveying at the ore cover;
- CQA Survey of fill north of furnace cover;
- Construction on the Tank Spring Channel including excavation and fabric placement and rip rap placement;
- Completion of hauling, placement, dozing and compaction of bulk soil in fill area north of furnace to grade;
- Rip rap of 3 spillways on the furnace cover;
- Drainage improvements in Phosphoria Gulch;
- Procurement of straw wattle for Phosphoria;
- More work on the bench within Phosphoria Gulch on north slope of canyon in native soil and grading of the ore to complete slope drainage;
- Completion of the topsoil placement on the clarifier;
- Baseline survey on the clarifier and slurry pit settlement monuments
- Completion of the subsoil and armor on the ore cover and drainage regrade in this area;
- Routine H&S daily monitoring at the clarifier and ore cover during excavations. We have not encountered phosphine or HCN in any excavation work and dust level concentrations have not exceeded action levels. Intrusive work is now completed

Please contact me if you have any questions regarding this schedule or the work in progress.

Best Regards,  
JB

2009 REMEDIAL ACTION CONSTRUCTION PROGRESS SCHEDULE - CENTRAL FARMERS GEORGETOWN CANYON FACILITY



Project: 100909 CF remedial action co  
Date: Fri 10/9/09

|                   |  |                    |  |                    |  |
|-------------------|--|--------------------|--|--------------------|--|
| Critical          |  | Baseline           |  | Project Summary    |  |
| Critical Split    |  | Baseline Split     |  | External Tasks     |  |
| Critical Progress |  | Baseline Milestone |  | External Milestone |  |
| Task              |  | Milestone          |  | Deadline           |  |
| Split             |  | Summary Progress   |  |                    |  |
| Task Progress     |  | Summary            |  |                    |  |

2009 REMEDIAL ACTION CONSTRUCTION PROGRESS SCHEDULE - CENTRAL FARMERS GEORGETOWN CANYON FACILITY

| ID | Task Name                            | % Comp.    | Jul '09 |   |    |    |    | Aug '09 |   |    |    |    | Sep '09 |    |    | Oct '09 |   |    |    | Nov '09 |   |
|----|--------------------------------------|------------|---------|---|----|----|----|---------|---|----|----|----|---------|----|----|---------|---|----|----|---------|---|
|    |                                      |            | 28      | 5 | 12 | 19 | 26 | 2       | 9 | 16 | 23 | 30 | 6       | 13 | 20 | 27      | 4 | 11 | 18 | 25      | 1 |
| 34 | Place and Compact Ore                | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 35 | Dig Anchor Trench                    | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 36 | Install GCL                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 37 | Install FMC                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 38 | Install Geocomposite                 | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 39 | Install Subsoil/Settlement Monuments | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 40 | Place Subsoil                        | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 41 | Place Topsoil                        | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 42 | Improve Drainage Around Clarifier    | 65%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 43 | <b>Ore Storage Area Reclamation</b>  | <b>86%</b> |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 44 | Install GCL                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 45 | Install FMC                          | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 46 | Install Geocomposite                 | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 47 | Install Soil Cover and Boulders      | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 48 | Grade Roads Above Ore Pile Slope     | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 49 | Excavate Terraces/Ditches            | 90%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 50 | Place Brush Barrier/Traffic Boulders | 10%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 51 | <b>Site Reclamation</b>              | <b>20%</b> |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 52 | Reclaim Haul Roads                   | 20%        |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 53 | Reclaim Borrow Area                  | 100%       |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 54 | Fertilize and Seed Site/Covers       | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 55 | Fertilize and Seed Haul Roads        | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |
| 56 | Cleanup/Demob                        | 0%         |         |   |    |    |    |         |   |    |    |    |         |    |    |         |   |    |    |         |   |

Project: 100909 CF remedial action co  
Date: Fri 10/9/09

|                   |  |                    |  |                    |  |
|-------------------|--|--------------------|--|--------------------|--|
| Critical          |  | Baseline           |  | Project Summary    |  |
| Critical Split    |  | Baseline Split     |  | External Tasks     |  |
| Critical Progress |  | Baseline Milestone |  | External Milestone |  |
| Task              |  | Milestone          |  | Deadline           |  |
| Split             |  | Summary Progress   |  |                    |  |
| Task Progress     |  | Summary            |  |                    |  |

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>7/6/09</u>    |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>5 -10 MPH</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>62-85</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 5         | 54          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA crew spent the first part of the day working on SESC controls along the top of the ore stockpile in Phosphoria Gulch. The dozer and compactor were used to construct diversion berms along the top of the stockpile. Two parallel lines of earthen berms were constructed per the SESC design drawing provided to CRA by John Brown last week. The second half of the day was spent using the excavator to clear trees along the top edge of the borrow source near Dud Hollow and the dozer was used to push fill material downhill for future transport to the screen. Dust control on Georgetown Canyon Road as required using water from clarifier. Kimball Equipment delivered screening plant at the end of the day. Modern Equipment delivered the second Komatsu 300 haul truck this morning.

### Site Visitors:

Kimball Equipment, Modern Equipment, & HLE

### Meetings:

Discussed tank spring diversion materials submittal with JB, which was approved as submitted. Discussed seep ring construction, drop inlet construction, piping tie-ins, collection piping, riser extension and lid, etc; all of which were acceptable. The required bentonite backfill will be required around the seep rings, with approx 4'X4'X6' placed at each. The inlet structure, piping, and tie-ins will be field adjusted as required. JB and Dan will verify the diameter of the 36" CMP riser as the diameter may be larger than 36".

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

CRA crew reviewed the JSA for haul truck operation and also discussed hazards associated with working on/near/around high walls and steep slopes. Also discussed traffic safety as CRA was starting to cut materials from Dud Hollow borrow area above Georgetown Canyon Road.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

HLE arrived onsite around 2:00 PM to collect an ore sample to run ATSM D698 (proctor) on in preparation for ore placement later in the week (approx 5 hours travel and onsite sample collection).

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PROJECT MANAGER

\_\_\_\_\_  
DATE

# CRA Services

# Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                  |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>7/7/09</u>    |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>5 -10 MPH</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>44-78</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 5         | 55.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA crew started the day by using the excavator to stockpile rock in the borrow area near Dud Hollow. The rock was unearthed yesterday as soil was being cut for the fill material. Later in the day, the excavator returned to the top of the borrow area, along with the dozer, to continue clearing small trees and cutting soil and pushing/casting over the edge. Traffic control was maintained as one person stood watch on the road anytime work was being performed on the upper slopes of the borrow. While dirt was being pushed/casted over the edge, two men stood watch upstream and downstream of the work areas. Cars were not allowed to proceed until the dozer and excavator operators could be contacted and stopped. At the end of the day, the excavator moved back down the slope and stockpiled rock again. Discussed drop inlet construction with JB mid morning and visited the work area. Verified that the specified 36" ADS riser will fit over the existing CMP riser, which is only 24" diameter. Based on site conditions at the drop inlet, some field adjustments of the elevations may be required.

### Site Visitors:

**Modern Equipment** onsite from 11:00 to 3:00 installing fire extinguishers on equipment and performing other minor equipment repairs. **Kimball Equipment** onsite from 3:00 to 6:00 to setup the screen plant and change the secondary screen to the required size.

### Meetings:

Pre-Construction Meeting held between 7:30 and 8:30. Attended by Dan White, Regis Seng, Howard Stich, and JB. Topics of discussion included stormwater management BMP's and routine inspections, the QA Plan, lines of communication, compaction testing, surveying, daily safety and progress meetings, liner material staging, elemental phosphorous safety, air monitoring, herbicide, clarifier work, filter fabric, straw waddles, dust generation at the screen plant, schedule updates, and equipment decontamination.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed heat stress and hydration, radio communication, working on slopes, falling debris, and traffic control.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PROJECT MANAGER

\_\_\_\_\_  
DATE

# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                 |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>7/8/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-15 MPH</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>42-72</u>    |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 8         | 81.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   | 2         | 10          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to cut fill material from the borrow area. The excavator and dozer continued to cast/push material down slope. Traffic control signage was put up along the road, and a spotter maintained at all times. Dewatering near the furnace/slurry pit began around 9:00 am. A sump was excavated near the drop inlet to pump from. The water level was lowered enough to expose the existing 18" line, so the inlet could be cleaned to increase flow. Later on, a second sump was excavated closer to the furnace in an effort to dry up the marshy ground around the base. Late in the day, the excavator was used to begin re-diverting the Tank Spring flow, immediately East of the furnace. Air monitoring was continuous during all excavation work in the EZ, for HCN and PH3. A peak reading of 1.78 ppm PH3 was observed late in the day near the furnace, upon which all work stopped and JB was notified. CRA will discuss the issue in at the tailgate meeting, and monitor the work area before re-entering in the morning. Kimball Equipment was onsite with a sales representative and a field technician to go over screen plant operation and do some test screening with the crew. Dust was minimal during screening.

### Site Visitors:

**Kimball Equipment** onsite from 12:30 to 4:00 to continue setup of the screen plant and train operators. **Pro-Rentals (Modern Equip)** onsite to pickup 20 kW generator and replace with 40 kW.

### Meetings:

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed traffic control, dust control, falling debris, signage along the road, and heat stress. Reviewed HASP with new personnel to the site (Ken Schmitt, Kevin Baumgartner, and Alberto Diaz). Air monitoring for HCN and PH3 during all subsurface work. No hits were detected near the drop inlet, however, a PH3 reading of 1.78 ppm was detected near the furnace along the tank spring diversion. JB was notified and the issue will be addressed before work continues in the area tomorrow.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

Had meeting with Scherbel Surveyors (Karl Scherbel and Alan Roberts) between 9:30 am and 12:00 pm. Dan White and JB went over the surveying requirements for the site and did a site walk, visiting the Tank Spring area, Slurry Pit, Furnace, Ore Pile, and Clarifier. A base topo will be provided to Scherbel by Norwest/JB, which will be used to compare future layers to for payment quantities.

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                 |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>7/9/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-15 MPH</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-71</u>    |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 83          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Stockpiled rock along toe of slope at borrow area with excavator for the first part of the day. Dozer continued to work on top of borrow area cutting fill material. Screen plant operated for several hours this morning, with the loader feeding soil from directly across the road. In the afternoon, the excavator returned to the top of the borrow, casting material from the upper bench down to the dozer to push off. Clearing of pines, willows, and aspens on the slurry pit began around 1:30 pm. Crew stockpiled brush west of slurry pit along fence for future disposal. Stumps we marked and herbicide will be applied tomorrow or Saturday. Air monitoring continuously while working in slurry pit.

### Site Visitors:

Dan Johnson toured the site and received site specific training late in the day. He will start tomorrow as an operator working for CRA.

### Meetings:

Discussed tank spring diversion construction with JB. The final shop drawings from ISCO were reviewed and approved, for the drop inlet and seep rings. The base of the box does not need to be a large concrete pad as shown on the updated drawings; instead we may use wood or concrete sleepers, or compacted gravel. The silica rock only needs to go up to a high enough elevation to bed the 16" pipe, if we run out beyond that point we will use 2" minus material from the screen, or another site soil to backfill to grade.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed Screen Plant JSA, phosphine gas detection yesterday along tank spring diversion, biological hazards, communication, dust, and public relations (ATV's in and around site). Monitored work area where phosphine was detected yesterday afternoon; no PH3 detected. Likely an instrument glitch (quick spike) per Jeff Maranciak of CRA (Regional HSM). Performed JSA meeting around 1:00 pm for clearing on the slurry pit; attended by Dan, Tim, Ken, and Alberto. No HCN or PH3 readings during clearing.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

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# CRA Services

## Supervisor's Daily Report

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|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>7/10/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>40-70</u>   |

| On-Site Personnel and Man-hours: |       |           |             |       |       |           |             |       |       |           |             |
|----------------------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| Trade                            | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
| CRA                              | 1st   | 9         | 93.5        |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor                 | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing                      | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting                | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS                              | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**  
 Excavator worked on cutting tank spring diversion ditch. Dewatering continued from the sump immediately upstream of the drop inlet, with water pumped around the slurry pit over to the south all day. Air monitoring in work areas near tank spring and slurry pit was continuous for HCN and PH3. Bentonite for seep rings on tank spring diversion piping was delivered around 9:00 am. Dozer continued to work cutting fill material in borrow area through late morning. Loader and screen plant screening select fill, bulk fill, and rip rap. Komatsu D61 dozer decontaminated and prepared for demobilization; Modern Equipment to replace with CAT D6R. Dozer used to clear additional stockpile area east of screen around noon, walked area with operator and cleared with JB prior to any stripping; pipe, valves, concrete, rebar, etc painted for visibility. No active utilities in new stockpile area. CAT D6R delivered around 1:00 pm, began using to cut fill material instead of D51. Excavator finished cutting tank spring ditch to sump, then went back to borrow area around 2:30 pm to cast soil to dozer to push off. Clearing continued this afternoon around the slurry pit. Moved soil away from screen to stockpiles to east; hauled large rock across road.

**Site Visitors:**  
**Robertson Supply** delivered 180 sacks of granular bentonite for installation around the seep ring collars of the 16" HDPE piping for tank spring. Onsite from 8:40 am to 9:10 am. **Modern Equipment** onsite from 1:00 pm to 1:30 pm to deliver CAT D6R and return Komatsu D61.

**Meetings:**  
 JB approved herbicide for use on the slurry pit, Round Up Poison Ivey and Brush Killer.

**Production Delays:**  
 None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**  
 Discussed MSHA bulletin on power haulage fatality, screening operations, traffic, dealing with the public, dust, and clearing and grubbing.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**  
 None

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>7/11/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>48-74</u>   |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 10        | 99          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Dozers and excavator cutting fill material (and rock) in borrow area. Excavator also stripping trees above the dozers, on the upper bench, to open additional area for cut. The D6R cut on the middle bench of the borrow while the D51 cut below and the lower bench. Screen plant run all day, with screened material periodically moved to the appropriate stockpiles to the east. Traffic control (spotter) maintained all day. Periodic dust control on roads as required. Clearing crew continued in slurry pit area to the east towards the tank spring diversion. All willows and other bushes were cut; brush will be collected with the excavator next week and stockpiled. Between 10:00 am and 2:00 pm, herbicide was sprayed on all stumps and roots in and around the slurry pit. Stumps larger than approximately 2" were drilled with a 3/8" bit and concentrated herbicide applied directly. Approximately 2 gallons of herbicide was applied over the entire area east of the slurry pit where the willows were the most dense, after treating individual root masses.

### Site Visitors:

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed MSHA bulliten on 2007 non metal and metal fatalities, traffic, off road vehicles and ATV's in work areas, dust, and clearing and grubbing. Had another breif saftey meeting to discuss herbicide application. Reviewed manufacturers directions, PPE requirements, and weather conditions. Notified others of presence of herbicide and worked upwind of sprayer.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>7/12/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-74</u>   |

**On-Site Personnel and Man-hours:**

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 10        | 32          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

Three man crew worked in borrow area cutting soil and rock. One man worked the screen plant transporting screened material away from the screening plant. The screen plant was not run today.

**Site Visitors:**

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Discussed traffic control as traffic is substantially heavier on Georgetown Canyon Road during the weekend. Of particular concern are ATV's as they run trails that go all around the site and sometimes travel at a high rate of speed.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

None

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# CRA Services

## Supervisor's Daily Report

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|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>7/14/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-72</u>   |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 10        | 95          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   | 2         | 16          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Excavator with thumb worked at clearing remaining brush in the slurry pit area cut last week this morning. Excavator then worked on roughing up grass on the furnace and slurry pit, in the dry areas, by tracking. D6R dozer continued to cut ore. A bench was established above the phosphorous area from which to load trucks from. Pipe materials were delivered today by ISCO, and three (3) rolls of 8 oz geotextile by ESI, just before lunch. The D51 dozer cut in the borrow area for several hours while the loader worked the screen plant. The haul truck was used to collect rock from the screen and haul to the road being built between the ore pile and the slurry pit. After lunch, the excavator with the thumb went up on the ore pile and began loading haul trucks. The material was spread on the south side of the furnace to establish a road around it towards the slurry pit for transport of ore to the slurry pit tomorrow. In all, 47 loads of material were hauled, averaging 20 CY each. Surveyors onsite to stake the 16" culvert, drop inlet, and slurry pit anchor trench. The other excavator worked in the borrow area casting material from the middle bench down to the loader at the screen.

### Site Visitors:

**Modern Equipment:** onsite from 4:00 pm to 5:30 pm to work on loader. **ISCO** onsite from 9:30 am to 10:00 am to deliver 16" culvert pipe and related materials. **ESI (Geodynamics)** was onsite to deliver geotextile fabric for cutoff trench around 10:00 am.

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed CRA's June safety matrix. Also went over site security, sign in/out policy, ground personnel and surveyors, and dust control.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**Sherbel** onsite from 11:20 to 4:10 to stake the culvert pipe, drop inlet, and slurry pit anchor trench. Location seems correct based on JB's test pit locations. Surveyors traveled 2 hrs to site and 1 hour from site.

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>7/15/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>48-80</u>   |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 10        | 94          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   | 2         | 16          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Continued hauling ore with both haul trucks from area at mouth of gulch to the west side of the furnace and up onto the slurry pit. Excavator with thumb loading trucks and D6R grading fill. Screen continued to operate, with D51 dozer cutting fill and rock in borrow for loader to feed screen. D51 moved to ore area around 10:00 am to push ore to excavator for loading for the remainder of the day. Dust control as required along haul routes. After building ore road to slurry pit, began spreading the first lift across the top, staying away from the marshy area to the east. By the end of the day, approximately 2/3 of the slurry pit was covered with the first lift of ore. Sherbel onsite to continue staking at the slurry pit and furnace for ore placement. Also staked centerline of Tank Spring diversion ditch. Modern Equipment delivered a second WA430 loader to the site around 3:00 pm. In all, 90 loads of ore were hauled to the slurry pit area today.

### Site Visitors:

**Modern Equipment:** delivered WA430 loader at 3:00 pm. Ryan Johnson and Paul Sandretto onsite to see how equipment was working out for us. The may switch the 430 loader out for a 320 that will fit into the grizzly box, or put a smaller bucket (<114") on the machine. **Kimball Equipment** onsite to change the screens in the screen plant to 3" primary and 1/2" secondary. The harp screen will not work with the larger upper, so all are now fixed deck screens. This change out was at no charge. **Pro Rentals:** Delivered trench compactor, 6000 kW generator, and Kubota RTV900 to the site around 3:30 pm.

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed MSHA bulliten on powered haulage which covered a number of safety tips and procedures for off road truck operation. Also covered dust control, ground personnel, site visitors, and housekeeping. Air monitoring for HCN, PH3, and dust throughout the day; no hits of HCN or PH3. Dust levels acceptable.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**Sherbel** onsite from 9:00 am to 3:00 pm to continue initial ore staking at the slurry pit and furnace. Also staked tank spring diversion ditch. Travel time approx. 1 hr each way for crew.

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>7/16/09</u> |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Light</u>   |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-85</u>   |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 93          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   | 1         | 3           |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA started the day by spreading waste rock in the marshy area east of the slurry pit (6 loads). Once complete, the haul truck driver switched to the roller and compacted the ore placed yesterday on the slurry pit and furnace. Existing grade settlement monuments were placed across the top of the slurry pit, with four spaced roughly in a line 75' to 100' apart. The monuments are to track settlement of the existing grade of the slurry pit as ore material is loaded on top. The 16" HDPE pipe fusion began today. The pipe was staged west of the slurry pit for welding. After regrading the ore fill on the slurry pit with the D6R dozer, the D51 dozer was used to cut ore material down the slope to the loading area. In between moving pipe, the excavator with the thumb was used to cut and cast fill material in the borrow area to where the loader cut get to it. Both loaders worked at the screen, with one loading and one moving the screened material to the stockpile area. After lunch, the D6R dozer was used to cut fill in the borrow area while excavator with the thumb was used to cut ore and debris from the top of the ore pile near the opening of the gulch.

Screen delays throughout the day due to moist borrow material. Cut lower slope with excavator late in the day and layed along road to dry. Tried recommendations of ICS (See below) using a large shackle on a rope. This helped, but the weight needs to be heavier; will try D6R ripper tooth tomorrow.

### Site Visitors:

**ICS:** onsite to check on the screen. Moist soil clogging 1/2" screen; recommended using a large weight tied to a rope or chain to bounce on screen while running to break loose clogged material. A ripper tooth, cutting edge, or other piece of steel weighing at least 30 lbs would work. There are other, more costly options, that may help if that doesn't work. Onsite from 11:00 am to 11:30 am. **Modern Equipment:** delivered WA320 loader and returned the WA430 delivered yesterday, as the larger machine will not fit in a grizzly. Onsite from 5:00 pm to 5:30 pm.

### Meetings:

Dan and JB spoke briefly with loader operator for Soda Springs Phosphate. He indicated they would be running 7 trucks, 6 rounds, today. JB made sure he knew where CRA's main work areas were so there would be minimal disruption to CRA. CRA and SSP will both be hauling out of the ore tomorrow, and will have to coordinate. JB and Dan later discussed how SSP should stage trucks and load out material. CRA will monitor SSP today to see how to set up tomorrow. Also discussed additional costs for delay that could be incurred if SSP significantly impedes CRA's operation. Spoke later with JB regarding the density test frequency on ore cover, as there was a discrepancy in the documents. JB agreed to the lower requirement of 6 tests/acre, on each 1 foot lift at the slurry pit and clarifier, every three lifts at the furnace. Following the density tests at the slurry pit (see below), JB agreed to allow CRA to put on multiple lifts then pothole back and do density tests on buried lifts.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed housekeeping, smoking, fire danger in the canyon, and powered haulage safety. The discussion on haulage covered speed, dust, headlight use, communication, and putting boxes down when traveling. Also discussed Soda Springs Phosphate who is loading out ore in Phosphoria Gulch starting today.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**HLE:** onsite to perform density tests on the first lift at the slurry pit - all six tests exceeded 100% compaction. Onsite from 2:00 pm to 3:00 pm.  
**Sherbel:** onsite to shot locations of (4) settlement monuments on the slurry pit, between 4:00 pm and 5:00 pm.

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# CRA Services

## Supervisor's Daily Report

|          |                         |                   |                       |          |                   |       |                        |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>7/17/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-10 (Variable)</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>49-73</u>           |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 85          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore material with one haul truck throughout the day (48 loads). The D51 dozer graded ore at the slurry pit while the 300 excavator with the thumb loaded from the northwest corner of the gulch. The other haul truck hauled dirty rock (10 loads) from the screen plant to the marshy area east of the slurry pit to help solidify the sub-base prior to ore placment. The screen plant ran without problem all morning, with the 430 loader feeding it and the 320 loader moving screened material to the appropriate stockpiles. The screen ran until around 4:00 pm, when wet material was encountered. The 300 excavator was used to pull more material down to the road, and the D6R dozer was used to spread and rip the material which will be allowed to dry overnight. Additional work was performed on the HDPE seep rings, which will be welded together tomorrow.

### Site Visitors:

None

### Meetings:

Spoke with JB regarding a request by Norwest to have CRA excavate (3) potholes down to the CMP culvert running under the site. This would be paid as additional work, and is part of the RFP preparation for the next phase of the Central Farmers Site remediation (Georgetown Creek restoration). Given the tight work schedule and high risk involved, CRA will likely not be able to perform this work. Moreover, one of the test pits is located near CRA's office, and the other is under or near some of the soil/rock stockpiles outside the EZ.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed work hours, site security, foot traffic and ground personnel, dust control and monitoring results, SSP operation in Phosphoria Gulch, work pace and speed - go slow to go fast, equipment idle time, lightning, and utility strikes. Air monitoring periodically throughout the day at the ore pile and the slurry pit and furnace areas. No hits of HCN or PH3 and dust levels acceptable.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

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|          |                         |                   |                       |          |                   |       |                        |
|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>7/18/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-10 (Variable)</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-76</u>           |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 84.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA worked in the ore area cutting the top third of the slope near the opening of the gulch to grade. The 300 excavator cut the knob of soil off at the northwest corner of the gulch while the D51 dozer pushed ore and soil down the slope. Around 1:00 pm, the dozer operator started using the 300 excavator with the thumb to cut down the ore and soil from the top and cast down slope, in areas to steep for the dozer. The fusion of the seep rings was completed today. The screen plant ran throughout the day, with both loaders feeding material and the 320 loader shuttling material to the finished stockpiles. The D51 and D6R dozers were used periodically to turn and aerate moist borrow material. The remainder of the first lift at the slurry pit was compacted this morning using the standard 4 pass roll pattern. Measured select and bulk fill stockpiles around 4:00 pm; 2013 CY select fill (50% complete) and 570 CY bulk fill (7% complete). Based on bid quantities and drawings, approximately 12,000 CY of screened fill will be required (4,000 CY 1/2" minus and 8,000 CY 3" minus).

### Site Visitors:

None

### Meetings:

JB discussed the final approved SWPP with the CRA crew and had everyone sign off that they understood the intent of the plan. JB provided CRA a copy to review and sign. JB indicated all of the inspections would be made by GET, not CRA. CRA would need to take corrective action to repair a faulty BMP, however. But, as of now, everything looked good to him. Later spoke with JB regarding the ore borrow; he thought the operators were doing a nice job of cutting the slope from the top down and approved of the slope (grade). He was not concerned with areas of low ore concentration and was more concerned with getting every bit of ore and shaping the slope. CRA will cut the slope break when the ore is brought down to the appropriate elevation. Also spoke with JB about a few apparently live willows near the anchor trench alignment (east of slurry pit). JB requested CRA apply more herbicide if more was readily available. However, upon further inspection, any apparently live willows were growing from poisoned stumps or we small singular plants. Plants not attached to stumps were pulled.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed housekeeping, smoking, reviewed the screen plant operation JSA (including reviewing the operations manual again with the crew), STAR - Stop Think Assess Review, and SWA - Stop Work Authority. HCN and PH3 monitoring continuous throughout the day - No Hits. Dust monitoring periodically in work zones - dust levels acceptable. Inspected first aid kits, eyewashes, and fire extinguishers.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

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|----------|-------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgeown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>7/19/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>   | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-5 (SE)</u> |
| Manager: | <u>Howard Stich</u>     | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-76</u>    |

**On-Site Personnel and Man-hours:**

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 11        | 40          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Sherbel Surveyor  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA worked at cutting fill and rock material from the borrow source near dud hollow. The D51 and D6R dozers both cut from the upper bench. The loader was used to collect stray rocks that rolled into the road. Traffic control throughout the day.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Discussed traffic control, recreational vehicles, falling rocks, and heavy equipment safety. No air monitoring as CRA worked exclusively outside of the EZ. No visible dust in borrow area as soil was moist and cohesive.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

None

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# CRA Services

# Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>7/20/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-10 (Variable)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-78</u>           |

**On-Site Personnel and Man-hours:**

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 11        | 122.5       |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued to haul ore to the slurry pit all day with two trucks (94 loads). The 300 excavator with the thumb loaded and the D51 dozer placed. Around 1:30 pm, the second lift was started from the north end working south. Work began on the tank spring diversion pipe today; the 300 excavator excavated around the 36" CMP riser down to within a foot of the 60" culvert. The existing 18" line was exposed and was cracked and leaking, filling the excavation. The excavation began getting wet around 4' below grade. The crew worked at temporarily bypassing tank spring with a trash pump, directly into the top of the 36" cmp riser. An electric pump pumped out of the excavation to the east of the slurry pit. Late in the day the first stick (20') of 6" perforated pipe was set, on a 4" bed of silica rock over geotextile, at a 1.5% slope. Concrete (dry) was packed around the 90 where it stubbed into the CMP riser. The invert of the pipe was set approximately 8' below grade; pipe installation and invert witnessed and approved by JB.

**Site Visitors:**

None

**Meetings:**

Spoke with JB regarding what he had considered for topsoil; JB was thinking we could use dinwoody material from slope behind furnace, but would also accept 1/2" minus screened soil. Would like to use dinwoody material to raise grade east of slurry pit - north of furnace to allow for positive drainage around the slurry pit. The use of the adjacent dinwoody material from the slope could be paid under the ore item, or another mutually acceptable pay item, so long as it makes sense for CRA and the client. Regis and JB spoke about the existing 18" culvert from tank spring, which was to stay in place. Now, he would like to remove it, as it has been found to be cracked and broken. JB is unsure if there are additional drainage lines that tie into it or not.

**Production Delays:**

Screen Plant shut down around 11:00 am; ICS to send mechanic ASAP. Water truck down at 2:00 pm, Modern to get new neutral lockout switch and send mechanic ASAP.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Discussed work area congestion with larger crew, interaction with the public (ATV's, kids, pets, COPS, log trucks, haul trucks, etc), SWA, JSA's and task changes, visibility, communication, screen plant safety, sunburn, seat belts, hospital directions, trench safety, and biological hazards. Reviewed HASP with Doug Weaver and Pete Lewis. Monitoring periodically throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>7/21/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-10 (Variable)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>54-82</u>           |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 11        | 122.5       |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling ore for the second lift on the slurry pit with both haul trucks all day (103 loads). The 300 excavator with the thumb continued loading while the D51 dozer placed. The water truck and compactor worked on the slurry pit periodically, as required. Late in the day, the first lift around the north side of the furnace was started. Excavation continued for the tank spring diversion trench and piping. CRA removed the existing concrete pipe mid-day with the approval of JB as it was in the way of the perforated pipe, and was cracked and leaking. Approximately 60' from the existing riser towards the drop inlet was removed. CRA continued excavating and placing the perforated 6" pipe, on a bed of silica rock, placed over geotextile fabric (60' total installed). Approximately 55' of HDPE was installed, set into the hole for the removed concrete pipe, installed on a bed of silica rock wrapped in filter fabric. Screen plant back in operation around 1:30 pm after a faulty stop switch was replaced and fuel filters changed.

### Site Visitors:

**Kimball Equipment (ICS):** onsite from 12:30 to 1:30 to repair the screen plant. **Modern Equipment:** onsite from 3:30 to 5:00 to work on the water truck and 430 loader.

### Meetings:

Spoke with JB throughout the day regarding Norwest's order to stop placing cover soil on the slurry pit. Norwest anticipated performing additional sampling and test pitting in the slurry pit area in order to finalize the cover design. JB and Mitch Hart agreed that CRA can continue with construction and that CRA may do some test pitting as a change order. JB asked that CRA focus on building furnace cover for the next day until he and Mitch meet with Norwest tomorrow. JB and Dan met with two representatives from Independent Drilling of Soda Springs, who will be extending the GT-2, 7, and 8 well casings. Dan provided them with a copy of JB's spreadsheet indicating the desired heights of each well and required materials. CRA will remove bollards and fill around existing wells to provide access for the drill rig. Independent anticipates extending the wells this Saturday. Discussed Tank Spring piping installation with JB; he decided to allow CRA to remove concrete piping if it would expedite pipe installation; water would be picked up by the perforated piping. The concrete piping needs to be set aside as the disposal of this piping is uncertain (may need to be characterized by Norwest).

### Production Delays:

Screen Plant down until 1:30 pm with faulty stop switch. D6R dozer down with bad ignition switch until early afternoon.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Discussed MSHA fatality article related to heavy equipment parking and operation. Also discussed PPE (using gloves) and smoking protocols. Also discussed trench safety relating to the excavation for the tank spring diversion trench. Monitoring periodically throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>7/22/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-12 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>51-84</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 12        | 135.5       |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   | 2         | 14          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore with both haul trucks to the furnace (83 loads). The D51 cut on the ore bench, the 300 excavator w/ thumb loaded, and the D6R graded fill. One foot lifts were compacted and wetted as required throughout the day. Screen plant operated all day with only the 430 loader feeding it and moving material to the appropriate stockpiles. Work continued on the tank spring diversion culvert, with a total of 140 LF of perforated pipe installed to date, silica rock placed, and grade set for the 16" HDPE. Surveyor Scherbel was onsite to set stakes for the terrace on the ore pile, reset a furnace toe stake, and stake the 13 TP's requested by Norwest on the north, south, and east sides of the slurry pit. They also checked the settlement monuments, with a net elevation change of approx. zero (delta from N to S: +0.35', -0.29', +0.07', -0.07').

### Site Visitors:

**United Rentals:** delivered grizzly w/ 3" bars around 1:00 pm.

### Meetings:

Regis, Dan, & JB discussed the TP's required by Norwest before any additional cover is placed on the Slurry Pit. CRA will focus on placing furnace cover and the crew laying pipe, when complete within the next day or so, will excavate the 13 pits, on a T&M change order, using contract rates. The excavation depth is 6', but may be shallower based on groundwater elevations. Also discussed the construction of the drop inlet, as a new detail was supplied late yesterday by Norwest. The new detail calls for 5 CY of bentonite around the drop box, with 6" of sand and 6" of D50 = 3" rock to grade. JB wanted CRA to see if there would be additional costs incurred by the change and discuss with him.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered CRA article on hazards as they relate to energy. Also discussed trench safety, traffic, and dust control. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits. Encountered elemental phosphorous within 50' of drop inlet. Small pieces were smothered to prevent continued burning. Discovered larger areas as trenching progressed; made sure personnel were upwind of smoke and that hot spots were quickly smothered. Monitoring results good in areas where elemental phosphorous was unearthed.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>7/23/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-12 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>51-84</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 12        | 142         |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling ore to the furnace to complete the second lift and begin on the third lift (71 loads). The D6R graded fill while the 300 excavator w/thumb loaded trucks. The other 300 excavator continued trenching for the perforated and culvert pipe. The perforated pipe was completed around 10:30 am, terminating 172 LF from the riser. The elevations of the ends were 6962.56' and 6965.14', equating to a 1.5% slope. The drop inlet area was over excavated and rip rap placed to within a few tenths of grade, then silica rock placed and compacted to grade. Final elevation of the rim of the drop inlet box was 6972.98' (6973.0' design). The seep rings were positioned and pockets excavated for them. The rings were welded to the drop inlet and the assembly was repositioned in the excavation. Two welds remain for tomorrow to complete the pipeline. HLE was onsite to perform density tests on the second slurry pit lift (6) and the third furnace lift (4); all tests exceeded 100% compaction, but moisture was only between 5% to 10%; JB asked that CRA continue to apply water to ore during placement and compaction.

### Site Visitors:

**Modern Machinery:** onsite this afternoon to repair water truck.

### Meetings:

Regis, Dan, & JB discussed drop inlet construction; decided to use 25% bentonite/75% select fill for backfill about drop inlet, compacted. Will set silica rock bedding and rip rap to the lip of inlet. Base foundation constructed of armor rock covered with smaller stone and compacted. JB ran this by the engineer at Norwest (Paul Kaos) who drafted the new detail; approved. JB also approved the liner materials submitted yesterday, as submitted.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered trench safety, working around and above open excavations, mustering points, emergency contacts, communication with equipment operators, elemental phosphorous, and water (hydration). Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**HLE:** onsite to perform density tests on 2nd lift on slurry pit and 3rd lift on furnace; all tests passed; ok to continue with additional lifts.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>7/24/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>Variable 8-12</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>56-81 F</u>       |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 94.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling ore to the furnace to continue on the third lift (82 loads). The D6R graded fill while the 300 excavator w/thumb loaded trucks. The other 300 excavator assisted the fusion welding and completion of the diversion installation, fusion completed @ 11:30 hrs and installation complete, ready for backfilling. Fusion welder and components fueled, cleaned, inspected and staged for p/u from vendor. The hydrostatic grvaity test was successfully completed @ 14:00 hrs with no leaks (JB & TR certified). 12 bollards were removed with the PC 300 for well pipe extensions. Primary equipment operations for day were executed on ore transfer and stockpiling. Additional test pit activity was completed by P. Conrod, T. Reed & JB (2.5 hrs). The PC 300 was used for this activity. Note changes to anchor trench will be needed and discussed further after client review of test pit results.

### Site Visitors:

James williams from Nu-West, 16:35 to 18:00 hrs.

### Meetings:

Brief w/ JB regarding the completion of hydrostatic gravity test of diversion pipe.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic control, public-client interactions, no exception use of required PPE, site coordination, machine movement, screen plant operations and the buddy system, communication with equipment operators, elemental phosphorous, and water (hydration). Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

# CRA Services

## Supervisor's Daily Report

Project: Georgetown Canyon Project number: 56872 Day: Saturday Date: 7/25/09  
 Client: Nu-West/Agrium Location: Georgetown, ID Weather: Sun Wind: Variable 8-12  
 Manager: Howard Stich Project Engineer: Dan White Supt: Regis Seng Temp: 56-78 F

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 9         | 94.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling ore to the furnace to continue on the third lift and the slurry cap (120 loads). The D6R graded fill while the 300 excavator w/thumb loaded trucks with soil production being lead by D-51 on ore slope. The other 300 excavator assisted grading around well points for extensions, and screen plant soil production. Both loaders worked screening operations. . Primary equipment operations for day were executed on ore transfer and stockpiling. Additional grade stake assistance given to slurry cap area, increased marks 1' ft.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic control, public-client interactions, no exception use of required PPE, site coordination, machine movement, screen plant operations and the buddy system, communication with equipment operators, elemental phosphorous, and water (hydration). Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Monitoring for H2S, O2, LEL, and CO when entering excavation - all results within acceptable limits.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>7/26/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cldy</u>    | Wind: | <u>0-13 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-75</u>     |

On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 40          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

Description of Day's Activities:

CRA worked in the ore pile area and the borrow area. The D51 dozer worked stockpiling ore for loading next week. The excavators and 430 loader worked on cutting rocks and soil near dud hollow.

Site Visitors:

Meetings:

Production Delays:

Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic control and work near the road.

Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>7/27/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>0-13 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>48-73</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 100         |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the furnace working on the fourth & fifth lifts (128 loads). The D6R dozer graded fill and the 300 excavator w/ thumb loaded trucks. The D51 dozer pushed ore to the excavator loading. The screen plant operated throughout the day, with the 430 loader feeding the screen and the 320 loader stockpiling. CRA relocated a short section of silt fence along the south end of the slurry pit that was too close for cover completion; this was moved as phosphorous had been discovered in nearby TP's. The backfil of the 16" culvert pipe was started today, with silica rock placed and compacted to just over the top of pipe. The new 36" ADS riser and lid installed at the outfall.

### Site Visitors:

### Meetings:

### Production Delays:

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered the buddy system, slopes, falling debris, communication, overhead loads, distractions, and traffic. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

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PROJECT MANAGER

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DATE



# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>7/29/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt. Cloudy</u> | Wind: | <u>0-10 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>54-71</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 132.5       |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   | 2         | 12.5        |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the furnace as the seventh lift was completed and eighth started (111 loads of ore hauled). Material was loaded out from the eastern portion of the gulch as the north slope has been stripped down to the haul road. Later in the day, loading was moved northeast to the top of the large stockpile on the north slope. Bentonite and gravel were backfilled around the seep rings per the discussion with JB this morning, below. The remianed of the pipeline was backfilled previously, with only the bentonite amended soil backfill left to complete around the drop inlet. The scen plant operated most of the day, except from 11:00 am to 1:30 pm when the secondary screen was changed, by Kimbal Equipment/ICS, to help alleviate clogging problems with 3" primary / 1/2" secondary configuration used previously. During the downtime, rip rap was screened with the grizzly and stockpiled, while the excavator bailed soil off of the middle bench to the road from the borrow area. Scherbel Surveyors onsite to stake ore grades on the slurry pit, set 6 new anchor trench points where it was extended to the south (new drawing issued earlier today). Surveyors also staked 5 ore grades along the top; there is 5.25' to 1.50' of fill remaining on top; less towards the edges.

### Site Visitors:

**Kimball Equipment:** onsite to change out secondary (lower) screen on screen plant to 3/4" minus.

### Meetings:

Spoke with JB regarding ore placement on slurry pit. Some compaction test failed yesterday, but he was not concerned. He asked that we roll the problem areas again before placing the next lift, and keep up on the water. Spoke with JB regarding ore grades at slurry pit. JB thinks we may be high on grade, especially near the anchor trench, but does not want CRA to remove ore above grade. Later in the day, surveyors staked ore grade along the center, and there is between 1.5' and 5.0' of fill remaining (highest fill in the center). Went over revised anchor trench alignment along the south end of the slurry pit; JB is not happy with Norwest's changes, and may decide to change back to original alignment tomorrow, as he is concerned that the new alignment puts the anchor trench under the slope of the furnace cover.

### Production Delays:

PC300 Excavator w/thumb down at 5:00 pm with burst hydraulic line.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered ground personnel and foot traffic, equipment/traffic in Phosphoria Gulch, communications, and site speed. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 11:00 am to 3:15 pm to set grade stakes on slurry pit and restake the south end of the anchor trench based on a revised alignment received from Norwest today.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                  |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>    | Date: | <u>7/30/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Ptly Cloudy</u> | Wind: | <u>0-10 (SE)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>46-69</u>     |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 124         |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   | 2         | 12          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| EIS               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling ore for the ninth lift on the furnace which was completed early this afternoon (64 loads hauled). The D6R continued grading while the 300 excavator loaded trucks. The screen plant continued to operate, with one loader feeding and one loader stockpiling screened soil and rock. Around 2:00 pm, CRA stopped hauling ore and began hauling 1/2" minus screened soil to begin building the anchor trench area around the east side of the slurry pit. Scherbel Surveyors onsite from 10:20 am to 2:30 pm to set grade stakes on furnace and topo screened fill piles. HLE onsite to perform density tests on the 9th furnace lift and 3rd slurry pit lift between 1:00 pm and 2:00 pm. Around 3:00 pm, the haul trucks began hauling select screened fill material to build the anchor trench around the slurry pit on the north and east sides (33 loads).

### Site Visitors:

**Modern Equipment:** onsite throughout the morning and early afternoon (2:00 pm) to repair PC300 w/thumb.

### Meetings:

Spoke with JB regarding furnace cap; JB would like 3' to 6" of 100% coarse bentonite on top, which equates to 3.5 to 7.0 CY. JB would also consider concrete. He expressed concerns about having equipment operate on top of the furnace in fear it will collapse; CRA will try to minimize equipment on the top of the structure. Spoke with JB in the afternoon regarding the furnace slope; Scherbel set slope stakes for the required 3.5:1 slope starting at the design toe, which interested the top of the furnace structure approximately 4' too low. JB discovered the design drawings had the furnace cover shifted, resulting in the slope difference. Dan., Regis, and JB decided to make the slope approx. 3:1 to provide a clean slope without building out the current toe and still covering the stack to the top. The design grades were not that critical according to JB. JB also wanted a slope break on the furnace cover, but Dan and Regis figured the effort to construct one and additional soil required to meet the appropriate grades probably weren't worth it; JB agreed, but still would like to have some sort of slope break if at all possible.

### Production Delays:

PC300 Excavator w/thumb down until 2:00 pm with burst hydraulic line.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered water truck safety in work zones, pedestrians, rough roads, haul trucks, and compacting. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 10:20 am to 2:30 pm to set grade stakes on furnace and topo screened fill piles. **HLE** onsite to perform density tests on the 9th furnace lift and 3rd slurry pit lift between 1:00 pm and 2:00 pm.

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

Project: Georgetown Canyon Project number: 56872 Day: Friday Date: 7/31/09  
 Client: Nu-West/Agrium Location: Georgetown, ID Weather: Ptly Cloudy Wind: 0-15 (NNE)  
 Manager: Howard Stich Project Engineer: Dan White Supt: Regis Seng Temp: 47-69

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 127         |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul screened select fill to the slurry pit to construct the anchor trench encircling the ore until lunch (66 loads). The D51 dozer placed the select fill and the 300 excavator w/ thumb loaded trucks. The select fill was also compacted as the lifts were placed. The D6R worked on cutting ore and stockpiling at the top of the ore pie in the east end of the ore area all day. The screen plant continued to operate throughout the day, with one loader feeding and one loader stockpiling screened soil (1/2" and 3"). After lunch, the trucks switched back to hauling ore to the slurry pit and furnace for the remainder of the day (54 loads). The D51 dozer placed ore and started to finish grade the slurry pit cap the the required 10% slope away from the center. The other 300 excavator operated in the borrow area casting soil down to the road level all day.

### Site Visitors:

### Meetings:

JB, Dan, and Regis discussed liner penetrations as slurry pit, for wells GT-2, 7, and 8. The original bid documents did not include the volclay bentonite panels between the ore lifts and the wells, or the complicated liner terminations now shown in the documents. JB wants to follow the manufacturers recommendations and do what makes sense, and not necessarily follow Norwest's new details. Dan provided FML and GCL liner details to JB from both the manufacturers on recommended methods for sealing the pipe penetrations; JB wants CRA to follow the liner manufacturers recommendations; not Norwest's detail. ESI (liner subcontractor) intended on following the liner manufacturers guidelines. Norwest later agreed to follow manufacturers recommendations for installation. Discussed furnace slope with JB, Dan and Tim set slope stakes for 3:1 slope based on the existing ore toe; appears as though the 3:1 slope will hit the top of the furnace. JB just asked that ore not be placed much higher than the top of the furnace.

### Production Delays:

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered haul truck safety and seat belt usage, traffic onsite and offsite, dust, first aid, fire extinguishers, buddy system, and emergency stops on screen plant. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>8/1/09</u>          |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-12)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>40-71</u>           |

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 121         |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the slurry pit for the remaining ore lifts in the center portion of the cap and continue placement on the top half of the furnace (117 loads). Ore was graded with the D51 dozer and loaded into haul trucks with the 300 excavator w/ thumb. The D6R dozer continued to push ore to the excavator and shape the cut areas as existing ground was exposed. The material was placed in approximately 1' lifts and compacted. Screen continued to operate throughout the day, with both loaders working to feed and stockpile fill and rock materials. The other 300 excavator continued to cast fill and rock from the middle bench of the borrow area to the road level for loading and screening.

### Site Visitors:

### Meetings:

### Production Delays:

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered haul truck safety, haul road maintenance, roll over incidents, traffic onsite and offsite, dust, and the buddy system (related to screen plant maintenance). Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

Project: Georgetown Canyon Project number: 56872 Day: Sunday Date: 8/2/09  
 Client: Nu-West/Agrium Location: Georgetown, ID Weather: Pt Cloudy Wind: Variable (0-8)  
 Manager: Howard Stich Project Engineer: Dan White Supt: Regis Seng Temp: 48-76

### On-Site Personnel and Man-hours:

| Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA               | 1st   | 13        | 64          |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing       | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI               | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
|                   | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                   | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA focused on cutting fill and rock material from the borrow area south of Dud Hollow and operating the screen plant. The excavators and dozers worked at cutting material while the loaders fed the screen plant and stockpiled.

### Site Visitors:

### Meetings:

### Production Delays:

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered falling debris and rock hazards, recreational vehicle traffic, hazards associated with screening rock with grizzly.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>8/3/09</u>          |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable (0-12)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>40-71</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 127.5       |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   | 2         | 1           |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the furnace (126 loads). Ore was graded with the D6R dozer and loaded into haul trucks with the 300 excavator w/ thumb. The D51 dozer continued to push ore to the excavator and shape the cut areas as existing ground was exposed. The material was placed in approximately 1' lifts and compacted. Screen continued to operate throughout the day, with both loaders working to feed and stockpile fill and rock materials. The other 300 excavator worked on stockpiling armor rock throughout the morning. ESI delivered 9.5 rolls of FML liner around 8:30 am. The rolls were inspected and documented and staged in the grass area east of the office trailer. HLE was onsite early this afternoon to perform density tests on the 5th and 6th lifts on the slurry pit and the 11th lift on the furnace (16 tests total); all tests exceeded 95% relative compaction. Independent Drilling onsite to verify well access, extension diameters and elevations, etc. They will be onsite tomorrow morning to complete the extensions of wells GT-2, 7, and 8.

### Site Visitors:

### Meetings:

Dan, Regis, Tim, and JB regarding water usage and clarifier dewatering. CRA will not be able to pump out of Georgetown Creek; however, CRA can use the well NW of the site, which currently can pump approximately 20 gpm. JB will look into purchasing a larger pump for the well, but the largest pump that will fit the currently configuration is 75 gpm. CRA will likely procure a frac tank, generator, and other components to use the current well and pump configuration to fill a frac tank from which CRA will draw water for dust control and compaction.

### Production Delays:

Water truck down at 4:00 pm with stripped key way on PTO shaft.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered rough roads/washboards, speed, fire danger and risks (smoking), and material handling and unloading (FML delivery today). Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**HLE:** onsite from 12:15 pm to 1:30 pm to test lift no 5 and 6 on slurry pit and lift 11 on the furnace. **Independent Drilling:** onsite to verify site conditions in preparation for tomorrows extension of wells GT-2, 7, and 8.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

Project: Georgetown Canyon Project number: 56872 Day: Tuesday Date: 8/4/09  
 Client: Nu-West/Agrium Location: Georgetown, ID Weather: Pt Cloudy Wind: Variable (0-12)  
 Manager: Howard Stich Project Engineer: Dan White Supt: Regis Seng Temp: 42-73

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 135         |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   | 2         | 8           |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA spent the morning grading the furnace with the D6R and D51 dozers, cutting finish grade and shapping slopes to the top of the stack. The top of the stack was covered with approx. 1' of silica rock a 3"-4" of 3/8" granular bentonite. Also installed 150' of silt fence around the south end of the 3" minus stockpile to protect Georgetown Creek. Installed 200' of 12" ADS pipe to provide a temporary conveyance for the spring running out of Phosphoria Gulch in order to maintain flow and get access to the blasting area. Blasting may comence as early as next week. Independent drilling onsite to extend wells GT-2, 7, and 8 per the table provided by JB (GT-2: 14', GT-7: 8', and GT-8: 10'). New top of protective cover elevations as follows: GT-2: 6982.10', GT-7: 6981.66', GT-8: 6982.95'. Screen continued to run all day, with the 430 loader feeding borrow material and the 320 loader stockpiling. CRA continued hauling ore around 12:30 pm with one haul truck to the slurry pit; filling in around wells as they became ready, but concentrating on the south end as that is where the largest amount of fill remains (30 loads).

### Site Visitors:

**Modern Equipment:** onsite to repair water truck and perform other routine maintenance on equipment. **IDEQ:** onsite with two representatives to visit site and meet with JB and Mitch Hart. IDEQ pleased overall with construction.

### Meetings:

Dan, Regis, Tim, and JB regarding bentonite on the furnace. JB asked that we complete the top seal ASAP. CRA recommended placing silica rock over the top to provide an even surface for the bentonite to seal to, to which JB agreed. JB, Dan, and Regis also discussed the furnace final grading and slopes; CRA is working on cutting slopes to 3.5:1 to 3:1 (variable). The north side will be a fairly consistent 3:1 slope, but the south will go from 3:1 at the stack to a shallower slope as it meets the hillside to the east. CRA will maintain drainage to the east from the top and create a saddle where it ties to the existing hillside. Spoke with JB about ESI's liner quantities; there was a 9,000 SF overage on the ore area, but otherwise they looked pretty good. JB was concerned about the geocomposite runout, as only 1.5' was specified for the ore area and clarifier (he wanted 5' minimum). He later confirmed with Norwest that the runout should be 5', not 1.5' as shown. Norwest did their own detailed takeoff and revised ESI's spreadsheet. CRA forwarded this information to ESI. Also spoke with JB regarding GT-7 and GT-8 extension heights; JB transposed the height

### Production Delays:

Water truck down throughout the day with worn pump and PTO shafts.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered IDEQ inspection coming up this morning, dust control, site speed, work zone awareness, and manual lifting/material handling. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**Independent Drilling:** onsite extend wells GT-2, 7, and 8 from 9:30 am to 1:30 pm.

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>8/5/09</u>          |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable (0-12)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>42-73</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 129.5       |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 2         | 14          |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul or the the slurry pit to complete the fill around the wells GT-2, 7, and 8 (63 loads). The 300 excavator loaded while the D51/D6R dozers graded. Compaction around the wells was performed with the remote control compactor, otherwise the roller was used. The screen continued to operate, with borrow material fed with the 430 loader and stockpiled with the 320 loader. The 300 excavator w/ thumb began clearing and grubbing around the clarifier this morning. In the afternoon, the machine moved from the clarifier to the top of the rock slope south of Phosphoria Gulch removing large boulders in preparation for blasting rip rap next week. HLE onsite to perform density tests on the furnace and slurry pit; five tests on furnace and seven tests on slurry pit; all exceeded 95% compaction. Scherbel onsite to topo furnace, reset anchor trench alignment, set locations and grades of points SL-01 to SL-17 (as provided by Norwest in slurry pit area), check slurry pit grade in other locations, and topo 3" and 1/2" minus stockpiles. Settlement Monuments were checked for the last time, from north to south (change from initial survey in brackets): 6980.99' (+0.37'); 6982.53' (-0.12'); 6980.05' (-0.01'); 6976.76' (+0.11').

### Site Visitors:

**Modern Equipment:** onsite to service equipment from 10:30 am to 6:00 pm. **Pre-Rentals:** delivered 20 kW generator to operate pumping well for dust control as clarifier will be pumped dry in the near future.

### Meetings:

Dan and JB discussed baseline survey provided by Norwest. JB and James Williams shot >900 points this spring to generate 1' contours of existing conditions; but the Norwest map showed 2' contours and did not seem to contain the points provided by JB. JB requested they provide a new map with a layer showing the survey shots; which Norwest later provided. Spoke with JB regarding density testing; JB was satisfied with the test results today and said no additional testing was required on the ore in the slurry pit or the furnace. Also discussed grade staking in the slurry pit; JB satisfied with grade, as nearly all points staked by Scherbel were within 6", a few points were high by approximately 6"-16", but these were not of concern as grade has been nicely shaped. JB, Regis, and Howard Stich discussed project changes (quantity increases) and invoicing; Howard will work with Mitch Hart on change orders/contract increases as the contract is not clear as to how to handle large unit price item changes. JB also spoke with Regis and Dan about 3" screened fill placement on the furnace; place in 1-foot lifts, tracked with dozer - not compacted. Topsoil can be cut from the slope above Tank Spring, but the Tank Spring conveyance cannot be disrupted.

### Production Delays:

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered STEP observations, SWA, screen plant safety, buddy system, equipment inspections and maintenance, and PPE. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level).

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>8/6/09</u>          |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable (0-12)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-75</u>           |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 103.5       |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA completed ore placement at the slurry pit, placing ore in and around the wells GT-2, 7, and 8 in 1-foot lifts and compacting (10 loads). Operations then shifted to screened 3" fill placement on the furnace, placed with the D51 dozer and tracked in in 1-foot lifts; the 300 excavator w/ thumb loaded ore and fill into the haul trucks (86 loads). The screen continued to operate, with the 430 loader feeding material and the 320 loader stockpiling. The other 300 excavator cut fill and rock material in the borrow area and cast down to the road for the loader. Shift ended early due to thunderstorms in the area, with crew offsite at 5:00 pm.

**Site Visitors:**

None

**Meetings:**

Met with Paul Kos of Norwest; Paul will be taking JB's place while he is away on vacation. Paul went though CRA's HASP and signed off on it. Howard Stich and Mitch Hart discussed quantity increases and changes; Mitch asked that CRA keep track of change orders and extra work and Nu-West will settle in the end. For items with existing unit rates, measured quantities will be paid at those rates. CRA can figure new rates for hauling borrow area fill to the area north of the furnace (and potentially others) and submit for review. Spoke with Paul Kos regarding slurry pit, grade and shape was acceptable to him and JB; CRA will topo on Monday. Also spoke about slope terrace on ore pile; Paul will work with CRA to field fit, Paul would like a 15' wide bench; 10' wide with a 5' wide berm and the edge, allowing vehicles to travel up the terrace. The original documents had a 3'-4' bench while the new drawings show 10'. A wide bench will require cutting the upper slope all the way to the top to avoid oversteepening; Paul did not want to move a lot of existing ground to achieve this; CRA and Norwest will stake and see what can be done.

**Production Delays:**

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered public relations, haul road speed, traffic patterns, dump point congestion, traffic control, and an article on Incident Afterthoughts and Regrets. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Paul Kos reviewed HASP w/ Dan and signed off prior to entering the site.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

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SUPERVISOR

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DATE

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PROJECT MANAGER

\_\_\_\_\_  
DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>8/7/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-5)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>43-69</u>          |

| On-Site Personnel and Man-hours: |       |           |             |       |       |           |             |       |       |           |             |
|----------------------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| Trade                            | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
| CRA                              | 1st   | 13        | 80          |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor                | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing                      | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting                | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                              | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling             | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                                  | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**  
 CRA continued hauling 3" minus fill to complete the first lift on the furnace and begin the second lift. The 300 excavator loaded and the D51 graded fill. Hauled with one truck through the early afternoon when the 320 loader broke down and then two trucks ran for the remainder of the day (66 loads). The screen plant continued to operate, with the 430 loader feeding and the 320 loader stockpiling material. Screen plant shut down for repairs for approx 3 hours this afternoon, during which the loaders worked on screening armor rock in the grizzly. Rain for Rent delivered the frac tank around 8:30 am to be used for water storage at the water well north of the site as the clarifier will soon be out of water. D6R dozer grades a pad beside the road and the tank was set around 9:30 am. Piped well pump to tank with 1 1/4" steel pipe in the afternoon and installed temporary wood supports for piping. Delimited tank area from road shoulder with t-posts and caution tape.

**Site Visitors:**  
**Rain for Rent:** delivered 21,000 gal frac tank (8:30 am to 10:00 am); **ICS:** onsite from 12:20 pm to 3:30 pm to repair hose and counter weight cover on screen plant. **Modern:** onsite from 3:30 pm to 6:30 pm to repair PTO on water truck. Did not have correct parts and will have to return. Took hose off 320 loader to have one made in Soda Springs. Returned and repaired loader. Installed harden bolts in PTO shaft until correct parts arrive.

**Meetings:**

**Production Delays:**  
 Screen plant down for approximately 3 hours while a hydraulic line was being replaced and the screen box counter weight cover repaired. WA320 loader down from 3:00 pm through the end of the day with a ruptured hydraulic line on the quick connect bucket ram.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**  
 Tailgate meeting covered public relations, haul road speed, traffic patterns, traffic control, screen plant safety, buddy system, and mobile equipment. Monitoring throughout the day for HCN, PH3, and dust - all results acceptable (no hits HCN or PH3, dust averages well under action level). Hydraulic line rupture on 320 loader; small hydraulic spill near grizzly (<1 gallon). Shoveled soil into heavy plastic sack for containment.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

|            |      |                 |      |
|------------|------|-----------------|------|
| SUPERVISOR | DATE | PROJECT MANAGER | DATE |
|------------|------|-----------------|------|

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>8/8/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Rain/Cloud</u> | Wind: | <u>Variable (0-8)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>41-47</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 94.5        |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul 3" minus screened soil to the furnace to complete the second lift. The D6R/D51 dozer were used to place lifts and the 300 excavator w/ thumb loaded trucks (93 loads). The other 300 excavator and 430 loader screened armor rock with the grizzly and stockpiled (due to the rain the screen plant was shutdown). Using a 5.5 kW gas generator, the well pump was started at 11:00 am to begin filling the frac tank. By 5:00 pm, 37" or 7001 gallons of water pumped (20 gpm average). A gravel area was constructed south of the frac tank for the 20 kW diesel generator, and large boulders placed to encircle it for security. The generator was set on blocks and the wheels removed. All compartment doors were locked with pad locks. Set out approximately 900 LF of 3" and 2" discharge hose and set up two 3" trash pumps (one at clarifier, one mid way to sedimentation pond - booster), and began pumping at 5:15 pm. Discovered large underground obstruction near rip rap pile outside gate, just east of roadway. Plate steel and corrugated metal was unearthed, and appeared to run under a large area. Caution tape and t-posts were installed to keep cars and equipment out of the area. Equipment shall stay out of the area. Returned to site from 9:00 pm to 10:00 pm to fuel trash pumps and shutdown well pump; level at 5'-8" or 12,600 gal (20.0 gpm avg). Secured portable 5.5 kW generator at tool crib for the night.

### Site Visitors:

None

### Meetings:

Spoke with Paul Kos regarding BMP's; he asked that CRA create a taller berm at the south end of the slurry pit where traffic crosses the BMP; had loader operator build up a ramp using soil and silica rock, approximately 1 foot high - Paul approved. Also spoke about the terrace on the ore slope; Paul is considering not installing the terrace and using the slope area to stockpile soil removed during the next phase of remediation - open cutting Georgetown Creek through the site. He will give this more consideration before making a final decision.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered dozer and haul truck STEP observation completed yesterday, weather, vision, weekend traffic and recreational vehicles, equipment inspections, damage, and spill containment/cleanup. No air monitoring today for HCN, PH3, or dust - worked on clean materials in clean areas and rain kept dust to a minimum. Had a brief safety stand down/JSA meeting prior to lifting the 20 kW generator and discussed rigging, hand signals, ground personnel, etc.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>8/9/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable (0-8)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>40-62</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 68          |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to operate the screen plant, feeding soil from across the road with the 430 loader and stockpiling with the 320 loader. D6R and 300 excavator cut soil and pushed down to the road level from on top of the borrow slope. After lunch, the D51 and D6R pushed soil down to the loader feeding the screen plant. A flagman was maintained all day in the road to control traffic as rocks could roll out in the road when cutting on the slope with the dozer. The 300 excavator with the thumb worked all day clearing and grubbing around the inside of the clarifier ring wall, stockpiling brush and cetails just inside the wall to dewater. Pumping from the clarifier to the sedimentation basin was continuous throughout the day. The frac tank was filled to the brim by 1:00 PM (21,000 gallons). A cracked pipe at the tank inlet needs to be repaired before the pump can be allowed to run continuously, however (pipe will be repaired tomorrow morning). Frac tank discharge valve secured with a lock; portable generator returned to secure area.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered weekend traffic and road safety, buddy system and screen plant maintenance, falling rocks and soil cave-ins, clearing and grubbing hazards at the clarifier, and continued safe work practices. Air monitored for HCN and PH3 continuously at the clarifier during clearing and grubbing - not hits. No dust monitoring due to wet conditions and limited wheeled vehicle traffic.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>8/10/09</u>        |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-5)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>42-72</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 124.5       |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 2         | 14          |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   | 2         | 15          |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued cutting soil from the borrow area with the D6R dozer and 300 excavator. The 300 excavator w/thumb worked with haul truck and D51 dozer to build road east of furnace up onto slope bench, above Tank Spring, to cut topsoil for furnace an clarifier. A section of CMP borrowed from scrap onsite used to construct ditch crossing; also used reject material from screen (6" minus rock) to build road. Hauled 4 loads of topsoil to furnace. Once on top of slope, used excavator to clear and grub brush and trees, which were hauled and stockpiled on concrete pad west of Phosphoria Gulch. Laborers removed steel from inside clarifier ring wall and set aside for future disposal. Stockpiled brush removed from clarifier slopes north of clarifier per JB. Cattails were left jjust inside clarifier wall to dewater and will be removed and stocpiled at JB's instruction. Screen plant ran throughout the day, with the 430 loader feeding and the 320 loader stockpiling. Superior Blasting (SBI) arrived onsite at 10:00 am and began drilling on top of the rock ledge. Scherbel onsite to topo furnace, stake Tank Spring ditch, and topo slope where ore was removed. Re-plumbe

### Site Visitors:

**ACE Electric** onsite to check generator and determine what parts are required to hook up pump and float at frac tank (8:30 am to 9:00 am). **Modern Equipment** onsite from 1:30 pm to 4:30 pm to repair water truck PTO and replace worn hydraulic line on 320 loader.

### Meetings:

Spoke with Paul Kos regarding cattails in clarifier; he or JB will decide what to do with them, but he does not want them incorporated into the cap materials. They may look at covering them somewhere outside the clarifier. Paul also asked that CRA cut a swale across the road south of the clarifier in lieu of using a 12" culvert to tie the ditch line to the creek. Paul and Dan discussed steel debris, plates, and brakets at the clarifier; CRA will remove and stockpile for future disposal. In the afternoon, spoke with Scherbel Surveyor Alan Roberts and Paul regarding a survey of the ore pile; Paul wanted Scherbel to shoot the slope to determine what needed to be done with the slope terrace; it was made clear that this intermediate survey would be an extra work item. Paul agreed and Scherbel proceeded with the extra work (approx 1.5 hrs for each surveyor)

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered screen plant cleaning - NO ONE ON PLANT WHILE RUNNING ALONE. Also discussed gas can safety and trash pump fueling, clean windows & mirrors, communication, SSP haul trucks, and equipment maintenance. Also discussed article on hand tool selection, inspection, and safety. Air monitored for HCN and PH3 throughout the day in various locations around the site - no hits. Discovered two small spots of phosphorous just inside the clarifier ring wall along southwest portion of wall. No dust monitoring due to continued moist conditions and limited wheeled vehicle traffic.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**SBI** onsite from 10:00 am to 5:30 pm to set up drill rig and begin drilling on rock outcropping south of the Phosphoria Gulch opening. SBI will plan to blast approx. 5,000 CY of rock armor. **Scherbel** onsite to topo furnace, stake Tank Spring ditch, and topo slope where ore was removed. The ore area topo was requested by Paul Kos and is extra work. Onsite from 11:00 am to 3:30 pm.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>8/11/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-72</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|-------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 148         |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   | 2         | 22          |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |       | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |       | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA began hauling topsoil from the bench above Tank Spring ditch and hauled to furnace (80 loads). The 300 excavator with thumb cut from south to north across the bench, while the D51 dozer spread the required 1-foot lift. Laborers continued to remove steel plates from clarifier ring wall, removing all plates that were not covered with soil/sediment. Clarifier dewatering continued, with water pumped to the sedimentation basin. Water levels dropped approximately 4" overnight, and several additional inches through the day. Pumps ran continuous until approximately 12:30 am this morning, and then were started again at 7:30 am. Screen plant continued to operate, with the 430 loader feeding borrow material and the 320 loader stockpiling. The D6R dozer and 300 excavator cut in the borrow area and pushed down to the 430 loader. Flagman on road while dozer pushing towards roadway. Rain for Rent onsite to deliver 4" dri-prime trash pump and 880 LF of discharge piping for clarifier dewatering. CRA will setup diesel pump in the morning and lay discharge pipe to sedimentation basin. Built up berm along south end of basin with D6R dozer to allow an additional 18" of capacity.

### Site Visitors:

**Pro Rentals** onsite from 10:00 am to 10:30 am to pickup trench compactor and drop of four (4) 50' sections of 3" lay flat hose. **Rain for Rent** onsite from 6:30 pm to 7:30 pm to deliver 4" pump and piping for clarifier dewatering.

### Meetings:

Spoke with Paul Kos about the clarifier cap construction. Drawings indicate compacted bulk fill on slopes to make them 2:1 (max); CRA will place in lifts, water as req'd, and track in due to thickness and slope - approved. Also, bulk select fill (3" minus) reduced from 2'-0" lift to 1'-6" lift (req'd qty from 4,328 CY to 3,246 CY, approx). Paul also concerned that sedimentation basin may overflow at southwest corner due to dewatering of clarifier - CRA is monitoring and will create berm if necessary. Paul also considering stockpiling cattails in sedimentation pond; indicating JB was agreeable to this - will follow up after further consideration. The anchor trench at the clarifier can also be modified as required; there is flexibility in positioning on bench around concrete wall. Spoke with JB late in the day after he arrived back onsite; he was overall happy with the work progress.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered screen plant cleaning - NO ONE ON PLANT WHILE RUNNING ALONE. Also discussed gas can safety and trash pump fueling, clean windows & mirrors, communication, SSP haul trucks, and equipment maintenance. Also discussed article on hand tool selection, inspection, and safety. Air monitored for HCN and PH3 throughout the day in various locations around the site - no hits. Discovered several small spots of phosphorous just inside the clarifier ring wall along southwest portion of wall. No dust monitoring due to continued moist conditions and limited wheeled vehicle traffic.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**SBI** onsite from 7:00 am to 6:00 pm to continue drilling on rock outcropping south of the Phosphoria Gulch opening. SBI manager/supervisor will visit tomorrow to monitor bore hole placement; SBI is concerned with the steepness of the resulting slope and the proximity of CRA's trailer. The slope steepness was not of concern to Paul Kos.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>8/12/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-72</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 136.5       | ACE Electric | 1st   | 1         | 2           |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   | 2         | 22          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling topsoil from the bench above Tank Spring ditch and hauled to furnace (24 loads). The 300 excavator cut across the top of the bench, while the D51 dozer spread the required 1-foot lift. Truck drivers and laborers spent morning staging and coupling discharge pipe and preparing 4" trash pump for operation. Pump started at 10:00 am and shut down by 2:00 pm as the bulk of the water was drawn out of the clarifier. Truck drivers and laborers broke down pipe and pump and staged near sedimentation pond. The 300 excavator w/ thumb helped stage pipe and maintained trenches to sump during pumping. Began mixing dry soil with saturated sediments after pumping ceased. Phosphorous observed throughout wet sediments; continuous monitoring in the clarifier all day - no hits of HCN or PH3. Removed all steel except for middle pivot pipe. Screen plant continued to operate, with the 430 loader feeding borrow material and the 320 loader stockpiling. The D6R dozer cut in the borrow area and pushed down to the 430 loader. Superior Blasting onsite to continue drilling to prepare for blasting of armor rock at borrow site. Ace Electric onsite to hook up pump controls to allow for automatic start/stop of pump at frac tank.

### Site Visitors:

None

### Meetings:

Discussed cattail placement with JB; after consideration, CRA will spread sediments and cattails in the depression south of the clarifier and cover. JB also concerned with the surveyors staked location of the Tank Spring diversion; Paul Kos approved but JB is not happy with the alignment or grade. JB will go over the staking with the surveyors when they are next onsite.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered screen plant cleaning - NO ONE ON PLANT WHILE RUNNING ALONE. Also discussed gas can safety and trash pump fueling, clean windows & mirrors, communication, SSP haul trucks, and equipment maintenance. Also discussed article on hand tool selection, inspection, and safety. Air monitored for HCN and PH3 throughout the day in various locations around the site - no hits. Discovered several small spots of phosphorous just inside the clarifier ring wall along southwest portion of wall. No dust monitoring due to continued moist conditions and limited wheeled vehicle traffic.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

SBI onsite from 7:00 am to 6:00 pm to continue drilling on rock outcropping south of the Phosphoria Gulch opening. SBI manager/supervisor will visit tomorrow to monitor bore hole placement; SBI is concerned with the steepness of the resulting slope and the proximity of CRA's trailer. The slope steepness was not of concern to Paul Kos.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>8/13/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-72</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 91          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 6.5         |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   | 2         | 13          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA began hauling fill material to the depression north of the furnace to create positive drainage to the north. The fill material was loaded out from the same source as the screened fill material; but was not screened prior to placement (23 loads). Also hauled ore to the clarifier to mix with saturated sediments in the bottom (2 loads). Screen plant ran through mid morning then was down for the remainder of the day. Operators screened armor rock and stockpiled after screen plant breakdown. Rain for Rent onsite to pickup 4" pump and HDPE discharge piping at 11:30 am. Scherbel Surveyors onsite to survey topsoil cover on furnace, ore on slurry pit, and 1/2" minus screened select fill material. Superior blasting completed drilling holes in rock outcrop around 11:00 am; blasting supplies arrived onsite at 5:30 pm; SBI maintained guard with trailer all night.

### Site Visitors:

**Rain for Rent:** onsite to pickup trash pump and piping used to dewater clarifier at 11:30 am.

### Meetings:

Mitch Hart with Agrium/Nu-West onsite to monitor work progression.

### Production Delays:

Screen plant down from 9:30 am through the end of the day. PC300 excavator w/o thumb down for repairs from 9:30 am to 4:00 pm.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic control and safety and falling debris hazards. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. Elemental phosphorous present throughout the clarifier sediments. No dust monitoring today.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**SBI** onsite from 7:00 am to 1:30 pm to continue drilling on rock outcropping south of the Phosphoria Gulch opening. SBI completed drilling holes in rock outcrop around 11:00 am; blasting supplies arrived onsite at 5:30 pm; SBI maintained guard with trailer all night. **Scherbel:** onsite with a crew of one to topo topsoil on furnace, slurry pit ore cover, and 1/2" minus screened fill stockpile; onsite from 10:15 am to 3:30 pm.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>8/14/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>36-65</u>           |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 13        | 91.5        | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   | 5         | 30          |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA spent the morning hauling ore rejects (coarse fraction of screened ore produced by Soda Springs Phosphate) to the clarifier to mix with wet sediments (32 loads). CRA spent the afternoon hauling fill material to the depression north of the furnace to create positive drainage to the north. The fill material was loaded out from the same source as the screened fill material; but was not screened prior to placement (43 loads). Screen plant down throughout the day; operators screened armor rock with the grizzly and stockpiled. Superior blasting onsite with a crew of five to charge boreholes and blast rock from borrow area near Phosphoria Gulch; blasted at 12:26 pm. All cars, equipment, and personnel moved outside the blast zone (1000' radius); road blocked, signs put up, and flagmen maintained prior to and during blasting. Also continued to cut clean fill material to feed screen plant all day. Pro Rentals onsite to deliver Kubota mini excavator for anchor trench excavation.

### Site Visitors:

**Pro Rentals:** delivered Kubota mini excavator for anchor trench excavation at 2:15 pm.

### Meetings:

None

### Production Delays:

Screen Plant down all day.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic control and safety and falling debris hazards. Covered blasting procedure with crew, including blast zone delineation, traffic control, equipment and personnel placement during blast, etc. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. Elemental phosphorous present throughout the clarifier sediments. No dust monitoring today.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**SBI** onsite with a crew of five to charge boreholes and blast rock from borrow area near Phosphoria Gulch; blasted at 12:26 pm. All cars, equipment, and personnel moved outside the blast zone (1000' radius); road blocked, signs put up, and flagmen maintained prior to and during blasting. SBI demobilized and offsite by 1:00 pm.

SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>8/15/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>29-64</u>           |

**On-Site Personnel and Man-hours:**

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 13        | 90          | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued to haul reject ore material to the clarifier and mix with wet material in the bottom in an effort to solidify (12 loads). The screen plant operated after a fuel filter change out, until 1:00 pm, when it went down again (for the rest of the day). Screen crew continued to screen armor rock with the grizzly and stockpile. The dozers worked all day cutting fill material for the screen plant.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

Screen Plant down from 1:00 pm through the rest of the afternoon.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered traffic control, falling debris during screening process, and fueling safety. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. Elemental phosphorous present throughout the clarifier sediments. No dust monitoring today.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>8/16/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-10)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-69</u>           |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 56          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul reject ore material to the clarifier and mix with wet material in the bottom in an effort to solidify (12 loads), using one haul truck and both 300 excavators. Screen operated throughout the day with some down time due to bad fuel/fuel filter change out. Both loaders worked at feeding screen and stockpiling material.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

Screen Plant down from 1:00 pm through the rest of the afternoon.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered cold weather safety, slips/trips/falls, 3 points of contact, and catch points and loose clothing. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. Elemental phosphorous present throughout the clarifier sediments. No dust monitoring today.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

SUPERVISOR

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PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>8/17/09</u>        |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable (0-5)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>44-72</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 134         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the clarifier for mixing with saturated sediments in order to solidify to allow for placement and compaction of ore lifts. The 300 excavator w/ thumb loaded ore, the D51 dozer cut ore, and the other 300 excavator placed and mixed sediments and ore at the clarifier. In all, 15 loads of ore and one load of rip rap were placed. The load of rip rap was placed in the center where the steel pivot pipe was removed earlier in the day using a cutoff saw. By late morning, the idle haul truck joined the first and both began hauling fill material to the depression north of the furnace, where the D51 dozer and compactor were placing material (42 loads). Screen plant operated throughout the day, with the 430 loader feeding and the 320 loader stockpiling screened soil. The 430 loader also loaded trucks placing borrow material north of the furnace. In the afternoon, the cattails were loaded out and relocated (buried) as directed by JB. CRA took delivery of 41 rolls of geocomposite and 2 rolls of nonwoven geotextile fabric from ESI/Skaps. Rolls were inspected, documented, and accepted by CRA and GET/Norwest.

### Site Visitors:

**ACE Electric:** onsite to replace a blown fuse in pump control panel at frac tank. **ESI:** delivered 41 rolls of geocomposite and 2 rolls of geotextile fabric in two separate loads. **ICS:** onsite to service screen plant (oil & fuel systems).

### Meetings:

Spoke with JB regarding final drawings location of ditch at clarifier; JB does not want to maintain the alignment as shown due to the amount of cut required to allow for positive drainage north of the clarifier through the existing hillside. JB wants to swing the ditch abruptly west at Sta 7+80, approx, to reduce cut of existing ground. JB marked up CRA's drawing set to show desired alignment.

### Production Delays:

Water truck down from 3:30 pm on with PTO problems. Screen plant down for service (oil changes, lube, and fuel system service) this afternoon.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered spill containment/cleanup/reporting, communication and chain of command, cold weather, falling debris/rocks, foot traffic, and work in and around the clarifier. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. Elemental phosphorous present throughout the clarifier sediments. No dust monitoring today.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite briefly but left as GPS equipment would not acquire satellites; no charge for trip to site.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>8/18/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SSE 0-8</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>39-67</u>   |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 13        | 143         | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   | 1         | 8           |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA spent the first part of the day loading out cattails and trees at the clarifier and relocating to the south with the 300 excavator w/ thumb and haul truck. Grubbed materials placed in a bermed area created at an existing depression. The other excavator unloaded the first GCL delivery (17 rolls) before returning the clarifier to continue stabilizing and drying wet sediments. Screen plant operated with the 430 loader feeding and the 320 loader stockpiling. The 430 loader also loaded fill material into a haul truck, which was transported and then placed with the D51 dozer north of the furnace (22 loads). Second delivery of GCL arrived onsite at 11:10 am and a third at 3:30 pm, which were both unloaded with the 300 excavator w/ thumb and staged near the office. Hauled ore reject material to clarifier all afternoon and began placing lift in bottom (21 loads); wet material pulled up the slopes to make way for dry ore. The wet sediments will be worked into the lifts as they are placed and compacted. Scherbel onsite to set anchor trench alignment at slurry pit and ore area cap. Began excavating anchor trench at slurry pit. Excavated approximately 100 LF before hydraulic line ruptured on mini excavator. Screen plant shut down from 3:00 pm to 5:00 pm as steel plates were installed to block 1/2" screen to allow for increased production of 3" minus screened soil. CRA estimates 5,500 to 6,000 CY of 1/2" minus screened fill stockpiled onsite.

### Site Visitors:

**ESI:** delivered 45 rolls of GCL on 3 separate loads (17, 15, & 13 each) throughout the day. **Modern Equipment:** onsite to repair water truck from 7:30 am to 9:30 am; will return with new PTO for truck at later date.

### Meetings:

Spoke with Darren Jorgensen of Norwest regarding liner layout drawings submitted to CRA by ESI; Darren approved of layout.

### Production Delays:

Water truck down until 9:30 am with PTO problems. Kubota mini excavator down from 2:30 pm for the remainder of the day with blown hydraulic line. Tim Reed drove to Pocatello, ID to have new hoses fabricated as no local shops had Kubota fittings available.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered screen plant buddy system, anchor trench excavation at slurry pit, onsite traffic and congestion, emergency stops on equipment, falling debris, and communication. Purchased buggy whips for loaders to increase visibility for dozers working above screen plant in borrow area. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. No orkers allowed to enter clarifier area without monitors present. Elemental phosphorous present throughout the clarifier sediments. Dust monitor with haul truck operator and on ground personnel; average dust levels well under action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 9:50 am to 2:30 pm with a crew of one to stake anchor trench alignment and phosphorous area (anchor alignment & ore grades) in ore stockpile area.

SUPERVISOR

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PROJECT MANAGER

DATE

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>8/19/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SSE 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>37-68</u>    |

**On-Site Personnel and Man-hours:**

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 13        | 141         | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   | 8         | 88          |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued to operate the screen plant, producing mostly armor rock and 3" minus material after blocking off the 1/2" screen yesterday. Both dozers continued to cut in the borrow area, pushing material down to the 430 loader for the screen and for the fill area north of the furnace. CRA used the mini excavator to cut the anchor trench from the southwest side of the slurry pit up around to the northeast side (near wells GT-7 & 8). Hauled ore reject material from Phosphoria Gulch (south slope) to clarifier (42 loads). The 300 w/ thumb loader one truck, which hauled to the other excavator mixing and placing. Compaction with the roller as necessary as 1-foot lifts are completed. Wet material brought in from sides in thin lifts and mixed with ore rejects. Approximately three (3) lifts completed in bottom of clarifier. ESI onsite to begin liner placement at the slurry pit. Installed GCL and FML over approximately 20% of the slurry pit (south end).

**Site Visitors:**

**ESI:** delivered 15 rolls of GCL at 9:00 am; rolls unloaded at slurry pit for immediate use. **Pro Rentals:** delivered 10CY dump trailer for liner trash and jumping jack compactor from anchor trench. Took 6000 watt generator and four (4) 50' sections of 3" hose back to shop. **ICS:** onsite to check on noisy bearing at the top of the main screen feed belt; Paul Jeo indicated seal was gone on bearing and to just continue greasing it several times daily until it failed (may last weeks, may last hours).

**Meetings:**

Darren Jorgensen, Tim Reed, and Dan White met with ESI crew (8 men) to review HASP and QA/QC requirements. ESI signed off on HASP and Darren and Edgar (crew supt) reviewed QC forms; ESI's standard QC forms mirrored the ones provided by Norwest; Darren saw no need to duplicate the paper work. ESI will provide copies daily of their QC forms to CRA. Walked slurry pit, Edgar approved of subgrade and indicated no further work was necessary prior to GCL placement. Discussed FML and GCL terminations at GT-2, 7, and 8. Spoke with JB regarding a number of issues throughout the afternoon: 1) As Built Drawings: JB would like to have Scherbel plot the provided points lists and overlay on the basemap provided; 2) Anchor Trench: 95% compaction specified, but no testing frequency provided. JB would like CRA to compact using jumping jack in 1-foot lifts, compact top lift with roller and test; 3) Fill North of Furnace: JB had indicated this could be tracked in; now he would like it placed in 1-foot lifts and rolled; when HLE is onsite he would like a few spot checks on this. 4) Seeding: JB is going to do soil testing on topsoil areas to determine fertilizer needs; he is ok with hydroseeding or broadcast seeding methods. 5) GCL: JB/Darren ok with leaving GCL uncovered in good weather, but its CRA/ESI responsibility if it rains. 6) CRA can stockpile woody materials at the clarifier in a central location; if a permit can be obtained JB would like to burn these (per Mitch Hart's recommendation). Concrete and steel can be collected and staged in a convenient location. 7) JB/Darren are filling out CQA Forms for the liner installation; copies will be provided to CRA.

**Production Delays:**

Screen plant down at 5:00 pm with dislodged roller on right side discharge belt - plant inoperable until repaired - ICS notified.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered screen plant housekeeping, clarifier work hazards, liner crew, manual lifting, common workplace injuries, and change conditions (SWA). Had second TGSM for ESI crew at 7:45 am; reviewed HASP and went over task specific hazards and potential issues. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. No workers allowed to enter clarifier area without monitors present. Elemental phosphorous present throughout the clarifier sediments. Dust monitor with haul truck operator and on ground personnel; average dust levels well under action level.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

**ESI:** onsite from 7:45 am to 7:00 pm with a crew of eight (8) to begin setting up equipment and deploying GCL and FML on the slurry pit. Covered approximately 20% of slurry pit with GCL and FML; all FML seams welded and will be sampled tomorrow.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                     |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>8/20/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-5</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-78</u>        |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 134.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 8         | 88          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore reject material to the clarifier with both trucks (79 loads ore & 3 loads rock); the 300 excavator w/thumb loading, other 300 excavator mixing wet and dry materials and stacking, D51 dozer placing lifts, and the roller compacting (as needed). Finished second lift in bottom, and completed third and fourth lifts, fifth lift completed tomorrow morning. HLE onsite to test first and second lifts, all tests passed (>100% compaction). As the screen plant was down all day, the 430 and 320 loaders screened and stockpiled armor rock and stockpiled. Continued excavation on the anchor trench at the slurry pit with the mini excavator, cutting an additional 250 LF around the south end and east past the furnace saddle; will cut remaining 300 LF tomorrow. Mini excavator worked in the afternoon digging soil out from around screen plant so mechanic can get to it easily tomorrow. Constructed survey monuments for slurry pit and clarifier using Sch 40 PVC and rebar as specified.

### Site Visitors:

**Modern Equipment:** onsite from 12:00 pm to 4:30 pm to repair 320 loader windshield, water truck PTO, D6R muffler, and 430 loader cutting edges. **Nu-West/IDEQ/CRA:** Mitch Hart with Nu-West and Tom Johnson with CRA onsite to check progress and meet with IDEQ officials onsite to inspect liner installation and clarifier work. **ICS:** onsite at 9:00 am and again at 12:00 pm to check on screen plant and schedule repairs.

### Meetings:

Spoke with JB regarding density testing on the fill area north of the furnace. HLE performed (3) tests (103.0%, 95.2%, 91.5%); JB happy with results at or above 90% relative compaction. HLE also estimated the max dry density for the test, as no proctor has been performed on unscreened material from the borrow area; assumed 30% rock, with each 10% adding 3 PCF to the max density (120.7 +9 = 129.7 PCF). Spoke with JB in the morning regarding bentonite on GCL seams; ESI was running low on bentonite, as they had only figured enough for end seams, not longitudinal seams. The specifications call for all seams to be lapped with bentonite between; JB purchased 10 bags in Soda Springs from Independent Drilling - ESI later provided information from Cetco that the Bentomat product does not require bentonite on all seams, but since the specifications call for it, they will install that way. Spoke with JB late in the day about the IDEQ inspection; overall the IDEQ officials were pleased. They did comment on a few things: GCL roll handling - don't let rolls drag during transport; Ore - pick out rocks at surface; FML/GCL termination - cut tails to go into anchor and across bottom to other side, no more; GCL seaming - watch for soil in panel laps. Discussed survey monuments with JB; he would like the PVC & rebar to sit directly on top of the geocomposite layer.

### Production Delays:

Screen plant down all day; ICS representative onsite at 9:00 am to remove loose roller that was jammed against main roller at base of RH discharge belt; re-tensioned belt and ran. Within 30 minutes, RH discharge belt main roller (at base of belt) walked out of left bearing and seized; ICS will return tomorrow to replace bearings.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered stored energy, heavy equipment safety (ground traffic awareness), clean windows/visibility, communication, and heavy equipment repairs (what CRA can and can't do). Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. No workers allowed to enter clarifier area without monitors present. Elemental phosphorous still present throughout the clarifier sediments being dried at the edges. Dust monitor with haul truck operator and on ground personnel; average dust levels well under action level. Near loss late in the day; discovered scrap pipe near slurry pit on fire (phosphorous) - attempted to use FE but valve was stuck and would not operate. Got second FE and put out fire; buried pipe to contain phosphorous.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite from 7:00 am to 6:00 pm to continue GCL and FML installation at the slurry pit; approximately 75% complete with both GCL and FML layers.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>8/21/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-78</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 134.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 6           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 8         | 88          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore reject material to the clarifier, completing lifts 6 and 7 today (98 loads). Lifts 3, 4, and 5 completed yesterday. HLE onsite to perform 16 density tests on lifts 3, 4, 5, & 6 (4/lift) in the clarifier; all tests exceeded 100% relative compaction and moisture was between 7% and 12%. CRA continued to screen rock armor with the grizzly, until after lunch when the screen plant was back in operation; then went back to screening soil and stockpiling. Completed anchor trench excavation on the east side of the slurry pit late in the day and began backfilling on the south end working north along the west side; compaction with jumping jack in 1-foot lifts. ESI continue GCL and FML installation at the slurry pit with an eight man crew; completed GCL and FML layers; will extrusion weld sample patch areas tomorrow once ESI takes delivery of LLDPE welding rod which did not get shipped to site as ordered. Scherbel onsite to topo 1/2" and 3" screened soil piles and topo grubbed ground surface outside of clarifier.

### Site Visitors:

ICS: onsite from 10:00 am to 11:30 am to repair drum roller and bearing assembly and adjust discharge belt.

### Meetings:

Discussed clarifier surveying with JB; agreed to determine ore quantity by load count vs. survey. Surveying clarifier as it is now is still unsafe as the stockpiles of sediments still contain phosphorous. JB would like to "calibrate" the truck volume using the survey results from the slurry pit and furnace - should be complete and submitted to CRA by Scherbel early next week. Spoke with JB about slope terrace on north slope of Phosphoria Gulch; CRA staked a proposed alignment at 1.5% down slope heading east; JB approved of the alignment. Ore will need to be removed from the top of the stockpile to allow for the cut to continue east; CRA will pull from the top of this pile one the ore rejects are loaded out. Ditch can run flat at the end (in the area of the remaining ore) if need be.

### Production Delays:

Screen plant down until 12:30 pm for repairs and cleaning; ICS replaced dislodged drum and adjusted; no bearings replaced.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic, haul roads safety and speed, PPE & recent WPLCo incident at a site in southern Michigan, screen plant area congestion, and communication between operators about Georgetown Canyon Road traffic. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. No workers allowed to enter clarifier area without monitors present. Elemental phosphorous still present throughout the clarifier sediments being dried at the edges. Dust monitor with haul truck operator and on ground personnel; average dust levels well under action level. No signs of phosphorous exposure (flu symptoms) to crew working in clarifier to date.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**ESI:** onsite from 7:00 am to 4:30 pm to continue GCL and FML installation at the slurry pit; completed GCL and FML layers; will extrusion weld pathes tomorrow once ESI takes delivery of LLDPE welding rod. **Scherbel:** onsite from 9:30 am to 12:30 pm to topo 1/2" and 3" screened soil piles and topo grubbed ground surface outside of clarifier. **HLE:** onsite from 10:30 am to 11:30 am to perform 16 density tests on lifts 3, 4, 5, & 6 in the clarifier.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>8/22/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>42-81</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 130         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 8         | 48          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore reject material to the clarifier, completing lift 8 before noon (55 loads). Lift 9 was completed with the ore and sediments mixed and stacked up to dry along the east side of the clarifier; sediment piles on the west and south sides still too wet to place. CRA continued to operate the screen plant, with the 430 and 320 loaders feeding and stockpiling. Continued to backfill slurry pit anchor trench, working around sample patch panels yet to be welded and tested; compaction with jumping jack in 1-foot lifts. Placed backfill with 320 loader from stockpile, will incorporate removed trench spoils (1/2" minus material) as part of cap layer once placement and grading starts next week. Completed backfill along west side late in the day with 300 excavator, used to pull down trench spoils so roller could compact top trench lift. ESI spent the afternoon extrusion welding destruct sample patch locations, well boots, and repair areas (ESI offsite until 1:00 pm as they made a trip to SLC to pickup delivery of LLDPE extrusion welding rod).

### Site Visitors:

None

### Meetings:

Discussed fill area north of clarifier with JB; maintain no less than 0.50% slope along ditch running between slurry pit & furnace saddle and tank spring diversion culvert. Also maintain drainage from slurry pit into ditch and from tank spring area into ditch. Set grades and discussed with JB after verifying final fill elevations; elevation of fill at SE corner (where N furnace slope meets existing ground; 6974.8' - approx. 0.8' higher than design; JB ok with that if that's what is required to maintain drainage to the east of the slurry pit and to the north of the furnace - do not want standing water near slurry pit. Ditch to be vegetated and 1-foot deep; ditch will daylight to existing grade approx 45' west of tank spring drop inlet structure per JB.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered traffic, haul roads safety and speed, PPE & recent WPLCo incident at a site in southern Michigan, screen plant area congestion, and communication between operators about Georgetown Canyon Road traffic. Air monitored for HCN and PH3 throughout the day, focusing on the clarifier - no hits. No workers allowed to enter clarifier area without monitors present. Elemental phosphorous still present throughout the clarifier sediments being dried at the edges. Dust monitor with haul truck operator and on ground personnel; average dust levels well under action level. No signs of phosphorous exposure (flu symptoms) to crew working in clarifier to date.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**ESI:** onsite from 1:00 pm to 6:45 pm to extrusion weld FML sample patches, well boots, and other repair areas and prepare for geocomposite deployment tomorrow.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>      | Date: | <u>8/23/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Rain/Clouds</u> | Wind: | <u>SSW 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>55-62</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 87.5        | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 8         | 40          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued backfill of the anchor trench on the east side of the clarifier; the first lift was placed and compacted from south to north; the second lift was placed along the entire east side but only half compacted before rain made the north half of the east side to wet to work. The final lift in the anchor trench was placed and compacted from the south end around to the north side of the furnace. Placed clean screened select fill with the 300 excavator and transported it with the haul truck. ESI was onsite until noon to begin geocomposite deployment; approximately 25% complete before rain forced them to shutdown early. Continued to cut soil in the borrow area with the dozers and operate screen plant with the loaders.

### Site Visitors:

None

### Meetings:

Inspected FML layer prior to geocomposite deployment with Darren Jorgensen (Norwest) and Edgar Mejia (ESI); discovered three small areas where additional extrusion welding/patching was required; otherwise FML layer was accepted by CRA, Norwest, and ESI for geocomposite installation. Discussed geocomposite placement with Darren Jorgensen late in the morning; geotextile fabric too wet to sew properly and FML becoming slippery to work on by 11:00 am due to steady precipitation; ESI planning to complete geocomposite by late Monday/early Tuesday.

### Production Delays:

Weather; anchor trench backfilling and compaction ceased at 11:30 am due to the wet conditions. PC 300 excavator with thumb down with leaking hydraulic line on quick connect bucket ram; technician to be onsite tomorrow morning.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered small equipment fueling (gasoline), backfilling operations in anchor trench, liner crew, weather (T-Storms, rain, snow, etc), and working long hours/alertness. No air monitoring today as no intrusive work was being performed; no work in or around clarifier. No dust due to rain throughout the day.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**ESI:** onsite from 7:00 am to 12:00 pm to begin deployment of geocomposite, with approximately 25% installed. ESI zip tied all seams and began sewing seams until the rain that began mid morning made the geotextile fabric too wet to sew. FML liner was becoming too wet to work on as well. ESI planning to complete geocomposite at slurry pit by the end of the day Monday.

SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>      | Date: | <u>8/24/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Rain/Clouds</u> | Wind: | <u>SSE 0-12</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>48-64</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 68          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 8         | 80          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Most of the CRA crew offsite by 7:15 AM due to heavy rain and wet conditions onsite; one operator and one laborer retained to pump water from anchor trench and clarifier where there was sporadic water ponding. ESI onsite with a crew of eight from 7:00 am to 6:30 pm to complete deployment of geocomposite, stitch seams, patch end joints, and clean up site. All tails over anchor trench sewn and rolled back for CRA to complete anchor trench backfill (east side). Approximately 5' to 6' left over anchor trench. CRA operated screen plant in the afternoon once weather improved; fed plant with 430 loader and stockpiled with the 320.

### Site Visitors:

**Modern Machinery:** onsite to replace cutting edge on D51 dozer, service 300 haul truck, and repair leaking hose on PC 300 w/ thumb.

### Meetings:

Discussed liner pay items with JB; these are paid in place per the specifications. Scherbel will shot the as-built anchor trench (edge of GCL & FML) for plotting on the drawings and for figuring in place liner quantity; will also shoot edge of geocomposite. Later discussed ore quantities with JB; he is coming up with 11,700 CY (approx) using the average end method, whereas Scherbel is coming up with 13,106 CY using their software (10% higher, approx). JB will have Norwest look at his maps and Scherbel's, once submitted, to determine where the difference is.

### Production Delays:

Weather; rain throughout the night and morning made site too wet to work and flooded portions of the clarifier and anchor trench. All but one operator and one laborer sent home at 7:15 am.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered slips/trips/falls, working on liner (slippery), visibility, and PPE. No air monitoring today as no intrusive work was being performed; no work in or around clarifier. No dust due to rain throughout the day.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite from 7:00 am to 6:30 pm to complete deployment of geocomposite, stitch seams, patch end joints, trim excess geocomposite, and clean up site.

SUPERVISOR

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>     | Date: | <u>8/25/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Rain/Clouds</u> | Wind: | <u>SE 0-12</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>50/68</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 140         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 6           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA began hauling 1/2" screened fill material to slurry pit. Loaded trucks with 300 excavator and hauled with up to two trucks; placed with D51 dozer. Placed one-way road approximately 2' thick across top (north-south) all the way to wells GT-7 & 8. Trucks backed up road and dumped; dozer placing from north to south cutting road out as placement progressed south; completed approximately 50% (hauled 105 loads). Completed anchor trench backfill on east side of slurry pit, removing saturated material as required and replacing; compaction in 1' (maximum) lifts with jumping jack. Continued to operate screen plant, feeding with 430 loader and stockpiling with 320. Scherbel onsite to survey as-built anchor trench alignment for liner quantities; will return to survey geocomposite boundaries tomorrow. Used D6R dozer to rip/scarify 9th lift on clarifier; allowed soil to sit from 1:30 pm to 3:30 pm, then compacted lift a second time; compaction testing tomorrow.

### Site Visitors:

**CRA:** Howard Stich (PM) onsite to view progress and talk with JB; onsite from 3:30 pm to 5:00 pm.

### Meetings:

Discussed surveying with JB; will topo top of 3" screened soil at slurry pit (and clarifier); no need to topo 1/2" soil, as both sizes are part of the same pay item. The 12" lift is not so critical that it needs to verify by survey, as long as there is approximately 12" for a cushion layer. Also discussed west slope of clarifier, where the drawings indicate a 2:1 slope, built out to grade with 3" minus screened fill. It appears as though much of the existing bench needs to be cut back, several feet in most cases, to meet the subgrade required for the topsoil layer (no 3" screened fill required). JB does not want to cut this slope back, but would rather make sure it does not exceed 2:1 and blend the top of the bench into the new cover soils. JB later commented on anchor trench backfill; he indicated he had never seen such an effort before (compaction with jumping jack compactor in 1 foot lifts), and was happy with the results.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered wet conditions, working on liner, slips/trips/falls, anchor trench excavation, accumulation of mud and debris in equipment, and heavy equipment operations. Air monitoring for HCN and PH3 when working with dozer and compactor in clarifier, briefly this afternoon - no hits. No dust monitoring due to wet site conditions from yesterday's rain.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 9:30 am to 12:15 pm to survey the as-built anchor trench alignment; will survey geocomposite tomorrow afternoon.

SUPERVISOR

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>8/26/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SE 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>47-71</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 132         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to place 1/2" screened fill on top of the slurry pit with D51 dozer, placing 28 loads on southern half, which was completed by noon. CRA still needs to finish grade lift, and upon trimming the anchor trench edge and folding back the geocomposite, tie in the lift to existing grade. Geocomposite remained folded back at the anchor trench while excavator and truck cut excess 1/2" screened soil from outside anchor trench at a 3:1 slope (approx), with 300 excavator w/ thumb; removed soil and hauled back to the stockpile (15 loads). Continued to operate screen plant throughout the day, with the 430 loader feeding and the 320 loader stockpiling. In the afternoon, switched one haul truck to relocating stockpiled clarifier sediments/ore to the center for placement of lift 10 by D6R dozer. HLE onsite to perform density tests on slurry pit anchor trench and clarifier lifts 7, 8, and 9. All clarifier tests exceeded 95% compaction; however, the anchor trench tests did not all pass. Of the 9 tests performed, 4 tests along the east side passed, while the remaining 5 along the east and south sides failed to meet the specified compaction. CRA will rework these

### Site Visitors:

**CRA:** Howard Stich (PM) onsite periodically throughout the day to view progress and talk with JB and CRA crew. **IDEQ/USFS:** Dennis Duchon and Sherri Clark of the USFS and Doug Tanner and Bruce Olenick of the IDEQ onsite to view remediation/reclamation progress with JB from 10:00 am to 1:00 pm. **Modern Machinery:** onsite from 11:15 am to 12:30 pm to replace cutting edge on D51 dozer and replace filters on one of the haul trucks.

### Meetings:

Discussed screened soil volumes with JB; CRA anticipates shutting down and demobilizing screen plant in the next week. Went over anchor trench compaction results with JB; 5 of 4 tests failed to meet specified compaction, CRA will rework bad areas and retest in the morning. JB located underground conveyance piping for Syncline Spring in the afternoon; CRA marked the alignment for it with stakes at the northwest corner of the slurry pit. JB wants one of the settlement monuments over the pipe near the anchor trench. The 3 other monuments are to be placed as shown on the drawings.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered site traffic (SSP hauling with belly dump trucks again today while CRA haul trucks are hauling from screen plant to slurry pit), heavy equipment right-of-way (yield to yellow iron), transfer of energy hazards/stored energy, KISS - Keep It Simple Stupid!, and being attentive to work task in general. Air monitoring for HCN and PH3 while working at the clarifier; not hits. No dust monitoring as wheeled vehicle traffic was limited in areas of concern (ore).

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**HLE:** onsite from 10:00 am to 11:10 am to test 9 locations along the slurry pit anchor trench and 12 locations (4 areas on each of lifts 7, 8, & 9) at the clarifier. All tests at the clarifier exceeded 95%; 5 of the slurry pit tests failed, along the west side. CRA will rework these areas and re-test tomorrow.

SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>8/27/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SE 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>47-71</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 130.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 5           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to trim the excess compacted 1/2" screened soil from outside the anchor trench and relocate for placement in the 12" lift around the edges of the slurry pit. Placed tails of geocomposite on east side and covered. Cleaned up soil piled along toe of furnace (ore) and relocated in Phosphoria Gulch, cut in slope for geocomposite, and backfilled. Completed anchor trench area trimming by 2:00 PM. Density tests performed by HLE (4 total) along west side of slurry pit - all exceeded 95%. Rolled geocomposite over compacted fill and completed most of cover by the end of day (hauling 12 loads of 1/2"). Continued work in clarifier (lift 10) grading and compacting the lift of stockpiled sediments spread out to dry yesterday. HLE performed 5 tests on the lift, 4 of which exceeded 95% relative compaction. CRA scarified the lift and will re-compact tomorrow prior to placing lift 11. Began hauling and placing 3" minus screened soil at the slurry pit in the afternoon (52 loads), building a road across the top of the cap to bring trucks across. Continued to operate screen plant, loading with the 430 loader and stockpiling with the 320.

### Site Visitors:

**Pro-Rentals:** picked up Kubota mini excavator and jumping jack compactor around 3:00 pm.

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered CRA's revised Substance Abuse Policy - all crewmembers signed acknowledgement form that was submitted to HR. Also discussed reporting site issues/potential hazards to appropriate personnel, small equipment fueling (gasoline), and ground personnel safety and surrounding awareness. Air monitoring for HCN and PH3 while working at the clarifier; not hits. Also monitor for HCN and PH3 at screen plant late in the day - not hits. Slight sulfur odor detected under rock piles; determined to be from naturally occurring sources.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

**HLE:** onsite from 3:00 pm to 4:00 pm to test 4 locations along the west side of the slurry pit on the anchor trench - all exceeded 95%. Also tested 5 locations on lift 10 in the clarifier, 4 exceeded 98%; one was at just under 89%. **Scherbel:** onsite from 2:30 pm to 3:15 pm to survey edge of geocomposite at slurry pit.

SUPERVISOR

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>8/28/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Calm</u>    |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>49-80</u>   |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 130         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued to haul select screened fill to the slurry pit, where the D51 dozer was placing and grading, to complete the cushion layer over the liner (8 select fill loads). Haul trucks switched to hauling ore to clarifier for lift 11 around 8:30 am (100 ore loads); then loaders shuttled select screened fill to slurry pit to complete 12" lift over 3:1 slope off of anchor trench (material hauled by loaders was previously placed material cut from anchor trench area over the past two days). The D6R dozer and smooth drum roller grading and placing ore reject material cut from the south side of Phosphoria Gulch by the 300 excavator. The 300 excavator w/ thumb worked in the borrow area cutting fill material; cut bench on slope to connect the road/ATV trail that was removed earlier in the project. Started lift 12 at the clarifier late in the day.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

Water truck down at 10:30 am; PTO shaft off of pump. Modern to replace truck with different one.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered team decisions, impact of actions/inaction, protection of work area, communication, dozer work, and everyday work zone awareness. Air monitoring for HCN and PH3 while working at the clarifier; not hits. Dust monitoring in the afternoon once site dried out, all levels acceptable.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

None

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>8/29/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>SSE 0-5</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>49-80</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 13        | 129         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA hauled ore material to the clarifier to complete lift 12 this morning (35 loads). The 300 excavator and D51 dozer worked in the borrow areas stockpiling and loading ore while the D6R dozer placed; compaction as required. Once complete with the lift, hauled 3" minus fill material to the slurry pit to begin the first lift across the north end (37 loads). One truck hauled to the D51 dozer; truck loader by the 300 excavator. The 300 excavator w/ thumb worked at the clarifier mixing and placing lift 13 at the clarifier using stockpiled sediments; assisted by the D6R dozer. Cleaned screen area this morning, screening ramp and berms around plant before tracking it out of the area for cleaning. Spent the rest of the day cleaning screen plant and power washing. The two loaders screened armor rock through the grizzly and stockpiled all day.

### Site Visitors:

**Modern Machinery:** onsite to pickup 4,000 gallon International water truck and replace with 4,000 gallon Kenworth model from 7:30 am to 8:00 am.

### Meetings:

JB onsite in the afternoon; overall pleased with progress.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered snakes, screen plant cleaning a breakdown, hand signals, fueling, and new water truck. Air monitoring for HCN and PH3 while working at the clarifier; not hits. No dust monitoring due to the limited vehicle traffic.

### Report on Subcontractors (Conversations, Meetings, Issues, etc.) :

None

SUPERVISOR

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>8/30/09</u>         |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>NE 0-20 (Gusty)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>47-75</u>           |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 12        | 0           | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

No work onsite today

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

None

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

None

SUPERVISOR

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DATE

# CRA Services

## Supervisor's Daily Report

Project: Georgetown Canyon Project number: 56872 Day: Monday Date: 8/31/09  
 Client: Nu-West/Agrium Location: Georgetown, ID Weather: Pt Cloudy Wind: SSE 0-5  
 Manager: Howard Stich Project Engineer: Dan White Supt: Regis Seng Temp: 49-80

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 12        | 122         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5.5         |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the clarifier to start lift 14 and fill in low areas left from removing stockpiled wet sediments along the west side of the clarifier. The 300 excavator loader trucks, assisted by the D51 dozer in the borrow area, while the D6R dozer graded. Compaction ongoing during lift placement. In all, 94 loads were hauled. HLE onsite to perform 18 density tests at the clarifier (6 on each of lifts 11, 12, and 13) all exceeded 98% relative compaction. The 300 excavator w/ thumb worked in the borrow area grading/shaping for the first part of the day, then worked on screening armor rock with the grizzly. The 430 loader assisted with screening rock all afternoon. Completed cleaning powerscreen and 320 loader prior to demobilization later this week.

### Site Visitors:

**ERC:** onsite (3 man crew) to go over seeding specifications and visit areas to be reseeded. Met with JB to discuss reclamation expectations and requirements (see below).

### Meetings:

Dan, JB, and crew from ERC (Evans Reclamation & Construction) reviewed seeding specifications. ERC recommended a few additional native species be added to the seed mix to promote vegetative cover growth, but approval of these species may be difficult to obtain. Fertilizer requirements will depend on soil analysis - which is pending (JB submitted samples last week). JB wants to use straw matting (or a similar biodegradable product) for covering the furnace - no specifications provided, so any cost effective erosion control blanket will suffice. ERC recommended track walking steep slopes (perpendicular) to promote growth and reduce propagation of rills. ERC also recommended applying fertilizer, seed, mulch, and tackifier in one application (versus applying fertilizer separately). Also, due to the steepness of the slopes to be seeded, it is not practical to till soil to prepare for seeding. ERC may drill seed the furnace or clarifier as they have seen good results doing this with the native soils in the area. An early October start date is anticipated. Discussed point elevations listed on the clarifier cover drawing (C-15 to C-22), there is a +/- 5' difference in elevation, but the points were all supposed to be on top of the concrete ring wall. Proceed with placing ore 1' above highest point on concrete ring wall, with a 5% slope towards the center. Discussed August 09 invoice with JB, invoiced quantities approved.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered power washer safety, water injection hazards, PPE, work areas hazards - debris, spotters & buddy system, weather changes - cold stress, and haul trucks (off road and on road). Air monitoring for HCN and PH3 throughout the day at the clarifier - no hits. Dust monitoring with compactor operator at the clarifier (afternoon) and one of the haul truck operators (morning) - averages well below action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**HLE:** onsite from 12:00 pm to 1:15 pm to perform 18 density tests at the clarifier (6 on each of lifts 11, 12, and 13), all exceeded 98% relative compaction.

SUPERVISOR

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>9/1/09</u>          |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>S 0-15 (Breezy)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>47-76</u>           |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 12        | 120.5       | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to placing and compacting ore at the clarifier with the D6R dozer and smooth drum roller; 300 excavator and D51 dozer working in the ore stockpile area (91 loads). Placed lifts 14 and 15 today - lift 15 consisted of moist sediments stockpiled along the south side of the clarifier. Removed all stockpiled sediments and backfilled hole from the clarifier base up to match surrounding lifts using ore. Removed concrete foundation near the proposed anchor trench alignment along the north side of the clarifier in the afternoon. The 430 loader worked all day at screening rock with the grizzly and stockpiling. Late in the day, began cutting slope terrace with D51 dozer along the cut slope in the ore storage area (north side of Phosphoria Gulch), completing approximately 75%.

### Site Visitors:

None

### Meetings:

Discussed Tank Spring diversion ditch cut with JB, JB would like to use existing ditch alignment as much as possible, except where it is necessary to move the ditch into the hillside to maintain the proper grade. No need to reshape slope above ditch (below topsoil borrow as it is already close to 2:1 and has trees and grass growing on it. Dan measured areas to receive seed and mulch; discussed with JB. Initial figure was 17.0 acres; including ore storage, borrow pit, furnace, fill north of furnace, clarifier, and haul roads - JB reduced to 15.7 acres (reduced area figured in ore storage area from 5.8 to 4.5 acres). JB will discuss borrow area reclamation with Mitch, but is sure it needs to be completed this year (much or soil removed to rock layer). Forwarded sketch with reclamation areas to ERC.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered dust control, rechargeable tools (grease guns, drills, saws, etc), upcoming holiday weekend - staying focused, site traffic, and public relations. Air monitoring for HCN and PH3 throughout the day at the clarifier - no hits. Dust monitoring with compactor operator in the afternoon - averages well below action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |               |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>9/2/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>NW 0-8</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>50-72</u>  |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 12        | 111         | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   | 1         | 7           | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA hauled 3" minus soil to the slurry pit for the first half of the day, loading trucks at the stockpile with the 300 excavator and placing/grading with the D51 dozer. The 300 excavator w/ thumb cleared brush/small trees from the slope between tank spring ditch alignment Sta 5+50 to 3+50 and began cutting slope at 2:1 from cut stakes established previously by Scherbel. In the afternoon, hauled ore to clarifier to complete backfilling of the depression where wet sediments had been stockpiled along the south side (39 loads). Placed ore and compacted in 1-foot lifts. Returned to hauling fill to the slurry pit once ore was complete (28 loads total for the day). Excavated test pits in the sedimentation basin and in the ore area today (6 total - 3 in each location). TP's in ore area along north side of area, inside proposed anchor trench. Due to rock, moved north side of anchor 8' to 10' south; no phosphorous detected in any TP's (spent a total of 1.5 hrs with excavator and operator). Late in the day, reopened tank spring ditch line for the weekend and graded/compacted remaining sediments at clarifier.

### Site Visitors:

**ICS:** onsite from 9:00 am to 12:00 pm to inspect, breakdown, and pickup screen plant. ICS representative Paul Jeo very happy with condition of machine and cleanliness. **Les Schwab Tire Co:** onsite from 10:45 am to 12:00 pm to repair cracked valve stem on roller. **Modern:** onsite from 3:00 pm to 4:00 pm to pickup 320 loader.

### Meetings:

Discussed tank spring ditch alignment with JB; had been considering moving alignment to fit existing cut, but decided to follow design alignment staked by Scherbel to keep the spring flow away from the slope below the topsoil borrow. CRA will not do any cutting on the long slope (Sta 0+50 to 3+50) as it is already vegetated and sloped at 2:1 (approx). Briefly discussed results of soil analysis on dinwoody soil and dud hollow borrow soil; consider all soils other than those originating in the dud hollow area as dinwoody material. Submitted to ERC for recommendations; JB suggested using a fertilizer that will work for both soil types, if possible.

### Production Delays:

Hamm compactor down from 7:00 am to 12:00 pm with cracked valve stem on left rear tire.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered dust control, water truck safety, frac tank inspection and security, off road haul trucks, fuel handles (don't trust automatic shutoffs), spill reporting and clean up, and tires/rocks (beware). Air monitoring for HCN and PH3 throughout the day at the clarifier, ore area, and tank spring ditch cut - no hits. No dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 11:45 am to 3:00 pm to re-stake anchor trench alignment and test pit locations provided by JB. Surveyed CRA test pits. (Extra work - TP's - totaled 2 hrs w/ and additional 3 hrs travel time and mileage). Set 40-foot offset stakes for Sta 5+00, 4+50, 4+00, & 3+50 along tank spring ditch cut.

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SUPERVISOR

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>9/9/09</u>   |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SSW 0-15</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>36-72</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 101         | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 6           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA hauled 3" minus soil to the slurry pit for the first half of the day for lift no. 2 of the screened bulk fill, loading trucks at the stockpile with the 300 excavator and placing/grading with the D51 dozer (28 loads of fill hauled). In the early afternoon, shifted to hauling ore to the clarifier to fill in the low area left from removing the last area of wet material along the south wall and to start lift no. 16; approx 4.2' of fill remaining in the center of the clarifier to reach 6940.0' elevation (30 loads of ore hauled). HLE onsite to perform density tests on lifts 14 and 15 of the clarifier (ore); all test exceeded 100 percent relative compaction; moisture ranged from 6 to 12 percent (6 to 7 percent on top lift, 11 to 12 percent on lower lift). Spread out remainder of wet sediments over center area of the clarifier, keeping sediments back from edge so they will not contact the GCL (potentially damaging it due to the phosphorous contained in them). Thin lift of wet material was worked late in the day with the D6R and D51 dozers, turning and ripping it to speed the drying process; will compact and continue with additional lifts tomorrow.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered work area and equipment inspections (after returning from the long holiday weekend), weather changes, animal behavior/grouping/movement/hunting, crew changes, communication, and focusing on work tasks at hand. Air monitoring for HCN and PH3 at the clarifier and slurry pit throughout the day - no hits. No dust monitoring.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**HLE:** onsite with one technician from 1:45 am to 2:30 pm to perform density tests on lifts 14 and 15 of the clarifier (ore); all test exceeded 100 percent relative compaction; moisture ranged from 6 to 12 percent (6 to 7 percent on top lift, 11 to 12 percent on lower lift). **ESI:** discussed next liner phase schedule with project manager; anticipate starting with GCL at the clarifier on 9/16/09 (next Wednesday).

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                          |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|--------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>9/10/09</u>           |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>WSW 0-20 (Breezy)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-81</u>             |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 104.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul ore to the clarifier for lift 16; loading trucks with the 300 excavator and placing with the D6R dozer (83 ore loads). The D51 dozer completed lift no. 2 (lift no. 1 of the 3" minus) at the south end of the slurry pit early in the day, removing the remainder of the haul road to complete the lift. Once complete, the dozer spread soil cut from the slope above tank spring between Sta 5+00 and 3+50 in the fill area north of the furnace. The 300 excavator w/ thumb then continued to cut the 2:1 slope above the tank spring alignment, but a leaking hydraulic line stopped this operation soon after starting. The D51 dozer went back to cutting ore in the borrow area until around 1:30 PM, when the dozer went to the clarifier to grade ore and finish the remaining lifts. The D6R switched to cutting excess soil north of the clarifier where the ditch will be cut. The soil was pushed out and around the bench on the west side of the clarifier to provide a place for the excavator to work from to dig/backfill the anchor trench along the west side of the clarifier. Hauled 3" minus screened soil for the last hour of the day to the slurry pit as the wet area that was left open last night at the clarifier was still too wet to compact and cover (15 loads of 3" fill hauled to SP). Scarified wet area; allow to dry tonight; will cover with the completion of lift 17 tomorrow.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

PC300 excavator w/ thumb down at 10:00 am with leaking hydraulic line to quick disconnect bucket ram.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered communication, cleaning windows & mirrors, compactor/roller safety, Chevron incident summary dealing with traffic control, and clarifier work. Air monitoring for HCN and PH3 in and around the clarifier and slurry pit throughout the day - no hits. Dust levels (averages) well under action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>9/11/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>WSW 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>41-77</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade    | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 104.5       | ACE      | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             | Electric | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC      | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 6           |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA graded the area where the ore stockpile area liner will be placed, shaping the existing grade for drainage in all directions. The area was compacted following grading. Hauled 3" minus screened soil to the slurry pit for the final 1-foot lift of screened soil, with the D51 dozer grading and the 300 excavator loading in the stockpile area. Also cut out a wet area of ore/sediments along the south wall of the clarifier (part of lift 16); mixed wet material with dry ore and replaced in the afternoon. Haul trucks switched to hauling ore in the afternoon (27 loads total ore), completing lifts on the clarifier by 4:30 PM, at which time operations reverted back to hauling and placing 3" minus screened soil (67 loads total fill). Graded and compacted clarifier top lift, and used 300 excavator w/ thumb to clean up the ore edge at the concrete wall. HLE onsite to perform density tests at the clarifier and the ore are (inside anchor trench alignment). Performed 6 tests on clarifier lift 16, 4 on lift 17, and 2 on lift 18 - all exceeded 100% compaction. Density tests in ore area (3 total) all exceeded 100% compaction.

### Site Visitors:

None

### Meetings:

Regis, Dan, and JB spoke late in the day during JB's brief visit to the site. Discussed past weeks work and next weeks projected schedule.

### Production Delays:

PC300 excavator w/ thumb down until 9:30 am with leaking hydraulic line to quick disconnect bucket ram; mechanic used incorrect fitting last time line was replaced. Also took oil samples from D51 dozer and adjusted parking brake on HM300 truck.

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered MSA hardhat defects and recall, PPE, haul trucks and haul routes, interaction with public, traffic control, and dust control. Air monitoring for HCN and PH3 in and around the clarifier throughout the day - no hits. Dust levels (averages) well under action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**HLE:** onsite from 12:00 pm - 1:00 pm with one technician to perform density tests at the clarifier and the ore are (inside anchor trench alignment). Performed 6 tests on clarifier lift 16, 4 on lift 17, and 2 on lift 18 - all exceeded 100% compaction. Density tests in ore area (3 total) all exceeded 100% compaction.

SUPERVISOR

DATE

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>9/12/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SSE 0-15</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-75</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 90          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul 3" minus screened soil to the slurry pit for the top 1-foot lift of liner cover soil (111 loads). The 300 excavator loaded in the stockpile area, the D51 dozer graded fill in the morning, and the D6R dozer graded in the afternoon. The D51 dozer worked at the clarifier early in the afternoon, finish grading the ore in preparation for liner deployment next week. After grading, the cap was dragged with a section of fence and rolled (static) with the compactor. Area was walked and large rocks removed. The PC300 w/ thumb worked in the morning continuing the slope cut along the tank spring ditch between Sta 4+00 and 5+50.

### Site Visitors:

None

### Meetings:

Sent JB e-mail regarding the tank spring alignment; CRA is proposing to move it back into the hillside, starting at 4+50 and moving it back approx. 12'-14' just beyond Sta 5+50. With this, additional fill would not need to be imported to create a bench for the channel to be cut into. JB approved this later in the day, but is also discussing it with Paul Kos of Norwest.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered MSA hardhat defects and recall, PPE, haul trucks and haul routes, interaction with public, traffic control, and dust control. Air monitoring for HCN and PH3 in and around the clarifier throughout the day - no hits. Dust levels (averages) well under action level.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>      | Date: | <u>9/13/09</u>  |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy/Rain</u> | Wind: | <u>SSE 0-18</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>49-68</u>    |

**On-Site Personnel and Man-hours:**

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 11        | 0           | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

No work performed onsite today.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

None

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>9/14/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>SE 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>52-76</u>   |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 11        | 100.5       | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   | 1         | 9           | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed 3" screened fill placement on the slurry pit this morning, hauling 6 loads of material, with the D51 dozer placing/grading and the 300 excavator loading. There are only a few loads required to complete the south end once the haul road ramp is removed (will keep ramp until rock armor is completed). Switched to hauling bulk fill from the Dud Hollow area for the area north of the furnace, hauling 107 loads. The D6R (and later the D6N LGP, after 10:00 am) dozer placed fill while the 300 excavator loaded trucks. The 300 excavator w/ thumb cast borrow material to the machine loading trucks. The D51 dozer finish graded the slurry pit and track walked the 3:1 side slopes. The dozer then track walked the furnace in preparation for seeding next month. In the afternoon, the D51 dozer assisted the excavators in the borrow area. Decontaminated and cleaned the D6R dozer in preparation for demobilization later in the week. Scherbel onsite to topo the slurry pit (top of fill), ore area (in and around anchor trench), and clarifier ore cap. Also began to stake clarifier ditch (sta 0+00 to 4+00) but quit due to weather.

### Site Visitors:

**WSECo:** onsite at 10:00 am to deliver D6N LGP dozer.

### Meetings:

Paul Kos approved moving the tank spring alignment into the hillside as proposed by CRA last week. Paul asked that CRA increase the curvature of the turn between 4+00 and 5+00, to avoid the sharp turn shown on the proposed sketch at 4+50, as well as adding a curve at Sta 5+60, where the berm starts to prevent higher flows from eroding away the berm surrounding the drop inlet structure.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered liner crew mobilization (new crew coming to site - unfamiliar with site conditions), traffic control, interaction with liner crew (heavy equipment/dust/etc), communication, and equipment decontamination. No air monitoring as all work was in clean areas and non-intrusive.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite from 10:45 am to 4:30 pm to topo the slurry pit (top of fill), ore area (in and around anchor trench), and clarifier ore cap. Also began to stake clarifier ditch (sta 0+00 to 4+00) but quit due to weather.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>9/15/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>SE 0-5</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>48-62</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 101.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA began hauling armor rock to the slurry pit for the top cover of that area (98 loads). A 50'X50' grid of lift stakes was set across the entire surface, and rock toe stakes set around the perimeter. The PC300 excavator loader trucks at the stockpile while the 300 excavator w/ thumb placed at the slurry pit, working from north to south. By the end of the day, approx 25,000 SF was covered at a minimum of 18" deep (30% complete). The D6N LGP dozer worked in the ore area cutting ore down to make room for the slope terrace that ties in with the ditch line along the south side of Phosphoria Gulch. In the afternoon, the 430 loader screened rock with the grizzly. Laborers completed decontaminating/cleaning the D51 and D6R dozers which have both been released. Also picked up rocks at the clarifier in preparation for GCL deployment tomorrow.

### Site Visitors:

**Modern Machinery:** onsite from 8:00 am to 12:00 pm to service D6R dozer, repair HM300 haul truck seat, and deliver 30" bucket for PC300 excavator. **Intermountain Bobcat:** onsite to deliver 300 tracked skidsteer for ESI.

### Meetings:

Discussed and walked tank spring ditch alignment from CB to Sta 4+50 regarding the alignment shift approved previously by JB and Paul Kos. JB's conceptual design had the ditch close to the location proposed by CRA. Also discussed fill area north of furnace; JB and Darren in favor of the changes proposed by CRA, which involves using less fill and running the bypass channel from north to south, starting at Sta 3+00, thus creating positive flow towards the saddle between the slurry pit and furnace. JB forwarded CRA's sketch and description to Paul Kos for final approval, but JB saw no reason why there would be any problem changing the flow as it fits better with the existing conditions. Regis discussed the clarifier ditch alignment (Sta 0+00 to 4+00) with JB; JB will look over this tomorrow, but he would rather follow the existing drainage and not the proposed alignment which shows fills in excess of 3' at the flow line towards the 0+00 end of the ditch.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered CRA monthly safety matrix (August), weather, slips/trips/falls, visibility, liner crew, and haul routes. No air monitoring as all work was in clean areas and non-intrusive. Dust minimal due to rain yesterday and overcast conditions.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>9/16/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable 0-12</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>44-72</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 104.5       | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 10        | 105         |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued hauling armor rock to the slurry pit, but found it difficult to load with the 430 loader, and switched to hauling unscreened fill to the area north of the furnace around 8:30 am. Hauled dud hollow borrow soil with both trucks, loaded with the 430 loader, and graded with the D6N dozer. Compacted 1-foot lifts as required. Hauled and placed 61 loads of unscreened fill material in all today. The 300 excavator cut the anchor trench around the south, west, and north sides of the clarifier. Trench was cut 30" deep and 36" to 40" wide to accommodate a walk behind padfoot compactor. The excavator then went back to loading armor rock around 1:00 PM. In total, 45 loads of armor rock we hauled and placed. The other 300 excavator w/ thumb that had been working in the borrow area switched to placing rock and pounded smooth in one 18" lift across the middle of the slurry pit.

### Site Visitors:

**Modern Machinery:** picked up D6R dozer at 7:30 am.

### Meetings:

JB gave CRA approval to proceed with the fill area north of the furnace changes noting that CRA's proposal is acceptable provided that the channel is adequately rip rapped through the saddle as shown on Drawing 5-3B to prevent erosion to the furnace cover. Later in the day, discussed outlet pipe on north side of clarifier that was found during anchor trench excavation (26" BG); ok to place liner over it. JB asked that CRA plug the pipe with bentonite or concrete. Discussed rip rap in saddle between furnace and slurry pit; from roughly the high point south, CRA should install non-woven fabric under the rock spillway.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered armor rock placement JSA, wildlife and livestock, predatory animals, anchor trench excavation, liner crew mobilization and start of work, and liner crew bobcat hauling materials through CRA staging area (haul route to slurry pit). HASP orientation with ESI crew from 8:35 am to 9:15 am. Attended by Dan White, Tim Reed, Darren Jorgensen, JB, Ismael Buitron, Telesforo Mancillas, Efren Buitron, Victor Buitron, Eliberto Radilla, Benjamin Buitron, Ivan Sanchez, Braulio Silva, Jose Campos, and Mario Buitron. No air monitoring as all work was in clean areas and non-intrusive. Dust minimal due to rain yesterday and overcast conditions.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite with a crew of 10 at 8:35 am. Went through safety brief and HASP review - sign off. Crew inspected subgrade at clarifier and began GCL deployment, covered south half by the end of the day. Also began FML deployment, also covering the southern half of the clarifier; all seams welded. Crew offsite by 7:00 pm.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                     |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>9/17/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-8</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>45-78</u>        |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 80.5        | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 10        | 95          |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to haul dud hollow borrow material and place in the fill area north of the furnace, loading trucks with the 430 loader and placing material with the D6N dozer (16 loads of fill). The 300 excavator cut the anchor trench around the ore area cap for the first half of the day, leaving one narrow access point to the west. Returned to hauling armor rock around 11:00 am through the end of the day, once the excavator was complete with the ore area anchor trench (hauling 54 loads of rock). ESI onsite to complete deployment of GCL and FML at the clarifier and complete required FML QA/QC testing. Moved to ore area around 2:00 pm; completed deployment of GCL and FML by late afternoon. Will complete testing and begin geocomposite deployment in both areas tomorrow. CRA began cutting ore in stockpile area at 3:30 PM in order to continue the slope terrace/ditch east into Phosphoria Gulch (see discussion below).

### Site Visitors:

**Modern Machinery:** picked up D51 dozer at 5:00 pm.

### Meetings:

Discussed slope terrace in ore area with JB; the bench needs to be completed this year in order to keep water away from ore pile through the winter and spring of next year. JB would like CRA to consider moving ore away from the slope in order to carry the bench through to the east and tie-in with the existing ditch line along the south side of the gulch. This would be paid as a change order as CRA had not intended to move ore without placing it in one of the cap areas in order to cut the slope break. Set cut stakes in ore area for terrace late in the day; upwards of 8' of cut to reach the grade necessary to provide positive drainage along the slope; set stakes for projected alignment through the ore pile south to the creek; upwards of 12' of cut in the ore pile. Walked with JB; approved of alignment. Will cut all ore east of the alignment and move onto west side of pile so no ore will be left cutoff by the terrace/ditch. Sent e-mail with sketch for approval late in the day. CRA to proceed on T&M basis using contact rates.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered PPE (specifically gloves and safety glasses), trench safety, working near the edge of the anchor trenches, and work in the public roadway. Air monitor for HCN, PH3, and dust when working in ore area cutting trench; all readings acceptable. Dust monitor in armor rock stockpile area; levels acceptable for clean work (<5.0 mg/m3)

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite with a crew of 10 at 7:00 am. Continued GCL and FML deployment on the north half of the clarifier and completed QC testing; Darren/JB sent in three (3) samples to the lab for testing. Moved to ore areas around 2:00 pm, and completed GCL and FML deployment by 4:00 pm. Offsite by 4:30 pm.

SUPERVISOR

DATE

PROJECT MANAGER

DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>      | Date: | <u>9/18/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear/Strms</u> | Wind: | <u>Variable 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>47-81</u>         |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 11        | 80.5        | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   | 10        | 100         |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA started the day by completing the anchor trench in the ore area, then moved to the clarifier to complete the anchor trench on the east side. Loaded cut material into a haul truck and dumped at the base of the hill, just north of the clarifier. The 300 excavator w/ thumb screened rock armor blasted near Phosphoria Gulch, assisted by the 430 loader. Stockpiled to west (dumped over hill). Completed cutting anchor trenches by noon and switched to loading out armor rock with 300 excavator, placing with 300 excavator w/ thumb (40 loads). The 430 loader continued to screen rock from the dud hollow area through the afternoon. The D6N LGP dozer worked all day in the ore pile to move stockpiled ore to allow for installation of the slope terrace/drainage towards the east (into the gulch), and south towards the spring drainage, along the south side of the gulch. ESI onsite to complete QC testing on ore area FML and complete deployment and seaming of geocomposite in the ore area. Began deploying and seaming geocomposite at clarifier in the afternoon. Completed approx 85%-90% of the composite there before shutting down for lightning. Surveyor Scherbel onsite to survey as-built anchor trench alignment (for calculating liner area) at the clarifier and ore area.

### Site Visitors:

**WSECo:** Changed fuel filters on D6N LGP dozer mid-morning.

### Meetings:

Discussed clarifier drainage ditch alignment with JB; do not follow path staked as it cuts off access along the clarifier loop road; follow existing swale along SE side and then head downhill towards Georgetown Creek, going just east of the stockpiled cattails, brush, and slag, then turn west and run to the creek, using (2) two 20' sticks of 12" pipe placed side by side (currently have over 100' of 12" ADS pipe onsite). JB would also like to ensure positive flow from the north end of the clarifier around the west side and to the south towards the monitoring well.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered worn, torn, or tattered clothing and associated hazards. Also discussed working in anchor trench, walk behind compactor safety, PPE, hand signals and competent person when backfilling trench, and loading/unloading small equipment into pickups of trailer. Air monitored HCN and PH3 while cutting remainder of anchor trench at the clarifier - no hits. Truck traffic picked up late in the day when began hauling armor rock - all work in clean areas - no dust monitoring. Incident with 430 loader late yesterday; when pushing up screened rock armor, grizzly moved and struck left fender, bending it. No injuries and equipment operable. Reported to JB, CRA RHSM, and Modern Machinery. Report on file as of this afternoon.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite with a crew of 10 at 7:00 am. Completed testing on ore area FML and completed deployment and seaming of geocomposite there as well. Began deploying and seaming geocomposite at clarifier in the afternoon. **Scherbel:** onsite with a one man crew from 9:45 am to 11:45 am to survey as-built anchor trench alignment for calculating liner area; will return to shoot geocomposite boundaries next week.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>    | Date: | <u>9/19/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear/Strms</u> | Wind: | <u>Variable 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>47-81</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade    | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 70.5        | ACE      | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             | Electric | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC      | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   | 10        | 40          |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |          | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA began backfilling anchor trench at the clarifier, using the 300 excavator and 33" padfoot walk behind compactor. Hauled 1/2" screened soil with haul truck (12 loads), loaded by the 430 loader (truck operator loaded himself). Completed approximately 50% by the end of the day, from the south around the east to the north. The D6N dozer worked in the ore area cutting ore from the east end of the pile and pushing west out of the way of the drainage terrace/ditch that will tie in with the creek along the south side of the gulch. Ore depth is much greater than expected; JB instructed CRA to continue moving ore westward. CRA anticipates excavating some test pits to determine ore depth at the east end of the pile on Monday.

### Site Visitors:

None

### Meetings:

Discussed clarifier drainage ditch alignment with JB; decided to re-stake alignment to swing south and west around the clarifier and pass 20' north of the well just southwest of the clarifier. Use two 20 LF sticks of 12" ADS pipe to maintain a road just west of the well and relocate/remove silt fence to the south to provide room for a pump rig to access wells from the south. Leave silt fence in place until next year. JB is considering how much topsoil to use on existing slopes around west side of clarifier; may not need any and just grade and reclaim the soil used to create bench for excavator cutting anchor trench. Use drainage diversion item for pay quantity (soil cut from north end of clarifier to create swale for ditch. Also, ditch on north end should run west and turn south, diverting water across the access road - cut shallow swale to get water to west side of road.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered walk behind compactor safety, CRA's lightning policy, and work area congestion. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic (one truck hauling to clarifier intermittently throughout the day) - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**ESI:** onsite with a crew of 10 at 7:00 am. Completed deployment and seaming of geocomposite at clarifier. Cleaned up liner scraps and trash and loaded equipment for demobilization. Offsite at 10:45 am; three man crew remained at hotel to await results for destructive testing at the ore area. Remainder of crew left town once the remainder of the destruct sample results we received from that lab around 2:30 pm.

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>9/20/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-15</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>43-65</u>         |

**On-Site Personnel and Man-hours:**

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 11        | 0           | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

No work performed onsite today

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

None

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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SUPERVISOR

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|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>9/21/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>N 0-20</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>31-62</u>   |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 81          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 6           | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 6           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued work on the clarifier anchor trench (using one haul truck, the 300 excavator, and both compactors), completing all but 100' along the southwest side, before switching to hauling 1/2" minus screened soil late in the day to hold liner down overnight (gusty winds forecast). In all, 17 loads of the 1/2" material were hauled and placed - 11 loads in the trench, 6 loads on top of the fabric. The 300 excavator w/ thumb spent most of the day screening rock rip rap in the borrow area near Phosphoria Gulch, with the 430 loader stockpiling rock and waste material. The excavator switched to loading trucks hauling fill to clarifier late in the day. HLE onsite to perform density tests at the clarifier and fill area north of furnace; completed 5 tests on clarifier anchor trench - all exceeded 95% compaction. Also completed 6 tests on the top lift of the fill area north of the furnace, all of which exceeded 99% compaction. Surveyor Scherbel onsite to survey the as-built edge of the geocomposite at the clarifier. Disposed of GCL, FML, and geocomposite scraps generated during liner installation at the clarifier and ore area, at the Bear Lake County Landfill.

**Site Visitors:**

**WSECo:** onsite from 11:00 am to 4:00 pm (left for parts from 2:00 pm to 3:30 pm) to repair steer/shift handle in dozer.

**Meetings:**

Discussed density testing at clarifier and fill area north of furnace - JB wanted a minimum of 4 tests at each location.

**Production Delays:**

D6N LGP down until 4:00 PM with bad F-N-R switch in drive/steering mechanism.

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered walk behind compactor safety, cold weather stress, working near heavy equipment, communication, and anchor trench safety. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic (one truck hauling to clarifier intermittently throughout the day) - no dust monitoring.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**HLE:** onsite from 3:00 pm to 4:00 pm with a crew of one to perform density tests at the clarifier and fill area north of furnace; completed 5 tests on clarifier anchor trench - all exceeded 95% compaction. Completed 6 tests on the top lift of the fill area north of the furnace, all exceeded 99% compaction. **Scherbel:** onsite with a one man crew from 2:30 pm to 5:00 pm to survey the as-built edge of the geocomposite at the clarifier.

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>9/22/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-10</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>27-72</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 11        | 95          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed backfilling and compaction of the clarifier anchor trench this morning along the southwest side, and then moved to the ore area and began backfilling there around 12:00 pm. Used loader to haul fill to the ore area anchor as trucks were hauling to the clarifier. Trucks hauled 1/2" minus screened fill to the clarifier for the cushion layer above the geocomposite. The 300 excavator w/ thumb loaded trucks and the D6N dozer graded 1/2" minus fill at the clarifier all day. Started by building a road (from north to south) across the middle, then began pushing off to the sides (east and west). In all, hauled 75 loads of soil to clarifier, 3 loads to the ore area for the anchor trench. CRA excavated a few TP's at far east end of the ore stockpile to determine the remaining ore in that area; just over 4' at the greatest depth behind the pile where CRA has been cutting.

### Site Visitors:

**Wingfoot Tire:** onsite from 9:00 am to 11:00 am to patch tire on haul truck that had a RR spike in it.

### Meetings:

JB, Dan, and Regis discussed slope terrace/drainage in the ore area. Regis excavated a few TP's at far east end of the stockpile, where the dozer has been cutting material - there is approximately 4' of ore remaining. The creek along the south side of the gulch is now over 8' above grade at the far east end of the pile - this may cause problems as the water flowing along it will likely seep through this bank and out into the ore area. JB will look at the area and work on a solution. Discussed possibly bringing the flow down from the bench west of the ore, between it and the cap area, using a rip rap apron - JB will weigh options and get back to CRA. Later in the day discussed side slopes for fill material (above liner) at the clarifier - set stakes at 2.5:1 as this worked out good along the west side - JB approved, indicating he was ok if we went as shallow as 3:1.

### Production Delays:

Haul Truck down 2 hours for tire repair (see above).

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered wild animals (elk, moose, bear, wolves, etc), watching for stock in road (sheep & cattle), and dust control - haul trucks back hauling today to clarifier. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Haul trucks and loader operating in clean areas - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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DATE

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                     |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>9/23/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-5</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>41-72</u>        |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 10        | 82          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 5           | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   | 1         | 5           |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed backfill and compaction of the ore area anchor trench around 9:00 am this morning. Smooth drum compactor used to roll the anchor trench top lift. Meanwhile, the 300 excavator w/ thumb, haul trucks, and D6N dozer continued loading, hauling, and placing the 12" lift of 1/2" minus screened soil for the cushion layer above the geocomposite at the clarifier. At 11:00 am, took two operators away from fill placement and continued screening rock armor/rip rap in the borrow area with the 430 loader and 300 excavator w/ thumb. Also removed pipe used to bridge creek in ore area that had been installed so CRA could access ore rejects along south side of Phosphoria Gulch. HLE onsite to perform density tests on the ore area anchor trench (top lift). Performed 4 tests, all of which exceeded 98% relative compaction. Surveyor Scherbel onsite to survey the ore area geocomposite and a small stretch of the clarifier geocomposite not ready when Scherbel was onsite two days ago. Also surveyed some of the slurry pit armor rock along east side of slurry pit. Around 2:00 pm, completed fill placement and grading at the clarifier and switched to hauling and placing fill with one truck at the ore area cap.

### Site Visitors:

**Pro Rental:** onsite to pickup walk behind compactor and dump trailer at 3:30 PM.

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered communication, traffic control and awareness in the public right of way, and dust control. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Haul trucks and loader operating in clean areas - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**HLE:** onsite from 12:30 pm to 1:00 pm with one technician to perform density tests on the ore are anchor trench (top lift). Performed 4 tests, all of which exceeded 98% relative compaction. **Scherbel:** onsite from 12:15 pm to 2:00 pm to survey the ore area geocomposite and a small stretch of the clarifier geocomposite not ready when Scherbel was onsite two days ago. Also surveyed some of the slurry pit armor rock along east side of slurry pit.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>9/24/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SE 0-12</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>51-84</u>   |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 10        | 60          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

Finish cover material on phosphorous cover in ore area and continue clarifier soil cover. Hauled 117 loads of 3" minus fill to the the ore area and the clarifier. Wash roller for demobe. Empty sand bags remaining from liner deployment, put out trash for pick up.

**Site Visitors:**

**Modern Machinery:** onsite this afternoon to repair water truck.

**Meetings:**

Meeting w/ State of Idaho, GET, Nu West, USDA, IDEQ, Norwest to insprct site and plan next remediation phase (Gergetown Creek cut through site).

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

State of Idaho, Forest Service, IDEQ onsite, watch visitors with equipment. Watch your lanes, traffic increase due to rifle season opening. Water on roads, speed of off road trucks.

**Report on Subcontractors (Conversations, Meetings, Issues, etc.) :**

None

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>9/25/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-15</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>39-85</u>   |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 10        | 60          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

Cut ditch between furnace cap & slurry cap. Install rip rap on slurry cap. Load and install 3" minus to clarifier, mix 1/2" minus in with 3" minus fill, with loader (64 loads of fill total - 75/25 mix of 3" to 1/2" fill, approx). Spread material on clarifier, install settlement monuments. Track in clarifier sides.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Loading out excess liner, haul truck path safety, strap inspections, dust control.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>9/26/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-15</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>39-85</u>   |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 10        | 60.5        | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA loaded, hauled, and placed armor rock on the south end of the slurry pit, completing the cover (except for the saddle between the furnace and the slurry pit) by the end of the day - 63 loads total. The stockpile of armor rock in the former soil screening staging area is nearly depleted. Continued working on filling the area north of the furnace, against the east side of the slurry pit, late in the day. Graded saddle area for drainage from the fill area to the south.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered ground personnel safety, haul truck routes and speed, equipment inspections, fire extinguishers, and recreational vehical traffic around the site. No air monitoring performed today.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                     |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>9/27/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable 0-8</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>33-65</u>        |

**On-Site Personnel and Man-hours:**

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 11        | 0           | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

No work performed onsite today

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

None

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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SUPERVISOR

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>9/28/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-5</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>29-72</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 9         | 92          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 6           | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to cut ore at the east end of the remaining stockpile and relocate with the PC300 excavator and D6N dozer, until around 11:00 am. Switched both machines to working remaining stockpiles of screened materials in the storage area, mixing 1/2" minus and 3" minus soil to make topsoil for the clarifier. Began hauling this topsoil material to the clarifier late in the day (hauling 30 loads). The PC300 excavator w/ thumb and the 430 loader screened and stockpiled rip rap all day near the borrow at the SW corner of Phosphoria Gulch. Laborers worked on cleaning haul trucks as CRA anticipates demobilizing one as early as this week.

### Site Visitors:

None

### Meetings:

Discussed using remainder of screened soil (1/2" and 3" minus) for topsoil at the clarifier; CRA mixing the remaining piles and will place on clarifier following topo by Scherbel today; JB approved. JB also indicated on the plans where he would like the access roads to the slurry pit monitoring wells (GT-2, 7, & 8) located - both roads will run off the fill area north of the furnace west towards the wells. CRA can use rock armor to build the base and place a layer of silica rock/fines on top to provide a smooth driving surface. JB would like CRA to complete this in the next week or two so he can sample these wells. JB would also like to excavate some test pits (at CRA's convenience, as an extra work item) along the proposed Georgetown Canyon bypass channel alignment so he know what the soil conditions are like along there.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered cold stress, weather changes, PPE, and wildlife and hunters in and around the site. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Scherbel:** onsite with a one man crew from 1:45 pm to 3:45 pm to survey the top of fill at the clarifier and ore area caps and the bulk fill material in the saddle between the furnace and the slurry pit.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>9/29/09</u>        |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>S 0-20 (gusty)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>33-71</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 9         | 93.5        | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rock armor/rip rap in the borrow area near Phosphoria Gulch, using the PC300 excavator w/ thumb and the 430 loader. Rock and fines stockpiled to the west over the side of the hill (separately). Continued hauling 1/2" and 3" screened soil (mixture) to the clarifier and placed in a 1-foot lift for topsoil (hailed 92 loads). Around 3:00 pm, switched to hauling armor rock to the slurry pit to complete the saddle near the furnace (hailed 14 loads). Placed 13' X 65' (94 SY) of geotextile fabric from the middle of the saddle south (where drainage gains grade quickly). Will complete rock at slurry pit tomorrow AM. The D6N dozer continued grading topsoil after complete with hauling, tracking side slopes and finish grading as required. Laborers worked at cleaning up trash and debris around the site late in the day.

### Site Visitors:

CRA: Howard Stich (CRA PM) onsite from 3:00 pm to 5:00 pm.

### Meetings:

Discussed Clarifier topsoil with JB; he wants to grade existing slopes (mainly west side) using existing material - no additional topsoil necessary. He would also like to put ECM on the slopes around the clarifier, from the edge (where the 5% across the top breaks to the steeper side slope) down to the bottom of the slope. CRA will work up a price for this (\$/SY) and submit for review.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered cold stress, winter driving, travel to/from site during winter weather, visibility, checking equipment and vehicles, hydration, dressing in layers, PPE, and haul routes/speed. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>9/30/09</u>        |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Snow</u>       | Wind: | <u>S 0-25 (gusty)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>29-36</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 9         | 82          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rip rap with the grizzly in the rock borrow area, using the PC300 excavator w/ thumb to load and the 430 loader to stockpile. The D6N dozer and the PC300 excavator worked in the ore area cutting ore and stockpiling towards the west end of the pile. By the end of the day, CRA will be nearly complete removing the bulk of the ore from the area where the terrace/ditch will be run. CRA intends to lower the existing creek (either by relocating it or cutting it down to below the surrounding exposed native ground) and will then continue the slope terrace east and south to tie in to the improved creek. Cleaned equipment, winterized pumps, and treated fuel systems to prevent freezing.

### Site Visitors:

None

### Meetings:

Discussed silt fence and straw waddles with JB. JB would like CRA to install 1200 LF of silt fence in the ore area to prevent sedimentation through the winter and into next spring - this is an extra work item. With regards to the waddles, the original bid included 875 LF of waddles in the ore area. JB evaluated the field changes that have been made and requested CRA purchase 700 LF for installation this year in the ore area.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered cold stress, winter driving, winter weather, and visibility. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>10/1/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>S 0-12</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>26-34</u>   |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 9         | 74          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rock armor in the borrow area near Phosphoria Gulch, using the PC300 excavator w/ thumb and the 430 loader. The D6N dozer worked at the clarifier cutting slopes below the cap at 2:1 or less. The PC300 excavator and one haul truck began cutting the ditch around the clarifier, cutting approximately 400 LF from the south working around to the east side. Material cut from the ditch was used to fill low areas in the slope around the west and south sides of the clarifier and to fill the low area NW of the clarifier (below where the ditch cut will empty). Removed 18 truck loads of material from the ditch cut by the end of the day.

### Site Visitors:

None

### Meetings:

Discussed ECM quantities at the furnace and clarifier - JB measured in the field and on the drawings, he came up with 4,450 SY at the furnace and 3,100 SY at the clarifier. The total SY is close to what CRA was figuring; so they will order appropriately. Also discussed fertilizer; CRA is ok to use ERC's recommended fertilizer (N/P/K/Fe @ 300 lbs/ac) as the application rate and components are close to what the laboratory analysis came up with. Went over seeding areas with JB; CRA will not need to seed the Dud Hollow borrow or area where ore is stockpiled, but needs to seed all vegetated ditches and tank spring hillside, so Dan and JB agreed to figure 13.5 acres for ordering materials. Discussed ECM; only need a temporary (12 MTH) product to protect seeded slopes through the winter and spring.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered cold stress, PPE, winter driving, winter weather, communication, ground personnel safety and work zone awareness, and visibility. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>10/2/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt. Cloudy</u> | Wind: | <u>Variable Calm</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>19-36</u>         |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade           | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 9         | 74          | ACE<br>Electric | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | ERC             | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                 | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                 | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed the rock armor on the slurry pit this morning. Operations then shifted to placing armor rock on the ore area cap, which was completed mid afternoon. Hauled 47 loads of rock armor to the slurry pit and ore cap. Once ore cap was complete, continued cutting ditch around clarifier, hauling cut material to the fill area NW of the clarifier (2 loads placed). D6N dozer graded stockpiled material NW of the clarifier to provide positive flow from the north to south along the base of the clarifier. Removed steel piping from topsoil borrow NE of furnace in the afternoon, pipes will be staged near scrap steel stockpile south of clarifier.

### Site Visitors:

**Modern Machinery:** onsite to repair water truck fuel tank mounts. **Matt Baker:** surveyor onsite for JB to survey completed cap and fill areas (independent of CRA/Scherbel).

### Meetings:

Discussed access roads to slurry pit monitoring wells with JB; he would like the access to GT-2 to come up from the south (not the east as directed earlier). The access to GT-7 and GT-8 will still come off of the fill area to the east. Discussed surveying with JB; his surveyor was surveying some areas that are incomplete, which JB understood, but wanted to have data for since the surveyor was out already.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered OSHA incident report on ignoring unsafe conditions in the workplace. Also discussed high wall instability in the rock borrow, slips/trips/falls, visibility, and communication. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>10/3/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt. Cloudy</u> | Wind: | <u>Variable Calm</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>19-36</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade        | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|--------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 9         | 72          | ACE Electric | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | ERC          | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |              | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |              | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rip rap with the PC300 excavator w/ thumb and the 430 loader. Screened rock stockpiles along the west side of Georgetown Canyon Road, and moved clean rock to the stockpile area with a haul truck. Also continued to cut the ditch around the clarifier, completing all but the last 30' to 40' and the north end where the ditch runs over the hill (in order to maintain access up onto the clarifier for seeding). Hauled 9 loads of soil to the low area NW of the clarifier (below the ditch outfall). Moved to cutting drainage swales in the afternoon at the furnace, cutting two aprons, one on the north and the other on the south, where the furnace slopes meet the existing hillside to the east of the structure. Placed a total of 165 SY of non woven fabric and covered with a 1 foot lift of rip rap (6 loads). The D6N dozer was used late in the day to track the furnace slopes disturbed during the apron construction.

### Site Visitors:

**Anderson Hydroseeding:** Onsite with a crew of 2 to see the site as they are preparing a proposal for reclamation for CRA.

### Meetings:

Correspondence with JB late in the day; CRA submitted a unit rate of \$3.50/SY for installing ECM at the clarifier. JB asked that CRA check to see if there was something less "beefy" ( i.e. more degradable such as 3 months life expectancy and a little less expensive for a 2:1). The matting priced was one of the cheapest straw mats rated for use on a 2:1 slope; and has a life expectancy of 10-12 months. Mats that degrade faster are typically not rated for slopes over 3:1. CRA will discuss this further next week.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered equipment traffic, cold stress, communication, slips/trips/falls, and struck by accidents/falling debris. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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SUPERVISOR

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PROJECT MANAGER

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DATE



# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>10/12/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>Variable 0-10</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>27-45</u>         |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 81          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 2           |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA completed the last 80 ft of the Tank Spring ditch, ending 630' from the center of the drop inlet. Placed approx 51 CY of rip rap and 116 SY of fabric to complete the ditch. The dozer worked on cleaning the old mine road to the top of the ore area slope for access by Anderson Hydroseeding, then moved to the ore pile to relocate ore at the east end around 9:00 am. Once complete with the Tank Spring ditch, the excavator and haul truck moved to installing the 12" culvert pipe across the mine road north of the site. Installed 35' of 12" ADS pipe, 13 CY rip rap (inlet and outlet), and 40 SY of fabric. Pipe was bedded and backfilled with one truck load (15 CY) of silica rock as the slag removed from the excavation was unsuitable for backfill. Late in the day, placed the rip rap at the outfall of the two 12" culverts south of the clarifier (12 CY rock). The PC300 excavator w/ thumb and the 430 loader screened rip rap all day in the borrow area; rock stockpiled near the ore cap.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered the interactions with hunters, wild animals, visibility, wet conditions, slopes, cold stress, and slips/trips/falls. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Anderson Hydroseeding:** onsite with a crew of two to visit site and check conditions. Left site and will return tomorrow once snow melts. Onsite from 9:00 am to 10:00 am.

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SUPERVISOR

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                     |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|---------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>10/13/09</u>     |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>Variable 0-5</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>28-53</u>        |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 80          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA worked in the ore area moving ore to make room for the Phosphoria Ditch cut, along the southeast portion of the ore stockpile. The PC300 excavator and the D6N dozer worked on cutting the ore back 12'-15' along the last 100'-125' of the pile, near the proposed confluence of the slope terrace and ditch. The excavator cut a bench halfway up the pile to work from, then cut material from below the bench and cast up on top of the pile for the dozer to push to the west. The PC300 excavator w/ thumb, the 430 loader, and a haul truck screened rock and stockpiled. Large boulders were hauled to the clarifier to form an ATV barrier around the west and south sides (9 loads). Placed 125'X15' (208 SY) of geotextile fabric in the ditch around the south side of the clarifier.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered the interactions with hunters, wild animals, continued wet conditions, slips/trips/falls, and equipment inspections (especially on accessories). No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>   | Date: | <u>10/14/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy/Rain</u> | Wind: | <u>S 0-20</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>38-52</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 32          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 8           | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA did not work onsite today due to the rain received last night and this morning (1.3" total). Moved boulders south of clarifier to allow access to well GT-6. JB onsite with James Williams to sample wells and surface water around the site. Schebel onsite to survey the rock armor at the clarifier and the fill area north of the furnace.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate meeting covered the wet conditions, slips/trips/falls, mud, lights, housekeeping, and visibility. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Scherbel:** onsite from 11:00 am to 4:00 pm to survey the fill area north of the furnace and the tank spring ditch and cut areas above the ditch.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>10/15/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>S 0-5</u>    |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>34-52</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 71          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rip rap in the borrow area using the PC300 excavator w/ thumb and the 430 loader. Rock stockpiled near the ore area cap and loaded into a haul truck for use in the Phosphoria Gulch Ditch. Began cutting Phosphoria Gulch Ditch, starting at the rock borrow working eastward. Installed fabric (175 SY) and rip rap (60 CY - 6 loads) from the beginning upstream 78 ft. Cut approx. 125 ft of ditch beyond that that will be a vegetated (no rock); no rip rap required until ditch nears west end of ore stockpile per JB's e-mail directive last week.

### Site Visitors:

None

### Meetings:

Discussed site roads with JB; he would like CRA to add silica gravel to the access road from the gate up to the ore pile and down to the furnace. This can be a T&M change order or a unit rate item (road base). He doesn't think it needs gravel all the way down to the gate, but will go over it with CRA in the next few days.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered the wet conditions, slips/trips/falls, work on slopes, and sickness (stay home and/or go to doctor if sick). No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

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# CRA Services

## Supervisor's Daily Report

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|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>10/16/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable Calm</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>28-55</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 80          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 20          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to screen rip rap in the borrow area and stockpile. Continued cutting Phosphoria Gulch Ditch, working eastward into the Gulch. Began placing rip rap once the ditch passed east of the toe of the ore stockpile; continued 55' with rip rap before finishing for the day. Anderson Hydroseeding onsite to begin reclamation. Hydroseeded the 2:1 side slopes of the clarifier, the side slopes of the furnace, and the disturbed areas around the Tank Spring ditch. CRA excavated 4 test pits along the east side of the GTC CMP at various locations. Pits were excavated to a depth of 10'-11' (spent 2 hours with the PC300 excavator w/ thumb).

### Site Visitors:

**Modern:** pickup Hamm Roller at 4:00 pm.

### Meetings:

Discussed seeding with JB - JB concerned about Anderson's fertilizer; they are using 20-20-20 concentrate applied at approx. 100 lbs./ac, which they say is equivalent to 300 lbs./ac of standard agricultural (granular) fertilizer. They will provide documentation ASAP that the fertilizer they are using is equivalent to what was specified. Also discussed Phosphoria Ditch with JB, he would like CRA to continue the rip rap at the downstream end further into the gulch, so there is at least 50' of rock upstream of the curve at the end.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate meeting covered the slips/trips/falls, uneven ground and twisted ankles, focusing on tasks near the end of the job, new site personnel (hydroseeding subcontractor), and ground personnel. Site orientation and HASP review with Anderson Hydroseeding this morning. No HCN or PH3 monitoring as no intrusive work being performed in areas of concern. Limited heavy equipment or vehicle traffic and wet conditions - no dust monitoring.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a crew of two from 9:30 am to 7:30 pm to begin hydroseeding. Sprayed the clarifier slopes, furnace, and Tank Spring Ditch area and surrounding disturbed slopes. Spoke with Anderson about work schedule for the coming days, they will get a D5N dozer to pull their hydroseeder into wet or steep areas. Also discussed ECM placement and areas to be covered; they will take delivery of the ECM next Tuesday.

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# CRA Services

## Supervisor's Daily Report

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|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>   | Date: | <u>10/17/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-15</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>39-62</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 60          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 24.5        |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

Dress phosphoria gulch for diversion channel. Dig channel, Install fabric & rock. Hydroseed required areas, CRA assist with water truck. Move ore material from diversion proximity. Stockpile road material. Dress up site with D-6. Anderson Hydroseeding onsite to continue reclamation, working in Phosphoria Gulch on the north slope.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Swing radius, driven animals and hunter awareness, foot traffic control & site crew (seeders) watch.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a crew of three from 9:00 am to 5:10 pm to continue hydroseeding. Crew hydroseeded the ore slope on the north side of Phosphoria Gulch.

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# CRA Services

## Supervisor's Daily Report

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|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>10/18/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>S 0-10</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>36-52</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 0           | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

No work performed onsite today.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

None

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>10/19/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Rain</u>       | Wind: | <u>S 0-15</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>38-61</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 63          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 1         | 9           | Anderson Hydro | 1st   | 4         | 28          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

Dress phosphoria gulch for diversion channel. Dig channel, Install fabric & rock. Hydroseed required areas, CRA assist with water truck. Move ore material from diversion proximity. Stockpile road material. Dress up site with D-6, mud control. Anderson Hydroseeding onsite to continue reclamation.

**Site Visitors:**

None

**Meetings:**

Paul Kos from Norwest onsite to inspect work; overall pleased with the work and had no major punchlist items that need attention.

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Swing radius, driven animals and hunter awareness, foot traffic control & site crew (seeders) watch.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Anderson Hydroseeding:** onsite with a crew of four from 10:00 am to 4:50 pm to continue hydroseeding. Crew worked on hydroseeding the ore slope on the north side of Phosphoria Gulch as well as vegetated ditch lines. **Scherbel:** onsite with a crew of one to continue surveying; topo at the clarifier, from 9:50 am to 2:15 pm.

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>10/20/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>S 0-8</u>    |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>41-46</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 52.5        | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 14          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA assisted JB in gathering up brush and burning at the clarifier, using the PC300 excavator to pile brush; had one laborer tend to fire and monitor for most of the day. Also spread gravel on the upper road from the ore area to the furnace per JB (6 loads). Placed boulders around the base of the clarifier with the excavator (approx 85 CY). In the afternoon, went back to placing rip rap in the ditch around the clarifier, working from the upstream end of the 12" culverts towards the north and east. Continued to removed rock and debris in the rock borrow to re-open the Phosphoria Ditch in that area. Relocated more brush late in the day to the stockpile at the north end of the site. Anderson Hydroseeding onsite to continue reclamation; adding additional fertilizer to areas already seeded, per JB.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate safety meeting covered fire safety (JB to begin burning brush onsite today at the clarifier); slips/trips/falls and wet conditions, and silt fence installation and associated hazards.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Anderson Hydroseeding:** onsite with a crew of two from 10:40 am to 6:00 pm to continue hydroseeding. Crew worked on broadcasting additional fertilizer to meet the specified application rate in areas already seeded.

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SUPERVISOR

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PROJECT MANAGER

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# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                      |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>10/21/09</u>      |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>Variable Calm</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>28-47</u>         |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 8         | 77          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 4         | 38          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed the rip rap in the clarifier ditch along the south half; only the rip rap spill way to the north remains to be completed. Moved to Phosphoria Gulch by late morning to continue cutting ditch and placing rock, starting approximately 620' from the downstream end and working up to 700' by the end of the day. The D6N was used to move ore cut from ditch out of the way and push it up onto the ore stockpile all afternoon. Continued screening rock with the excavator and loader and stockpiling. Anderson Hydroseeding began placing straw matting at the clarifier, working from the south end to the west. Late in the day, began placing straw mat on the south side of the furnace.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate safety meeting covered watching for animals (deer are on the move), equipment and vehicle walk around, flying rocks and debris, focusing on the job/task near the end of the project, ground personnel, and fire safety.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a crew of four from 9:00 am to 6:30 pm to begin ECM placement at the clarifier.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>10/22/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>S 0-12</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>31-42</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 7         | 61          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 4         | 34          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA completed cutting the ditch and spill way north of the clarifier, and placed fabric (75 SY) and rip rap (26 CY) in the spill way connecting the ditch above to the flat area below. At the same time, placed large boulders around the clarifier, continuing the barrier wall south to the rip rap ditch and north past the ditch/spillway to the undisturbed hillside (boulder barrier 566 LF in length). The D6N dozer worked in the ore area all day, moving ore for the ditch cut at the east end of the pile and preparing for the slope terrace continuation past the ore pile. In the afternoon, once complete with ditch work at the clarifier, the excavator moved to the ore area to rough cut the slope terrace past the ore pile; loaded material (mostly ore) into the haul truck which was dumped at the west end of the pile. Once the bulk of the material was removed, CRA used Anderson Hydroseeding D5 dozer to complete cutting the terrace and grade it so it tilts towards the slope.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate safety meeting covered watching for animals (deer are on the move), ground personnel, subcontractors, and slips/trips/falls.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Anderson Hydroseeding:** onsite with a crew of four from 9:00 am to 5:30 pm to begin ECM placement at the furnace, hydroseed slope areas north of the furnace, and complete the ECM at the clarifier.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                        |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|------------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Friday</u>     | Date: | <u>10/23/09</u>        |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>SE 0-15 (Gusty)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>26-44</u>           |

### On-Site Personnel and Man-hours:

| Trade                   | Shift | Personnel | Total Hours | Trade             | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|-------------------------|-------|-----------|-------------|-------------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                     | 1st   | 7         | 56          | ACE<br>Electric   | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel<br>Surveyor    | 1st   |           |             | Anderson<br>Hydro | 1st   | 6         | 57          |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing             | 1st   |           |             |                   | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |
| Superior<br>Blasting    | 1st   |           |             |                   | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |
| ESI                     | 1st   |           |             |                   | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |
| Independent<br>Drilling | 1st   |           |             |                   | 1st   |           |             |       | 1st   |           |             |
|                         | 2nd   |           |             |                   | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA continued to cut the slope terrace this morning with the D5G dozer while the excavator loaded excess ore into a haul truck for relocation to the west end of the stockpile. Around 9:00 am, stopped work on terrace and switched to cutting the upstream end of the Phosphoria Gulch Ditch, working west down the hill towards the previously completed section. Build a temporary dam to stop water flow until the ditch was completely cut and connected. Placed fabric and rip rap in the ditch. Will need to complete the tie in to the existing channel and clean up the ore area tomorrow. Also need to tie the terrace/ditch into the main conveyance. Anderson Hydroseeding completed straw matting placement at the furnace with one crew while another worked on hydroseeding the clarifier. Late in the afternoon, the entire crew worked on applying additional fertilizer to the ore area slope that was seeded previously at a lower than specified rate. The D6N dozer worked in the ore area all day, moving stockpiled ore away from the slope terrace to keep it from eroding into the ditch in the future.

### Site Visitors:

None

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate safety meeting covered watching for animals (deer are on the move), ground personnel, subcontractors, and slips/trips/falls, and communication.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a crew of six from 9:00 am to 6:30 PM to complete ECM placement at the furnace, hydroseed the top of the clarifier, and apply additional fertilizer to the ore area slope. Late in the day, placed 3 additional rolls (all that were remaining) of straw mat at the clarifier, on the NW corner.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                    |       |                       |
|----------|--------------------------|-------------------|-----------------------|----------|--------------------|-------|-----------------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Saturday</u>    | Date: | <u>10/24/09</u>       |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy/Rain</u> | Wind: | <u>S 0-20 (Gusty)</u> |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u>  | Temp: | <u>28-39</u>          |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 7         | 63.5        | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 22          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed the Phosphoria Gulch ditch this morning at the upstream end, tying the end of the rock into the existing channel. Also regarded the ore/soil that was stockpiled beyond the work area to the east, along the north side of the channel. The dozer was used to push up ore are the west end of the pile and maintain haul routes in the ore area. Regraded area south of clarifier and cleaned up boulder stockpile near well GT-6 in preparation for seeding. The dozer continued to work in the ore area in the afternoon moving ore away from the slope terrace. The excavator and haul truck spent the afternoon loading out ore in order to expose native ground so the slope terrace drainage will not be cut into ore. Anderson Hydroseeding onsite to continue hydroseeding; applied seed and fertilizer to fill area north of furnace, top of furnace and clarifier (haul road and flat area at NW corner). Cleaned 430 loader and grizzly in preparation for demobilization. Also installed 8 straw wattles (9"X25') in the following areas: three at 150' o.c. on the ore slope bench, two on the mine road cutoff at the east end of the ore slope, and three along the north side of the Pho

### Site Visitors:

None

### Meetings:

Discussed straw wattle placement with JB (via e-mail); place the straw wattles at the base of the slope on Phosphoria, place some near the mouth of Phosphoria to contain runoff from the canyon below the ore cap. Also, place a few wattles at 150 to 175 foot intervals on the Phosphoria bench. There is also a road cut above the bench that was mined out with the ore near the east end, place a wattle(s) before it daylight onto the slope. Protect the Phosphoria channel from the remaining ore pile with the silt fences. Silt fences should also run along the south side of Phosphoria ditch on places that you deem appropriate and necessary to keep the silt runoff from the channel. Don't bother seeding the unlined portion of the channel, we may rip rap next year. JB also asked that a detailed list of extra work activities be compiled for project closeout. JB also gave approval for the road base installation from the ore cap to the furnace - use pay item.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate safety meeting covered slips/trips/falls, flying rocks/debris, wet conditions, and weather.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a two man crew from 8:00 am to 6:00 pm to continue hydroseeding; applied seed and fertilizer to fill area north of furnace, top of furnace and clarifier (haul road and flat area at NW corner).

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Sunday</u>     | Date: | <u>10/25/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-12</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>26-37</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 7         | 24          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   | 2         | 20          |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA had a small crew onsite to assist Anderson Hydroseeding and begin preparing for demobilization. Picked up garbage, replaced tires on generators and tool crib, greased equipment, and began packing tool crib in preparation for demobilization next week. Replaced 50kW generator (bad water pump); returned generator to Pro-Rental and brought another one back to the site and reconnected to trailer. Anderson Hydroseeding completed seeding onsite, except for a small amount in Phosphoria Gulch, seeding areas around the clarifier, furnace, parking area east of trailer, and upstream end of the Phosphoria Gulch drainage.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate safety meeting covered slips/trips/falls, uneven ground, and freezing temperatures.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

**Anderson Hydroseeding:** onsite with a two man crew from 8:00 am to 5:00 pm to complete the majority of seeding onsite, except for a small amount in Phosphoria Gulch, seeding areas around the clarifier, furnace, parking area east of trailer, and upstream end of the Phosphoria Gulch drainage.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Monday</u>     | Date: | <u>10/26/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>S 0-12</u>   |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>26-37</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 7         | 74          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   | 2         | 16          | Anderson Hydro | 1st   | 2         | 8           |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA completed the slope terrace tie in the the Phosphoria Gulch drainage. The D6 dozer, PC300 excavator, and haul truck were used to move excess ore and some ore/native soil mix for most of the morning. Then the truck and excavator finished cutting the terrace and cut a ditch for the last 40' to the main drainage, where 35' of fabric and rock were installed (12' wide), creating a confluence area. The dozer worked for through the late morning to early afternoon grading haul roads, then the operator switched to the excavator w/ thumb to clean the Phosphoria drainage through the rock borrow. Anderson Hydroseeding onsite late in the afternoon to complete hydroseeding along the slope terrace at the east end of the ore pile. Also completed seeding in the parking area once soil piles were leveled just NE of the site entrance.

### Site Visitors:

None

### Meetings:

Discussed surveying with JB (via e-mail); JB indicated it was not necessary to survey the north slope of the Phosphoria Gulch (ore area). Sent all survey points (to date) to JB for review. Received approval from JB to burn the brush pile north of the slurry pit, which was burned out by the end of the day.

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate safety meeting covered slips/trips/falls, uneven ground, and freezing temperatures.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

**Anderson Hydroseeding:** onsite with a two man crew from 2:00 am to 5:45 pm to complete the majority of seeding onsite, except for a small amount in Phosphoria Gulch, seeding areas around the clarifier, furnace, parking area east of trailer, and upstream end of the Phosphoria Gulch drainage. Surveyor Scherbel: onsite to with a two man crew to complete surveying the clarifier and phosphoria gulch drainage ditches, from 11:00 am to 4:00 pm.

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SUPERVISOR

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DATE

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PROJECT MANAGER

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DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Tuesday</u>    | Date: | <u>10/27/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Cloudy</u>     | Wind: | <u>SE 0-15</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>22-29</u>    |

### On-Site Personnel and Man-hours:

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 7         | 71          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

### Description of Day's Activities:

CRA worked on SESC and reclamation for most of the day. CRA installed the remainder to the straw wattles along the south side of the Phosphoria Gulch Creek (16 total). Also installed 280 LF of silt fence; 117 LF west of the ore cap and 163 LF west of the ore stockpile, with both fences run from the north slope over to within 20' of the creek. CRA also graded site roads and completed opening the downstream end of the Phosphoria Drainage where blasting in the rock borrow had obstructed it. Constructed a 1.5' high berm along the entire north side of the Phosphoria Drainage to prevent runoff from the ore stockpile from reaching the creek. Office trailer broke down and demobilized this afternoon. Broke down water storage/pumping equipment as well; pulled well pump and riser pipe, moved rock boulders from generator storage, and removed all wiring and controls from the tank.

### Site Visitors:

William Scotsman: onsite to pickup office trailer at 2:00 pm.

### Meetings:

None

### Production Delays:

None

### Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :

Tailgate safety meeting covered slips/trips/falls, uneven ground, and freezing temperatures.

### Report on Subcontractors (Conversations, Meetings, Issues, etc) :

None

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PROJECT MANAGER

\_\_\_\_\_  
DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Wednesday</u>  | Date: | <u>10/28/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Pt Cloudy</u>  | Wind: | <u>SE 0-12</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>13-28</u>    |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 5         | 50          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA began cleaning equipment to prepare for demobilization. The PC300 excavator, D6N dozer, and 300 haul truck were cleaned today. Modern demobilized the 430 loader. United Rentals picked up the rock screen (grizzly). Pro Rentals picked up the Kubota RTV900; CRA delivered north the 50 kW and 20 kW diesel generators back to Pro Rental's Pocatello yard. Placed a line of boulders across the upper (east) haul road to the clarifier (southeast of the sed. pond).

**Site Visitors:**

None

**Meetings:**

JB inspected the site, including the SESC controls in Phosphoria Gulch. The only item JB wanted CRA to change/correct was adding some boulders to the east haul road to the clarifier (which was hydroseeded); CRA completed this before JB left the site for the day. CRA will also supply JB with extra work backup and survey data as the information becomes available and/or is completed within the next week.

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate safety meeting covered slips/trips/falls, uneven ground, and freezing temperatures.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PROJECT MANAGER

\_\_\_\_\_  
DATE

# CRA Services

## Supervisor's Daily Report

|          |                          |                   |                       |          |                   |       |                 |
|----------|--------------------------|-------------------|-----------------------|----------|-------------------|-------|-----------------|
| Project: | <u>Georgetown Canyon</u> | Project number:   | <u>56872</u>          | Day:     | <u>Thursday</u>   | Date: | <u>10/29/09</u> |
| Client:  | <u>Nu-West/Agrium</u>    | Location:         | <u>Georgetown, ID</u> | Weather: | <u>Clear</u>      | Wind: | <u>SE 0-12</u>  |
| Manager: | <u>Howard Stich</u>      | Project Engineer: | <u>Dan White</u>      | Supt:    | <u>Regis Seng</u> | Temp: | <u>9-21</u>     |

**On-Site Personnel and Man-hours:**

| Trade                | Shift | Personnel | Total Hours | Trade          | Shift | Personnel | Total Hours | Trade | Shift | Personnel | Total Hours |
|----------------------|-------|-----------|-------------|----------------|-------|-----------|-------------|-------|-------|-----------|-------------|
| CRA                  | 1st   | 5         | 48          | ACE Electric   | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Scherbel Surveyor    | 1st   |           |             | Anderson Hydro | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| HLE Testing          | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Superior Blasting    | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| ESI                  | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |
| Independent Drilling | 1st   |           |             |                | 1st   |           |             |       | 1st   |           |             |
|                      | 2nd   |           |             |                | 2nd   |           |             |       | 2nd   |           |             |

**Description of Day's Activities:**

CRA continued cleaning equipment to prepare for demobilization and clean up site. The PC300 excavator w/ thumb was cleaned. The fuel tank was shipped offsite and the containment areas cleaned up and liner removed. Debris and trash were taken to the Bear Lake Landfill. T-posts and temporary fence was removed in various locations. Modern was onsite to pickup both PC300 excavators, 300 haul truck, and water truck. CRA left the water truck and the haul truck at the fish ladder at the end of the day as the low boy was having a hard time making it up to the site due to the snow pack on the road; the equipment will be picked up tonight. WSECo was onsite to pickup the D6N dozer.

**Site Visitors:**

None

**Meetings:**

None

**Production Delays:**

None

**Health and Safety (Tailgate Meeting Topics, Incidents, Near Misses, etc) :**

Tailgate safety meeting covered slips/trips/falls, uneven ground, and freezing temperatures.

**Report on Subcontractors (Conversations, Meetings, Issues, etc) :**

None

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PROJECT MANAGER

\_\_\_\_\_  
DATE



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/11/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time        | Wind Direction | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|--|-----------|-----------|--------------|
| 8:30-8:45   | SSE            | Calm       | Office to Slurry Pit, around perimeter and across top, near pump discharge, back to office                                   | φ         | φ         | —            |
| 9:30-10:40  | SSE            | 5-10       | Slurry Pit & marsh towards tank Spring diversion   | φ         | φ         | —            |
| 11:00-11:30 | SE             | 5-10       | Slurry Pit   | φ         | φ         | —            |
| 12:15-12:45 | SE             | 5-10       | Slurry Pit   | φ         | φ         | —            |
| 12:50-1:40  | SE             | 5-15       | Slurry Pit to office to clarifier to office to Slurry Pit. Walk perimeter of area while spraying herbicide, working N. to S. | φ         | φ         | —            |
|             |                |            |  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/11/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments         |
|-------------------|--------------|--------------|-----------------|------------------|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No hits detected |
|                   |              |              |                 |                  |
|                   |              |              |                 |                  |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No hits detected |
|                   |              |              |                 |                  |
|                   |              |              |                 |                  |
| Dust              |              |              |                 |                  |
|                   |              |              | DW              |                  |
|                   |              |              |                 |                  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/11/2009      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| Time | Wind Direction | Wind Speed         | Location & Comments  | CO | LEL | O2   | H2S |
|------|----------------|--------------------|--|----|-----|------|-----|
| 4:30 | SE             | 0-10<br>(Variable) | East of screen plant at base of Phosphoria Gulch, @ abandoned utility stubs. | ∅  | ∅   | 20.2 | ∅   |
| DW   |                |                    |  |    |     |      |     |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/11/2009      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| LEL               | BZ    | ∅            | ∅               | Strong petroleum smell, clean water present (clear), checked around water and in pipe |
|                   | WZ    | ∅            | ∅               |   |
|                   | CR    | ∅            | ∅               |   |
|                   | Back  | ∅            | ∅               |   |
| O2                | BZ    | 20.2         | 20.2            |   |
|                   | WZ    | 20.2         | 20.2            |   |
|                   | CR    | 20.2         | 20.2            |   |
|                   | Back  | 20.2         | 20.2            |   |
| H2S               | BZ    | ∅            | ∅               |   |
|                   | WZ    | ∅            | ∅               |   |
|                   | CR    | ∅            | ∅               |   |
|                   | Back  | ∅            | ∅               |   |
| CO                | BZ    | ∅            | ∅               |   |
|                   | WZ    | ∅            | ∅               |   |
|                   | CR    | ∅            | ∅               |   |
|                   | Back  | ∅            | ∅               |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone      CR - Contact reading on specific media  
 WZ - Ambient air in work zone      EZ - Exclusion zone boundary reading  
 Back - Background reading in clean environments

Dan White  
 Performed By (Print)

  
 Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/10/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| Time       | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|------------|----------------|------------|---|-----------|-----------|--------------|
| 7:30-8:40  | Variable       | Calm       | Tank Spring diversion, 300'-400' south of drop inlet  | ∅         | ∅         | —            |
| 9:30-11:30 | SSE            | 5-10       | Tank Spring diversion, near furnace   | ∅         | ∅         | —            |
| 12:00-2:30 | S              | 5-10       | Tank Spring d. version, furnace area to drop inlet, Slurry Pit                              | ∅         | ∅         | —            |
| 3:30-5:00  | S (light)      | 0-5        | Office area, dewatering discharge flow up to dewatering pump. Monitor clearing @ Slurry pit | ∅         | ∅         | —            |
|            |                |            |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/10/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10506103

| End of Day Totals | Code*         | Peak Reading | Average Reading | Comments         |
|-------------------|---------------|--------------|-----------------|------------------|
| HCN               | BZ, WZ,<br>CR | ∅            | ∅               | No hits detected |
|                   |               |              |                 |                  |
|                   |               |              |                 |                  |
| PH3               | BZ, WZ,<br>CR | ∅            | ∅               | No hits detected |
|                   |               |              |                 |                  |
|                   |               |              |                 |                  |
| Dust              |               |              |                 |                  |
|                   |               |              |                 |                  |
|                   |               |              |                 |                  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

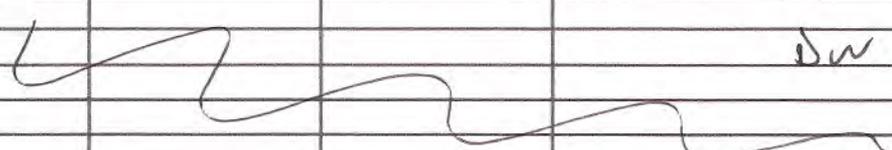
Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 1/9/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments           |
|-------------------|--|--------------|-----------------|--------------------|
| HCN               | WZ   | Ø            | Ø               | Site surface water |
|                   | CR   | Ø            | Ø               |                    |
|                   | BZ   | Ø            | Ø               |                    |
| PH3               | WZ   | Ø            | Ø               | Site surface water |
|                   | CR   | Ø            | Ø               |                    |
|                   | BZ   | Ø            | Ø               |                    |
| Dust              |  |              |                 | DW                 |
|                   |  |              |                 |                    |
|                   |  |              |                 |                    |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

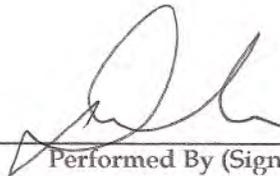
**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
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CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)



Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/8/2009          | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| Time  | Wind Direction | Wind Speed | Location & Comments              | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------|----------------|------------|----------------------------------|-----------|-----------|--------------|
| 9:30  | SE             | Calm       | Drop Inlet                       | ∅         | ∅         | —            |
| 10:00 | SE             | Calm       | Drop Inlet                       | ∅         | ∅         | —            |
| 10:30 | SE             | Calm       | Drop Inlet                       | ∅         | ∅         | —            |
| 9:30  | SE             | Calm       | Office Trailer                   | ∅         | ∅         | —            |
| 9:30  | SE             | Calm       | Slurry Pit (West)                | ∅         | ∅         | —            |
| 4:58  | SE             | 10-15      | E. of Furnace, Tank Spring ditch | ∅         | 1.70      | —            |
|       |                |            |                                  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/8/2009          | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code* | Peak Reading      | Average Reading | Comments   |
|-------------------|-------|-------------------|-----------------|--|
| HCN               | WZ    | ∅                 | ∅               | Continuous monitoring while excavating dewatering sump - no HCN detected |
|                   |       |                   |                 |  |
|                   |       |                   |                 |  |
| PH3               | WZ    | <del>∅</del> 1.78 | ∅               | Continuous monitoring - ND   |
|                   |       |                   |                 | Detect PH3 along Tank Spring ditch, Stopped work, left area - Contact JB |
|                   |       |                   |                 |  |
| Dust              |       |                   |                 |  |
|                   |       |                   |                 |  |
|                   |       |                   |                 | DW   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

*Dan White*

Performed By (Print)

*[Signature]*

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/18/09      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10506103

| Time        | Wind Direction | Wind Speed | Location & Comments                                   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-------------|----------------|------------|---|-----------|-----------|---------------|
| 7:45-8:30   | Variable       | Calm       | Slurry Pit & Furnace<br>* No work in area - No Dust * | ∅         | ∅         | —             |
| 8:50-9:15   | Variable       | Calm       | Ore stockpile, base to top                            | ∅         | ∅         | 0.075<br>(19) |
| 9:20-10:00  | Variable       | Calm       | Slurry Pit<br>* Meters on compactor oper. vest *      | ∅         | ∅         | 0.085<br>(20) |
| 12:35-12:45 | NW             | 0-10       | Ore Pile  | ∅         | ∅         | 0.028<br>(21) |
| 1:05-1:15   | SE             | 0-10       | Screen Plant  | ∅         | ∅         | 0.048<br>(22) |
|             |                |            |   |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/10/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments                  |
|-------------------|--------------|--------------|-----------------|---------------------------|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No Hits                   |
|                   |              |              |                 |                           |
|                   |              |              |                 |                           |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No Hits                   |
|                   |              |              |                 |                           |
|                   |              |              |                 |                           |
| Dust              | BZ           | 3.000        | 0.085           | Peak not sustained        |
|                   | WZ           | 0.501        | 0.052           | Ore Pile Area             |
|                   | Back         | 0.342        | 0.048           | Site entrance near screen |
|                   |              |              |                 |                           |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 7/17/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time        | Wind Direction | Wind Speed | Location & Comments    | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-------------|----------------|------------|------------------------|-----------|-----------|---------------|
| 9:00-9:30   | Variable       | Calm       | Slurry Pit & Furnace   | ∅         | ∅         | 0.103<br>(16) |
| 9:45-10:15  | Variable       | Calm       | Ore Stockpile Area     | ∅         | ∅         | 0.017<br>(17) |
| 11:15-11:30 | SE             | 0-10       | Slurry Pit (North End) | ∅         | ∅         | 0.062<br>(18) |
| 2:15-2:30   | SE             | 0-8        | Slurry Pit & Furnace   | ∅         | ∅         | 0.013         |
| 3:30-3:45   | SE             | 0-12       | Slurry Pit & Furnace   | ∅         | ∅         | 0.015         |
|             |                |            |                        |           |           |               |
|             |                | DW         |                        |           |           |               |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/17/09           | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments   |
|-------------------|--------------|--------------|-----------------|--|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No Hits  |
|                   |              |              |                 |  |
|                   |              |              |                 |  |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No Hits  |
|                   |              |              |                 |  |
|                   |              |              |                 |  |
| Dust              | WZ           | 3.273        | 0.103           | Peak from passing haul truck on clean haul road. No hits near 1.5mg/m <sup>3</sup> in ore areas. |
|                   |              |              |                 |  |
|                   |              |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

Dan White  
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**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/16/09           | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| Time            | Wind Direction    | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-----------------|-------------------|------------|--|-----------|-----------|---------------|
| 8:15-<br>8:20   | Calm              | Calm       | Screen Plant   | ∅         | ∅         | 0.250         |
| 10:00-<br>10:30 | SE                | 0-10       | Slurry Pit<br>*Oper of compactor wore meter<br>half period, and monitor rest | ∅         | ∅         | 0.012<br>(14) |
| 1:30-<br>2:00   | Variable<br>SE-NW | 0-12       | Slurry Pit & Furnace   | ∅         | ∅         | 0.075<br>(15) |
| 3:00-<br>3:30   | Variable          | 0-5        | Slurry Pit   | ∅         | ∅         | —             |
|                 |                   |            |  |           |           |               |
|                 |                   |            |  |           |           |               |

**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/16/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10506103

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments  |
|-------------------|--------------|--------------|-----------------|---|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No Hits   |
|                   |              |              |                 |   |
|                   |              |              |                 |   |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No Hits   |
|                   |              |              |                 |   |
|                   |              |              |                 |   |
| Dust              | BZ           | 0.095        | 0.012           | Ore compactor operator<br>High not sustained, exp.<br>When machine drove past<br>on clean soil road |
|                   | WZ           | 1.688        | 0.075           |   |
|                   |              |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)



Performed By (Signature)

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/15/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time          | Wind Direction | Wind Speed | Location & Comments      | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)   |
|---------------|----------------|------------|--------------------------|-----------|-----------|----------------|
| 8:30 - 9:00   | Variable       | Calm       | Ore Pile, mouth of gulch | ∅         | ∅         | 0.001<br>(8) ← |
| 9:00 - 9:40   | Variable       | Calm       | Furnace, South ↔ West    | ∅         | ∅         | 0.005<br>(9)   |
| 11:00 - 11:30 | Variable       | 0-5        | Ore Pile                 | ∅         | ∅         | 0.037<br>(10)  |
| 4:25 - 4:30   | SE             | 0-8        | Ore Pile                 | ∅         | ∅         | 0.191<br>(11)  |
| 4:35 - 4:45   | Calm           | —          | Slurry Pit ∅ 16" culvert | ∅         | ∅         | 0.086<br>(12)  |
|               |                |            |                          |           |           |                |

SidePak  
Log No

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/15/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*           | Peak Reading | Average Reading | Comments  |
|-------------------|-----------------|--------------|-----------------|---|
| HCN               | BZ, WZ<br>Back  | ∅            | ∅               | No Hits   |
|                   |                 |              |                 |   |
|                   |                 |              |                 |   |
| PH3               | BZ, WZ,<br>Back | ∅            | ∅               | No Hits   |
|                   |                 |              |                 |   |
|                   |                 |              |                 |   |
| Dust              | WZ              | 2.396        | 0.191           | Peak no sustained, dust from passing equip. prior to wetting road surface |
|                   |                 |              |                 |   |
|                   |                 |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Don White*

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**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 7/14/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time        | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|-----------------------|-----------|-----------|--------------|
| 7:45        | SE-NW          | 0-8        | Ore P:le              | ϕ         | ϕ         | 0.011        |
| 9:55        | (Variable)     |            |                       |           |           |              |
| 9:55-10:10  | W (Variable)   | 0-10       | Slurry P:it & Furnace | ϕ         | ϕ         | 0.270        |
| 10:10-11:00 | SE             | 0-5        | Slurry Pit            | ϕ         | ϕ         | —            |
| 12:00-12:30 | SE             | 0-10       | Furnace & Ore P:le    | ϕ         | ϕ         | 0.011        |
| 12:30-12:45 | SE- SSE        | 0-5        | Ore P:le              | ϕ         | ϕ         | 0.000        |
| 2:00-3:40   | Variable       | 0-7        | Ore P:le & Furnace    | ϕ         | ϕ         | 0.056        |
|             |                |            |                       |           |           |              |

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/14/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments           |
|-------------------|--------------|--------------|-----------------|--------------------|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No Hits            |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No Hits            |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |
| Dust              | WZ           | 2.431        | 0.056           | Peak not sustained |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |
|                   |              |              |                 |                    |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

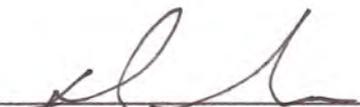
**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

Dan White

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**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/13/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10506103

| End of Day Totals | Code*          | Peak Reading | Average Reading | Comments   |
|-------------------|----------------|--------------|-----------------|--|
| HCN               | BZ, WZ<br>Back | ∅            | ∅               |  |
|                   |                |              |                 |  |
|                   |                |              |                 |  |
| PH3               | BZ, WZ<br>Back | ∅            | ∅               |  |
|                   |                |              |                 |  |
|                   |                |              |                 |  |
| Dust              | BZ, WZ<br>Back | 5.1          | 0.25            | Peak in clean zone near office trailer. Max reading at 0.68 near dozer on ore pile at bottom (Dry) |
|                   |                |              |                 |  |
|                   |                |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/25/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

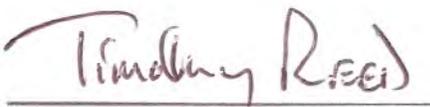
| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | WZ    | 0            | 0               | NONE     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               |       | 0            | 0               | NONE     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       | .520         | .101            | NONE     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

  
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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/24/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

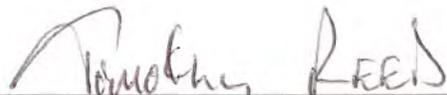
| End of Day Totals | Code* | Peak Reading    | Average Reading | Comments |
|-------------------|-------|-----------------|-----------------|----------|
| HCN               | WZ    | 0               | 0               | No hits  |
|                   |       |                 |                 |          |
|                   |       |                 |                 |          |
| PH3               | WZ    | 0               | 0               | No hits  |
|                   |       |                 |                 |          |
|                   |       |                 |                 |          |
| Dust              | WZ    | 1.0327<br>1.121 | 1.0327          | NONE     |
|                   |       |                 |                 |          |
|                   |       |                 |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

  
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 \_\_\_\_\_  
 Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/24/09      **Project Manager:** Howard Stich  
**Meter Model:** MSA Orion (10031091)      **HCN Meter SN:** A6-15547-803

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| LEL               | WZ    | 0            | 0               | Good     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| O2                | WZ    | 20.8         | 20.8            | Good     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| H2S               | WZ    | 0            | 0               | Good     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| CO                | WZ    | 0            | 0               | Good     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

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Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

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**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 7/23/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time       | Wind Direction | Wind Speed | Location & Comments                               | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|------------|----------------|------------|---|-----------|-----------|---------------|
| 7:30-9:10  | Calm           | Calm       | Ore Pile ↔ Furnace<br>* Meter w/ haul truck oper. | —         | —         | 0.440<br>(33) |
| 9:10-10:55 | SE             | 0-5        | Furnace<br>* Meter w/ compactor oper.             | —         | —         | 0.038<br>(34) |
| 1:00-3:30  | SE             | 0-12       | Ore Pile<br>* Meter w/ excavator oper.            | —         | —         | 0.010<br>(35) |
| 3:40-6:00  | SE             | 0-15       | Furnace<br>* Meter w/ dozer oper.                 | —         | —         | 0.689<br>(36) |
| 8:00-11:30 | SE             | 0-5        | Tank Spring Trench                                | ∅         | ∅         | —             |
| 12:00-6:00 | SE             | 0-15       | Tank Spring Trench                                | ∅         | ∅         | —             |
|            |                |            |   |           |           |               |
| <p>DW</p>  |                |            |   |           |           |               |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/23/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments  |
|-------------------|--------|--------------|-----------------|---|
| HCN               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| PH3               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| Dust              | WZ     | 7.499        | 0.689           | Peak readings not sustained, produced from dust from clean topsoil @ edge of ore lift |
|                   |        |              |                 |   |
|                   |        |              |                 |   |

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BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

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EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 7/23/2009      **Project Manager:** Howard Stich  
**Meter Model:** MSA Orion (10031091)      **HCN Meter SN:** A6-15547-803

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| LEL               | WZ    | 0            | 0               | /        |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| O2                | WZ    | 20.8         | 20.8            |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| H2S               | WZ    | 0            | 0               |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| CO                | WZ    | 2            | 0               |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

*Tim REED*

Performed By (Print)

*Robert [Signature]*

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/22/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time        | Wind Direction | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-------------|----------------|------------|--|-----------|-----------|---------------|
| 8:00-9:00   | Variable       | Calm       | Quarry Pit, Furnace, Excavation, Tank Spring   | ∅         | ∅         | —             |
| 10:00-11:30 | SE             | 0-10       | Tank Spring Excavation   | ∅         | ∅         | —             |
| 11:00-12:15 | ESE            | 0-5        | Ore P:le   | —         | —         | 0.041<br>(31) |
| 3:50-5:20   | Variable       | 0-12       | Furnace<br>+ Monitor w/ door open for last 1 hr of test, around furnace for first 20 min | —         | —         | 0.884<br>(32) |
| 12:00-6:30  | Variable       | 0-12       | Tank Spring excavation<br>0'-150' from 30" CMP   | ∅         | ∅         | —             |
| DW          |                |            |  |           |           |               |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/22/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments  |
|-------------------|--------|--------------|-----------------|---|
| HCN               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| PH3               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| Dust              | BZ     | 5.789        | 0.004           | Max not sustained, long term average under action level (1.5mg/m <sup>3</sup> ) |
|                   |        |              |                 |   |
|                   |        |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/22/2009      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| Time  | Wind Direction | Wind Speed | Location & Comments    | CO  | LEL | O2   | H2S |
|-------|----------------|------------|------------------------|-----|-----|------|-----|
| 11:00 | SE             | 0-10       | Tank Spring Excavation | ∅   | ∅   | 20.8 | ∅   |
| 12:00 | ESE            | 0-5        | Trench cut 0'-50'      | ∅   | ∅   | 20.8 | ∅   |
| 1:00  | SE             | 0-5        | Trench cut 0-50'       | ∅   | ∅   | 20.8 | ∅   |
| 2:00  | Variable       | 0-10       | Trench cut 50'-75'     | ∅   | ∅   | 20.8 | ∅   |
| 3:00  | Variable       | 0-12       | Trench cut 50'-75'     | ∅   | ∅   | 20.8 | 2.0 |
| 4:00  | Variable       | 0-12       | Trench cut 75'-100'    | 1.0 | ∅   | 20.8 | 1.0 |
| 5:00  | North          | 0-10       | Trench cut 100'-125'   | 1.0 | ∅   | 20.8 | 1.0 |
| 6:00  | North          | 0-12       | Trench cut 125'-150'   | ∅   | ∅   | 20.8 | 2.0 |
| DW    |                |            |                        |     |     |      |     |

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/22/2009      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments   |
|-------------------|--------|--------------|-----------------|--|
| LEL               | BZ, WZ | ∅            | ∅               | No hits  |
|                   |        |              |                 |  |
|                   |        |              |                 |  |
| O2                | BZ, WZ | 20.8         | 20.8            | Constant all day                                 |
|                   |        |              |                 |  |
|                   |        |              |                 |  |
| H2S               | BZ, WZ | 2.0          | ∅               | Intermittent hits, <2.0ppm, likely organic mat'l |
|                   |        |              |                 |  |
|                   |        |              |                 |  |
| CO                | BZ, WZ | 1.0          | ∅               | Spot hits <10 ppm, not sustained                 |
|                   |        |              |                 |  |
|                   |        |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

Don White / Tim Reed  
 Performed By (Print)

[Signature]  
 Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/21/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*        | Peak Reading | Average Reading | Comments   |
|-------------------|--------------|--------------|-----------------|--|
| HCN               | BZ, WZ, Back | ∅            | ∅               | No Hits  |
|                   |              |              |                 |  |
|                   |              |              |                 |  |
| PH3               | BZ, WZ, Back | ∅            | ∅               | No Hits  |
|                   |              |              |                 |  |
|                   |              |              |                 |  |
| Dust              | WZ, BZ       | 1.479        | 0.081           | Max reading & avg. @ slurry pit spreading fill; less than action level, ok |
|                   |              |              |                 |  |
|                   |              |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
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*Dan White*

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/21/09      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments                        |
|-------------------|--------|--------------|-----------------|---------------------------------|
| LEL               | WZ, BZ | ∅            | ∅               | No Hits                         |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
| O2                | WZ, BZ | 20.8         | 20.8            | Constant                        |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
| H2S               | WZ, BZ | ∅            | ∅               | No Hits                         |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
| CO                | WZ, BZ | 1.0          | ∅               | Low hits from excavator exhaust |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |
|                   |        |              |                 |                                 |

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 Back - Background reading in clean environments

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 EZ - Exclusion zone boundary reading

Dan White / Timothy Reed  
 Performed By (Print)

[Signature]  
 Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 7/20/09           | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time            | Wind Direction | Wind Speed | Location & Comments | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-----------------|----------------|------------|---------------------|-----------|-----------|---------------|
| 8:30            | SE             | 0-5        | 36" CMP             | ∅         | ∅         | —             |
| 9:40            | SE             | 0-3        | 36" CMP             | ∅         | ∅         | 0.089<br>(23) |
| 10:00-<br>10:10 | SE             | 0-8        | Slurry Pit (N. End) | ∅         | ∅         | 0.213<br>(24) |
| 10:15-<br>10:45 | 0-10 ↔ ESE     |            | Ore Pile            | ∅         | ∅         | 0.044<br>(25) |
| 1:20-<br>1:50   | Variable       | Light      | Slurry Pit          | ∅         | ∅         | 0.063<br>(26) |
| 3:00            | Variable       | 0-5        | 36" CMP             | ∅         | ∅         | —             |
| 3:40-<br>4:20   | Variable       | 0-5        | 36" CMP             | ∅         | ∅         | 0.165<br>(27) |
| 4:45-<br>6:15   | SE             | 0-10       | 36" CMP             | ∅         | ∅         | —             |
|                 |                |            |                     |           |           |               |
|                 | DW             |            |                     |           |           |               |

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/20/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*            | Peak Reading | Average Reading | Comments  |
|-------------------|------------------|--------------|-----------------|---|
| HCN               | BZ, WZ, CR, Back | ∅            | ∅               | No hits   |
|                   |                  |              |                 |   |
|                   |                  |              |                 |   |
| PH3               | BZ, WZ, CR, Back | ∅            | ∅               | No hits   |
|                   |                  |              |                 |   |
|                   |                  |              |                 |   |
| Dust              | WZ               | 3.088        | 0.165           | Peak not sustained, WZ averages well under action level |
|                   |                  |              |                 |   |
|                   |                  |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*  
 Performed By (Print)

*Tom Reed*  
 Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/20/09      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| Time  | Wind Direction | Wind Speed | Location & Comments | CO  | LEL | O2   | H2S           |
|-------|----------------|------------|---------------------|-----|-----|------|---------------|
| 8:30  | SE             | 0-5        | 36" CMP Riser       | 5.0 | ∅   | 20.6 | ∅             |
| 9:30  | SE             | 0-3        | 36" CMP Riser       | 5.0 | ∅   | 20.8 | ∅             |
| 10:50 | SSE            | 5-8        | 36" CMP Riser       | ∅   | ∅   | 20.8 | 1 PPM (2 Sec) |
| 11:20 | SE             | 5-8        | 36" CMP Riser       | ∅   | ∅   | 20.8 | 2 PPM (3 Sec) |
| 12:45 | Variable       | 0-8        | 36" CMP Riser       | 2.0 | ∅   | 20.8 | ∅             |
| 1:30  | Variable       | 0-5        | 36" CMP Riser       | ∅   | ∅   | 20.8 | ∅             |
| 3:00  | Variable       | 0-5        | 36" CMP             | ∅   | ∅   | 20.8 | ∅             |
| 4:00  | SE             | 0-5        | 36" CMP             | 5.0 | ∅   | 20.8 | ∅             |
| 5:00  | SE             | 0-8        | 36" CMP             | 3.0 | ∅   | 20.8 | ∅             |
| 6:00  | SE             | 0-10       | 36" CMP             | 2.0 | ∅   | 20.8 | ∅             |
|       |                |            |                     |     |     |      |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/20/09      Project Manager: Howard Stich  
 Meter Model: MSA Orion (10031091)      HCN Meter SN: A6-15547-803

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments  |
|-------------------|--------|--------------|-----------------|---|
| LEL               | WZ, BZ | ∅            | ∅               |   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| O2                | WZ, BZ | 20.8         | 20.8            |   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| H2S               | WZ, BZ | 2.0          | ∅               | 2-3 sec reading; 0 ppm rest of day                  |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| CO                | WZ, BZ | 3.0          | ∅               | Intermittent readings from nearby equipment & pumps |
|                   |        |              |                 |   |
|                   |        |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

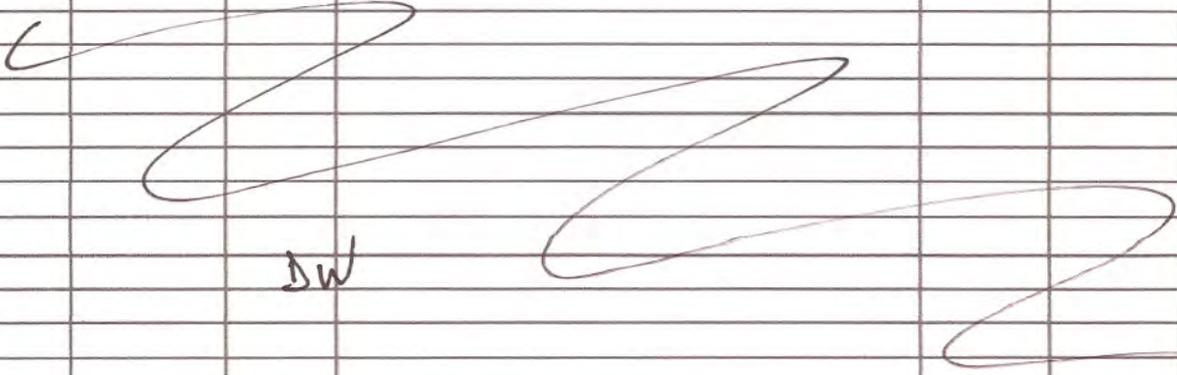
EZ - Exclusion zone boundary reading

Performed By (Print)

Performed By (Signature)

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/1/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time  | Wind Direction | Wind Speed | Location & Comments             | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|---|----------------|------------|---------------------------------|-----------|-----------|---------------|
| 07:30-11:30   | Variable       | Calm       | Screen Plant & Dvd Hollow       | —         | —         | 0.034<br>(50) |
| 07:30-11:00   | Variable       | Calm       | Top of ore pile, north slope    | ∅         | ∅         | —             |
| 11:00-11:30   | Variable       | Calm       | Ore Pile → Furnace → Slurry Pit | ∅         | ∅         | —             |
| 01:00-02:50   | Variable       | Calm       | Office Trailer                  | —         | —         | 0.041<br>(51) |
| 01:00-02:45   | Variable       | Calm       | Slurry Pit & Furnace            | ∅         | ∅         | —             |
| 03:00-05:25   | Variable       | Calm       | Slurry Pit & Furnace            | —         | —         | 0.028<br>(52) |
| 04:15-05:15   | Variable       | Calm       | Tank (above Tank Spring)        | ∅         | ∅         | —             |
|  |                |            |                                 |           |           |               |

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/1/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                     |
|-------------------|-------|--------------|-----------------|------------------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits                      |
|                   |       |              |                 |                              |
|                   |       |              |                 |                              |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits                      |
|                   |       |              |                 |                              |
|                   |       |              |                 |                              |
| Dust              | BZ    | 0.419        | 0.041           | Clean Zone                   |
|                   | BZ    | 0.893        | 0.028           | Compactor (ore) @ SP/Furnace |
|                   |       |              |                 |                              |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

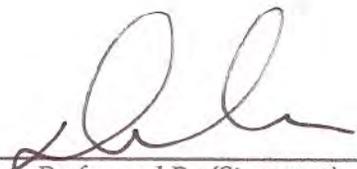
**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
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 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

Dan White

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**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/31/09           | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | WZ    | ∅            | ∅               | All Good |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | WZ    | ∅            | ∅               | All Good |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              | WZ    | 1.835        | .032            | Good     |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

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BZ - Workers breathing zone

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Dan White

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 7/30/09           | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| Time           | Wind Direction | Wind Speed | Location & Comments      | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|----------------|----------------|------------|--------------------------|-----------|-----------|---------------|
| 7:50-<br>5:30  | North          | 0-12       | Furnace & Slurry Pit     | —         | —         | 0.041<br>(43) |
| 9:00-<br>10:00 | North          | 0-5        | Slurry Pit               | ∅         | ∅         | —             |
| 2:00-<br>3:00  | North          | 0-12       | Slurry Pit & Furnace     | ∅         | ∅         | —             |
| 3:00-<br>4:00  | North          | 0-10       | Tank (above tank spring) | ∅         | ∅         | —             |
|                |                |            |                          |           |           |               |
|                |                | SW         |                          |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date:      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments          |
|-------------------|-------|--------------|-----------------|-------------------|
| HCN               | EZ/WZ | ∅            | ∅               | No Hits           |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits           |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |
| Dust              | EZ/WZ | 2.604        | 0.041           | Max not Sustained |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |
|                   |       |              |                 |                   |

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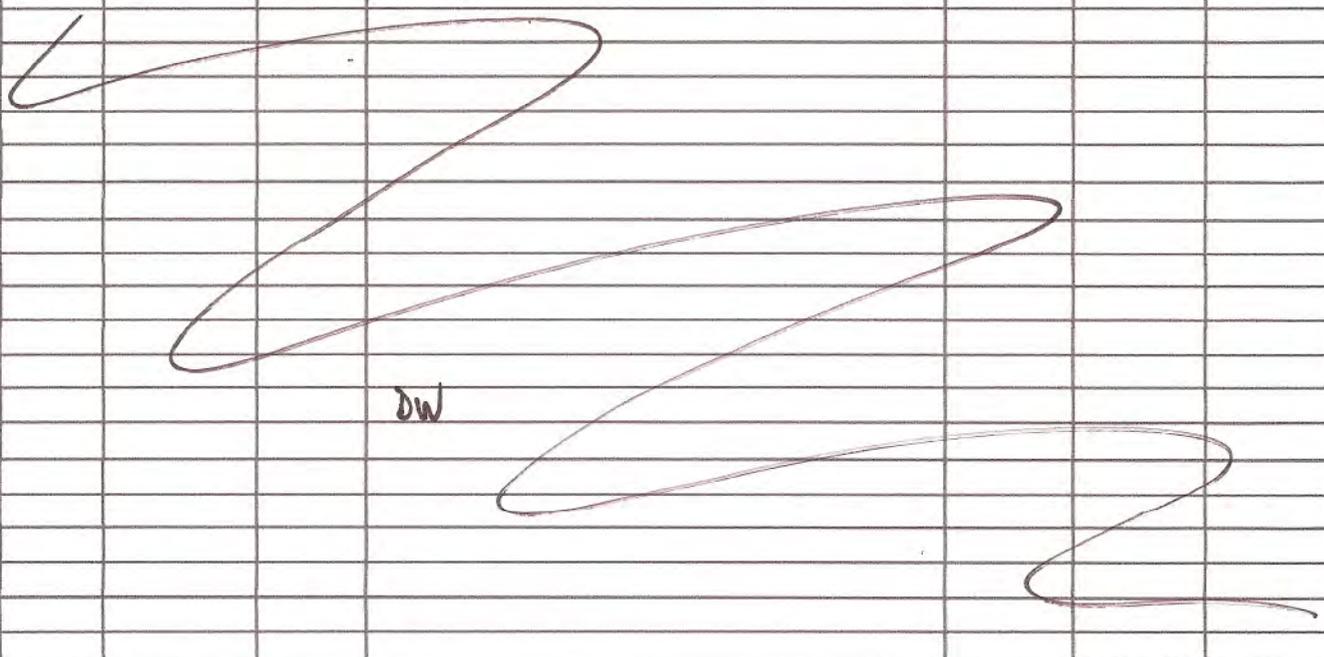
*Dan White*

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### CRA DAILY AIR MONITORING LOG

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 7/29/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time  | Wind Direction   | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|---|------------------|------------|--|-----------|-----------|---------------|
| 08:30 - 10:00   | Variable         | Calm       | Ore stockpile<br>* Monitors in cab of excavator loading haul trucks w/ ore → | ∅         | ∅         | 0.546<br>(30) |
| 12:10 - 1:35  | Variable         | 0-10       | Furnace<br>* Monitor in cab with operator of compactor                       | —         | —         | 0.136<br>(40) |
| 10:30 - 11:30   | Variable         | 0-5        | Ore stockpile<br>* Monitor w/ excavator operator @ ore stockpile             | ∅         | ∅         | 0.090<br>(31) |
| 1:45 - 5:30   | Variable (SE-NW) | 0-10       | Slurry Pit & Furnace & ore pile<br>* Dust monitor w/ haul truck operator     | ∅         | ∅         | 0.160<br>(41) |
|  |                  |            |  |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/29/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments  |
|-------------------|--------|--------------|-----------------|---|
| HCN               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| PH3               | BZ, WZ | ∅            | ∅               | No Hits   |
|                   |        |              |                 |   |
|                   |        |              |                 |   |
| Dust              | BZ/WZ  | 11.977*      | 0.546           | Excavator   |
|                   | BZ/WZ  | 3.039        | 0.160           | Haul Truck  |
|                   | BZ/WZ  | 3.343        | 0.136           | Compactor   |
|                   |        |              |                 | * Spike not sustained, operator had smoked near monitor |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 7/27/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               |       | 0            | 0               | OK       |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               |       | 0            | 0               | OK       |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       | .794         | .275            | OK       |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

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**KEY FOR ABBREVIATIONS:**

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**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/9/09            | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments                       |
|-------------------|--|--------------|-----------------|--------------------------------|
| HCN               | BZ   | Ø            | Ø               | No Hits @ clarifier<br>all day |
|                   |  |              |                 |                                |
|                   |  |              |                 |                                |
| PH3               | BZ   | Ø            | Ø               | No Hits @ clarifier<br>all day |
|                   |  |              |                 |                                |
|                   |  |              |                 |                                |
| Dust              | <br>DW |              |                 |                                |
|                   |  |              |                 |                                |
|                   |  |              |                 |                                |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

*Dan White*

Performed By (Print)



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**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/7/09            | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time          | Wind Direction | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|---------------|----------------|------------|--|-----------|-----------|--------------|
| 08:30 - 11:30 | Variable       | Calm       | Screen Plant<br>* Monitor w/ loader operator               | —         | —         | 0.007<br>(5) |
| 08:30 - 10:30 | Variable       | Calm       | Office Area & Water Well<br>(N. of site)                   | ∅         | ∅         | —            |
| 12:50 - 5:05  | Variable       | Light      | Screen plant ↔ Furnace<br>* Monitor w/ haul truck operator | —         | —         | 0.016<br>(6) |
| 1:00 - 2:00   | SE             | 0-12       | Furnace / Tank Spring                                      | ∅         | ∅         | —            |
| 3:00 - 4:00   | SE             | 0-10       | Water Well / Frac Tank                                     | ∅         | ∅         | —            |
|               |                |            |  |           |           |              |
|               |                | DW         |  |           |           |              |

**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 8/7/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                       |
|-------------------|-------|--------------|-----------------|--------------------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No hits; continuous monitoring |
|                   |       |              |                 |                                |
|                   |       |              |                 |                                |
| PH3               | BZ/WZ | ∅            | ∅               | No hits; continuous monitoring |
|                   |       |              |                 |                                |
|                   |       |              |                 |                                |
| Dust              | BZ    | 0.529        | 0.016           | Haul truck                     |
|                   | BZ    | 0.799        | 0.007           | Loader (Screen)                |
|                   |       |              |                 |                                |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

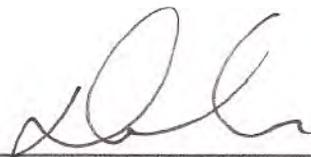
**KEY FOR ABBREVIATIONS:**

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 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/6/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                       |
|-------------------|-------|--------------|-----------------|--------------------------------|
| HCN               | BZ/WZ | Ø            | Ø               | Continuous monitoring, no hits |
|                   |       |              |                 |                                |
|                   |       |              |                 |                                |
| PH3               | BZ/WZ | Ø            | Ø               | Continuous monitoring, no hits |
|                   |       |              |                 |                                |
|                   |       |              |                 |                                |
| Dust              | BZ    | 0.335        | 0.006           | haul truck                     |
|                   |       |              |                 |                                |
|                   |       |              |                 |                                |

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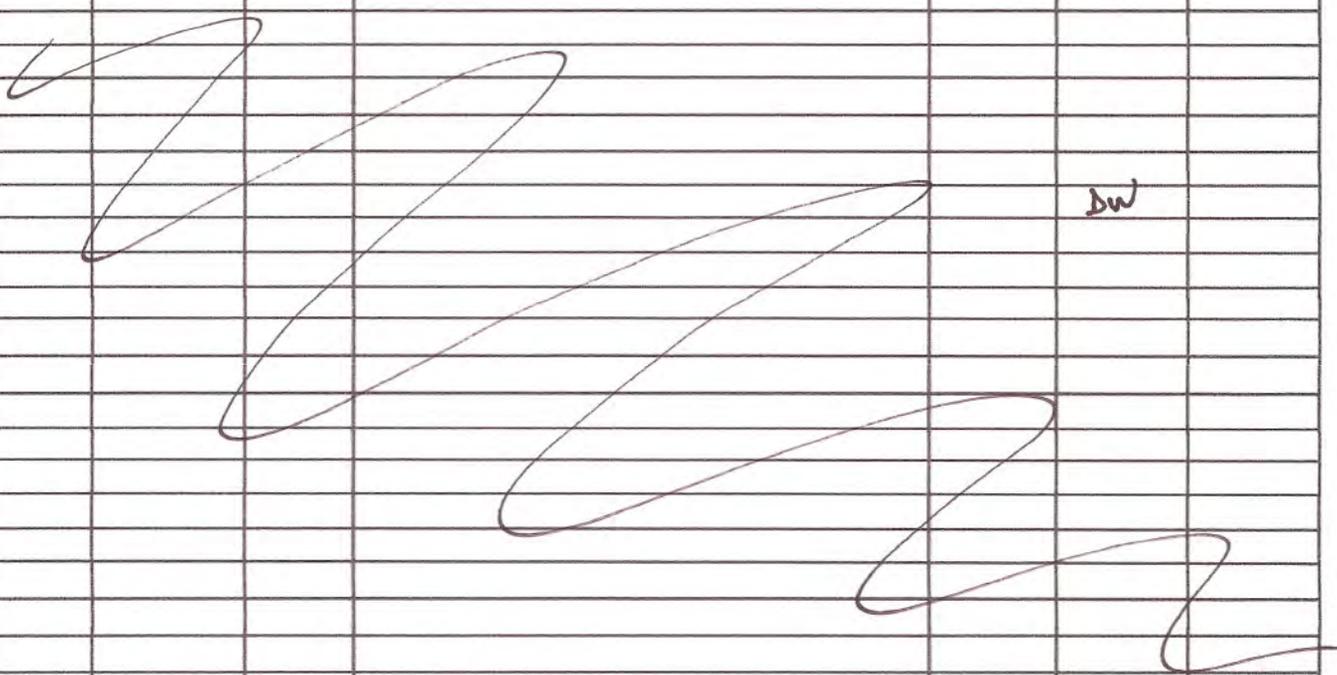


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**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/5/09            | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| Time  | Wind Direction | Wind Speed | Location & Comments | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|---|----------------|------------|---------------------|-----------|-----------|--------------|
| 8:00-12:35  | SSE            | 0-5        | Slurry Pit          | —         | —         | 0.024 (1)    |
| 1:20-1:45   | SSE            | 0-8        | Slurry Pit          | —         | —         | 0.002 (2)    |
| 3:00-4:00   | Variable       | 0-12       | Ore stockpile       | —         | —         | 0.009 (3)    |
| 7:30-5:30   | Variable       | 0-12       | Ore stockpile       | ∅         | ∅         | —            |
|  |                |            |                     |           |           |              |

**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 8/5/09      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | BZ/WZ | 4.238        | 0.024           | Peak not sustained, monitor w/ compactor operator |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

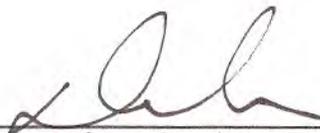
**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
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 EZ - Exclusion zone boundary reading

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/4/2009          | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time        | Wind Direction | Wind Speed | Location & Comments                           | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|---|-----------|-----------|--------------|
| 8:40-11:00  | Variable       | Calm       | Screen Plant → Slurry Pit → Furnace → Trailer | ∅         | ∅         | 0.054 (1)    |
| 12:45-03:50 | SSE            | 0-10       | Slurry Pit, Furnace, Screen                   | —         | —         | 0.132 (2)    |
| 11:00-01:00 | SSE            | 0-10       | Slurry Pit, well areas<br>6T-2, 7, & 8        | ∅         | ∅         | —            |
| 01:00-06:00 | SSE            | 0-10       | Phosphoria Gulch, rock blast area             | ∅         | ∅         | —            |
|             |                |            |   |           |           |              |
|             | DW             |            |   |           |           |              |

**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/4/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | WZ/BZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | WZ/BZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | WZ    | 9.562        | 0.132           | Peak in clean area (screen) and not sustained, gen. by passing haul truck while water wagon was being serviced. |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

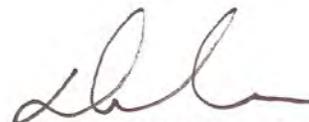
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 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/3/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              | BZ    | 2.097        | 0.051           | Dust from clean soil surrounding base of furnace. Meter w/ compact operator continuous |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/16/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

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- EZ - Exclusion zone boundary reading

*Paul Conrad*  
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 \_\_\_\_\_  
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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: **8/15/2009**      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| Time  | Wind Direction | Wind Speed | Location & Comments              | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------|----------------|------------|----------------------------------|-----------|-----------|--------------|
| 08:00 | SE             | 0-10       | Clarifier                        | ∅         | ∅         | —            |
| 11:30 |                |            | * Monitors w/ excavator operator |           |           |              |
| 12:00 | SE             | 0-10       | Clarifier                        |           |           |              |
| 5:00  |                |            | * Monitors w/ excavator operator | ∅         | ∅         | —            |
|       |                |            |                                  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 8/15/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

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 EZ - Exclusion zone boundary reading

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8-14-2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No hits; monitors w/ operators and/or personnel in/around classifier |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No hits; monitors w/ operators and/or personnel in/around classifier |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              |       |              |                 |  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

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- EZ - Exclusion zone boundary reading

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*[Signature]*

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*[Signature]*





**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 02-13-2007      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                         |
|-------------------|-------|--------------|-----------------|----------------------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits - Clarifier & Sed. Basin |
|                   |       |              |                 |                                  |
|                   |       |              |                 |                                  |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits - Clarifier & Sed. Basin |
|                   |       |              |                 |                                  |
|                   |       |              |                 |                                  |
| Dust              |       |              |                 |                                  |
|                   |       |              |                 |                                  |
|                   |       |              |                 |                                  |

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- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

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*[Signature]*

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*[Signature]*





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/12/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments            |
|-------------------|-------|--------------|-----------------|---------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits             |
|                   |       |              |                 |                     |
|                   |       |              |                 |                     |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits             |
|                   |       |              |                 |                     |
|                   |       |              |                 |                     |
| Dust              | WZ    | 1.523        | 0.021           | Clarifier           |
|                   | WZ    | 4.764        | 0.031           | Clean Areas & Roads |
|                   |       |              |                 |                     |

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**CRA DAILY AIR MONITORING LOG**

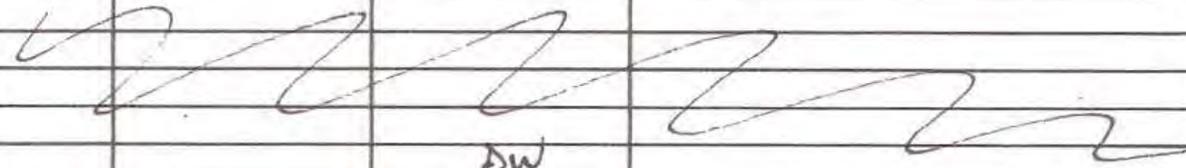
Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/11/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time       | Wind Direction | Wind Speed | Location & Comments              | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|------------|----------------|------------|----------------------------------|-----------|-----------|--------------|
| 8:30-9:30  | Variable       | Calm       | Classifier                       | ∅         | ∅         | —            |
| 9:45-11:30 | SSE            | 0-5        | Topsoil Borrow (East of Furnace) | ∅         | ∅         | —            |
| 12:00-2:30 | SSE            | 0-10       | Topsoil Borrow (East of Furnace) | ∅         | ∅         | —            |
| 3:00-5:30  | SSE            | 0-8        | Topsoil Borrow & Furnace         | ∅         | ∅         | —            |
| 5:45-7:00  | Variable       | Calm       | Classifier                       | ∅         | ∅         | —            |
|            |                |            |                                  |           |           |              |
|            | DW             |            |                                  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/11/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits - Monitors on ground personnel @ clarifier, on equip. oper. @ topsoil borrow       |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No hits - Monitors on ground personnel @ clarifier w/ excavator oper. @ topsoil borrow     |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              |       |              |                 | <br>DW |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)



Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/10/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| Time       | Wind Direction | Wind Speed | Location & Comments                            | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|------------|----------------|------------|--|-----------|-----------|--------------|
| 9:30-11:30 | Variable       | Calm       | Clarifier                                      | Ø         | Ø         | —            |
| 12:00-2:00 | SSE            | 0-10       | Clarifier & Furnace Area<br>(near Tank Spring) | Ø         | Ø         | —            |
| 2:00-5:00  | SSE            | 0-8        | Furnace Area & Slurry Pit                      | Ø         | Ø         | —            |
|            |                |            |  |           |           |              |
|            | DW             |            |  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 8/10/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       | DW           |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Dan White

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 08/22/2009        | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              | BZ/WZ | 1.376        | 0.101           | Peak sustained in clean zone, all readings under action level (0.5 mg/m <sup>3</sup> ) |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

Note: Workers in clarifier aware of symptoms of phosphorous exposure (flu like symptoms); all workers in good health. Much of phosphorous bearing materials covered or buried, odor / smoke much reduced.

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/21/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| Time          | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|---------------|----------------|------------|---|-----------|-----------|--------------|
| 07:30 - 11:30 | Variable       | Calm       | Clarifier<br>+ Monitor w/ excavator operator working in and around ring wall                  | Ø         | Ø         | —            |
| 10:00 - 11:50 | Variable       | Calm       | Clarifier<br>+ Monitor w/ ground personnel, also monitored along haul road to office and back | —         | —         | 0.036 (14)   |
| 01:05 - 05:20 | Variable       | 0-5        | Clarifier ↔ Ore Pile<br>+ Monitor w/ haul truck driver  | —         | —         | 0.009 (15)   |
| 12:00 - 05:15 | Variable       | 0-5        | Clarifier<br>+ Monitor w/ excavator operator  | Ø         | Ø         | —            |
|               |                |            |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/21/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              | WZ    | 8.357*       | 0.036           | Monitor on ground in clarifier<br>*false peak as intake became blocked |
|                   | BZ    | 0.796        | 0.009           | Monitor in haul truck  |
|                   |       |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

CR - Contact reading on specific media

WZ - Ambient air in work zone

EZ - Exclusion zone boundary reading

Back - Background reading in clean environments

Note: Phosphorous odor off and on in WZ based on wind direction;  
 monitor workers for signs of exposure (nausea, headache, vomiting, etc);  
 crew in good health

Dan White

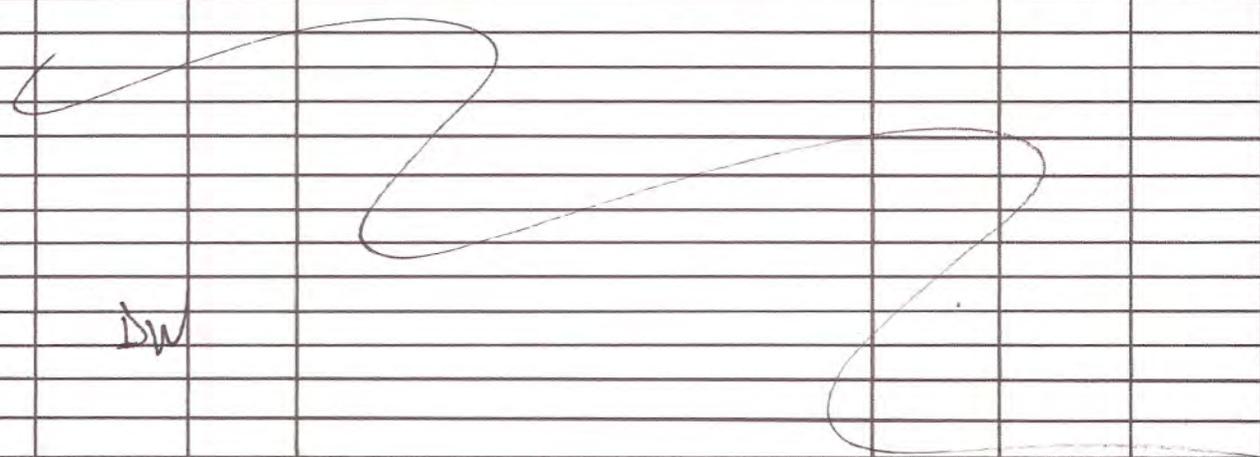
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**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/20/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time   | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|--|----------------|------------|---|-----------|-----------|--------------|
| 07:30 - 11:30  | Variable       | 0-5        | Clarifier<br>* Monitors w/ excavator operator in clarifier                              | ∅         | ∅         | —            |
| 12:00 -  | Variable       | 0-5        | Clarifier<br>* Monitors w/ excavator operator   | ∅         | ∅         | —            |
| 09:00 - 03:00  | Variable       | 0-5        | Ore Pile - Clarifier<br>* Monitor w/ haul truck driver hauling ore rejects to clarifier | —         | —         | 0.083 (12)   |
| 03:25 - 05:50  | Variable       | 0-5        | Ore Pile, clarifier<br>* Monitor w/ compactor operator @ clarifier                      | —         | —         | 0.031 (13)   |
|  |                |            |   |           |           |              |
|  | DW             |            |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/20/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                         |
|-------------------|-------|--------------|-----------------|----------------------------------|
| HCN               | BZ/WZ | 0            | 0               | No Hits                          |
|                   |       |              |                 |                                  |
|                   |       |              |                 |                                  |
| PH3               | BZ/WZ | 0            | 0               | No Hits                          |
|                   |       |              |                 |                                  |
|                   |       |              |                 |                                  |
| Dust              | BZ    | 2.712        | 0.083           | Monitor in haul truck            |
|                   | WZ    | 1.408        | 0.031           | Monitor w/ compactor in open air |
|                   |       |              |                 |                                  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

CR - Contact reading on specific media

WZ - Ambient air in work zone

EZ - Exclusion zone boundary reading

Back - Background reading in clean environments

Note: Phosphorous odor present in WZ; monitor workers for signs of exposure (nausea, vomiting, headache, etc.) - no signs of worker exposure

Dan White

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/19/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time        | Wind Direction | Wind Speed | Location & Comments                              | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-------------|----------------|------------|--|-----------|-----------|---------------|
| 07:30-11:30 | Variable       | 0-5        | Clarifier<br>+ Monitor w/ excavator operator     | Ø         | Ø         | —             |
| 11:45-06:00 | NNE            | 0-10       | Ore Stockpile<br>+ Monitor w/ excavator operator | —         | —         | 0.180<br>(11) |
| 12:00-06:00 | NNE            | 0-10       | Clarifier<br>+ Monitor w/ excavator operator     | Ø         | Ø         | —             |
|             |                |            |  |           |           |               |
|             | DW             |            |  |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/19/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | Ø            | Ø               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | Ø            | Ø               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | BZ    | 5.909        | 0.180           | Peak not sustained, TWA and average well under action level |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Note! Phosphorous odor present in WZ; monitor workers for signs of exposure (nausea, vomiting, headache, etc.) - no signs; odor dissipated by wind

Don White

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/18/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time        | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|---|-----------|-----------|--------------|
| 08:00-11:30 | SE             | 0-5        | Clarifier<br>* Monitors w/ excavator oper. grubbing cat tails   | ∅         | ∅         | —            |
| 08:40-11:40 | SE             | 0-5        | Screen Plant - office -<br>Slurry Pit - Furnace<br>* Monitor w/ haul truck oper. hauling clean fill to area north of furnace from Dud Hollow borrow | —         | —         | 0.102 (9)    |
| 05:00-06:00 | SSE            | 0-8        | Clarifier & Ore Pile<br>* Monitor @ ground level  | —         | —         | 0.064 (10)   |
| 12:00-06:00 | SSE            | 0-8        | Clarifier<br>* Monitors w/ excavator oper. placing ore & mixing sediments   | ∅         | ∅         | —            |
|             |                |            |   |           |           |              |
|             |                | DW         |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/18/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments           |
|-------------------|-------|--------------|-----------------|--------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits            |
|                   |       |              |                 |                    |
|                   |       |              |                 |                    |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits            |
|                   |       |              |                 |                    |
|                   |       |              |                 |                    |
| Dust              | WZ    | 4.045        | 0.064           | Peak in clean area |
|                   | BZ    | 1.876        | 0.102           | Clean work zones   |
|                   |       |              |                 |                    |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

WZ - Ambient air in work zone

Back - Background reading in clean environments

CR - Contact reading on specific media

EZ - Exclusion zone boundary reading

Note: Phosphorous odor present, dissipated by breeze. Monitor workers for signs of exposure (nausea, vomiting, headache, etc.) - no exposure

Dan White

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

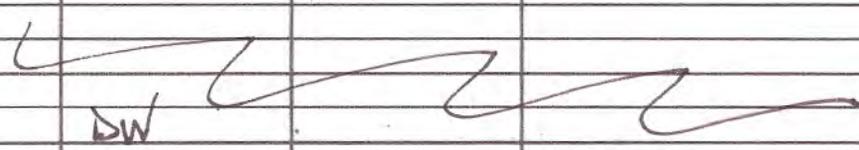
|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/17/09           | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10506103     |

| Time        | Wind Direction | Wind Speed | Location & Comments  | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|--|-----------|-----------|--------------|
| 07:30-09:00 | Variable       | Calm       | Clarifier<br>* Monitor w/ excavator operator                               | Ø         | Ø         | —            |
| 09:30-11:00 | Variable       | Calm       | Clarifier<br>* Monitors w/ personnel cutting pipe @ E of clarifier         | Ø         | Ø         | —            |
| 11:00-2:45  | Variable       | 0-5        | Clarifier<br>* Monitor w/ excavator operator mixing sediments              | Ø         | Ø         | —            |
| 2:45-5:00   | Variable       | 0-3        | Clarifier<br>* Monitors w/ excavator operator loading cat tails / grubbing | Ø         | Ø         | —            |
|             |                |            |  |           |           |              |
|             |                | DW         |  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/17/09           | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code* | Peak Reading   | Average Reading | Comments |
|-------------------|-------|--|-----------------|----------|
| HCN               | BZ/WZ | ∅  | ∅               | No Hits  |
|                   |       |  |                 |          |
|                   |       |  |                 |          |
| PH3               | BZ/WZ | ∅  | ∅               | No Hits  |
|                   |       |  |                 |          |
|                   |       |  |                 |          |
| Dust              |       |  |                 |          |
|                   |       | DW   |                 |          |
|                   |       |  |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

Note: Phosphorous odor periodically, depending on wind speed and direction - monitor crew for signs of exposure; no exposure detected.

Dan White  
Performed By (Print)

  
Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/29/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

|   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

Note: Phosphorous odor and some smoke present when spreading stockpiled (wet) sediments for last lift today; operators working in clarifier area monitored for signs of exposure (flu symptoms) - no signs.

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/28/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| Time       | Wind Direction | Wind Speed | Location & Comments                           | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|------------|----------------|------------|---|-----------|-----------|---------------|
| 7:30-11:48 | WNW            | 0-5        | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
| 12:10-5:35 | Variable       | Calm       | Clarifier<br>* Monitor w/ compactor operator  | —         | —         | 0.028<br>(17) |
| 12:10-5:35 | Variable       | Calm       | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
|            |                |            |   |           |           |               |
|            |                | DN         |   |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/20/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                                |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits                                 |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits                                 |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | BZ/WZ | 1.898        | 0.028           | Peak not sustained, obs. in clean area. |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

CR - Contact reading on specific media

WZ - Ambient air in work zone

EZ - Exclusion zone boundary reading

Back - Background reading in clean environments

Note: Phosphorous odor much reduced; workers monitored for signs of exposure (flu symptoms) - none noted. Little to no smoke from remaining stockpiled sediments.

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

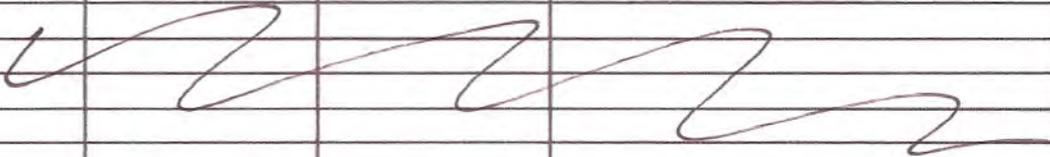
|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 8/27/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time         | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|--------------|----------------|------------|---|-----------|-----------|--------------|
| 9:00 - 11:10 | SSE            | 0-5        | Slurry Pit<br>* Monitors w/ ground personnel                          | ∅         | ∅         | —            |
| 12:15 - 2:00 | SSE            | 0-8        | Clarifier<br>+ Monitors w/ compactor operator                         | ∅         | ∅         | —            |
| 4:00 - 5:00  | SSE            | 0-4        | Clarifier<br>* Monitors w/ drier operator                             | ∅         | ∅         | —            |
| 5:00 - 5:30  | SSE            | 0-7        | Screen Plant<br>* Monitors w/ loader operator<br>(4:30 - Dan Johnson) | ∅         | ∅         | —            |
|              |                |            |   |           |           |              |
|              |                | DW         |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 8/27/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10506103     |

| End of Day Totals | Code*  | Peak Reading | Average Reading | Comments |
|-------------------|--|--------------|-----------------|----------|
| HCN               | BZ/WZ  | ∅            | ∅               | No Hits  |
|                   |  |              |                 |          |
|                   |  |              |                 |          |
| PH3               | BZ/WZ  | ∅            | ∅               | No Hits  |
|                   |  |              |                 |          |
|                   |  |              |                 |          |
| Dust              |  |              |                 |          |
|                   |  |              |                 |          |
|                   |  |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

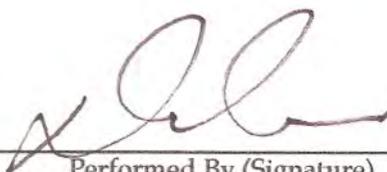
**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)



Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/26/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| Time        | Wind Direction | Wind Speed | Location & Comments   | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|-------------|----------------|------------|---|-----------|-----------|--------------|
| 10:15-11:40 | SSE            | 0-5        | Clarifier<br>* Monitors w/ Compactor operator, compactor rolling, dozer cutting spots through lifts for density tests | ∅         | ∅         | —            |
| 1:00-4:30   |                |            | Clarifier<br>* Monitors w/ excavator operator loading / mixing sediments  | ∅         | ∅         | —            |
| 4:30-5:10   |                |            | Sedimentation Basin<br>* Monitors w/ excavator operator - down tracks & bucket in SE corner of pond                   | ∅         | ∅         | —            |
|             |                |            |   |           |           |              |
|             |                |            | DW  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/26/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10506103

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Note: Smoke & odor from phosphorous minimal in and around clarifier during shift today.

Dan White

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/25/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone

CR - Contact reading on specific media

WZ - Ambient air in work zone

EZ - Exclusion zone boundary reading

Back - Background reading in clean environments

Note: Phosphorous odor much reduced by light rain / moist conditions. No signs of crew exposure.

*Dan White*

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**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/2/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits @ Clarifier, Ore Area, or Tank Spring ditch |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits @ Clarifier, Ore Area, or Tank Spring ditch |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

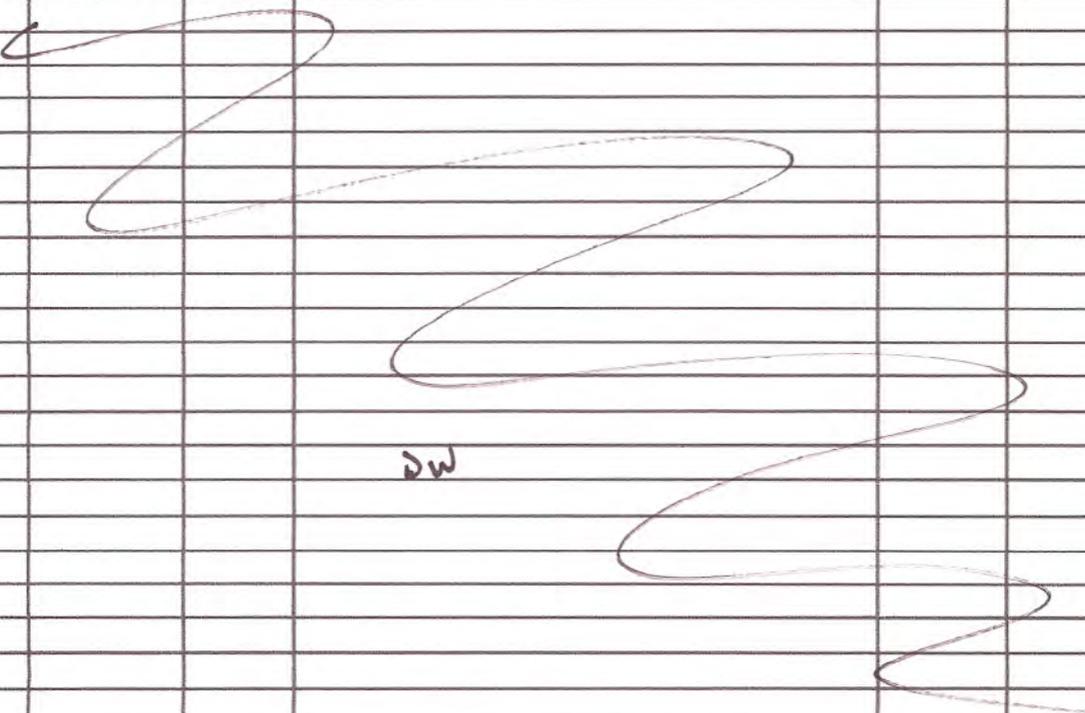
*Dan White*  
 \_\_\_\_\_  
 Performed By (Print)

\_\_\_\_\_  
 Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 9/1/2009          | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| Time   | Wind Direction | Wind Speed | Location & Comments                           | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|--|----------------|------------|---|-----------|-----------|---------------|
| 7:30-11:30   | S              | 0-10       | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
| 12:00-5:50   | S              | 0-15       | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
| 1:00-5:50  | S              | 0-15       | Clarifier<br>* Monitor w/ compactor operator  | —         | —         | 0.056<br>(21) |
|  |                |            |   |           |           |               |
|  |                |            | DW  |           |           |               |



**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 9/1/2009          | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                           |
|-------------------|-------|--------------|-----------------|------------------------------------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits                            |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits                            |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |
| Dust              | BZ/WZ | 1.508        | 0.056           | Dust levels @ clarifier acceptable |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |
|                   |       |              |                 |                                    |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 8/31/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | BZ/WZ | 5.824        | 0.081           | Peak in clean area, levels in ore area ok ✓           |
|                   | BZ/WZ | 1.854        | 0.072           | Peak reading measured along haul road in clean area ✓ |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 9/12/2009         | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits  |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              | DW              |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

*Dan White*

Performed By (Print)

*[Signature]*

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 9/11/09           | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time         | Wind Direction | Wind Speed | Location & Comments                         | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|--------------|----------------|------------|---|-----------|-----------|--------------|
| 9:30 - 11:30 | NSW            | 0-12       | Clarifier<br>*Monitors on ground personnel  | ∅         | ∅         | —            |
| 12:00 - 1:15 | WSW            | 0-5        | Clarifier<br>*Monitors on ground personnel  | ∅         | ∅         | —            |
| 1:30 - 2:45  | Variable       | Calm       | Clarifier<br>*Monitor on ground personnel   | ∅         | ∅         | —            |
| 3:30 - 4:30  | Variable       | Calm       | Clarifier<br>*Monitor on ground personnel   | ∅         | ∅         | —            |
| 3:20 - 5:25  | Variable       | Calm       | Clarifier<br>*Monitor w/ compactor operator | —         | —         | 0.074<br>(i) |
|              |                |            |   |           |           |              |
|              | DW             |            |   |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/11/09      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | Ø            | Ø               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | Ø            | Ø               | No Hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              | BZ/WZ | 3.756        | 0.074           | Peak not sustained, obs @ adjacent clean haul road / levels in ore area acceptable |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Note: Minimal contact w/ phosphorus bearing sediments, remainder of this material incorporated into ore cap. Workers monitored for signs of phosphorus exposure - none observed.

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

|                   |                   |                  |              |
|-------------------|-------------------|------------------|--------------|
| Project Name:     | Georgetown Canyon | Superintendent:  | Regis Seng   |
| Project Number:   | 56872             | SSO:             | Dan White    |
| Date:             | 9/10/2009         | Project Manager: | Howard Stich |
| HCN Meter Model:  | GasBadge Pro      | HCN Meter SN:    | 09063QV-001  |
| PH3 Meter Model:  | GasBadge Pro      | PH3 Meter SN:    | 09063QU-001  |
| Dust Meter Model: | SidePak AM510     | Dust Meter SN:   | 10508069     |

| Time        | Wind Direction | Wind Speed | Location & Comments                           | HCN (PPM) | PH3 (PPM) | DUST (mg/m3)  |
|-------------|----------------|------------|---|-----------|-----------|---------------|
| 07:30-09:30 | Calm           | Calm       | Slurry Pit<br>* Monitors w/ grade checker     | ∅         | ∅         | —             |
| 09:30-11:30 | WSW            | 0-10       | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
| 12:00-4:45  | WSW            | 0-20       | Clarifier<br>* Monitors w/ compactor operator | ∅         | ∅         | —             |
| 12:00-4:55  | WSW            | 0-20       | Clarifier<br>* Monitor w/ compactor operator  | —         | —         | 0.026<br>(22) |
|             |                |            |   |           |           |               |
|             |                | DW         |   |           |           |               |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/10/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments   |
|-------------------|-------|--------------|-----------------|--|
| HCN               | BZ/WZ | ∅            | ∅               | No hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| PH3               | BZ/WZ | ∅            | ∅               | No hits  |
|                   |       |              |                 |  |
|                   |       |              |                 |  |
| Dust              | BZ/WZ | 2.129        | 0.026           | Avg. well under action level of 1.5 mg/m <sup>3</sup> - peak from dust on adjacent clean road/fill areas |
|                   |       |              |                 |  |
|                   |       |              |                 |  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Note: Workers in clarifier area monitored for phosphorous exposure signs/symptoms (flu - nausea, coughing, eye irritation, vomiting, etc); no signs observed; smell/smoke in one small isolated area along south wall of clarifier.

Dan White

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

|                          |                   |                         |              |
|--------------------------|-------------------|-------------------------|--------------|
| <b>Project Name:</b>     | Georgetown Canyon | <b>Superintendent:</b>  | Regis Seng   |
| <b>Project Number:</b>   | 56872             | <b>SSO:</b>             | Dan White    |
| <b>Date:</b>             | 9/9/09            | <b>Project Manager:</b> | Howard Stich |
| <b>HCN Meter Model:</b>  | GasBadge Pro      | <b>HCN Meter SN:</b>    | 09063QV-001  |
| <b>PH3 Meter Model:</b>  | GasBadge Pro      | <b>PH3 Meter SN:</b>    | 09063QU-001  |
| <b>Dust Meter Model:</b> | SidePak AM510     | <b>Dust Meter SN:</b>   | 10508069     |

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments |
|-------------------|-------|--------------|-----------------|----------|
| HCN               | BZ/WZ | ∅            | ∅               |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| PH3               | BZ/WZ | ∅            | ∅               |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |
| Dust              |       |              |                 |          |
|                   |       |              |                 |          |
|                   |       |              |                 |          |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- |   |  |
|---|--|
| BZ - Workers breathing zone                     | CR - Contact reading on specific media |
| WZ - Ambient air in work zone                   | EZ - Exclusion zone boundary reading   |
| Back - Background reading in clean environments |  |

*Dan White*

Performed By (Print)

Performed By (Signature)



**CRA DAILY AIR MONITORING LOG**

**Project Name:** Georgetown Canyon      **Superintendent:** Regis Seng  
**Project Number:** 56872      **SSO:** Dan White  
**Date:** 9/18/2009      **Project Manager:** Howard Stich  
**HCN Meter Model:** GasBadge Pro      **HCN Meter SN:** 09063QV-001  
**PH3 Meter Model:** GasBadge Pro      **PH3 Meter SN:** 09063QU-001  
**Dust Meter Model:** SidePak AM510      **Dust Meter SN:** 10508069

| Time       | Wind Direction | Wind Speed | Location & Comments                    | HCN (PPM) | PH3 (PPM) | DUST (mg/m3) |
|------------|----------------|------------|--|-----------|-----------|--------------|
| 7:30-8:15  | Variable       | Calm       | Ore Area Anchor Trench                 | ∅         | ∅         | —            |
| 8:30-12:00 | SSE            | 0-5        | Classifier Anchor Trench /<br>SE to NE | ∅         | ∅         | —            |
| DW         |                |            |  |           |           |              |



**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/18/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments                                      |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits - No Phosphorons encountered/observed |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits - No Phosphorons encountered/observed |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              |       |              |                 |   |
|                   |       |              |                 |   |
|                   |       |              |                 | DW  |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

- BZ - Workers breathing zone
- WZ - Ambient air in work zone
- Back - Background reading in clean environments
- CR - Contact reading on specific media
- EZ - Exclusion zone boundary reading

Dan White

Performed By (Print)

Performed By (Signature)





**CRA DAILY AIR MONITORING LOG**

Project Name: Georgetown Canyon      Superintendent: Regis Seng  
 Project Number: 56872      SSO: Dan White  
 Date: 9/17/2009      Project Manager: Howard Stich  
 HCN Meter Model: GasBadge Pro      HCN Meter SN: 09063QV-001  
 PH3 Meter Model: GasBadge Pro      PH3 Meter SN: 09063QU-001  
 Dust Meter Model: SidePak AM510      Dust Meter SN: 10508069

| End of Day Totals | Code* | Peak Reading | Average Reading | Comments  |
|-------------------|-------|--------------|-----------------|---|
| HCN               | BZ/WZ | ∅            | ∅               | No Hits - No Phosphorons observed   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| PH3               | BZ/WZ | ∅            | ∅               | No Hits - No Phosphorons observed   |
|                   |       |              |                 |   |
|                   |       |              |                 |   |
| Dust              | BZ/WZ | 4.882        | 0.122           | Higher dust readings obs. in clean rock stockpile area - no dust / low dust in ore area |
|                   |       |              |                 |   |
|                   |       |              |                 |   |

\* Differentiate the location of the readings using the appropriate codes (i.e., BZ, WZ, CR, EZ, etc.).

**KEY FOR ABBREVIATIONS:**

BZ - Workers breathing zone  
 WZ - Ambient air in work zone  
 Back - Background reading in clean environments

CR - Contact reading on specific media  
 EZ - Exclusion zone boundary reading

*Dan White*

Performed By (Print)

Performed By (Signature)

## **APPENDIX G TEST PIT LOGS**

### **G.1.0 General**

Test pits were excavated at the slurry pit and at the ore pile in 2008 and 2009. Both investigations were completed to identify the location of elemental phosphorus and to determine the final sizes for the two caps.

On August 20 and 21, 2008, a total of 37 exploratory test pits (TP-1 through TP-33) were excavated and logged at both sites and surveyed. At a few sites, including TP-6, TP-8, TP-16 and TP-46, multiple test pits were excavated. Logs of these pits are contained within this appendix. Exploratory test pits in 2008 were excavated by Vaughn Smith Construction of Soda Springs, Idaho using a track hoe and a hoe ram.

During 2009, additional test pits were excavated on July 24 at the slurry pit, and again on September 2, 2009 at the ore pile. Logs of these pits (TP-34 through TP-52) are contained within this appendix. Exploratory test pits in 2009 were excavated by CRA using a PC 300 excavator.

### **G.2.0 Slurry Pit Test Pits**

Thirty nine exploratory test pits were excavated at locations surrounding the slurry pit, as shown on Figure G-1. Locations were selected based on the design trace of the anchor trench for the slurry cap and to define the extent to the east following dewatering. Excavations were made parallel to the trace of the trench alignment in order to maximize the area of investigation and reduce potential future exposure during construction. The locations of test pits were surveyed and staked prior to excavation.

#### **G.2.1 2008 Slurry Investigation**

During 2008, pits were excavated up to approximately 6 feet in depth, unless shallow

water conditions precluded any further investigation. Shallow surface water in 2008 was noted to be present between test pits TP-7 and TP-13, on the north and east sides of the slurry pit as the result of Tank Spring flooding. Exploratory test pits TP-3 through TP-7 indicated a very hard slag layer between about 1 to about 3 feet below grade that required the use of a hydraulic hoe ram to break through the layer before the pits could be excavated to the targeted depth of 6 feet below grade.

Air monitoring of vapor levels during the 2008 excavation of the test pits was performed using a VRAE hand held five-gas monitoring meter, model 6211 with built in sampling pump and level alarm. The meter was calibrated on August 15, 2008 prior to arrival on site. The meter was used during excavation to assess whether the soil materials that were being excavated contained hazardous levels of gases within the operator's working area atmosphere and to assess the approximate level of gasses present within the test pits. Both phosphine and hydrogen cyanide were gases of interest noted during the exploratory program.

Within each test pit that did not contain the presence of elemental phosphorus, a channel sample was obtained with a clean stainless steel trowel for up to 40 inches into a clean 16-ounce mason jar. One jar was filled from each side of the test pit. Each jar was labeled with the appropriate test pit number, approximately half filled with soil materials from each channel cut, covered with aluminum foil, and sealed for up to 2 hours at temperatures between 70 and 80 degrees. Samples were shaken vigorously prior to storing and prior to measurement of the headspace within each of the sample jars. The foil cover was punctured with the filtered tip of the VRAE meter, and the highest reading in the headspace above the soil in the jar within the first 10 seconds was noted on the test pit logs. Based on the results of the soil gas headspace analysis and phosphine measurement within the test pits, phosphine was detected above 0.1 ppm in 8 of 25 pits. Test pit TP-9 had the largest phosphine concentration of 0.3 ppm. The levels of phosphine and hydrogen cyanide are most frequently detected and largest on the north and east sides of the slurry pit.

### G.2.2 2009 Slurry Investigation

During the 2009 Phase I remedial action construction, fifteen (15) additional test pits (TP-34 through TP-46C) were excavated by CRA along the north, east and south sides of the slurry pit as shown on Figure G-1 to completely identify the limits to elemental phosphorus. No samples were obtained for analysis. Air monitoring during the intrusive work was constantly monitored by CRA using a GasBadge Pro HCN meter and a GasBadge Pro PH3 meter. No HCN or phosphine was encountered during the investigations. Completion of the investigative work during Phase I remedial construction immediately followed site dewatering of surface water to the east and to the south of the slurry pit. The additional 15 test pit excavations revealed the presence of elemental phosphorus in four of the test pits TP-43 and TP-46 through TP-46B. Where elemental phosphorous was detected, a new test pit was dug approximately 10 feet away. This procedure was repeated until no phosphorous was encountered thus delineating the extents of the area to be covered. There is no TP-44 because this location was beneath the furnace cover. Results of the Phase I test pits are contained in this appendix.

### **G.3.0 Ore Pile Test Pits**

Sixteen exploratory test pits were excavated at locations surrounding the ore cover and adjacent area, as shown on Figure G-2. Locations were selected based on the design trace of the anchor trench for the cap. Excavations were made parallel to the trace of the trench alignment in order to maximize the area of investigation and reduce potential future exposure during construction. The locations of test pits were surveyed and staked prior to and following excavation.

#### G.3.1 2008 Ore Pile Investigations

On August 21, 2008, an exploratory test pit investigation was completed near the west

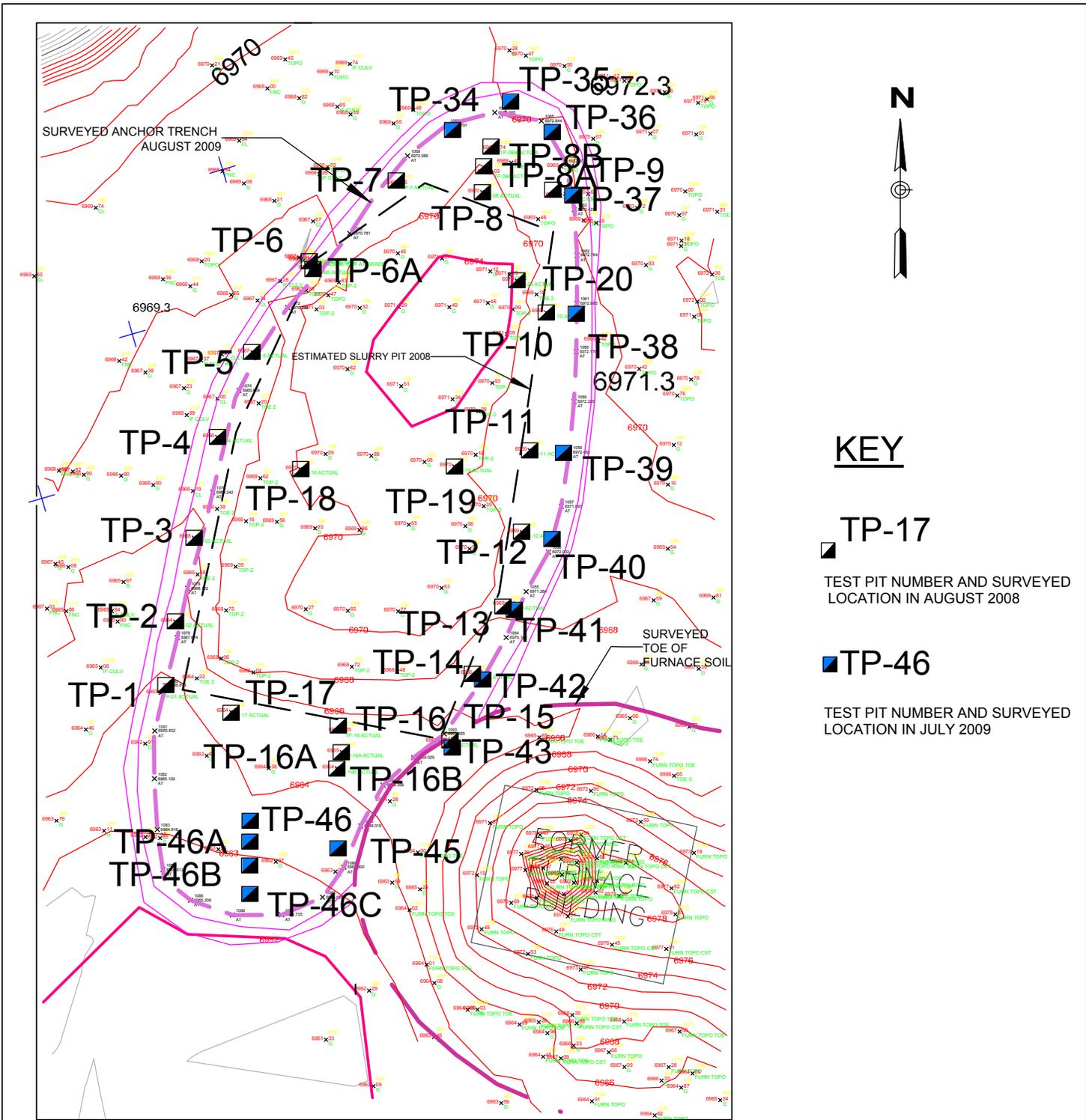
end of the ore pile to assess the extent of the elemental phosphorus buried within the ore. Thirteen test pits, shown on Figure G-2 were completed in the ore pile either to native soil horizons or to elemental phosphorus (TP-21 and TP-22 are immediately to the west of figure). Logs of these pits are contained within this appendix. Elemental phosphorus was identified in TP-24 through 26, and TP-28. Once elemental phosphorus was encountered, the depth was quickly obtained and each excavation was backfilled and compacted.

Air monitoring of vapor levels during the excavation of the test pits in the ore was performed using a VRAe hand held five gas monitoring meter, model 621-1 with built in sampling pump and level alarm. The meter was calibrated on August 15, 2008 for all five gasses. The meter was used during excavation to assess whether the soil materials that were being excavated contained hazardous levels of phosphine gas within the operators working area atmosphere and the approximate level of gasses present within the test pits. Neither HCN or phosphine gas was detected in the ore pile during test pit excavation.

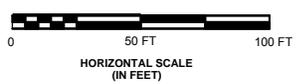
### G.3.2 2009 Ore Pile Investigations

In September 2009, three additional test pits (TP-50 through TP-52) were completed to assess the extent of the elemental phosphorus that was buried within the bottom of the ore pile. This area became accessible in 2009 following the removal of the ore from the hillside immediately above the defined area of elemental phosphorus. Air monitoring during the intrusive work was constantly monitored by CRA using a GasBadge Pro HCN meter and a GasBadge Pro PH3 meter. No HCN or phosphine was encountered during the investigations. Test pits were excavated immediately northeast of the test pits that were completed in 2008 which indicated the presence of elemental phosphorus. These pits defined the northeast and southeast boundaries of elemental phosphorus, as shown on Figure G-2. No elemental phosphorus was encountered in the 2009 test pits. Test pits were excavated to native Wells limestone soils at depths of 7 to 9.3 feet. The area between TP-28 and TP-29 was bedrock at the surface, defining the edge of the

anchor trench. The permanent closure of this area was addressed with an engineered cover over the ore area described in this report that completely covered the elemental phosphorus based on the results of both 2008 and 2009 test pit results. No elemental phosphorus was encountered in the anchor trench excavation during cover placement.



- KEY**
- ▣ TP-17  
TEST PIT NUMBER AND SURVEYED LOCATION IN AUGUST 2008
  - TP-46  
TEST PIT NUMBER AND SURVEYED LOCATION IN JULY 2009

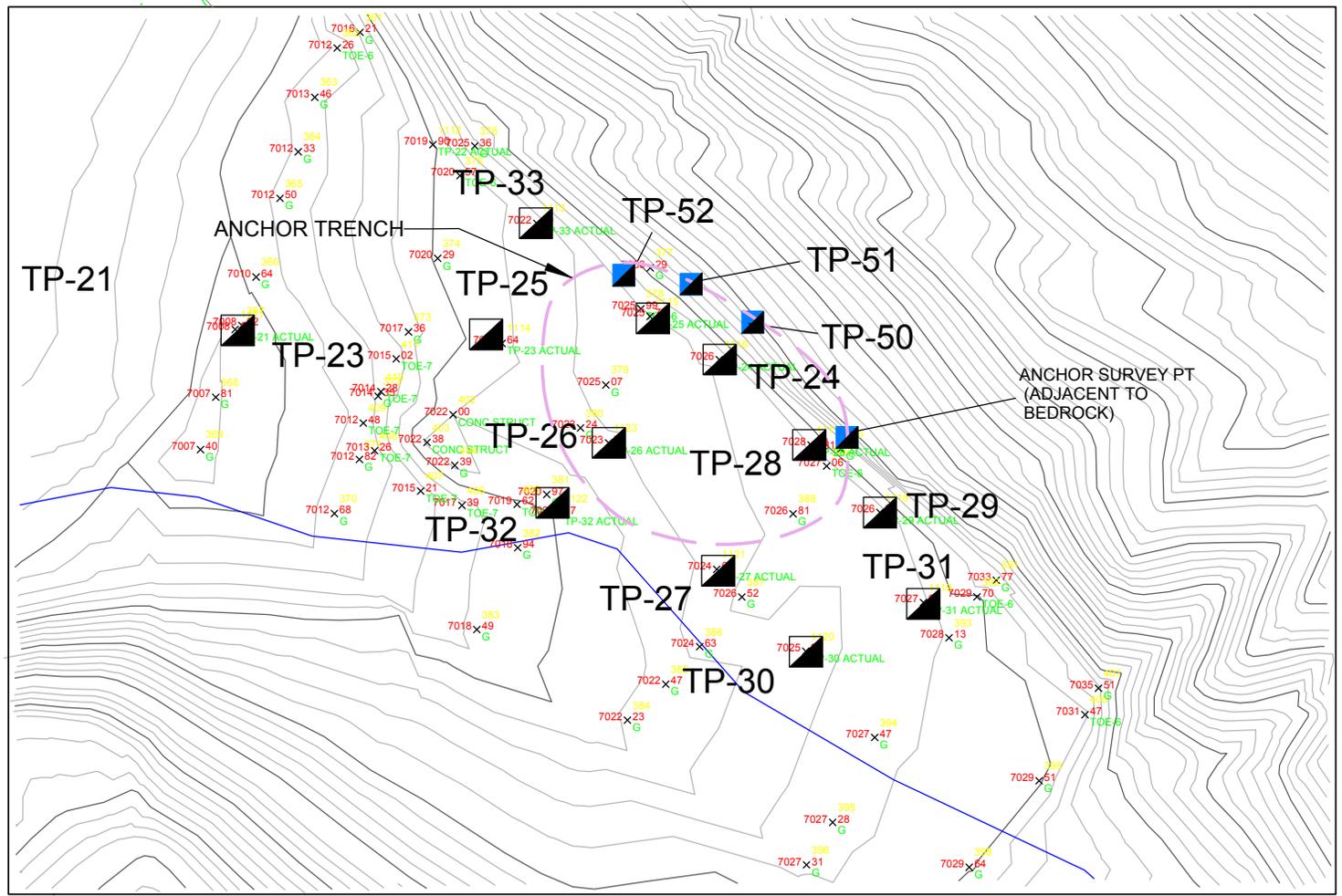


**REFERENCES:**  
 NU-WEST AUGUST AND OCTOBER, 2008  
 SURVEYOR SCHERBEL, LTD. AUGUST 24, 2009

**FINAL REMEDIAL ACTION COMPLETION REPORT**

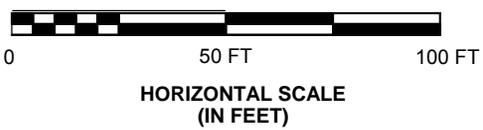
**LOCATIONS OF TEST PITS AND SLURRY PIT ANCHOR TRENCH**

|                                 |                   |
|---------------------------------|-------------------|
| SLURRY PIT TEST PITS.TCW        | <b>FIGURE G-1</b> |
| DRAWN BY JS BROWN, P.G. 1/23/10 |                   |



**KEY**

-  **TP-29**  
TEST PIT NUMBER AND SURVEYED LOCATION IN AUGUST 2008
-  **TP-46**  
TEST PIT NUMBER AND SURVEYED LOCATION IN JULY 2009



**REFERENCES:**  
 NU-WEST AUGUST AND OCTOBER, 2008  
 SURVEYOR SCHERBEL, LTD. SEPTEMBER 2, 2009

|  |           |        |            |
|--|-----------|--------|------------|
| <b>REMEDIAL ACTION COMPLETION REPORT</b>                               |           |        |            |
| TITLE<br><b>LOCATIONS OF TEST PITS ON ORE PILE IN PHOSPHORIA GULCH</b> |           |        |            |
| SIZE<br><b>A4</b>  | CAGE CODE | DWG NO | REV        |
| DRAWN BY J.S. BROWN, P.G.  |           | SHEET  | FIGURE G-2 |

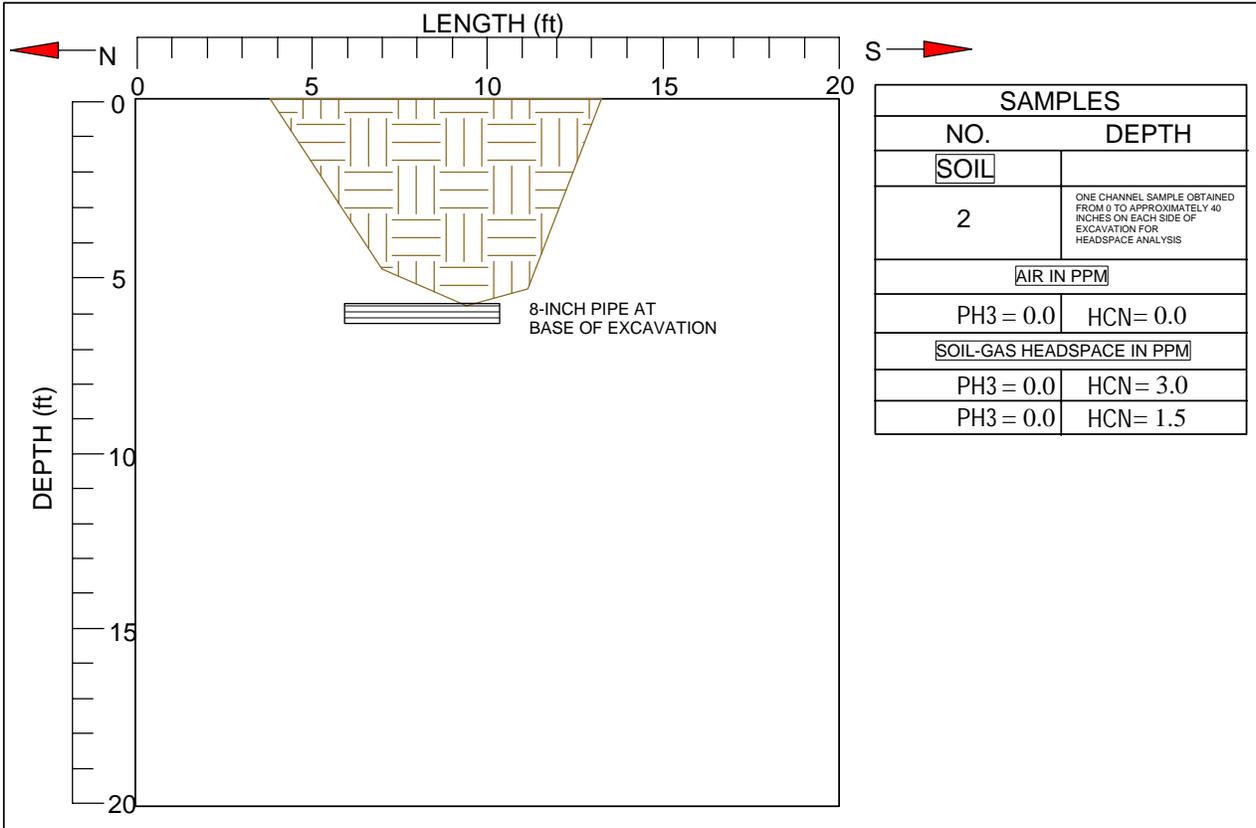
**FIELD TEST PIT LOG**

DATE: 8/20/08  
 ELEVATION: 6963.64  
 NORTHING: 316523.93  
 EASTING: 899922.59  
 DATUM : MSL

**TEST PIT: TP-1**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
 GEORGETOWN CANYON  
 OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE  
 ENGINEERS: J. WILLIAMS/JB BROWN

WEATHER: SUNNY,  
 HIGH CLOUDS, LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION   |
| 0                 | .8  | ML   | MED GRY SI W/ SLAG  |
| 0.8               | 3.1 | GM   | MED - DK GRAY SILTY FN-CS SANDY SUBANGULAR GRAVEL, MOIST (SLAG) |
| 3.1               | 5.8 | GM   | GRADES DK GRAY SANDY SUB ANGULAR GRAVEL TO 4" (FILL)            |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 11:19 | 5.8 FEET      | DRY |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) NO GROUND WATER ENCOUNTERED
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) HIT 8" METAL PIPE AT BASE OF EXCAVATION RUNNING N-S.

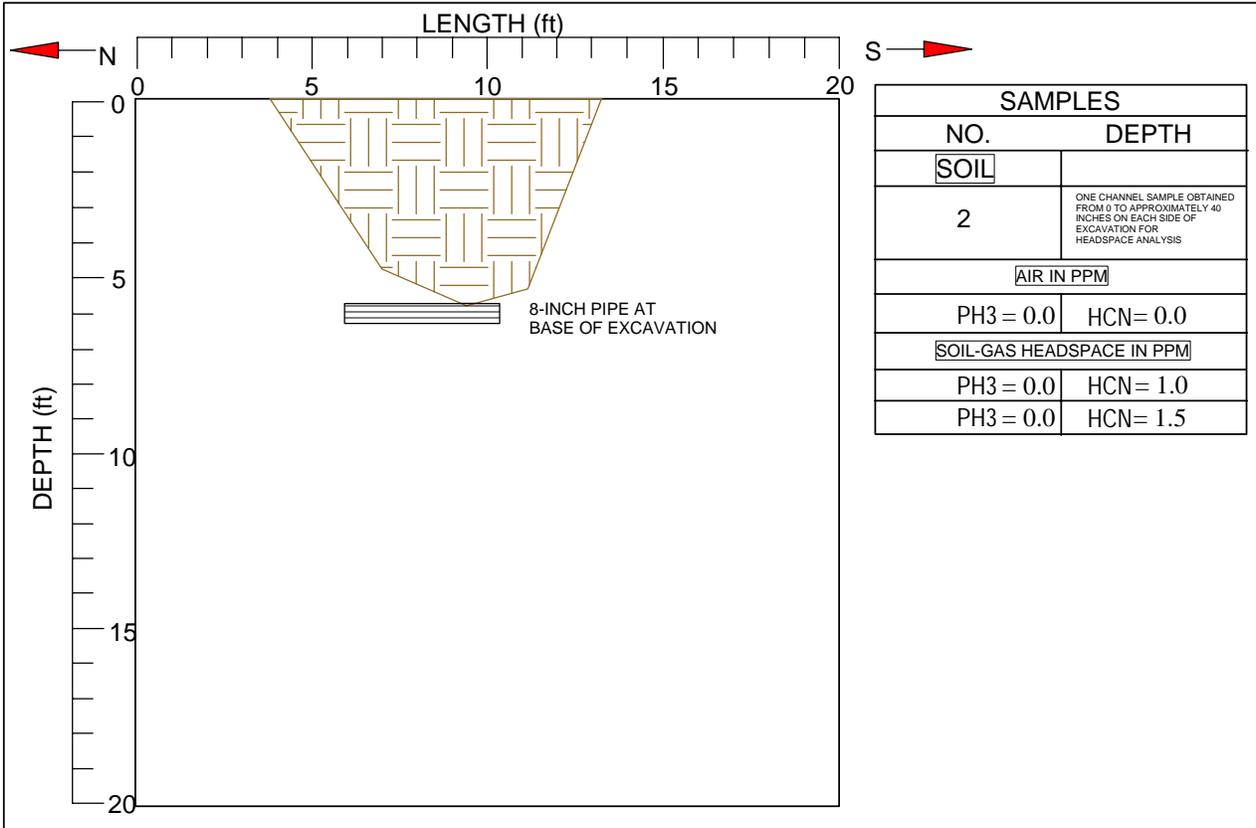
**FIELD TEST PIT LOG**

DATE: 8/20/08  
 ELEVATION: 6964.73  
 NORTHING: 316561.98  
 EASTING: 899930.46  
 DATUM : MSL

**TEST PIT: TP-2**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
 GEORGETOWN CANYON  
 OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE  
 ENGINEERS: J. WILLIAMS/JB BROWN

WEATHER: SUNNY,  
 HIGH CLOUDS, LITTLE WIND



| LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES |     |      |  |
|--|-----|------|--|
| DEPTH (ft)                                   |     |      |  |
| FROM   | TO  | USCS | DESCRIPTION  |
| 0  | 1.8 | GM   | LT TO MED GRY SI GR (SLAG)                           |
| 1.8  | 6.1 | GM   | DK GRAY SILTY FN-CS SANDY SUBANGULAR GRAVEL AND SLAG |
| 3.1  | 5.8 | GM   | GRADES DK GRAY SANDY SUB ANGULAR GRAVEL TO 4" (FILL) |
|  |     |      |  |
|  |     |      |  |
|  |     |      |  |
|  |     |      |  |
|  |     |      |  |
|  |     |      |  |
|  |     |      |  |

| TIME   | DEPTH OF HOLE | DTW |
|--|---------------|-----|
| 11:38  | 6.1 FEET      | DRY |
|  |               |     |
|  |               |     |
| SPECIAL NOTES:   |               |     |
| 1) NO GROUND WATER ENCOUNTERED   |               |     |
| 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION |               |     |
| 3) HIT 8" METAL PIPE AT BASE OF EXCAVATION RUNNING N-S.                      |               |     |





**FIELD TEST PIT LOG**

DATE: 8/20/08 AND FINISHED ON 8/21/08

**TEST PIT: TP-5**

WEATHER: SUNNY,  
HIGH CLOUDS, LITTLE WIND

ELEVATION: 6967.17

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

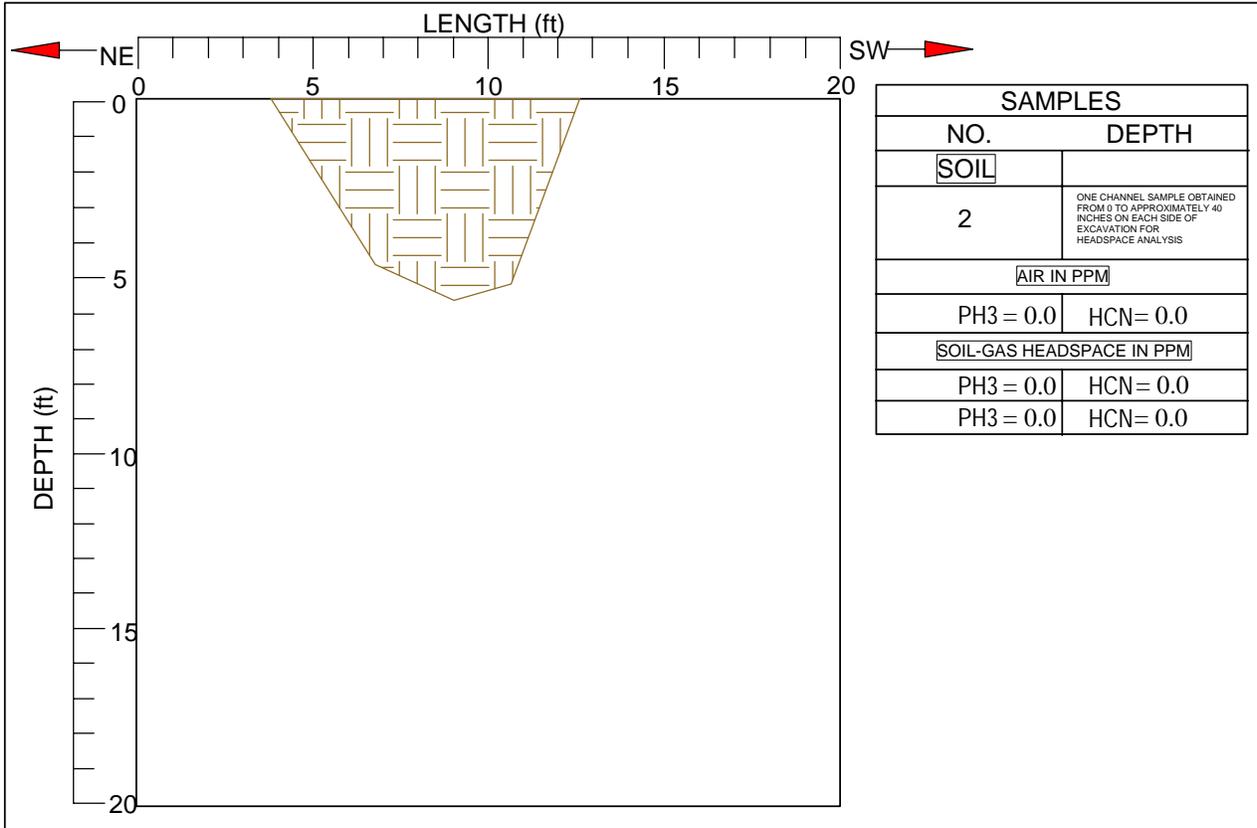
NORTHING: 316705.56

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

EASTING: 899971.54

ENGINEERS: J. WILLIAMS/JB BROWN

DATUM : MSL



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| DEPTH (ft) |     |      |   |
|------------|-----|------|---|
| FROM       | TO  | USCS | DESCRIPTION   |
| 0          | 2.9 | GM   | LT TO MED GRY SI GR (SLAG) VERY HARD                              |
| 2.9        | 5.8 | GM   | MED TO DK BROWN SILTY FN-CS SANDY SUBANGULAR GRAVEL, MEDIUM DENSE |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 12:19 | 5.8 FEET      | DRY |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) NO GROUND WATER ENCOUNTERED
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) HIT REFUSAL AT 1.3 FT ON 8/20/08

**FIELD TEST PIT LOG**

DATE: 8/20/08 AND FINISHED  
ON 8/21/08

**TEST PIT: TP-6**

WEATHER: SUNNY,  
HIGH CLOUDS, LITTLE WIND

ELEVATION: 6967.52

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

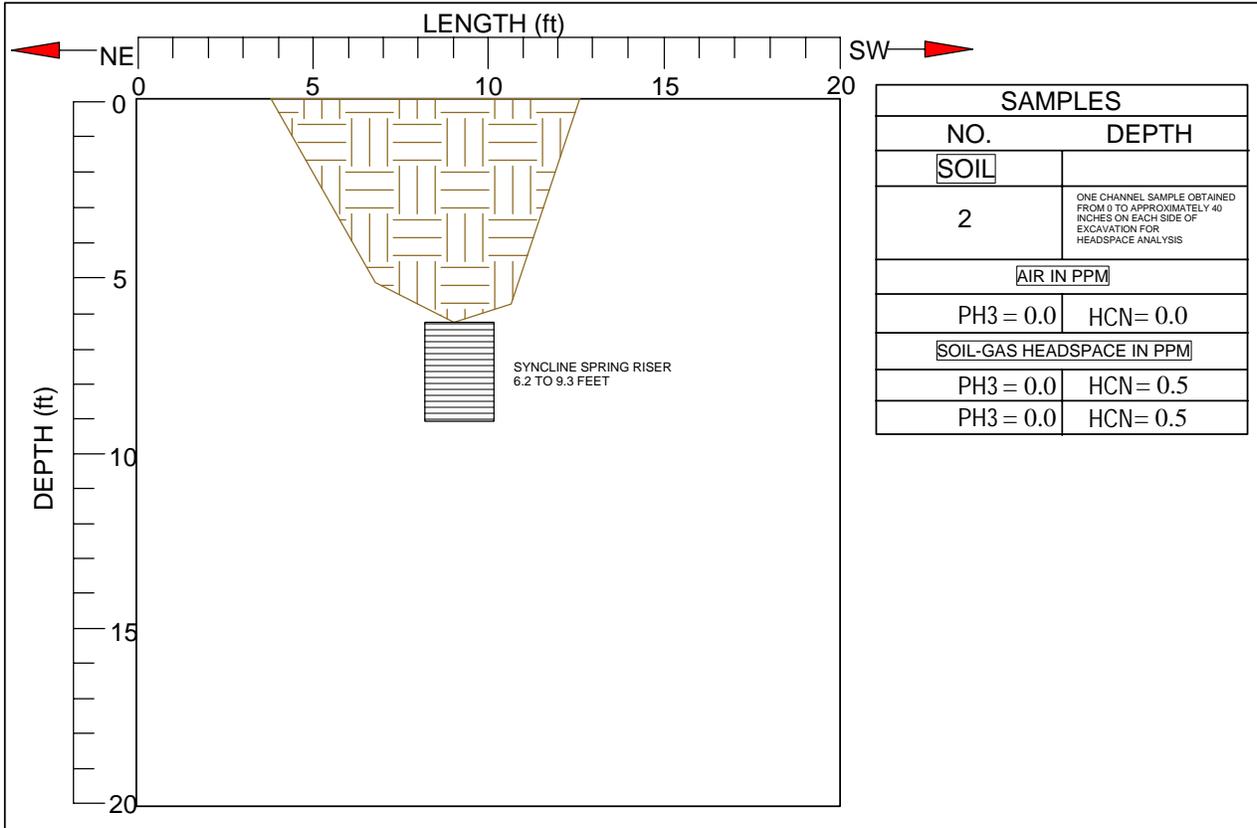
NORTHING: 316756.13

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

EASTING: 899996.32

ENGINEERS: J. WILLIAMS/JB BROWN

DATUM : MSL



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| DEPTH (ft) |     |      |   |
|------------|-----|------|---|
| FROM       | TO  | USCS | DESCRIPTION   |
| 0          | 2.9 | GM   | LT TO MED GRY SI GR (SLAG) VERY HARD                              |
| 2.9        | 6.4 | GM   | MED TO DK BROWN SILTY FN-CS SANDY SUBANGULAR GRAVEL, MEDIUM DENSE |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 12:22 | 6.4 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) NO GROUND WATER ENCOUNTERED
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) HIT REFUSAL AT 0.5 FT ON 8/20/08

**FIELD TEST PIT LOG**

DATE: 8/20/08 AND FINISHED  
ON 8/21/08

**TEST PIT: TP-6A**

WEATHER: SUNNY,  
HIGH CLOUDS, WINDY

ELEVATION: 6967.05

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

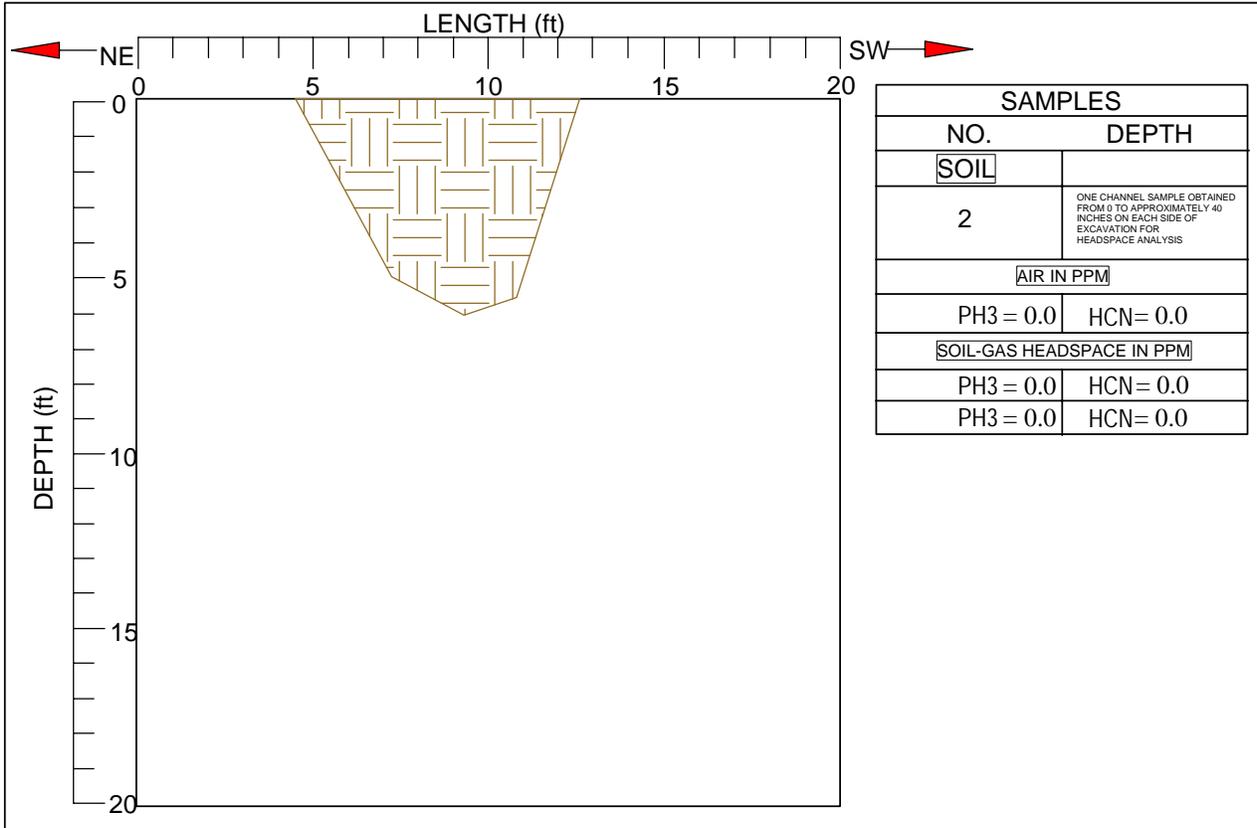
NORTHING: 316750.07

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

EASTING: 900003.72

ENGINEERS: J. WILLIAMS/JB BROWN

DATUM : MSL



| LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES |     |       |   |
|--|-----|-------|---|
| <u>DEPTH (ft)</u>                            |     |       |   |
| FROM   | TO  | USCS  | DESCRIPTION   |
| 0  | 3.1 | GM    | LT TO MED GRY SI GR (SLAG) VERY HARD                                    |
| 3.1  | 5.6 | GM    | DK BROWN TO DARK GRAY SILTY FN-CS SANDY SUBANGULAR GRAVEL, MEDIUM DENSE |
| 5.6  | 6.2 | GM/GC | LT TO MED BROWN CLAYEY FN-CS SANDY SUBANGULAR GRAVEL, MEDIUM DENSE      |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |
|  |     |       |   |

| TIME   | DEPTH OF HOLE | DTW |
|--|---------------|-----|
| 13:21  | 6.2 FEET      | DRY |
|  |               |     |
|  |               |     |
|  |               |     |
| SPECIAL NOTES:   |               |     |
| 1) WATER SEEPING INTO BOTTOM OF PIT  |               |     |
| 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION |               |     |



















**FIELD TEST PIT LOG**

DATE: 8/20/08

**TEST PIT: TP-14**

WEATHER: SUNNY,  
HIGH CLOUDS, LITTLE WIND

ELEVATION: 6966.30

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

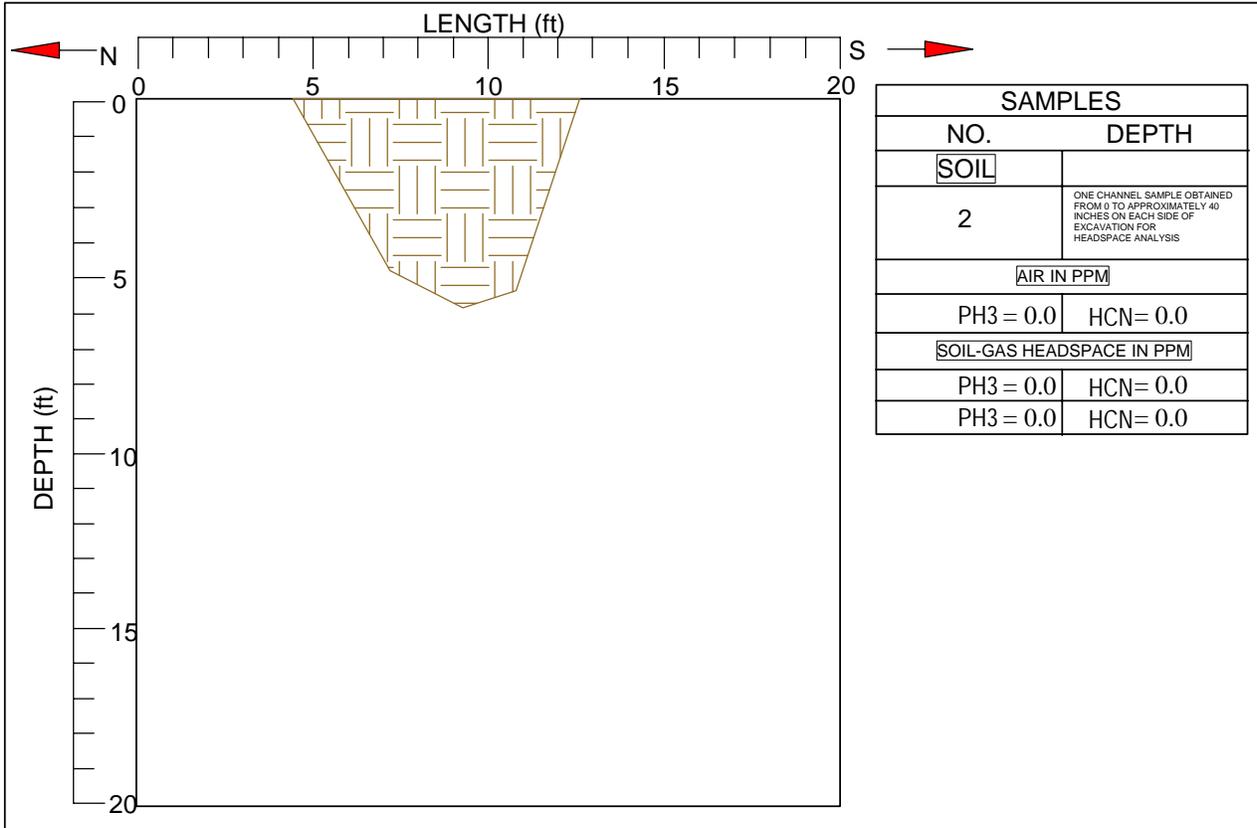
NORTHING: 316534.09

EASTING: 900090.05

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

DATUM : MSL

ENGINEERS: J. WILLIAMS/JB BROWN



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES |     |      |   |
|--|-----|------|---|
| <u>DEPTH (ft)</u>                            |     |      |   |
| FROM   | TO  | USCS | DESCRIPTION   |
| 0  | 2.8 | GM   | LIGHT TO MED GRAY SLAG, VERY HARD AT 1.2 FEET                 |
| 2.8  | 5.9 | GM   | MED TO DARK BROWN, SILTY FN-CS SANDY GRAVEL AND CLAYEY GRAVEL |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |
|  |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 14:44 | 5.9 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) NO GROUND WATER ENCOUNTERED
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) WATER SEEPING INTO EXCAVATION AT BOTTOM OF PIT, SMOKING AT BOTTOM OF PIT

**FIELD TEST PIT LOG**

DATE: 8/20/08

**TEST PIT: TP-15**

WEATHER: SUNNY,  
HIGH CLOUDS, LITTLE WIND

ELEVATION: 6965.72

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

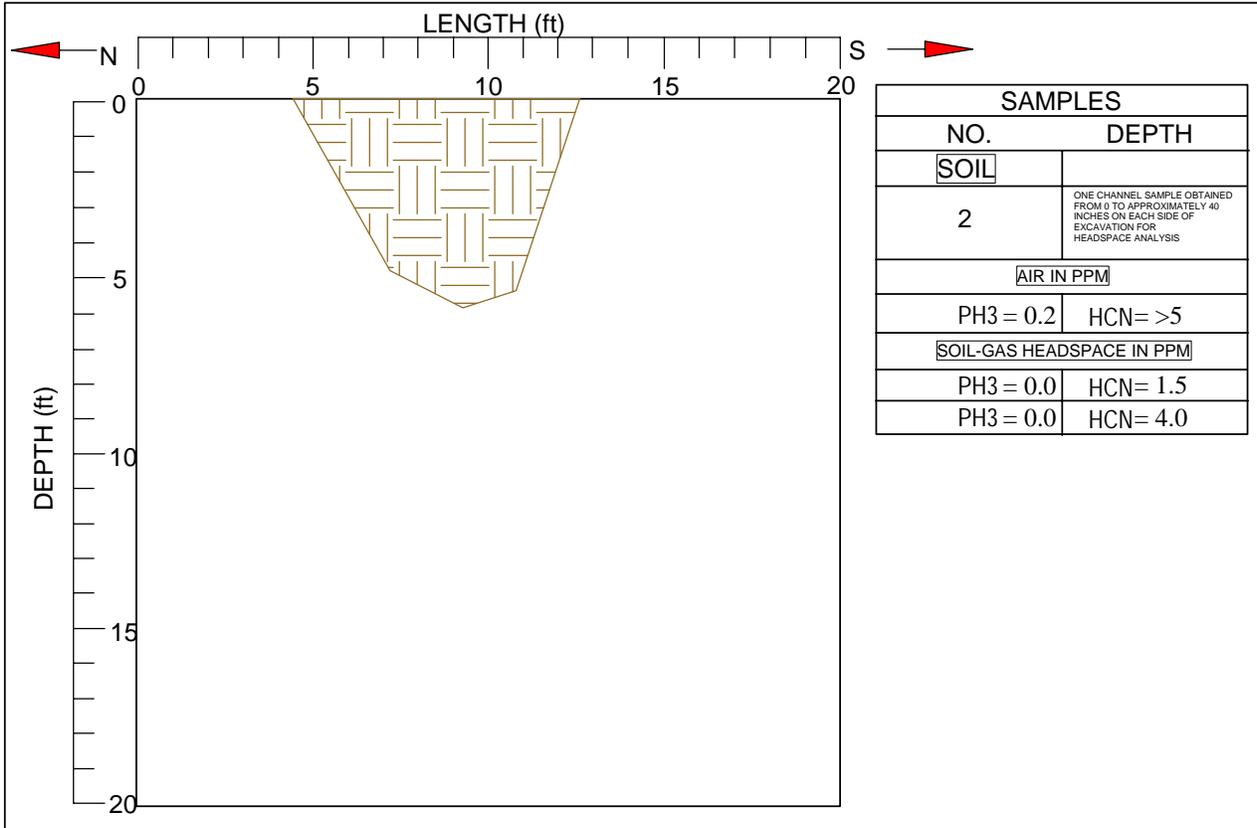
NORTHING: 316498.09

EASTING: 900071.52

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

DATUM : MSL

ENGINEERS: J. WILLIAMS/JB BROWN



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| DEPTH (ft) |     |      |   |
|------------|-----|------|---|
| FROM       | TO  | USCS | DESCRIPTION   |
| 0          | 5.8 | GM   | LIGHT TO MED GRAY SLAG AND SILTY FINE TO CS SANDY GRAVEL AND UP TO 9" COBBLES |
|            |     | ML   | SILT BELOW 5.8 FEET   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |
|            |     |      |   |

| TIME   | DEPTH OF HOLE | DTW |
|--|---------------|-----|
| 14:32  | 5.9 FEET      | DRY |
|  |               |     |
|  |               |     |
|  |               |     |
| SPECIAL NOTES:   |               |     |
| 1) NO GROUND WATER ENCOUNTERED   |               |     |
| 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION |               |     |

























**FIELD TEST PIT LOG**

DATE: 8/21/08

**TEST PIT: TP-26**

WEATHER: SUNNY,  
HIGH CLOUDS, VERY WINDY

ELEVATION: 7023.71

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

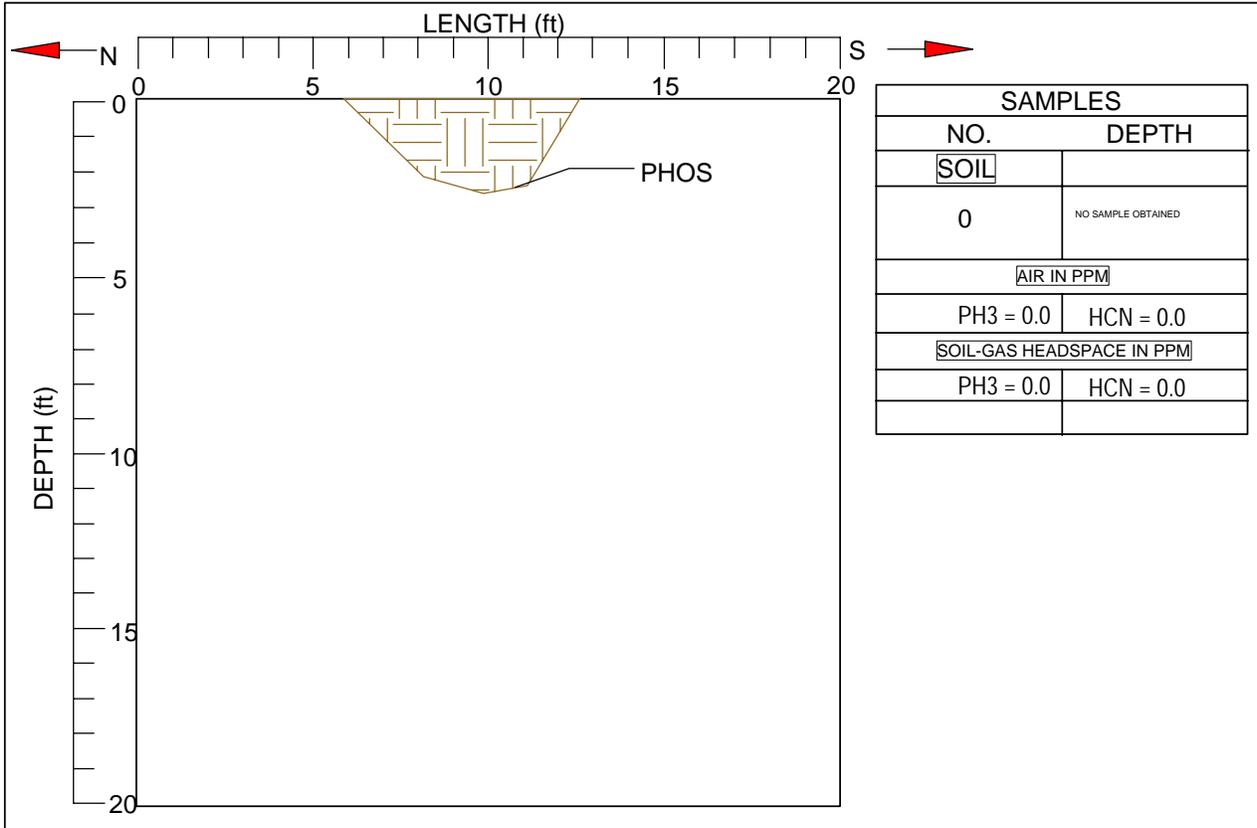
NORTHING: 315761.00

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

EASTING: 900444.12

ENGINEERS: J. WILLIAMS/JB BROWN

DATUM : MSL



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |       |  |
|-------------------|-----|-------|--|
| FROM              | TO  | USCS  | DESCRIPTION  |
| 0                 | 1.7 | ML    | DARK BROWN TO BLACK SILT (ORE)                                     |
| 1.7               | 2.6 | ML/CL | BLACK AND WHITE SPECKLED CLAYEY WET MATERIAL - SMOKING AT 2.6 FEET |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |
|                   |     |       |  |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 14:24 | 2.6 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) NO GROUND WATER ENCOUNTERED
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) EVIDENCE OF ELEMENTAL PHOSPHORUS AT 2.6 FEET











**FIELD TEST PIT LOG**

DATE: 8/21/08

**TEST PIT: TP-32**

WEATHER: SUNNY,  
HIGH CLOUDS, VERY WINDY

ELEVATION: 7020.17

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON

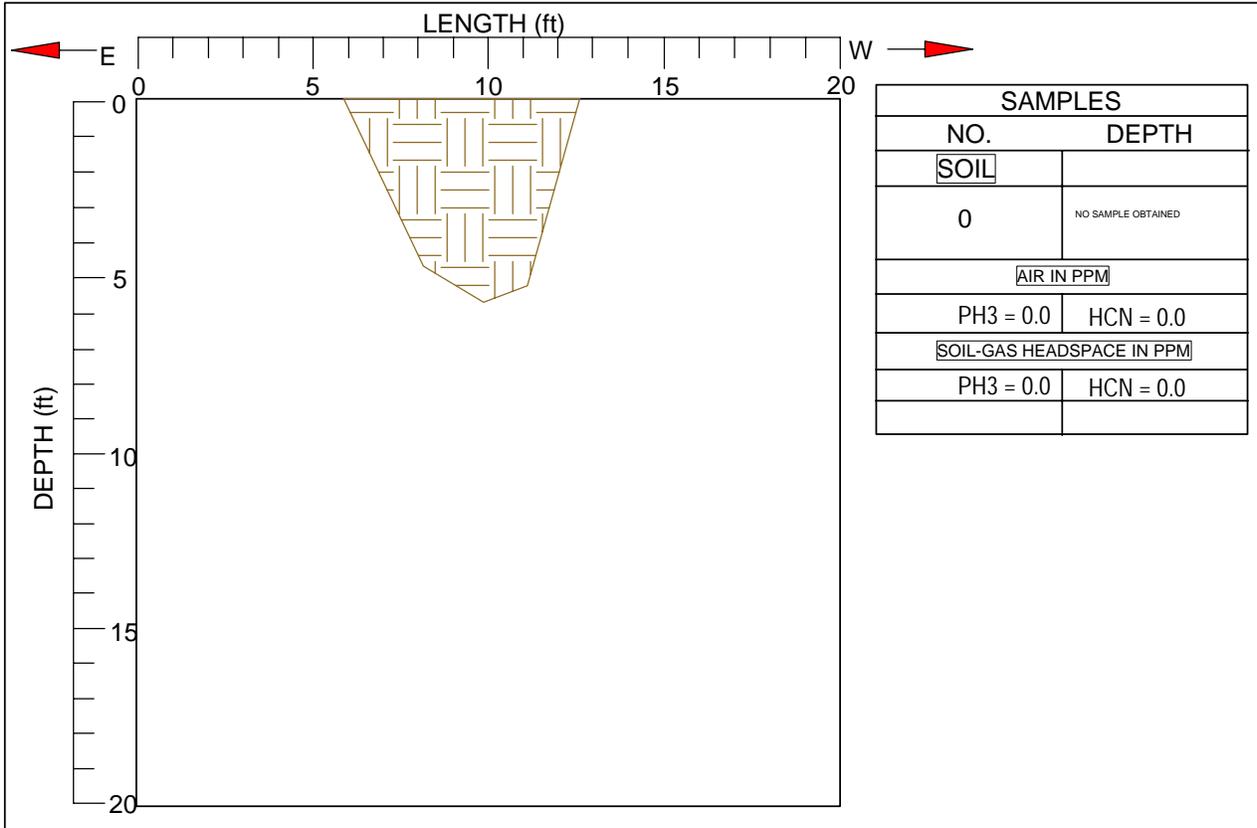
NORTHING: 315742.36

OPERATOR: VAUGHN SMITH CONSTRUCTION TRACKHOE

EASTING: 900431.17

ENGINEERS: J. WILLIAMS/JB BROWN

DATUM : MSL



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION   |
| 0                 | 5.4 | ML   | DARK BROWN TO BLACK SILT (ORE)                                |
| 5.4               |     | GM   | ORANGE BROWN TO BROWN WELLS<br>LIMESTONE COBBLES AND BOULDERS |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 15:14 | 5.4 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

1) NO GROUND WATER ENCOUNTERED

2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION

3) NO EVIDENCE OF ELEMENTAL PHOSPHORUS











**FIELD TEST PIT LOG**

DATE: 07/24/09

TIME: 14:04

ELEVATION: 6969.8

NORTHING: 316726

EASTING: 900144

DATUM : MSL

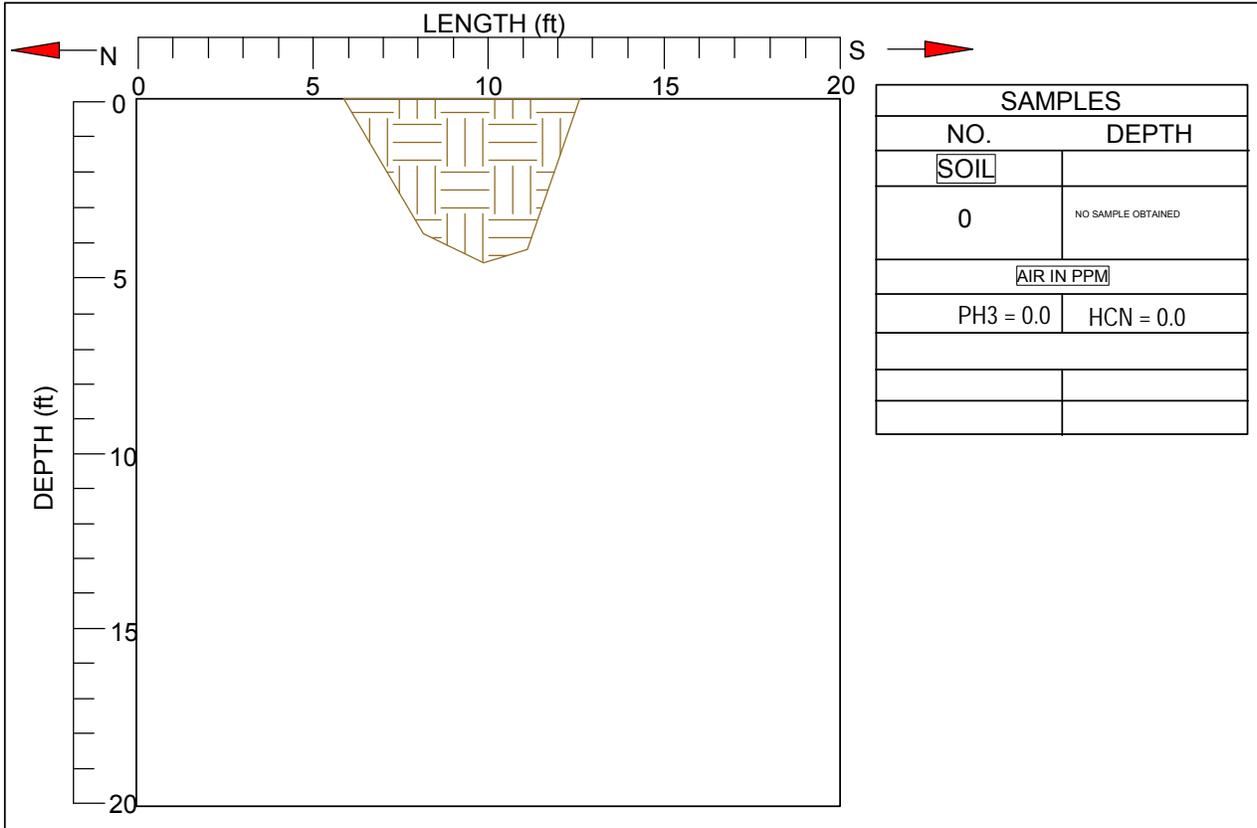
**TEST PIT: TP-38**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON AT SLURRY PIT

OPERATOR: CONESTOGA ROVERS (CRA)

ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION                                   |
| 0                 | 4.0 | FILL | SLAG, GRAY, VERY HARD BEGINNING AT 1 FT.      |
| 4.0               | 4.0 | GP-K | DK BROWN VERY COARSE SANDY GRAVEL AND COBBLES |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 14:09 | 4.5 FEET      | 2.3 |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) GROUND WATER NOT ENCOUNTERED DURING EXCAVATION, SEEPING IN SEVERAL MINUTES LATER
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) NO EVIDENCE OF ELEMENTAL PHOSPHORUS



**FIELD TEST PIT LOG**

DATE: 07/24/09

TIME: 14:21

ELEVATION: 6968.3

NORTHING: 316606

EASTING: 900131

DATUM : MSL

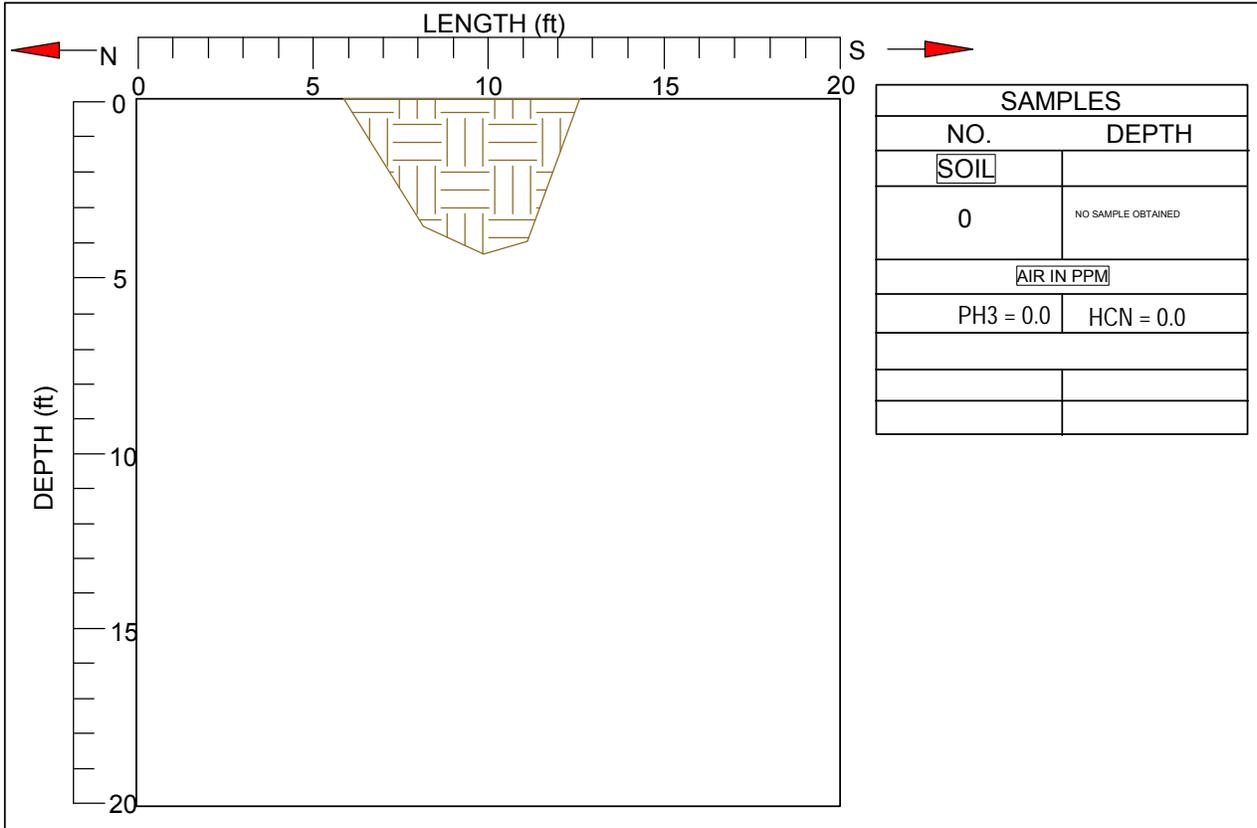
**TEST PIT: TP-40**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON AT SLURRY PIT

OPERATOR: CONESTOGA ROVERS (CRA)

ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION                               |
| 0                 | 1.0 | ML   | GRASS AND LT TO MED BROWN FINE SANDY SILT |
| 1.0               | 3.5 | FILL | SLAG, GRAY, VERY HARD                     |
| 3.5               | 4.2 | GM   | MEDIUM BROWN SILTY VERY FINE SANDY GRAVEL |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 14:31 | 4.2 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) GROUND WATER NOT ENCOUNTERED DURING EXCAVATION, DRY
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) NO EVIDENCE OF ELEMENTAL PHOSPHORUS, FILL IN AT 15:56

**FIELD TEST PIT LOG**

DATE: 07/24/09

TIME: 14:31

ELEVATION: 6968.3

NORTHING: 316568

EASTING: 900111

DATUM : MSL

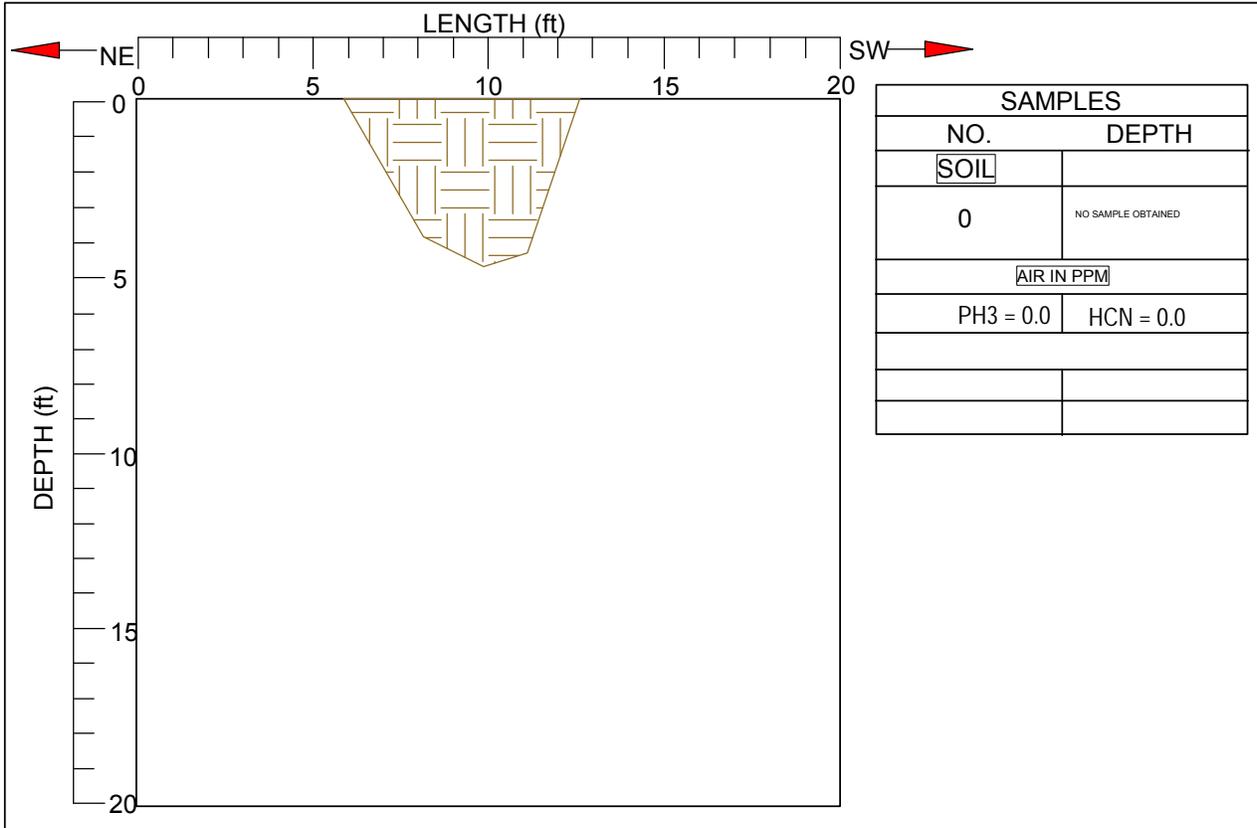
**TEST PIT: TP-41**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
GEORGETOWN CANYON AT SLURRY PIT

OPERATOR: CONESTOGA ROVERS (CRA)

ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION                               |
| 0                 | 2.5 | FILL | RUBBLE, LOGS, RED SAND, RR TIES AND CABLE |
| 2.5               | 4.3 | FILL | SLAG, GRAY, VERY HARD, H2S ODOR           |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
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|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 16:00 | 4.3 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) GROUND WATER NOT ENCOUNTERED DURING EXCAVATION, DRY
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) NO EVIDENCE OF ELEMENTAL PHOSPHORUS, FILL IN AT 16:00

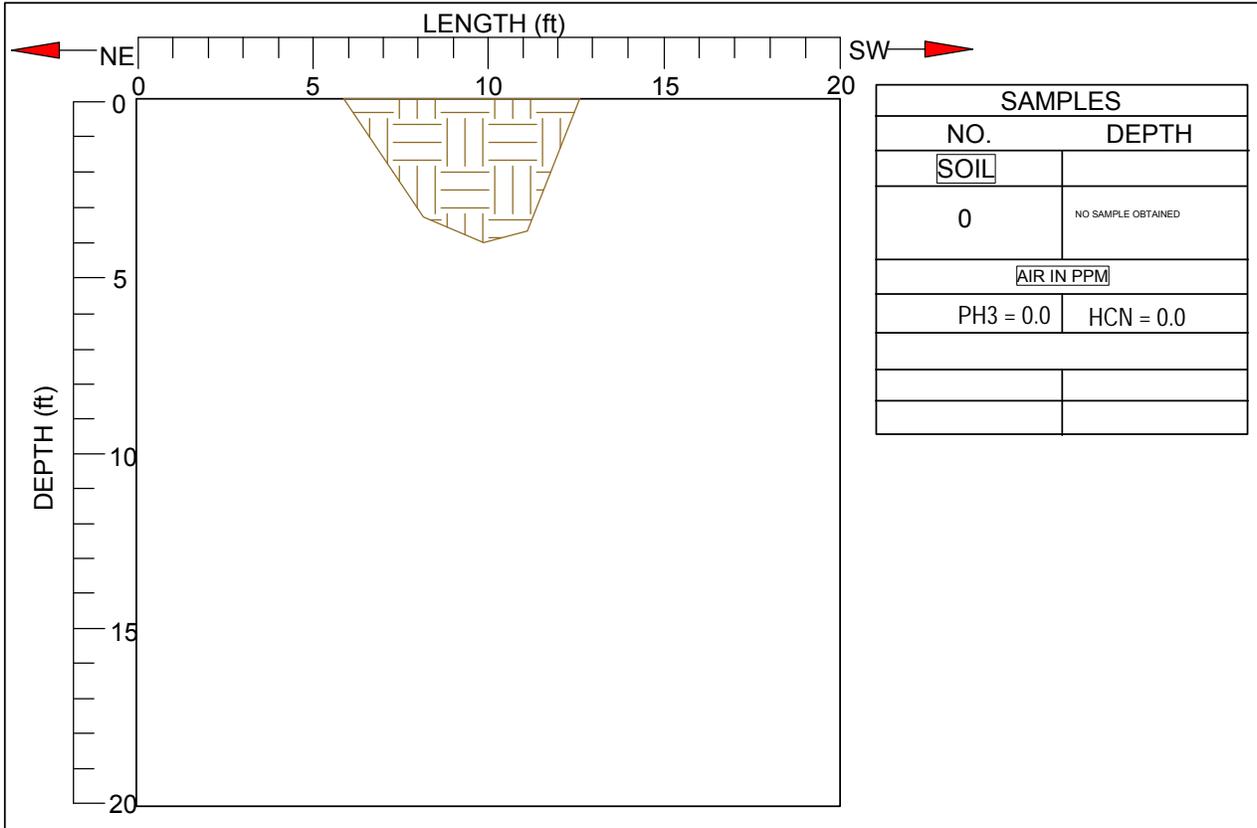
**FIELD TEST PIT LOG**

DATE: 07/24/09  
 TIME: 14:45  
 ELEVATION: 6968.0  
 NORTHING: 316531  
 EASTING: 900094  
 DATUM : MSL

**TEST PIT: TP-42**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
 GEORGETOWN CANYON AT SLURRY PIT  
 OPERATOR: CONESTOGA ROVERS (CRA)  
 ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
 LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |   |
|-------------------|-----|------|---|
| FROM              | TO  | USCS | DESCRIPTION                                       |
| 0                 | 2.5 | FILL | LIGHT TO MED. GRAY SLAG                           |
| 2.5               | 3.8 | GM   | MEDIUM TO DARK BROWN SILTY VERY FINE SANDY GRAVEL |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
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|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |
|                   |     |      |   |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 16:02 | 3.8 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

- 1) GROUND WATER NOT ENCOUNTERED DURING EXCAVATION, DRY
- 2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION
- 3) NO EVIDENCE OF ELEMENTAL PHOSPHORUS, FILL IN AT 16:05











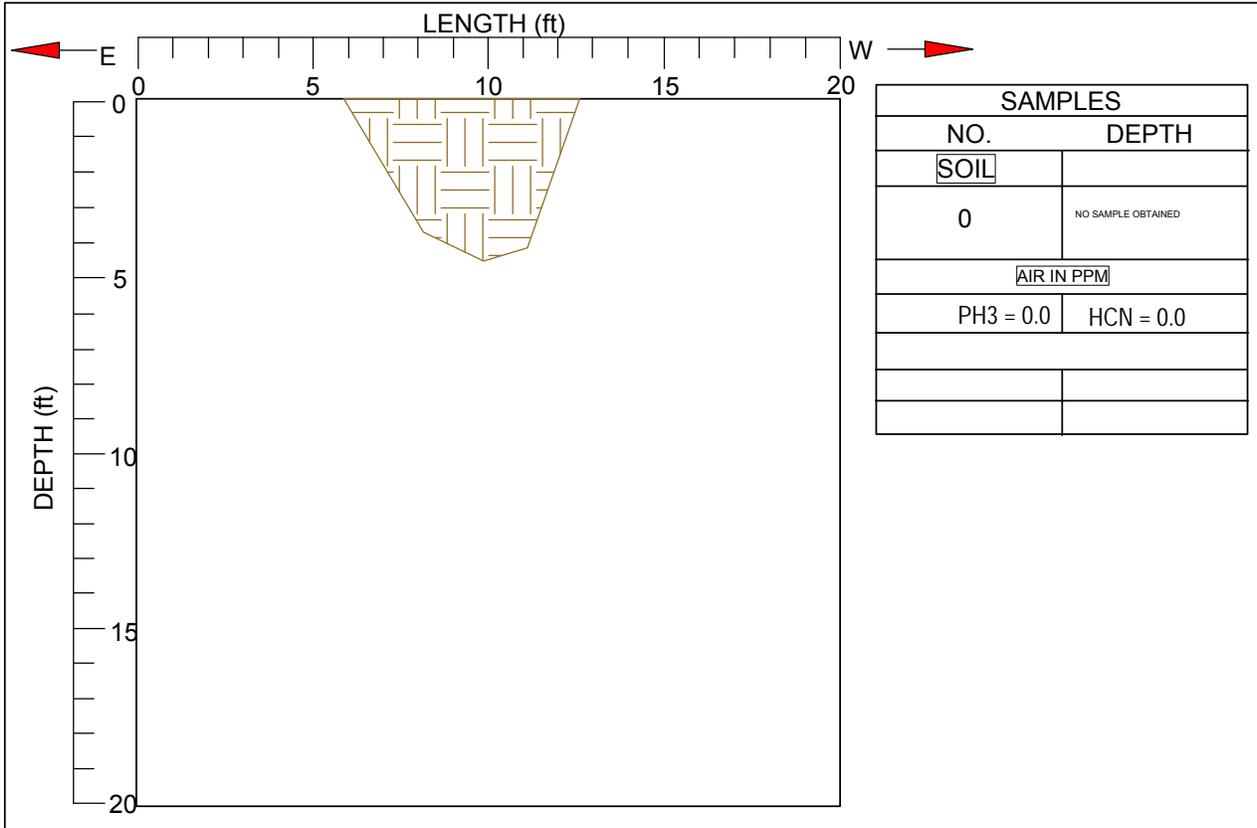
**FIELD TEST PIT LOG**

DATE: 07/24/09  
 TIME: 15:26  
 ELEVATION: 6964.3  
 NORTHING: 316418  
 EASTING: 899967  
 DATUM : MSL

**TEST PIT: TP-46 C**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
 GEORGETOWN CANYON AT SLURRY PIT  
 OPERATOR: CONESTOGA ROVERS (CRA)  
 ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
 WIND FROM NORTH  
 10 TO 15 MPH



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| <u>DEPTH (ft)</u> |     |      |  |
|-------------------|-----|------|--|
| FROM              | TO  | USCS | DESCRIPTION  |
| 0                 | 3.2 | FILL | MEDIUM TO DARK GRAY VERY HARD SLAG                   |
| 3.2               | 4.7 | ML   | LIGHT TO MEDIUM BROWN SILTY VERY COARSE SANDY GRAVEL |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |
|                   |     |      |  |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 15:31 | 4.7 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

1) NO GROUND WATER ENCOUNTERED

2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION

3) NO ELEMENTAL PHOSPHORUS ENCOUNTERED





**FIELD TEST PIT LOG**

DATE: 09/02/09

TIME: 13:17

ELEVATION: 7029.5241

NORTHING: 315792.7274

EASTING: 900481.8914

DATUM : MSL

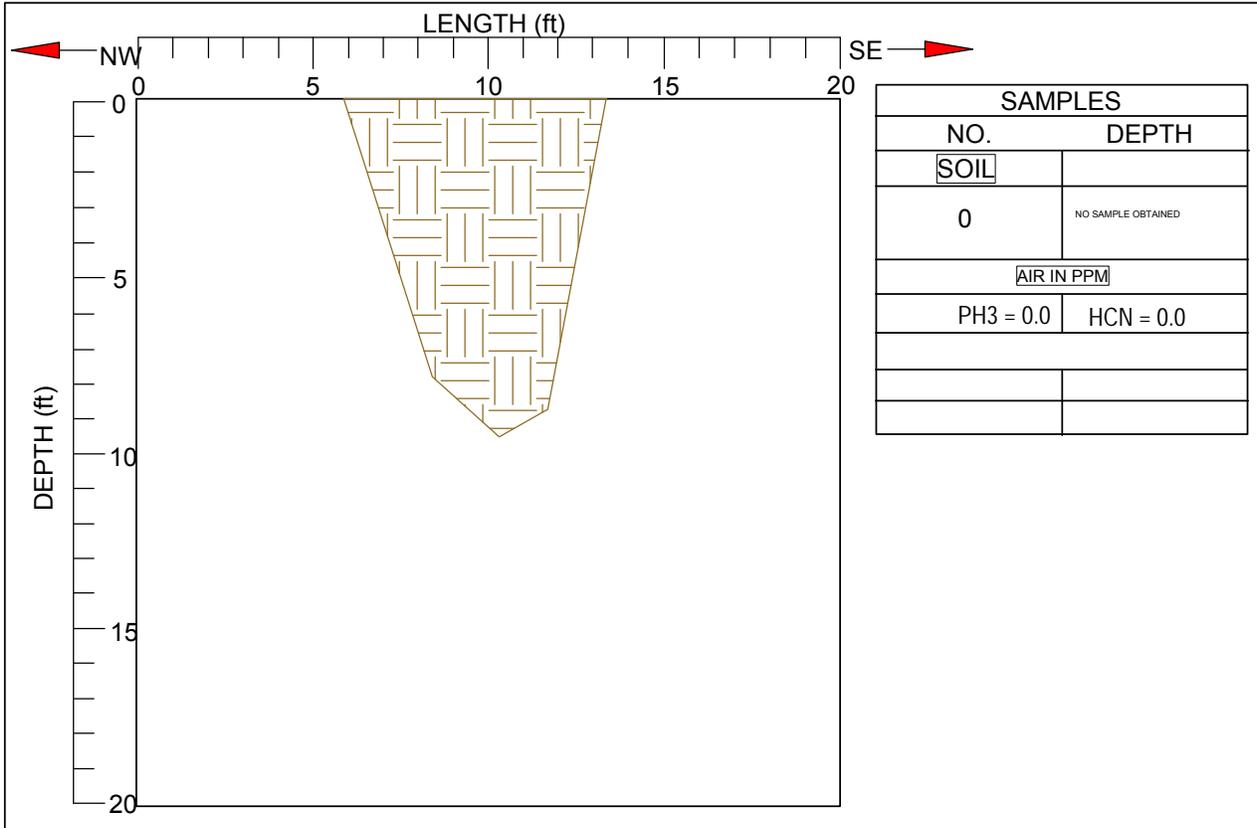
**TEST PIT: TP-52**

SITE: CENTRAL FARMERS FERTILIZER FACILITY  
 GEORGETOWN CANYON AT ORE COVER PHOSPHORIA GULCH

OPERATOR: CONESTOGA ROVERS (CRA)

ENGINEERS: JB BROWN, P.G.

WEATHER: HIGH CLOUDS,  
 LITTLE WIND



**LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES**

| DEPTH (ft) |     |      |  |
|------------|-----|------|--|
| FROM       | TO  | USCS | DESCRIPTION  |
| 0          | 9.3 | FILL | PHOSPHATE ORE, NO ELEMENTAL PHOSPHORUS ENCOUNTERED |
| 9.3        |     | LS   | WELLS LIMESTONE AND GRAVEL, LIGHT YELLOWISH BROWN  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |
|            |     |      |  |

| TIME  | DEPTH OF HOLE | DTW |
|-------|---------------|-----|
| 13:26 | 9.3 FEET      | DRY |
|       |               |     |
|       |               |     |
|       |               |     |

**SPECIAL NOTES:**

1) GROUND WATER NOT ENCOUNTERED DURING EXCAVATION, DRY

2) TEST PIT BACKFILLED WITH EXCAVATED MATERIAL AND COMPACTED UPON COMPLETION

3) NO ELEMENTAL PHOSPHORUS ENCOUNTERED

**APPENDIX H**

**PHASE I DRAFT REMEDIAL ACTION COMPLETION PLAN  
OPERATION AND MAINTENANCE AND  
POST- CLOSURE CARE PLAN  
CENTRAL FARMERS FERTILIZER FACILITY  
IN GEORGETOWN CANYON, IDAHO  
NU-WEST INDUSTRIES, INC. and  
NU-WEST MINING, INC.**

January 27, 2010

Prepared By:



GLOBAL ENVIRONMENTAL TECHNOLOGIES L.L.C.

**Global Environmental Technologies LLC  
Salt Lake City, Utah**

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## 1.0 INTRODUCTION

This document addresses the operation and maintenance (O&M), post-closure care, and monitoring activities for the Phase I remedial action construction work, including the clarifier, furnace, slurry pit, ore pile and CMP bypass stream channel at the Central Farmers Fertilizer Facility site in Georgetown Canyon. Monitoring and maintenance will also be performed as required on the CMP bypass channel and the Tank Spring conveyance following the completion of Phase II activities to assure unimpeded flow. This document presents descriptions of normal O&M, potential problems, and reporting.

Nu-West owns the land on which the clarifier, furnace, slurry pit, and ore pile are sited and the land surrounding the site. The Forest Service controls the right to the easement that includes the FS road through the site and 33 feet on either side of the easement centerline. With the exception of the clarifier, these areas are fenced off from the public, and the gate is kept locked. The clarifier is protected by a ring of boulders that restricts access to the cap. No trespassing signs are regularly posted. It is Nu-West's current intent to retain ownership of these lands. The land occupied by the clarifier, furnace, slurry pit, and ore pile will remain as unused open space through deed restriction and institutional control. No vehicular traffic will be allowed on reclamation covers, ore pile, or furnace cover. Access to the site will be restricted to authorized personnel by entrance through the locked gate on the south end of the fence. This fence configuration will be modified during the Phase II construction.

All records generated during the post-closure care period will be retained in the Nu-West environmental office. These records will be retained for the life of the remedial actions and through the post-closure period.

### 1.1 Normal Operation and Maintenance

Long-term maintenance of the remedial actions will consist of inspections and correction of any problems identified in the inspections. Maintenance activities will be initiated if a

problem is identified during a routine inspection or monitoring activity, or at any time when problems are identified that present an immediate threat to human health and the environment. Maintenance inspections will also be made after extreme weather events, such as the 100-year, 24-hour event (3.80 inches), or after forest fire in the vicinity of the site or at locations immediately upstream of the site. The completed remedial actions area will be inspected by a member of the Nu-West environmental department or designee on a quarterly basis for the first two years following completion of the remedial actions. This schedule will be modified to semiannual with the concurrence of IDEQ. The inspections will be documented in a permanent logbook that will be part of the records retained in the Nu-West environmental office and in a checklist for inspection that will be completed following Phase II work. The site inspections will include:

- Observations of the conditions of remedial action covers on the furnace, clarifier and slurry pit including signs of animal burrowing, erosion, or settlement;
- Annual survey of cover settlement monuments and documentation of net differential settlement calculations of each respective cover;
- Observation of stream diversions, improved channels and CMP bypass channel, berms and riprap and documentation of any areas or slopes requiring repair;
- Documentation of unimpeded flow from Tank Spring into the drop inlet box and culvert at the 60-inch CMP intake, any actions taken during the inspection to clear obstructions at the drop inlet;
- Documentation of unimpeded flow through culverts installed as part of the remedial action and from the drainage trench;
- Documentation of the condition of the drop inlet and Tank Spring conveyances;
- Documentation that erosion in Phosphoria Gulch has not progressed to the point where maintenance is required;
- Documentation of the condition of site cover vegetation;
- Documentation that the fence surrounding the site is intact and posted signs are visible;

- Documentation of vandalism or unauthorized vehicle traffic at the site;
- Documentation that the monitor wells have not been disturbed, and;
- Walking the length of the CMP alignment and documentation of any site ground surface settlement that may be the result of CMP settlement;

The clarifier, furnace, ore cover and slurry pit cover inspections will include the following items:

- Identification of trees or other deep-rooting plants growing on the slurry pit, the clarifier and the ore covers. Any deep-rooting species will be removed. Weed growth will be monitored on the reclaimed areas and herbicide will be applied as required.
- Inspection of the covers for holes or erosion. Erosion rills on the furnace cover will be repaired if these exceed 8 inches in depth. Areas of erosion greater than 10 square feet in size on the slurry pit or the clarifier will be scheduled for repair. If the area of erosion exposes the geocomposite materials on the slurry pit, ore cover or the clarifier, then the area will be repaired as soon as is practical. IDEQ will be notified a minimum of five working days prior to significant repairs on any of the engineered structures, so that a IDEQ representative can be present to witness the repair of the problem.
- Depressions and/or ponded water on the slurry pit, the clarifier cover or cover over the ore in Phosphoria Gulch will be noted. These areas will be scheduled for repair.
- Signs of burrowing animals on the covers of the slurry pit or the clarifier will be addressed. If significant burrowing activity is identified, additional rock armoring or varmint control may be required.

The slope where the ore pile was located prior to excavation will be inspected for signs of erosion on the borrowed and reclaimed slopes or for signs of disturbance on the capped ore area on the west end containing elemental phosphorus. Diversion structures will be observed to ensure that erosion from the slope during reclamation is contained at the base of the slope behind the straw wattles or silt fence above the Phosphoria Gulch stream channel until reclamation efforts result in established vegetation. Repairs to the silt fences or straw wattles will be made if damage to the

barrier results in soil erosion into the intermittent flows or below Phosphoria Gulch until vegetation is established. Roads above the slope were graded during the Phase I construction and will be maintained to shed runoff water away from the slope during establishment of vegetation on the slope.

The fence inspection will be made for security purposes. The inspections will include verifying the integrity of the existing fence, that the gate is locked and that all warning signs are properly posted and visible. Holes in the fence will be repaired immediately. Missing locks will be replaced immediately. Missing or unreadable signs will be scheduled for replacement.

Prior to Phase II construction of the stream channel, the CMP beneath the site will be monitored for signs of deterioration or failure. Deterioration of the CMP will be assessed through visual observation such as sinkhole development above the CMP at the surface. Depressions resulting from settlement at the surface following the Phase II work completion will be filled in to grade.

## 1.2 Potential Problems

The purpose of the inspections described above is to identify potential problems and address these problems in a timely manner. Potential foreseeable problems that could be encountered at the site include:

- Obstructed flow in Tank Spring channel resulting from leaves, tree branches, or other materials resulting in site flooding;
- Failure of rip rap or undercutting in front of the site open channels;
- Failure of conveyance or sediment control measures to Phosphoria Gulch;
- Failure or partial failure of the CMP;
- Occlusion of flow in site culverts;

- The occurrence of plants with deep tap roots or trees that become established on the slurry pit or the clarifier or phosphorus ore pile covers;
- Erosion of the soil covers, berms, slopes, armor, or riprap;
- Settling of the slurry pit, ore cover or the clarifier covers;
- Burrowing or digging from animals;
- Off-road damage caused by ORVs, and;
- Vandalism.

### 1.2.1 Deep Rooting Plants

Plants that have deep tap roots include trees, shrubs, and several noxious weeds. Tap roots could penetrate the geocomposite, FML, and GCL if allowed to grow on the covers of the slurry pit, ore cover or the clarifier. Deep tap-rooted plants can provide a path for infiltration of precipitation or snowmelt through the covers.. The covers were seeded with an approved reclamation mixture of grasses and several other seed-bearing plants during the Phase I construction. The seeded areas will be sprayed with an approved agricultural herbicide to control the noxious weeds on an as-needed basis. Nu-West is not planning to plant any trees or shrubs around the remedial action covers.

### 1.2.2 Erosion

Erosion of the soil covers on the clarifier will eventually lead to exposing the geocomposite materials if the problem is not rectified. It is not expected that the armor on the slurry pit will be affected by erosion. Erosion will be minimized by establishment of the vegetation from seeding during reclamation and using an erosion control fabric on the furnace and clarifier covers. If the cover liner materials are exposed, damage could occur due to degradation because of exposure to the weather (i.e. freeze and thaw cycles). Damage to the geomembrane layers can allow infiltration of meteoric water

into the underlying facilities that are known to have low permeability bottoms to control containment.

Erosion-control mats on the furnace and clarifier covers will be inspected after snowmelt in 2010 to check for movement of matting, topsoil, mulch, or erosion. If there are washouts, breakage, or erosion, Nu-West will repair the surfaces, reseed, re-mulch, replace topsoil, and install new netting. Inspections will continue on the erosion control matting until vegetation is established.

### 1.2.3 Settling of Covers

Settlement monuments were constructed during the Phase I remedial work and will be monitored on the slurry and clarifier caps. Results will be compared with the baseline survey from October 2009.

Large depressions and/or areas of ponded water indicate that the cover or covered waste materials may have settled. If excessive settling occurs, the integrity of the synthetic covers could be compromised. The damage that could occur ranges from slight stretching of the geomembranes to large tears. As described above, any breach of the synthetic materials provides a path for infiltration of water. Settling of the facilities will be minimized by proper compaction of the ore during regrading and compaction. The linear low density geomembrane covers have high tensile strength and high impact and puncture resistance. This cover materials are flexible and will elongate under stress, providing a greater degree of ground settlement or movement without damage to the slurry pit or clarifier. Cover settlements on permanent monuments exceeding one foot of differential settlement will be investigated for signs of stress or damage to the FML.

#### 1.2.4 Burrowing Animals

Burrowing or deep digging animals pose the same problem described above because the synthetic material could be damaged, which would provide a pathway for infiltration. The presence of burrowing animals will be noted during the quarterly/semiannual inspections. If burrowing animals are present, the necessary positive step to eliminate their threat will be taken.

#### 1.2.5 Drop Inlet Maintenance

Prior to Phase II construction, the drop inlet box system will require regular attention to prevent any weak points and potential failure. The drop inlet system will be abandoned during Phase II resulting from the channel connection to the CMP bypass channel. Observation of the drop inlet box and detention basin includes:

- Obstructions in the inlet debris guard should be removed. If these obstructions reoccur frequently a different inlet will be installed.
- Watch for signs of leakage or infiltration around inlet structure.
- Watch for cracks in the detention basin berm or spillway. If cracks occur, immediate repair will be required.
- A path should be dug through the snow or ice to the inlet just before peak flow is expected, if necessary.

### 1.3 Seed Mix

If any of the reclaimed areas indicate that vegetation does not become established, this will be documented in the inspections and re-seeding of areas will be required. Areas will be re-seeded with the same mix used during the Phase I reclamation activities. The approved reclamation seed mix for the site includes:

| <b>Georgetown Canyon Central Farmers Facility Reclamation<br/>Seed Mixture</b> |                       |                             |                 |  |
|--|-----------------------|-----------------------------|-----------------|--|
| <b>Species</b>   | <b>Common Name</b>    | <b>Bulk Pounds per Acre</b> | <b>% of Mix</b> | <b>Description</b>   |
| <b>Grasses</b>   |                       |                             |                 |  |
| Oryzopsis hymenoides   | Indian Ricegrass      | 8.1                         | 16%             | Densely tufted, cool season, very drought tolerant, perennial bunchgrass adapted to deep, well drained soils.  |
| Bromus marginatus  | Mountain Brome        | 8.1                         | 16%             | Cool season, short lived perennial bunchgrass, adapted to wide spectrum of soils, Establishes quickly on disturbed sites. Good palatability, good at high elevations       |
| Agropyron trachycaulum   | Slender Wheatgrass    | 6.8                         | 14%             | Cool season, saline tolerant, short lived perennial bunchgrass with short rhizomes. Wide range of sites, moderate drought tolerant, Establishes quickly, Good palatability |
| Agropyron dasystachyum   | Thickspike Wheatgrass | 6.8                         | 14%             | Strongly rhizomatous, long-lived, drought tolerant, perennial sod former. Good on well drained soils   |
| Agropyron spicatum   | Bluebunch Wheatgrass  | 6.8                         | 14%             | Cool season, drought tolerant, long-lived perennial bunchgrass, adapted to most sites including thin-non productive soils. Generally good palatability                     |
| Poa ampla  | Big Bluegrass         | 5.4                         | 11%             | Cool season , perennial bunchgrass with shallow fibrous root system. Intolerant of poorly drained soils or high water table. Excellent forage.                             |
| Festuca idahoensis   | Idaho Fescue          | 4.1                         | 8%              | Cool season, drought tolerant. Will occur on well drained sites. Good palatability   |
| <b>Total Grasses</b>   |                       | <b>46.0</b>                 | <b>92%</b>      |  |
| <b>Wildflowers/Forbs</b>   |                       |                             |                 |  |
| Achillea lanulosa  | Western Yarrow        | 4.1                         | 8%              | Drought tolerant native forb. An aggressive species used for erosion control. Tolerant of full sun, blooms spring to fall.   |
| <b>Total Wildflowers/Forbs</b>   |                       | <b>4.1</b>                  | <b>8%</b>       |  |
| <b>Total Grasses and Wildflowers/Forbs</b>                                     |                       | <b>50.0</b>                 | <b>100%</b>     |  |

## 2.0 ROUTINE MONITORING

### 2.1 Remedial Action Monitoring Tasks

Monitoring activities for the remedial actions area during the post-closure period include both ground and surface water monitoring, and monitoring of the covers and reclamation work as described in Section 1.

### 2.2 Ground Water Monitoring

Ground water samples will be collected and analyzed semi-annually from selected wells. This monitoring activity is described in the approved Sampling and Analysis Plan (SAP) for the Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho and the Quality Assurance Project Plan (GET, April 19, 2004). Monitor wells that will be sampled include GT-1, GT-2, GT-3, GT-4, GT-5, GT-6, and GT-8. Table 1 below presents the list of ground water analytes. Ground water monitoring will continue on a semi-annual basis throughout the Remedial Action and post-closure monitoring period to evaluate the impacts to ground water resulting from the completed actions. Ground water monitoring will continue through the remedial action period for a minimum of five years into the post-closure period on a semi-annual basis. At that time, monitoring data may be reviewed to determine if monitoring frequencies can be modified.

### 2.3 Surface Water and CMP Monitoring

Surface water samples will be collected and analyzed semi-annually. Table 1 below presents the list of surface water analytes. This monitoring activity is described in the approved Sampling and Analysis Plan (SAP) for the Central Farmers Fertilizer Facility in Georgetown Canyon, Idaho and the Quality Assurance Project Plan (GET, April 19, 2004). Surface water monitoring will occur at sites GTSW-1, GTSW-2, GTSW-3, GTSW-4, GTSW-5 and GTSW-6. Sampling will continue through the remedial action period for a minimum of five years into the post-closure period on a semi-annual basis.

At that time, monitoring data may be reviewed to determine if monitoring frequencies can be modified.

**Table 1**  
**GEORGETOWN CANYON**  
**GROUND AND SURFACE WATER**  
**PARAMETERS AND ANALYTICAL METHODS**

| Analyte                      | Analytical Method                 | Holding Time | Method Detection Limit |
|------------------------------|-----------------------------------|--------------|------------------------|
| <b>FIELD PARAMETERS</b>      |                                   |              |                        |
| Specific Conductance         | Field                             |              | 10 uS/cm               |
| pH                           | Field                             |              | 0.01 units             |
| Temperature                  | Field                             |              | 0.1 degree C°          |
| Turbidity                    | Field                             |              | 0.01 ntu               |
| <b>LABORATORY PARAMETERS</b> |                                   |              |                        |
| Wet Chem                     |                                   |              |                        |
| Alkalinity                   | SM 2320 B, Titrimetric            | 14 Days      | 2.0 mg/l               |
| Total Dissolved Solids       | EPA M160.1 Gravimetric, 180 C     | 7 Days       | 10.0 mg/l              |
| Total Suspended Solids       | EPA M160.2 Gravimetric, 105 C     | 7 Days       | 5.0 mg/l               |
| Specific Conductance         | EPA M120.1 Wheatstone Bridge      | 28 Days      | 1.0 umhos/cm           |
| Ion Balance                  | 1030F & API                       |              |                        |
| PH                           | EPA M150.1 Meter                  | Immediate    | 0.1 (units)            |
| Bicarbonate                  | SM 2320 B, Titrimetric            | 14 Days      | 2.0 mg/l               |
| Carbonate                    | SM 2320 B, Titrimetric            | 14 Days      | 2.0 mg/l               |
| Chloride                     | EPA M325.2 Colorimetric           | 28 Days      | 1.0 mg/l               |
| Fluoride                     | EPA M340.2 Ion Specific Electrode | 28 Days      | 0.1 mg/l               |
| Nitrate+Nitrite              | EPA M353.2 Automated Colorimetric | 28 Days      | 0.02 mg/l              |
| Sulfate                      | EPA M300.0 Ion Chromatography     | 28 Days      | 0.5 mg/l               |
| Phosphorous                  | EPA M365.1 Automated Colorimetric | 28 Days      | 0.01 mg/l              |
| <b>Metals List –2</b>        |                                   |              |                        |
| Metals Digestion             |                                   |              |                        |
| Aluminum                     | EPA M3010                         |              |                        |
| Arsenic                      | EPA Method 200.7 ICP              | 6 Months     | 30 ug/l                |
|                              | EPA Method 200.8 ICP/MS           | 6 Months     | 0.5 ug/l               |
| Antimony                     | EPA Method 200.8 ICP/MS           | 6 Months     | 0.2 ug/l               |
| Barium                       | EPA Method 200.7 ICP              | 6 Months     | 3 ug/l                 |
| Beryllium                    | EPA Method 200.7 ICP              | 6 Months     | 2 ug/l                 |
| Cadmium                      | EPA Method 200.7 ICP              | 6 Months     | 3 ug/l                 |
| Calcium                      | EPA Method 200.7 ICP              | 6 Months     | 200 ug/l               |
| Chromium                     | EPA Method 200.7 ICP              | 6 Months     | 10 ug/l                |
| Copper                       | EPA Method 200.7 ICP              | 6 Months     | 10 ug/l                |

|            |                            |          |           |
|------------|----------------------------|----------|-----------|
| Iron       | EPA Method 200.7 ICP       | 6 Months | 10 ug/l   |
| Magnesium  | EPA Method 200.7 ICP       | 6 Months | 200 ug/l  |
| Manganese  | EPA Method 200.7 ICP       | 6 Months | 5 ug/l    |
| Molybdenum | EPA Method 200.7 ICP       | 6 Months | 10 ug/l   |
| Mercury    | EPA Method 200.8<br>ICP/MS | 28 days  | 0.05 ug/l |
| Nickel     | EPA Method 200.7 ICP       | 6 Months | 10 ug/l   |
| Potassium  | EPA Method 200.7 ICP       | 6 Months | 300 ug/l  |
| Lead       | EPA Method 200.8<br>ICP/MS | 6 Months | 0.1 ug/l  |
| Selenium   | SM 3114 C, AA-Hydride      | 6 Months | 1.0 ug/l  |
| Sodium     | EPA Method 200.7 ICP       | 6 Months | 300 ug/l  |
| Silver     | EPA Method 200.8<br>ICP/MS | 6 Months | 0.5 ug/l  |
| Thallium   | EPA Method 200.8<br>ICP/MS | 6 Months | 0.05 ug/l |
| Vanadium   | EPA Method 200.7 ICP       | 6 Months | 5.0 ug/l  |
| Zinc       | EPA Method 200.7 ICP       | 6 Months | 10 ug/l   |

1. MDL, reported by ACZ Labs. Reporting limits vary with dilution.
2. Total and dissolved will be performed

## 2.4 Cover Settlement Surveying

Settlement monitoring verifies that adequate slopes, designed to shed precipitation from the caps, are being maintained. If settlement causes the top slope of the clarifier cap or the slurry pit cap to settle more than 10 percent from original grade or if the adjacent survey monuments on each cover show differential settlement greater than 2 feet and low spots are forming on the covers, a mitigation plan will be developed to assess reshaping drainage on the affected cover.

### **3.0 SAFETY REQUIREMENTS**

#### **3.1 Inspection Activities**

The exposure during the routine inspections will be low since the waste materials and site soils are contained under the Phase I remedial actions. No specific safety requirements are mandated for inspections of the remedial actions. Due to the elevated location, roughness of the terrain, and variety of weather conditions expected, appropriate clothing and footwear should be worn.

#### **3.2 Monitoring Activities**

##### **3.2.1 Ground and Surface Water Monitoring**

During the pumping and collection of ground water samples, the following personnel protective equipment shall be worn (at a minimum) if bailing equipment are used; appropriate work clothes, hard hat (rig operator), safety glasses, and steel-toed shoes. Secure footwear or appropriate stream waders shall be worn when working in Georgetown Creek during the surface water measurement activities. Raingear may prove helpful.

#### **3.3 Reporting Emergencies**

All emergencies, including but not limited to medical emergencies, system failures, fires, etc., must be reported to Nu-West. The standard method of reporting emergencies is to assess the situation and then make a report to either the Environmental or Safety Departments. If the emergency is life threatening or the area must be evacuated, initiate the emergency medical service and then report the emergency to Nu-West.

## 4.0 PERSONNEL AND TRAINING

Personnel involved with performing the inspection or monitoring activities will be required to receive training before they will be allowed to perform these duties. The training will be given when they begin performing these tasks and refresher training will not be given unless they are not performing these duties for more than one consecutive year. When new personnel complete the training requirement, they will sign a statement attesting that they have received the training. This statement will be part of the training records that will be maintained in the environmental office.

The training will consist of the following elements:

- Nu-West safety policies and rules;
- Site remedial actions;
- Inspection requirements;
- Monitoring requirements;
- Reporting requirements, and;
- Emergency procedures.

## 5.0 RECORD KEEPING AND REPORTING

### 5.1 Inspection Records

The semiannual inspections, and other inspections required to address O&M activities detailed in this plan will be recorded in a bound logbook. The results of each inspection will be recorded and then the logbook entry will be signed and dated by the inspector. Each inspection report will start on the top of a new page so that there will not be multiple inspection reports on one page. The Nu-West Environmental Department will store and maintain the logbook. Additionally an inspection sheet will document field inspections described in chapters 1 and 2 of this O&M document and that these sheets are submitted to DEQ in the annual report for the site.

### 5.2 Monitoring Records

Records of the monitoring activities will be kept in the same logbook that the inspections are kept. Each monitoring activity will be recorded, signed, and dated by the person performing the work. Records from each monitoring activity will start on the top of a new page, as discussed above.

### 5.3 Maintenance Records

Maintenance activities are a direct result of an inspection or monitoring report. The need for maintenance of any of the remedial actions will be recorded in the inspection/monitoring logbook and then a work order will be written. When the maintenance activity has been completed, a description of the completed work will be recorded in the log book. The Nu-West environmental department will keep the maintenance activity file for the maintenance completed at the site.

#### 5.4 Reporting Requirements

There are no specific reporting requirements. However, Nu-West will provide IDEQ with a summary of the remedial actions inspection, monitoring, and maintenance activities on an annual basis with the annual monitoring report following completion of the remedial actions.