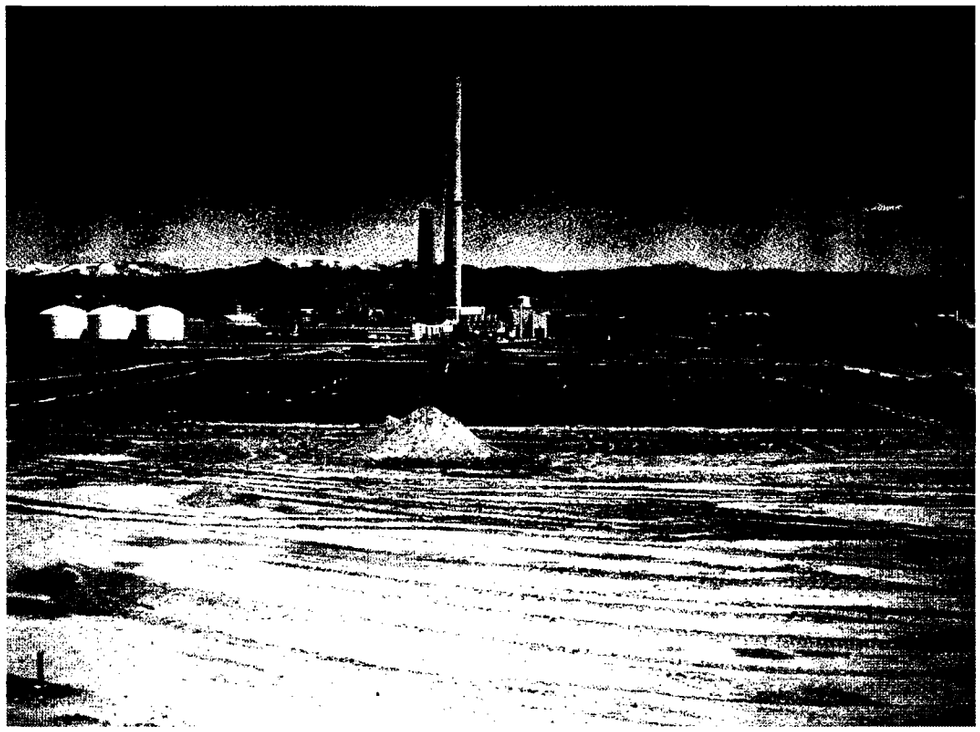
1099468 - R8 SDMS

2008 CONSTRUCTION REPORT
ASARCO EAST HELENA PLANT
CORRECTIVE ACTION MANAGEMENT UNIT (CAMU)
PHASE 2 CELL CONSTRUCTION PROJECT

Prepared For:

ASARCO LLC
P.O. Box 1230
East Helena, MT 59635



Hydrometrics, Inc.
Consulting Scientists and Engineers

JANUARY 2009

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ASARCO

January 30, 2009

Linda Jacobson (3 Copies)
RCRA Project Manager
US EPA Region VIII
8ENF-T
1595 Wynkoop Street
Denver, Colorado 80202-1129

SENT BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: CAMU Phase 2 Cell, 2008 Construction Report -
Asarco East Helena Plant

Dear Ms. Jacobson:

I am enclosing the CAMU Phase 2 Cell, 2008 Construction Report (January 2009). The enclosed Report summarizes the 2008 construction activities for the CAMU Phase 2 Cell project. A copy of the CAMU Phase 2 Cell, 2008 Construction Report is simultaneously being submitted in the enclosed compact diskette.

The CAMU Phase 2 Cell, 2008 Construction Report contains 1) the project history, 2) a work description, 3) the sampling and test results obtained during the construction (QA/QC), and 4) the control plans, waste characterization analysis, photographic log, and construction schedule. Be advised that Asarco is preparing the restriction on the deeds for both the CAMU Phase 1 and Phase 2 cells. We plan on submitting the restrictions to EPA in February 2009.

Sincerely,

Jon Nickel

Jon Nickel

Enclosures: Report and diskettes

CERTIFICATION
PURSUANT TO U.S. v ASARCO INCORPORATED
(CV-98-3-H-CCL, USDC, D. Montana)

I certify under penalty of law that this document, CAMU Phase 2 Cell, 2008 Construction Report (January 2009) and all attachments, were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature _____
Name: Thomas L. Aldrich
Title: Vice President Environmental Affairs
Date: January 26, 2009

2008 CONSTRUCTION REPORT FOR ASARCO EAST HELENA PLANT CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) - PHASE 2 CELL CONSTRUCTION PROJECT

Prepared for:

ASARCO LLC
P.O. Box 1230
East Helena, MT 59635

Prepared by:

Hydrometrics, Inc.
3020 Bozeman Avenue
Helena, MT 59601

January 2009

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2008 CONSTRUCTION REPORT FOR ASARCO EAST HELENA PLANT CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) - PHASE 2 CELL CONSTRUCTION PROJECT

1.0 INTRODUCTION

This document and its appendices are the 2008 Construction Report for the Corrective Action Management Unit (CAMU) - Phase 2 Cell at the Asarco East Helena Plant in East Helena, Montana. This report was prepared to summarize 2008 construction activities of the CAMU-Phase 2 Cell Project. Project plans and specifications including detailed design criteria and a design summary are contained within the *Design Analysis Report Asarco East Helena Corrective Action Management Unit (CAMU) Phase 2 Cell* (Hydrometrics, June 2008).

Project construction commenced March 17, 2008 and completed for the construction season by December 9, 2008. Project construction included the work generally described as follows:

- Construction of a Corrective Action Management Unit (CAMU);
- Loading, transporting, placing and compacting of demolition debris in the CAMU cell;
- Construction of associated surface water and erosion controls, access road improvements, facility fencing, health and safety requirements, site access and haul controls (including traffic control) and construction surveys; and
- Temporary capping of CAMU cell.

1.1 PROJECT HISTORY

The project history only includes items relevant to the construction of the CAMU Phase 2 cell, and is summarized in Table 1-1. The project construction schedule (Exhibit 1) is contained in a map pocket at the back of this report.

TABLE 1-1. PROJECT HISTORY SUMMARY

May 5, 1998	Asarco and EPA entered into Consent Decree to further the objectives of RCRA and CWA.
May 10, 2006	Preliminary CAMU Phase 2 Design Analysis Report submitted to EPA.
October 17, 2006	Hydrometrics, Inc completes geotechnical report for CAMU Phase 2.
January 26, 2007	Project Contract Documents released for Bid.
February 13, 2007	Pre-Bid Conference with prospective bidders.
March 2, 2007	Bid Opening
March 22, 2007	Notice of Award to URS/ Cleveland Wrecking, Inc.
May 4, 2007	Final CAMU Phase 2 Design Report submitted to EPA.
January 2, 2008	EPA issues comments on Final CAMU Design Analysis Report
January 8, 2008	EPA approves Final CAMU Design Report.
March 11, 2008	CAMU Pre-Construction Meeting with Asarco, URS/Cleveland Wrecking, Helena Sand and Gravel, DEQ, Womack and Associates, and Hydrometrics.
March 17, 2008	Helena Sand and Gravel begins Mobilization to site for construction of CAMU Phase 2.
March 18,2008	Contractor began removal and stock piling of topsoil, construction of storm water control ditch, and installation of silt fences.
March 20, 2008	Stormwater pond location surveyed and survey stakes set for CAMU cell, haul road, and storm water pond.
March 21, 2008	Contractor finished stripping topsoil and began removal and stock piling of subsoil.
March 25, 2008	Contractor finished excavation of subsoil and began excavation of cell and separation of soils into clay-rich and clay-poor stockpiles.
March 28, 2008	Began soil screening of clay-rich stockpiled material.
April 9, 2008	Contractor began shaping bottom of excavated CAMU cell to final grade.
April 10, 2008	Final grade of CAMU cell was surveyed, meeting specifications, sufficiently completing excavation.
April 11, 2008	Compaction testing on cell bottom substantially completed. Began laying and compacting Compacted Clay Liner (CCL).
April 23, 2008	Begin excavating additional clay-rich material needed to complete CCL.
May 6, 2008	Compaction testing completed for sub grade of haul road.
May 8, 2008	Began placing road base on haul road.
May 15, 2008	Placement and compaction of road mix on haul roads substantially completed.
May 28, 2008	CCL substantially completed and ready for GCL installation.
May 29, 2008	Contractor began laying Geosynthetic Clay Liner (GCL) and first layer of 60-mil HDPE Liner.

TABLE 1-1. PROJECT HISTORY SUMMARY (continued)

June 2, 2008	Leak Detection and Leachate Collection Sump Pipes Installed.
June 3, 2008	GCL and first layer of HDPE are completed. Began laying first layer of Geocomposite. Contractor paved long section of haul road.
June 6, 2008	First layer of Geocomposite is completed. Began laying second layer of HDPE.
June 9, 2008	Contractor began placing drain rock in Leak Detection Trench and began laying second layer of Geocomposite.
June 11, 2008	Leak Detection Trench drain rock installation complete.
June 13, 2008	Completed second layer of HDPE.
June 14, 2008	Finished laying second layer of Geocomposite. Liner system in CAMU is substantially complete.
June 16, 2008	Contractor backfilled anchor trench and started hauling cushion material.
June 26, 2008	Contractor installed Leachate Collection Trench Drain Rock and paved the remaining section of haul road.
July 2, 2008	Cushion layer installation complete. CAMU ready to accept waste material.
July 7, 2008	Began hauling, placing, and compacting stored waste materials.
July 15, 2008	Began hauling stored asbestos material to CAMU.
July 18,2008	Completed hauling stored asbestos material to CAMU.
July 23, 2008	Hauling, placing, and compacting of stored waste material is complete.
August 4, 2008	Applied binder agent to waste to reduce windblown dispersion.
September 4, 2008	Cleaning and demolition of buildings begins.
September 16,2008	Hauling, placing, and compacting of newly demolished waste began.
October 27, 2008	Hauling, placing, and compacting of newly demolished waste is complete.
November 7, 2008	Contractor began deploying temporary liner on CAMU cell.
November 23, 2008	Temporary liner installation is complete and CAMU cell is closed for construction season.

1.2 REPORT ORGANIZATION

This report is intended to provide a concise summary of the construction of the CAMU Phase 2 Cell. Additional detailed information is provided as appendices to this report. Appendices are as follows:

- APPENDIX A CONSTRUCTION CONTROL PLANS
- APPENDIX B QA/QC TESTING RESULTS
- APPENDIX C WASTE CHARACTERIZATION REPORT
- APPENDIX D PHOTO LOG

1.3 REPORT DISTRIBUTION

Copies of this report and all appendices have been distributed to Asarco LLC and the EPA. A full set of construction photos, the QA/QC inspector's daily diary and all shop drawings are on file at the Hydrometrics' Helena office.

1.4 WORK DESCRIPTION

This section provides a narrative description of the CAMU Phase 2 Cell construction project.

1.4.1 Pre-2008 Demolition and Stockpiling

Prior to waste placement, debris from previous demolition was placed in the Barnum Cover-All Building, Bailey Cover-All Building, Ringling Cover-All Building, and Concentrate Storage and Handling Building (CSHB). In addition, CAMU bound asbestos waste removed from buildings prior to demolition was stored in the Direct Smelt Building.

1.4.2 Construction Contractors

1.4.2.1 Prime Contractor

URS Corporation/Cleveland Wrecking Company
614 East Edna Place
Covina, CA 91723
Phone : (626) 967-4287
Contact: Brian Laurin

1.4.2.2 Subcontractors

Surveyors:
Smith Surveying & Consulting
291 3rd Avenue E.N.
Kalispell, MT 59901
Phone : 406-257-4323
Contact: Dick Smith

Sand, Asphalt, Base Course Aggregate, Subsoil stripping and the subsequent cell construction work:
Helena Sand and Gravel
2209 Airport Road
Helena, Montana 59601
Phone: 406-442-1185
Contact: Nick Miller

ACM removal, flue dust removal, and pre-cleaning work:
IRS Environmental
12415 E. Trent
Spokane, WA 99216
Phone (509) 927-7867
Contact: Mark Kazemba

Geomembrane Liners, Geocomposite, GCL:
Northwest Geotextile and Linings
21000 77th Ave. South
Kent, WA 98032
Phone: (206) 872-0244
Fax: (206) 872-0245
Contact: Kirk Lilleskare

Fencing:
Grizzly Fence
220 W. Custer Ave.
Helena, Montana
(406) 443-6460

1.4.3 Construction Controls

Cleveland Wrecking Company prepared and submitted the following items in March 2008: Dust Control Plan and Health and Safety Plan. In addition to the plans submitted by Cleveland Wrecking Company, Hydrometrics submitted a Construction Quality

Control/Quality Assurance Plan and a storm water drainage plan for the CAMU Phase 2 cell. These plans are contained in Appendix A of this report.

1.4.3.1 Health and Safety Requirements

The Contractor prepared, submitted and maintained a written Site Health and Safety Plan. It was the Contractor's responsibility to implement the safety program to protect workers from all health and safety hazards associated with this project. Health and Safety training requirements for Contractor workers were dependent upon the type of work being performed. There were three distinct types of workers needed to complete project work.

- Group A – No environmental training or medical monitoring required.
- Group B – Medical monitoring only.
- Group C – 40-hour OSHA HAZWOPPER and full medical monitoring.

Work was performed in accordance with the following:

- Special Provision Section 110 Safety;
- OSHA 29 CFR 1926.65 (HAZWOPER);
- OSHA 1926.62 (lead);
- OSHA 1926.1118 (arsenic);
- OSHA 1926.1127 (cadmium); and
- All applicable regulations and specifications.

Work Included:

- Identifying and meeting all safety standards that are applicable to this project;
- Providing all personnel working on the project with required orientation and training on the potential hazards anticipated and the appropriate use of safety equipment;
- Providing adequate proof of required employee HAZWOPER training requirements;
- Conducting daily safety meetings;

- Developing and maintaining for the duration of work activities at the Site, a written Site Health and Safety Plan that effectively incorporated and implemented all applicable requirements;
- As part of the Site Health and Safety Plan, developing and maintaining for the duration of work activities at the Site, a written monitoring program that provided information necessary to comply with relevant worker health and safety regulations;
- Making appropriate corrective actions as required for compliance;
- All required reporting;
- Providing all required personal protective equipment.
- Providing a full time Site Safety Officer.

Site Safety Officer

URS's Shaun O'Connor served as the Site Safety and Health Officer for the project. The site Safety and Health Officer was present on-site during demolition, waste hauling, and waste placement in the CAMU Phase 2 Cell.

Personal Air Monitoring

Hydrometrics and Cleveland Wrecking collected personal air monitoring samples to determine worker exposures to lead, arsenic, cadmium and asbestos. The air samples were sent to Data Chem Laboratories in Salt Lake City, UT for analysis. Personal air monitoring was completed using OSHA standard methods. The monitoring frequency was completed in accordance with OSHA standards for lead, arsenic, cadmium and asbestos. Results of personal air monitoring are contained in Appendix A.

Personal Protective Equipment

As part of the Site Safety and Health Plan, the Contractor was responsible for contractor workers wearing required Personal Protective Equipment (PPE). Required PPE included a hard hat, safety glasses, hard-toed boots, coveralls, and respirator. Personal air monitoring test results showed that respirators were not required for project work at the CAMU site. Until air monitoring tests were available, respirators were used when driving vehicles, when

dust was in the air, when operating equipment, when handling materials destined for the CAMU cell, and when handling any ground materials within the plant site. Prior to receiving test results, respirators were worn around the neck by all personnel.

Cleveland Wrecking provided clean respirators, coveralls, safety glasses, and all other necessary PPE.

Medical Monitoring

Cleveland Wrecking was responsible for the Contractor employees' medical monitoring program. For Contractor employees on this Site for more than 30 days, an initial medical examination and biological monitoring was required according to the OSHA standards for lead, arsenic, cadmium and asbestos. For Contractor employees on site less than 30 days, only an initial blood lead analysis was required per the OSHA lead standard. Contractor employees that have been exposed to these substances for more than 30 days in the past 12 months would require the full medical and biological monitoring.

Cleveland Wrecking was also responsible to provide Contractor employees with a medical examination to determine the employee's ability to use a respirator.

URS was responsible for subsequent medical monitoring including biological monitoring for lead every two (2) months for the first six (6) months of exposure. In addition to the requirements of OSHA standards, all Contractor employees were required to receive subsequent medical examinations using medical procedures covered in the OSHA standards for lead, arsenic, cadmium and asbestos every six (6) months.

For each employee, Cleveland Wrecking kept records with a statement from a licensed physician indicating that the employee could work in a lead, arsenic, cadmium and asbestos environment and that the employee was physically able to use a respirator.

Training

Contract workers were required to receive training according to the OSHA HAZWOPER, lead, arsenic and cadmium standards. Contract workers were also required to receive training according to the OSHA asbestos standard. Specific HAZWOPER training certificates included the initial 40-hour, initial 8-hour supervisory training for supervisors, and current 8-hour refresher training. Cleveland Wrecking was responsible for providing its workers training regarding requirements of the Site Specific Health and Safety Plan. Cleveland Wrecking kept onsite documentation of each Contractor employee receiving this and all other required OSHA training specific to activities on this project.

Decontamination

After loading, hauling, placing and /or compacting waste materials, construction workers were required to shower prior to leaving the project site. Shower and change facilities were provided in the Asarco Changehouse. Construction equipment leaving the project site was cleaned using the wash bay facility located at the plant site.

1.4.3.2 Quality Assurance Plan

Hydrometrics, Inc. prepared and submitted a Quality Assurance Plan (QAP). The project QAP is contained in Appendix A of this report. Hydrometrics, Inc. Quality Assurance Plan identified the personnel, procedures, instructions, records, forms, and a description of the Quality Assurance management organization including an organizational chart. Hydrometrics, Inc. Mark Rhodes served as the Quality Assurance manager. In addition to Hydrometrics, Inc. providing Quality Assurance, Womack and Associates of Jackson Hole, WY provided Third Party Independent Quality Assurance.

The Quality Assurance Records contained a record of daily inspections for all work accomplished. The Quality Assurance Manager signed daily reports and indicated work performed that day. Specific items of work checked each day were annotated. All work-in-place was certified as complying with the contract plans and specifications. Non-compliance items were clearly noted. Corrective actions were outlined and detailed for non-compliance

items. Cleveland Wrecking also maintained daily records, which were on-the-job site and available for review by Asarco. Copies of the QA daily reports prepared by Hydrometrics personnel were given to Asarco and EPA within 48 hours after work was completed.

1.4.3.3 Site Access And Traffic Controls

Cleveland Wrecking controlled public access to the CAMU site during construction. Temporary orange poly fence (safety fence) was installed around the perimeter of the CAMU during construction of the cell to deter access by the public and wildlife. A temporary 72-inch woven wire fence with two access gates was installed around the CAMU once construction of the cell was completed as well as temporary locking gates installed at the entrance to both haul roads. Cleveland Wrecking provided all traffic control associated with hauling and other construction activities between the plant and the CAMU site.

1.4.3.4 Dust Control

A Dust Control Plan was prepared and submitted to Asarco for approval. The plan addressed minimizing the creation and spread of dust during the demolition and loading of waste material, and placing and compacting activities in the CAMU and stockpiles. Watering was required during hauling, placing and compacting activities as needed for dust control. Asarco supplied non-potable water for compaction and dust suppression at fill station standpipes on the plant, and Cleveland Wrecking transported water to the point of use. Dust control for hauling operations on paved access roads is discussed in 1.4.5.1 Haul Road Maintenance.

1.4.4 Construction Surveys

On March 14, 2008, surveyors from Smith Surveying & Consulting of Kalispell, Montana initiated the construction activities by performing the layout staking of the CAMU cell. Offset reference points were set by the surveyors to indicate the location of the top of cut for the cell excavation including the depth of cut to the cell bottom. Cell bottom coordinates were included on the plans to aid the surveyors in performing the layout. The excavation was staked for a 3:1 slope from the existing ground elevation to the toe coordinates provided on the plans. The final layout survey and reference point staking was completed on March 20, 2008.

1.4.5 Haul Roads

Helena Sand and Gravel of Helena, Montana constructed haul roads to provide access to the new cell at points located in the northeast and northwest corners of the cell. Stripping of topsoil and subsoil from the alignment of the haul roads was concurrent with the cell construction. Base coarse placement and compaction began on May 8, 2008 followed by paving on June 3, 2008 and June 26, 2008. The haul roads were constructed of 4 inches of asphalt and 6 inches of base coarse over a compacted subgrade embankment.

1.4.5.1 Haul Road Maintenance

During hauling operations, Cleveland Wrecking continuously swept the access roads using a dry vacuum sweeper. A 4,000-gallon water truck periodically applied a light misting of the roadway to prevent fugitive dust. Care was taken during misting to prevent excess water from running off the roadway. Solid bottom hauling vehicles were used to minimize leakage potential.

1.4.6 Temporary Erosion Controls

The Contractor was responsible for providing temporary erosion control measures which included preparation of a project Storm Water Pollution Prevention Plan (SWPPP) and installation and maintenance of all construction BMPs. Preliminary project erosion control measures were in place by March 18, 2008 and included construction of temporary run-on diversion ditches around the perimeter of the site, construction of a runoff control pond and installation of a perimeter silt control fence. Additional erosion and pollution control measures were actuated as construction progressed and included dewatering excavations and maintaining positive drainage during construction.

1.4.7 Runoff Control Pond

A 0.56 acre-foot runoff control pond was constructed downgradient of the CAMU cell to provide capacity for more than the water volume resulting from a 24-hour, 25-year storm (0.46 acre-feet). The pond's overflow channel, for events with runoff exceeding the available pond storage capacity, outleted to the borrow ditch along the west side of Smelter Road.

1.4.8 Cell Excavation

Topsoil removal and stockpiling began on March 18, 2008. Helena Sand and Gravel of Helena, Montana was employed as a subcontractor to perform topsoil and subsoil stripping, the subsequent cell excavation, and construction of the CCL. Helena Sand and Gravel utilized two Cat Scrapers to strip the topsoil and stockpile at the location designated on the Material Handling Plan. A 4,000-gallon water truck was onsite for dust control. However, snow and moist soil conditions provided adequate dust suppression and the water truck was not needed. Topsoil removal was completed on March 21, 2008. The design proposed a removal depth of 8 inches within a 3.6-acre area generating a volume of approximately 3,864 cubic yards. However, additional topsoil was removed and stockpiled during construction of the northern haul road. The additional topsoil removal generated approximately 1,400 cubic yards of material.

Helena Sand and Gravel continued to use two Cat scrapers to strip and stockpile subsoil. Subsoil was removed an additional 18 inches below the topsoil removal zone and stockpiled at a location designated on the Material Handling Plan. Subsoil removal began on March 21, 2008 and was completed on March 25, 2008. Approximately 10,300 cubic yards of subsoil was removed and stockpiled.

Excavation of the cell began on March 25, 2008 using two Cat scrapers. Based on visual determination for clay content, scraper loads were directed to stockpiles designated for clay-rich material or reject soil material. These stockpiles were built at a location designated in the Material Handling Plan. As excavation progressed, it became evident that the CAMU site was characterized by a series of ancient meandering stream channels with the gravelly reject material occurring primarily in the channels. The ribbons of sand/gravel were intermittent and angled across the cell excavation from the southwest corner to the northeast corner. As the channels were exposed, they were identified and marked out for the scraper operators to excavate prior to removing the clay-rich material. Larger areas of sand/gravel were also identified during excavation and the material was placed in the reject soil pile.

Cell excavation was completed on April 10, 2008, and following some minor grade adjustments, a final survey confirmed that the cell floor was constructed to the lines, grade and slope specified. The sides and bottom of the CAMU excavation were compacted with a vibratory roller and the surfaces tested for compaction using a nuclear density (ASTM D2922) gauge. Results of the subgrade compaction testing are included in Appendix B. The subgrade was subsequently accepted as being in conformance with the specifications and the Contractor was given approval to begin installation of the Compacted Clay Liner (CCL).

1.4.9 Clay-Rich Soil Screening

On March 27, 2008 Helena Sand and Gravel delivered and set up a screening plant at the site to begin production of material in compliance with the CCL specification which stipulated "Cobbles and rock fragments having maximum dimensions of more than 1-inch shall not be used in the liners". After several days of plant breakdowns and poor production, it was determined a larger screen plant would be necessary to continue screening soil. On April 9, 2008, a larger screening plant was delivered and set up at the site. After several adjustments and preparatory production screening, a sufficient stockpile of material was generated to efficiently begin placing CCL material.

During screening of the CCL material, it was observed that a significant portion of the material being screened consisted of clods of clay. This created some concern since in the process of meeting the cobble and fragment specification, the most desirable material was being removed. Hydrometrics Quality Assurance personnel directed Helena Sand and Gravel to reprocess the screened reject material several times to remove as much clay soil as possible from the cobbles and rock fragments. Screening of the clay rich soil was completed on April 25, 2008.

1.4.10 Compacted Clay Liner

The placement of the Compacted Clay Liner (CCL) began on April 11, 2008 using two scrapers to import the screened clay-rich material from the stockpile to the cell. Hauling, processing and compaction of the screened material commenced at the southwest corner of

the CAMU excavation and proceeded in staggered 6-inch lifts to the north side of the cell. A large 4x4 tractor with attached heavy-duty construction disk incorporated moisture into the soil that was provided by a 4,000-gallon water truck. A sheepsfoot vibratory roller and a smooth drum vibratory roller followed the moisture adjustment process to provide compaction. Lift thickness was verified by hand measurements and in place density and moisture testing was performed using shallow depth nuclear test methods (ASTM D2219) to monitor the result of the placement efforts. The nuclear gage used for performing the tests was checked periodically using Sand Cone density tests (ASTM D1556), Electrical Density Gage tests, and oven soil moisture tests (ASTM D2216). Results of the CCL compaction tests are included in Appendix B.

Initially, construction of the first 6-inch lift was impeded as Helena Sand and Gravel worked to determine a suitable material placement and processing method that would achieve acceptable moisture and compaction results. Helena Sand and Gravel was required to remove and replace material that failed to meet specification requirements until a sequence of operations achieved acceptable test results. Once this was accomplished, progress improved until it was perceived that the volume of clay-rich material available from the cell excavation was not enough to complete placement of the entire CCL. On April 23, 2008 Helena Sand and Gravel began excavating additional material for the CCL from a borrow area adjacent to the southern edge of the cell. The borrow area was approximately 1 acre in size and was previously stripped of topsoil and subsoil, and clay soil excavated for use during construction of the Dross Plant Slurry Wall. Borrow excavation continued until April 25, 2008 when it was determined enough soil for completion of the CCL had been excavated.

As construction of the CCL progressed, samples of the CCL material were taken at intervals outlined in the Quality Assurance Plan and tested for hydraulic conductivity and plasticity index (PI). Results of two hydraulic conductivity tests performed on the stockpiled material were one-half an order of magnitude above the 1.0×10^{-6} cm/sec standard outlined in the project specifications. Because these two samples were above the 1.0×10^{-6} cm/sec requirements, EPA and Asarco agreed that undisturbed samples of the completed clay liner

would be taken and tested for hydraulic conductivity before further placement of any CCL.

On Thursday May 1, 2008 Hydrometrics and Womack Quality Assurance personnel mobilized a truck mounted geoprobe rig to take undisturbed samples from the CCL using 3-inch diameter, 36-inch long thin walled Shelby tubes, as outlined in Appendix G of the CAMU Phase 2 Design Report. Two 36-inch long samples were taken, one by Hydrometrics, and one by Womack. The samples were carefully packaged and overnight shipped to their respective testing laboratories. The laboratories were instructed to divide the sample into three distinct specimens and perform hydraulic conductivity testing on each specimen in accordance with ASTM D-5084. Hydrometrics' lab, HWA Geosciences in Lynwood, WA, noted the Shelby tube they received contained only 22 inches of intact soil and the top several inches of the sample were in poor condition. However, HWA Geosciences was able to extract three distinct specimens from the Shelby tube and performed hydraulic conductivity tests on each. After reviewing the results of the hydraulic conductivity tests on the sample submitted by Hydrometrics, Hydrometrics and HWA Geosciences agreed the sample tested may have been compromised by sampling technique or during sample shipment and may not have reflected the actual hydraulic conductivity of the in-place CCL. The sample taken by Womack and Associates appeared to have had more intact soil than the sample submitted by Hydrometrics and the results of their hydraulic conductivity tests was below the required hydraulic conductivity of 1.0×10^{-6} cm/sec.

Because of the problems reported by Hydrometrics and HWA Geosciences with the first Shelby tube sample submitted for hydraulic conductivity testing, EPA and Asarco agreed to allow Hydrometrics to resample the compacted clay liner at the same location the previous samples were taken. However, in an effort to minimize the disturbance to the soil samples during sampling, it was agreed that three smaller Shelby tubes would be pushed instead of one 36-inch Shelby tube. This method of sampling was consistent with guidance from the USGS for thin walled tube sampling. On Wednesday May 7, 2008, Hydrometrics and Womack QA personnel again mobilized a truck mounted geoprobe drill rig to push the Shelby tubes. The first Shelby tube was pushed into the compacted clay liner approximately

12 inches. The tube was then removed and an 8-inch auger was used to auger the hole to 12 inches. The hole was cleaned out and a second Shelby tube was pushed approximately 16 inches. This tube was then removed and an 8-inch auger was used to auger the hole to 28 inches. The hole was again cleaned out and a third Shelby tube was pushed approximately 16 inches. The hole was then backfilled with bentonite and thoroughly tamped to ensure no bridging had occurred. This process was repeated again by Womack and Associates to collect a confirmation sample. The second set of samples were carefully packaged and shipped to the respective laboratories for testing. The laboratories were instructed to take one specimen from each Shelby tube and perform a hydraulic conductivity test on the specimen. Results of hydraulic conductivity tests on the second set of Shelby tube samples were below the required 1.0×10^{-6} cm/sec and on May 19, 2008 placement of CCL resumed.

Wet weather at the end of May delayed construction of the CCL several days. However, the CCL was substantially completed on May 29, 2008 with final completion on May 31, 2008. Following some minor grade adjustments, a final survey confirmed that the CCL was constructed to the lines, grade and slope specified. The entire cell was rolled with a smooth drum roller to provide a smooth surface for liner placement. The CCL was subsequently accepted as being in conformance with the specifications and the Contractor given approval to begin installation of the Geosynthetic Clay (GCL) liner and textured 60-mil high density polyethylene (HDPE) liner. As-built drawings of the completed CCL are in Appendix B.

1.4.11 Geosynthetic Liner System

Liner installers from Northwest Lining and Geotextile of Kent, Washington were on site May 29, 2008 performing preliminary work in preparation to begin liner installation. Supervision of liner material delivery, anchor trench excavation and fabrication of sandbags for ballast was completed prior to layout of the first GCL and textured 60-mil HDPE liner. Liner placement began on May 29, 2008. Once liner placement began, it progressed proficiently across the south half of the cell. As specified, only the amount of GCL that could be placed and covered with textured 60-mil HDPE during the same day was laid out. The seams of the GCL and textured 60-mil HDPE were oriented down and parallel to the line of the slope with

butt seams at least ten feet from the toe of the slope as required in the project specifications. GCL seams were overlapped a minimum of 12 inches along longitudinal seams and a minimum of 24 inches along butt seams. A bead of granular bentonite was used to enhance butt seams, and a factory installed Supergroove was used to enhance longitudinal seams. Textured 60-mil HDPE seams were welded with an automatic heat-fusion wedge welder. Northwest Linings and Geotextile provided a seam numbering system compatible with their panel numbering system to aid in identification of seam test samples. After the textured 60-mil HDPE seams were fusion welded, air channel tests were conducted along the length of each seam to guarantee an airtight weld. The seams were subjected to an air pressure of 35 psi that was maintained a minimum of 7 minutes. Northwest Linings and Geotextile conducted trial seam welds prior to beginning seaming. Each test weld was field tested for peel adhesion and bonded seam strength (ASTM D 4437). Seam specifications for the textured 60-mil HDPE liner stipulated tests for seam peel adhesion and seam shear strength to be 80% of the material's specified sheet strength or 91 and 120 lb/in, respectively. Destructive seam tests were also performed on every 500 lineal feet of seamed textured 60-mil HDPE. Duplicate samples were provided to the Engineer for archive storage and submittal to Precision Geosynthetic Laboratories for evaluation and test corroboration of the field results. Test results are included in Appendix B.

In addition to fusion welding of seams, extrusion welding was performed on liner patches to repair damage caused by handling, traffic, removal of folded or wrinkled areas, holes caused by destructive testing as well as on short butt seams and at locations where more than two panel edges intersected. Non-destructive vacuum testing was used at the locations where seams were extrusion welded to verify adequate seaming.

As placement HDPE continued on the northwest half of the cell, the next components of the Geocomposite were installed on the southwest half of the cell. The first geocomposite liner was installed over the 60-mil liner and overlapping edges secured with plastic ties at maximum intervals of 5 feet. Once the geocomposite installation was completed, inspected and accepted by the Engineer, the second layer of textured 60-mil HDPE liner and

geocomposite was installed. The second layer of HDPE and geocomposite were installed and tested similar to the first liner. On June 15, 2008, the installation of the geosynthetic liner system was completed and the installation approved on June 16, 2008 once the results of final destructive seam tests were received.

1.4.12 Leak Detection and Leachate Collection System

Construction of the leak detection and leachate collection system was partially completed concurrent with CCL placement and the liner installation on the southeast half of the cell. Installation of the 24-inch HDPE standpipes and concrete support pad was completed prior to HDPE liner placement. Liner installation in the trench proceeded immediately after completion and approval of the CCL liner in the trench. The GCL, first layer of textured 60-mil HDPE and succeeding geocomposite, were installed in the collection trench prior to placement of the 4-inch perforated pipe and the drainage rock for the leak detection system. The drain rock was placed in the trench using a shooter truck, which allowed for a uniform 18-inch layer of drain rock to be placed in the trench without the need for equipment to be in the cell and cause possible damage the HDPE liner. Upon completion of the leak detection system, the 4-inch perforated pipe was connected to one of the 24-inch HDPE standpipes, and the second layer of textured 60-mil HDPE liner and geocomposite was installed. The leachate collection system was constructed the same as the leak detection system using a 4-inch perforated pipe and 18 inches of drainage rock. The drain rock for the leachate collection system was also placed using a shooter truck to minimize damage to the liners.

Prior to completion of the final layer of HDPE and geocomposite installation, a large rainfall event occurred which allowed a significant volume of water to be contained in the leak detection system. The contractor used best efforts to remove a significant portion of the water from the leak detection trench. However, a small amount of water remained in the leak detection system once the installation of the second layer of HDPE and gecomposite was completed. Over time, the remaining water in the leak detection system was conveyed to the 24-inch standpipe and pumped out of the system. Pumped leachate quantities and analytical test results are located in Appendix B.

1.4.13 Cushion Layer and CAMU Liner Completion

Once installation of the geosynthetic liner system was complete, a 24-inch layer of cushion material was placed above the liners for protection. The cushion layer consisted of ¾-inch minus road mix with a percentage passing the #200 screen of less than 5 percent. On June 16, 2008, Helena Sand and Gravel began placing the cushion material with a low ground pressure (LGP) dozer. Placement began in the southwest corner of the cell and progressed across the cell towards the northeast corner. The cushion material was transported to the cell using side dump haul trucks and spread across the cell with a LGP dozer. The haul trucks entered and exited the cell on a haul road constructed of 36 inches of cushion material which was consistent with the required minimum 36-inch lift for wheeled vehicle traffic required in the project specifications. The cushion layer installation was completed on July 1, 2008 and depths verified by QA personnel. As-built drawings of the completed cushion layer are found in Appendix B.

1.4.14 Waste Material-Load, Haul, Place and Compact

On July 7, 2008, Cleveland Wrecking began hauling stored waste from the CSHB, Ringling, Barnum, and Bailey buildings. Approximately 22,000 cubic yards of waste material was transferred from these temporary storage facilities on the Asarco East Helena Plant to the landfill for disposal. Prior to loading, the waste material was wetted to prevent fugitive dust. Two track mounted excavators and a track mounted front end loader were utilized to load stored waste into four side dump trucks and four tandem end dump trucks for transport to the CAMU cell. Prior to leaving the Asarco East Helena Plant site, haul trucks crossed the Asarco truck scale where Hydrometrics personnel recorded weight, time, truck number, and photographed load contents. Samples were taken from one in twenty trucks to characterize contents of waste being placed in the CAMU. Hydrometrics personnel also monitored wind speed at the scale house as well as the CAMU. If wind speeds exceeded a 15 mph hourly average, hauling ceased for the remainder of the day. Results of the waste characterization sampling are found in Appendix C.

In conjunction with hauling of stored demolition debris, IRS Environmental of Spokane, Washington was contracted to remove all of the asbestos containing material (ACM) stored on the Asarco East Helena Plant site and place in the designated area of the CAMU cell. Removal of the ACM material began on July 15, 2008 and was completed on July 18, 2008. All ACM material placed in the CAMU cell was covered with a minimum of 6 inches of waste within 24 hours of placement in the cell. The ACM was not required to be weighed prior to placement in the CAMU cell. However, a survey was conducted of the ACM once placement was completed to document the location of the ACM and for volume purposes. A map showing the location of the ACM is found in Appendix B. The total volume of ACM placed in the CAMU cell was 3,530 cubic yards.

Upon placement of the waste materials in the CAMU, Helena Sand and Gravel distributed and compacted the waste material in 24-inch lifts. Hydrometrics personnel were on site during placement of waste in the cell to ensure all debris had at least one dimension smaller than 2 feet and that all oversized debris was removed and hauled back to the Asarco plant to be resized.

Once placement of the stored waste material in the CAMU cell was complete, Hydrometrics applied a dust suppression liquid on top of the waste to minimize wind blown dispersion of dust and debris. The dust suppression liquid consisted of 15 gallons of Earthbound L tackifier mixed with 6,000 gallons of water placed at the manufacturers recommended rate of 2,000 gallons per acre.

On September 4, 2008, approval to begin demolition and cleaning was granted and IRS Environmental began removing catalyst from the acid plant and cleaning and removing bags from the baghouse area. Once the catalyst was removed, baghouses cleaned, and waste hauled to the CAMU cell, IRS Environmental proceeded with removal of flue dust from the Monier and Blast Furnace flues. All waste collected during the cleaning and removal process was weighed prior to placement in the CAMU cell. Several samples of cleaning process waste were collected and sampled. The results are contained in Appendix C.

Concurrent with IRS Environmental cleaning activities, Cleveland Wrecking began demolition of the former spray dryer building on September 16, 2008. Demolition work then progressed rapidly to the former Acid Plant on September 19, 2008, the Baghouses on September 20, 2008, the Blast Furnace Flue and surrounding structures on September 30, 2008, the Acid Plant Cooling Tower on October 6, 2008, and the Monier Flue and surrounding structures on October 8, 2008. All salvageable steel was separated from the demolished structures, visible debris removed, and hauled to Pacific Steel and Recycling. As work progressed, Pacific Steel and Recycling was unable to keep up with the large quantity of scrap steel being generated therefore, Cleveland Wrecking began stockpiling the scrap steel on the concrete pad north of the Bailey Coverall Building to be removed at a later date. All scrap steel was eventually removed from the site by November 19, 2008.

Waste debris generated from demolition activities was sized to meet the 24-inch maximum requirement before being hauled to the CAMU cell. As was done during hauling of the stored waste, all haul trucks crossed the Asarco truck scale prior to leaving the plant site where Hydrometrics personnel recorded weight, time, truck number, and photographed load contents. Samples were taken from one in twenty trucks to characterize contents of waste being placed in the CAMU. Results of the characterization samples are contained in Appendix C.

On November 19, 2008, all waste generated for the 2008 construction season had been hauled and placed in the CAMU cell. Approximately 48,300 cubic yards of material was placed in the CAMU cell. The waste in the CAMU cell was graded to obtain positive drainage, rolled with a smooth drum roller, and all sharp objects (rebar, wood, pipe, etc.) removed and/or covered to provide a suitable surface for installation of the temporary liner.

1.4.15 Temporary Liner Cover System

On November 4, 2008, Northwest Linings and Geotextile began placement of a temporary liner over the CAMU Phase 2 cell. The temporary liner consisted of a 10-oz/sy cushion geotextile covered by a 20-mil reinforced polyethylene (RPE) held in place with sandbags.

The large panels of RPE were seamed together using a stitched "Z" fold to create a watertight seal. Pipe boots were used to attach the liner to the 24-inch leak detection and leachate collection standpipes to prevent precipitation from getting under the liner. Anchor trenches were utilized around the perimeter of the cell to provide protection from lifting due to wind. The temporary liner installation was completed on December 8, 2008.

1.4.16 Fencing

The CAMU Phase 2 Cell was fenced with a temporary 6-foot high chain link fence with two gates (30 feet wide) at the access roads. The temporary fence will be removed prior to installation of the CAMU Phase 2 Cell permanent cap to allow construction equipment better access to the site. A permanent fence will be installed once the final cap has been constructed.

1.5 PHOTO LOG

Hydrometrics took construction photographs through out the project and a Photo Log of the project is located in Appendix D of this report.

2.0 SAMPLING AND TESTING DURING CONSTRUCTION - QA/QC

2.1 GENERAL

The purpose of Construction Quality Assurance (CQA) was to provide Asarco and EPA with data verifying that the CAMU Phase 2 Cell construction satisfies the design intent, the specification requirements, and the performance standards contained in 40 CFR 264. Project QA/QC consisted of the field testing program and reporting described in the Construction Quality Assurance Plan from the Design Analysis Report Asarco East Helena Corrective Action Management Unit (CAMU) Phase 2 Cell (Appendix G, Hydrometrics, 2008). The Asarco Project Manager, with assistance from Hydrometrics, provided project Manufacturing Quality Assurance (MQA) to verify that the CAMU was constructed from materials that met specifications. Numerous quality control checks and tests were completed throughout construction. Quality control checks included soil sampling for moisture content, density, permeability, lift thickness, HDPE subgrade, seam, vacuum tests, placement and handling, temperature; geocomposite panel fastening; water material moisture, lift thickness and voids; survey layout and as-built verification.

2.2 COMPACTED CLAY LINER - CCL

This project involved the construction of one 3-foot thick compacted clay liner.

2.2.1 CQA items for CCL

Quality control checks for the CCL were as follows:

a. Materials
   (1) Maximum Particle Size < 1-inch – Visually checked continuously.
   (2) No unsuitable Material – Visually checked continuously.
   (3) Plasticity – 28 measurements.
   (4) In situ Moisture Content – 39 measurements.
   (5) Moisture / Density Relationship – 8 measurements.

b. Workmanship

(1) Compacted Lift Thickness < 6 inches – monitored continuously.

(2) Density – 240 nuclear measurements and 24 sand cone measurements.

(a) $\geq$ 90% Standard Proctor

(b) $\leq$ 20% of the samples may be less than 95% Proctor

(3) Permeability < 1×10^{-6} cm/sec – 11 measurements.

(4) Construction Stakes Inventory – Verified daily.

(5) Scarification – Visually checked continuously.

(6) Number of Compaction Passes – Visually checked continuously.

2.2.2 QC Testing and Results

The results of all of the soil testing associated with QA/QC (listed in the previous section) of the CCL are contained in Appendix B. All soil samples were collected by Hydrometrics and were tested by Hydrometrics' soils laboratory. Samples for the hydraulic conductivity tests were collected by Hydrometrics and shipped to HWA Geosciences, Inc. of Lynnwood, Washington for testing. These results are also contained in Appendix B.

2.3 GEOSYNTHETIC CLAY LINER –GCL

The project involved placement of a reinforced geosynthetic clay liner (GCL).

2.3.1 CQA items for GCL

Quality control checks for the GCL were as follows:

(1) Materials met project specifications.

(2) Installer was experienced and used experienced crews and provided references.

(3) Workmanship

(a) Precipitation and winds – monitored continuously.

(b) Install longitudinal to slope – monitored continuously.

(c) No seams within 3 feet of slope – monitored continuously.

(d) Seam overlap (longitudinal 6 inches minimum, end-of-roll 24 inches minimum) – monitored continuously.

(e) Supergroove present along all longitudinal seams – monitored continuously.

(f) Bentonite – enhanced seams in end overlap zone. (A continuous bead of granular sodium bentonite was applied at a minimum application rate of one quarter pound per lineal foot) – monitored continuously.

(g) Sealed around penetrations and embedded structures embedded in accordance with the GCL manufacturer details) – monitored continuously.

(4) Other Inspection Items

(a) Prepared Subgrade – observed continuously for holes, roots, stones, etc…

(b) Installer certification of prepared subgrade – verified.

(c) Anchor Trenches for compliance with drawings – observed continuously.

(d) Handling and Placement of GCL

(i) Sheet Position – observed continuously.

(ii) Damage During Placement – observed continuously.

(iii) No equipment travel directly on GCL– observed continuously.

(iv) Reduction of friction damage during placement.

(v) Panels flat with no wrinkles or folds.

(vi) Cover at night-no moisture to touch GCL (prevent hydration)

(e) Repairs – observed continuously.

(f) Cover placement – observed continuously.

2.3.2 QC Testing and Results

Northwest Linings and Geotextile was the GCL installer. The testing associated with GCL installation was visual. QA/QC Inspection is noted in the inspector's daily journal entries. No problems were encountered and the GCL was installed in accordance with project specifications.

2.4 FLEXIBLE MEMBRANE LINERS - HDPE

There were three geomembrane liners installed on this project. Primary and secondary textured 60-mil HDPE liners were installed as part of the CAMU liner system.

2.4.1 CQA items for HDPE

Quality control checks for the HDPE were as follows:

a. Materials met project specifications.

b. Installer was experienced and used experienced crews and provided references.

c. Workmanship.

   (1) Ambient Temperature > 40°F and < 100°F – monitored continuously.

   (2) Precipitation winds – monitored continuously.

   (3) Install longitudinal to slope – monitored continuously.

   (4) No seams within 10 feet of slope – monitored continuously.

   (5) Master Seamer on site during seaming – monitored continuously.

   (6) Trial Seam Tests – observe and record tests.

   (7) Seam Strength – observe and record tests, send 12 to lab for testing

	60 mil HDPE Strength Requirements
(a) Seam Shear	126 ppi
(b) Seam Peel	90 ppi

   (8) Overlap > 3 inches for extrusion and 4 inches for hot wedge seaming – monitored continuously.

   (9) Vacuum Seam Tests – observed continuously.

d. Other Inspection Items.

   (1) Prepared Subgrade – observed continuously for holes, roots, stones, etc.

   (2) Installer certification of prepared subgrade – verified.

   (3) Anchor Trenches for compliance with drawings – observed continuously.

   (4) Handling and Placement of FMLs.

      (a) Sheet Position – observed continuously.

      (b) Damage During Placement – observed continuously.

(5) Repairs – observed continuously.

(6) Verification of Seaming – observed continuously.

(a) Extruder is purged of heat-degraded extrudate prior to beginning a seam.

(b) Seam grinding has been completed less than 1 hour before seam welding.

(c) Ends of old welds more than 5 minutes old are ground to expose new material before restarting weld.

(d) Weld is free of dust and debris.

(e) Cross Seam is ground smooth prior to welding.

(f) No solvents or adhesives are in weld area.

(g) No free moisture in seam area.

(h) Generators are not damaging liner.

(i) Insulating plate placed beneath hot welders when not in use.

(j) Liner is being protected in high traffic areas.

2.4.2 QC Testing and Results

Northwest Linings was the geomembrane installer and conducted all field tests. Destructive samples were taken for testing the liner seams. The seam test samples were sent to Precision Geosynthetic Laboratories, headquartered in Anaheim, California, for verification testing. Destructive seam test results are contained in Appendix B.

2.5 GEOCOMPOSITES

Two geocomposites were installed in the CAMU liner, one above the primary HDPE liner and one above the secondary HDPE liner.

2.5.1 CQA items for Geocomposites

Quality control checks for the Geocomposites were as follows:

a. Materials met project specifications.

b. Workmanship.

(1) Overlap $\geq$ 3 inches on sides and $\geq$ 6 inches on ends – monitored continuously.

(2) Placement longitudinal to slope – monitored continuously.

(3) Zip tied seams every 5 feet – monitored continuously.

c. Other Inspection Items – monitored continuously.

(1) Manufacturer's Certification.

(2) Handling and Storage.

(3) Panel Fastening.

2.5.2 QC Testing and Results

Northwest Linings was the geocomposite installer. Hydrometrics observed all work to insure proper overlap, placement, handling and storage of the geocomposite.

2.6 CUSHION LAYER

A 24-inch cushion layer consisting of ¾-inch minus road mix was installed above the HDPE liner system for protection.

2.6.1 CQA items for Cushion Layer

Quality control checks for the Cushion Layer were as follows:

a. Material passing the #200 screen < 5% – gradation submitted prior to delivery.

b. Cushion layer thickness minimum of 24 inches – manually measured.

c. Wheeled vehicle traffic on minimum 36 inches – monitored continuously.

d. No vehicle traffic directly on liners – monitored continuously.

e. Minimize wrinkles in liner during cushion layer installation.

2.6.2 QC Testing and Results

Helena Sand and Gravel was the Cushion Layer installer. Hydrometrics observed all work to ensure there was no damage to the liners and measured layer thickness.

2.7 WASTE MATERIALS/SOURCE SOILS

2.7.1 CQA items for Waste Materials/Source Soils

Quality control checks for the Waste Materials were as follows:

a. Materials

(1) Free Liquids – monitored continuously.

(2) Oversized Debris > 24 inches – monitored continuously.

(3) Samples taken from haul trucks at 1 sample per 20 truckloads frequency.

2.7.2 QC Testing and Results

The testing results associated with waste materials were visual as well as analytical. Visual inspections are noted in the inspector's daily journal entries, and analytical results are found in Appendix C.

3.0 REFERENCES

Hydrometrics, Inc., June 2008. Design Analysis Report Asarco East Helena Corrective Action Management Unit (CAMU) Phase 2 Cell.

URS Corporation/Cleveland Wrecking Company, May 2008. 2008 Cleaning and Demolition Project, Asarco East Helena Plant, 2008 Work Plan.

APPENDIX A

HEALTH & SAFETY AND CONSTRUCTION CONTROL PLANS

A.1 QUALITY CONTROL PLAN

A.2 HEALTH AND SAFETY PLAN

A.3 AIR MONITORING RESULTS

A.4 DUST CONTROL PLAN

A.5 CONSTRUCTION STORM WATER DISCHARGE PERMIT

A.1 QUALITY CONTROL PLAN

CONSTRUCTION QUALITY ASSURANCE PLAN

CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL PLAN FOR THE ASARCO EAST HELENA CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) PHASE 2 CELL

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May 2007
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CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL PLAN FOR THE ASARCO EAST HELENA CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) PHASE 2 CELL

1.0 INTRODUCTION

1.1 PURPOSE

This Construction Quality/Quality Control Assurance Plan (CQA/QCP) provides guidance in attaining and maintaining high quality in the construction of liners and leachate detection and collection systems for the Corrective Action Management Unit (CAMU) Phase 2 Cell. Execution of this plan will provide confidence that the facility is constructed in accordance with the Plans and Specifications. This CQA/QCP is intended for use in conjunction with Project Plans and Specifications.

Specific Performance Standards for CAMU Phase 2 cell design are addressed in the Design Analysis Report (Hydrometrics, 2007). One of the Performance Standards for the CAMU Phase 2 cell design requires establishment of a Construction Quality Assurance (CQA) program to ensure that the constructed cover meets or exceeds all design criteria and specifications in accordance with 40 CFR 264.19. This CQA/QCP along with the Plans and Specifications for the CAMU Phase 2 cell constitutes the Construction Quality Assurance Program.

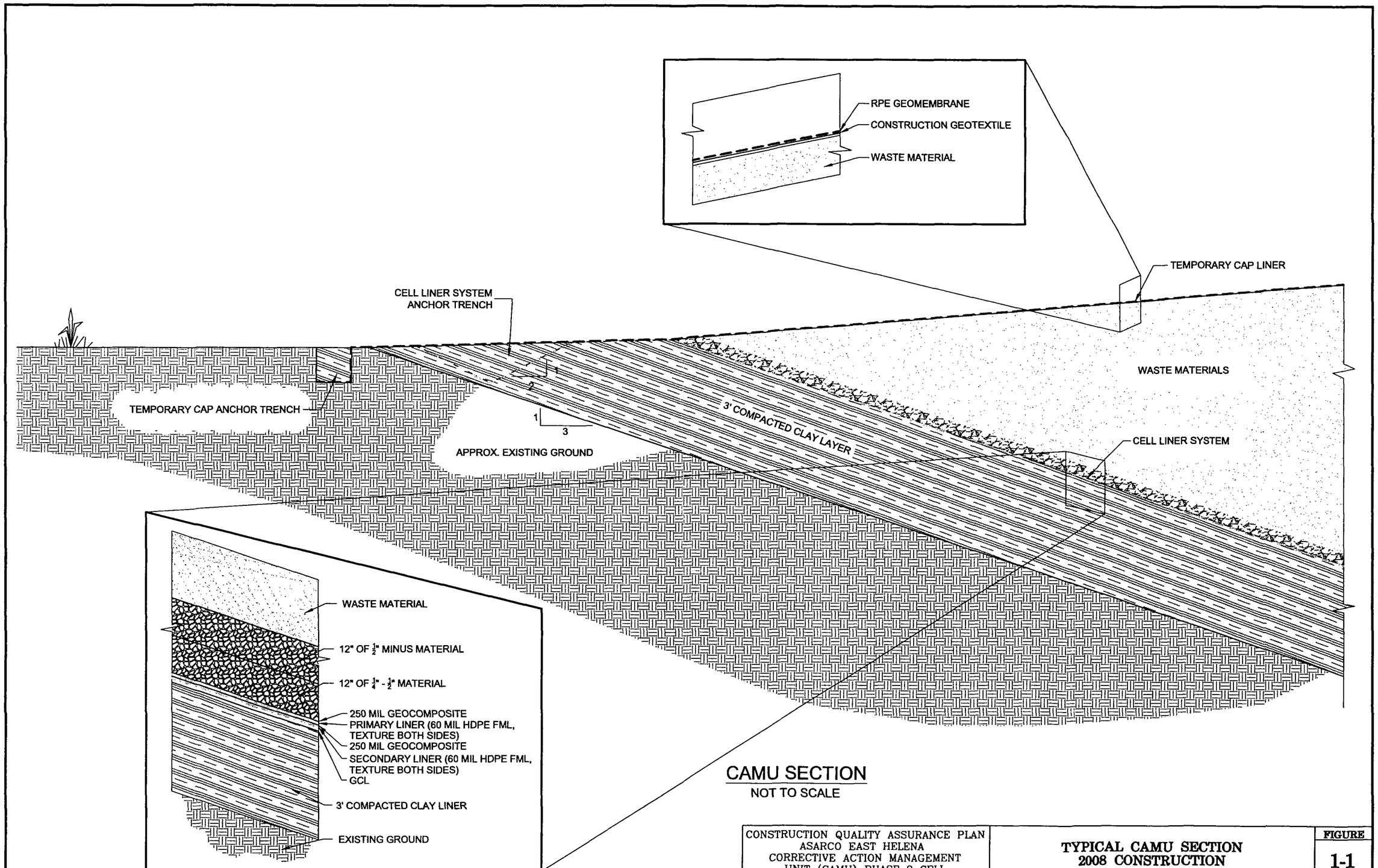
1.2 SCOPE

This plan has been written to include both Quality Assurance (QA) and Quality Control (QC) elements that will be applicable during construction of the CAMU Phase 2 cell including methods of observations, test procedures, and testing frequency. The overall requirements for

inspection and quality assurance of the CAMU Phase 2 cell components, as addressed in this CQA/QCP and in the Plans and Specifications for the Phase 2 cell, are the responsibility of the Engineer. Construction QC requirements are the responsibility of the Contractor as addressed in Section 2.

1.3 LIMITATIONS

This plan focuses on the most critical elements to the success of the CAMU Phase 2 cell, including compacted clay liner, flexible membrane, geotextiles, and geocomposites. Figure 1-1 shows a typical cross-section through the CAMU Phase 2 cell and its components. All elements of the project will be inspected for compliance with Specifications by the Engineering Inspectors. Some elements represent routine types of civil engineering construction (roads, drainage ditches, etc.) and require no special QA or QC provisions other than those described in the Project Plans and Specifications.



CAMU SECTION

NOT TO SCALE

CONSTRUCTION QUALITY ASSURANCE PLAN ASARCO EAST HELENA CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) PHASE 2 CELL	TYPICAL CAMU SECTION 2008 CONSTRUCTION	FIGURE 1-1

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Hydrometrics, Inc.
Consulting Scientists and Engineers

2.0 CONSTRUCTION QUALITY ASSURANCE PLAN ELEMENTS

The following sections address CQA/QCP responsibilities and authorities; project records; and data management and control.

2.1 CQA/QCP RESPONSIBILITY AND AUTHORITY

During construction of the CAMU Phase 2 cell, the Contractor will be responsible for construction QC. The Engineering Inspector will be responsible for assuring that construction QC is effectively implemented as part of the QA responsibilities.

A summary of project responsibilities and authorities relative to QA and QC is included in the following sections. Figure 2-1 presents the QA/QC Functional Organization Chart for CAMU Phase 2 Cell Construction.

2.1.1 Regulatory Agencies

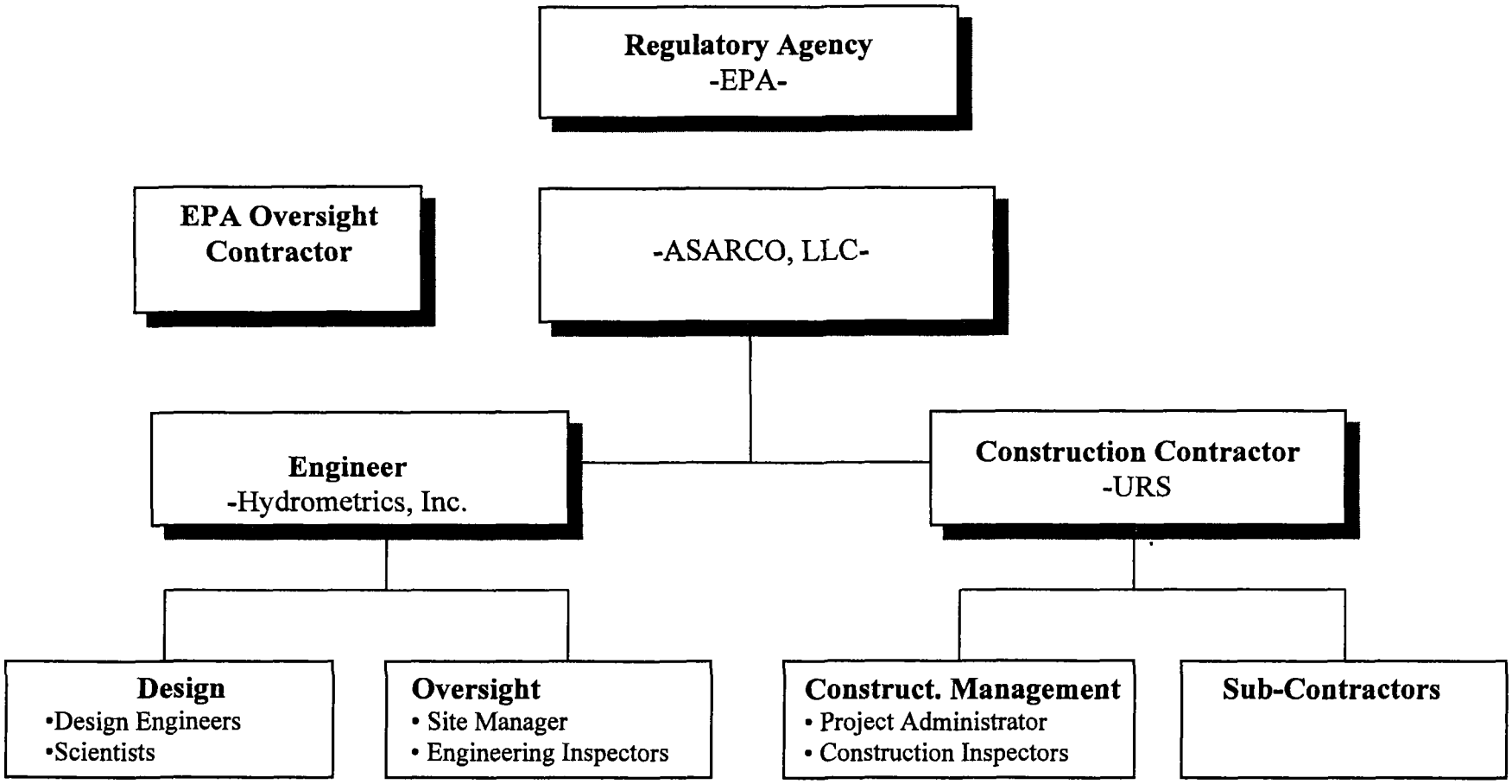
The U.S. Environmental Protection Agency (EPA) is the lead agency responsible for regulatory oversight at the site. EPA is primarily responsible for ensuring public health and the environment are protected. Functional roles of the EPA during CAMU Phase 2 cell implementation are described in Table 2-1.

2.1.2 Project Owner

Asarco, LLC is the Owner for the East Helena Facility and is responsible for the control and implementation of CAMU Phase 2 cell activities. Functional roles of the Owner are further defined in Table 2-1.

2.1.3 Project Engineer

Hydrometrics, Inc. is the Engineer for design and construction oversight of the CAMU Phase 2 cell. During project design, the Engineer is primarily responsible for providing development of designs, plans and specifications which meet project requirements. Functional roles of the Engineer during design are addressed in Table 2-1.



ASARCO,LLC CONSTRUCTION QUALITY ASSURANCE PROJECT PLAN ASARCO EAST HELENA CAMU PHASE 2 CELL	CONSTRUCTION QUALITY ASSURANCE FUNCTIONAL ORGANIZATION	FIGURE 2-1

H:\files\007 ASARCO\6043\CAMUCQAP-Org Chart.ppt\HLN\02/27/07

TABLE 2-1. QUALITY ASSURANCE AND QUALITY CONTROL ROLES BY FUNCTIONAL POSITION

Regulatory Agency (EPA)	Owner (ASARCO LLC)	Engineer Design (Hydrometrics)	Engineer Oversight (Hydrometrics)	Engineering Inspectors (Hydrometrics)	Construction Contractor
• Reviews and approves CAMU Phase 2 Cell Work Plans, design documents, and construction plans and specifications. • Monitors the Construction program. • Attends or participates in progress meetings. • Coordinates government agency interaction. • Ensures protection of public health and environment. • Verifies completion of work and approves project closeout.	• Controls and effects CAMU Phase 2 cell activities. • Assigns work to the Engineer and Construction Contractor • Responsible for long term performance of the remedy. • Obtains approvals needed to accomplish project completion (i.e., permits, easements, etc.)	• Prepares construction plans and specifications, and other design documents. • Identifies approvals needed to accomplish project completion. • Provides project engineering and designs. • Performs any necessary design changes during construction to include updates to plans and specifications and construction changes.	• Assesses compliance with construction permits and approvals. • Maintains project records. • Implements portions of CQA/QCP including testing and construction inspection.	• Performs independent, on-site inspections, may include implementation or oversight of performance and certification testing. • Implements CQA/QCP including testing, reporting, and construction inspection. • Performs on-site inspections, including oversight of performance and certification testing.	• Implements CQA/QCP for specific construction activities. • Provides required submittals including progress schedules, reports, and QC documentation. • Submits lists of equipment, material, and proposed methods of work to engineering inspectors. • Submits manufacturers' or suppliers' certification that materials meet specifications

During construction, the Engineer is primarily responsible for assuring that quality standards specified by the design documents and accepted trade practices are met. The functional roles of the Contractor are further addressed in Table 2-1. A Project Manager will be employed by the Engineer to maintain project records as defined in Section 2.3. Project Inspectors will be employed to implement and assure adherence to the CQA/QCP.

2.2 PROJECT RECORDS

Project records will be maintained by the Engineer's Project Manager. Section XI of the RCRA Consent Decree for the East Helena Plant addresses reporting requirements for this project. Submittals by the subcontractors and their vendors will include pertinent shop drawings, data sheets, material certifications, mix designs, permits, and other pertinent or required submittals. The Project Manager will prepare various reports that describe the remediation construction activities and provide documentation that the construction conforms to approved plans and specifications. The specific reports, their content, distribution and distribution schedule will be developed for each specific CAMU Phase 2 Cell construction activity. As a minimum the following reports will be part of the project records:

1. Inspection Testing Report
2. Daily Inspectors Report
3. Problem Identification and Corrective Measures Report
4. Weekly Summary Report and
5. Monthly Summary Report.

Examples of these project reports are included in Appendix A.

2.3 DATA MANAGEMENT AND DOCUMENT CONTROL

All information relevant to remediation activities will be categorized as either (a) data, or (b) construction project records. Data are results from the measurement of some parameter of media and can include sampling and analytical results, and other tests or measurement (e.g., survey information). Construction project records consist of all documentation pertinent to CAMU Phase 2 Cell construction activities.

The QA methods and procedures outlined in this CQA/QCP will be used to verify and document that the project is completed in accordance with plans and specifications, codes, standards and practices referenced therein.

2.4 MEETINGS

To effectively implement this plan, several meetings will be held to promote communication. The meetings are described below.

2.4.1 Pre-Bid Meeting

The meeting will be held prior to bid opening and will allow construction contractors a chance to discuss questions with the Owner and Engineer and to visit the site.

2.4.2 Pre-Construction Meeting

The meeting will be held before construction commences. The Engineer, Contractor, and Owner will attend this meeting. At this meeting, the Engineer's oversight plans will be discussed as well as the CQA/QCP and any specific CQA/QCP addendum.

2.4.3 Progress Meetings

These meetings will be held during construction and their frequency may vary with the amount of construction activity ongoing. While discussion at these meetings may include a wide variety of topics, it should also include any problems encountered or anticipated that are related to CQA. The Engineer will attend progress meetings to monitor overall project progress and issues particularly those related to QA and QC issues. EPA will be notified of progress meetings, provided an agenda and handouts, and may participate via phone or in person.

2.5 REPORTING

QA/QC Issues will be recorded and reported to interested parties in a number of ways. Engineering Inspectors will prepare general daily, weekly and monthly reports documenting construction progress and issues. QA/QC test failures or non-conformance shall be noted on

daily logs. Additionally, each test failure or non-conformance will be further reported on a special report documenting the issue and its resolution.

Sample reporting forms are contained in Appendix A.

Daily reports and QA/QC issue reports will be distributed to the Engineer, Owner and Regulator (EPA) within 48 hours after the close of business on the day reported. Distribution methods may include hand delivery, fax, mail, e-mail, website or other methods.

3.0 EARTHWORK

This section describes QA and QC measures for all earthwork to be performed except for those related to the compacted clay liner (CCL). QA/QC measures for the CCL are described in Section 4.0.

3.1 QUALITY CONTROL MEASURES

The Contractor shall perform QC measures on excavated on-site soils, imported borrow materials, and other miscellaneous earthen materials.

QC measures for on-site soils to be used for cover soil and subsoil shall include visual inspection. All organic material including roots, sticks, leaves, brush trash, and any other debris shall be removed before placing excavated material in the appropriate stockpile.

QC measures for imported borrow materials to be used for drain material, drain aggregate, or 1/2" minus crushed material shall include visual inspection, gradation, and liquid and plasticity limits (where applicable). Imported materials used for road base shall be subject to the same tests and will also be subject to wear, fractured faces and a standard proctor density tests. Placed road base shall be tested for density and moisture content. Table 3-1 lists the specific tests, frequency of testing and acceptance criteria.

QC measures for asphalt used on haul roads shall be at the discretion of the Contractor.

3.2 QUALITY ASSURANCE MEASURES

Engineering Inspectors will perform QA testing to corroborate QC testing. In general, QA testing will use the same methods, standards and rejection criteria as QC testing. The frequency of QA testing will vary from the QC testing.

Those QA tests that can be characterized as a materials acceptance test (such as gradation, liquid and plastic limits, wear and fractured faces, and proctor density tests for drain material

TABLE 3-1. QC TESTS FOR SELECTED EARTHEN AND ASPHALT MATERIALS

Material	Test Description	Test Method	Test Frequency	Standard	Test Rejection Criteria
Drain Material, Drain Aggregate, 1/2" minus Crushed Cushion Material	Deleterious Materials	Visual	Continuous	--	All foreign material and undersized or oversized particles to be removed.
	Gradation	ASTM D-422	1 per 5,000 cy[2]	Special provisions Section 203.07.8 or ½" minus	No deviation from standard.
	Liquid and Plastic and Limits Plasticity Index	ASTM D-4318	1 per 5,000 cy[2, 3]	LL <40 PI <6	No deviation from standard.
Road Base Course (Type A Grade 5)	Deleterious Materials	Visual	Continuous	--	All foreign material and undersized or oversized particles to be removed.
	Gradation	ASTM D-422	1 per 5,000 cy[2]	Section 701.025 Table 701-8	No deviation from standard.
	Liquid and Plastic Limits Plasticity Index	ASTM D-4318	1 per 5,000 cy[2, 3]	LL <25 PI <6	No deviation from standard.
	Wear	MT-209	1 per 5,000 cy[2]	Wear Factor <50 @ 500 revolutions	No deviation from standard.
	Fractured Faces	MT-217	1 per 5,000 cy[2]	At least 25% of material retained on No. 4 sieve must have at least one mechanically fractured face	No deviation from standard.

TABLE 3-1. QC TESTS FOR SELECTED EARTHEN AND ASPHALT MATERIALS (continued)

Material	Test Description	Test Method	Test Frequency	Standard	Test Rejection Criteria
Road Base Course (Type A Grade 5) (continued)	Standard Proctor Density	ASTM D-698 or AASHTO T-99 Method A, B, C or D	1 per 5,000 cy^2	N/A	N/A
	In-Place Density	ASTM D-2922	1 per 500 cy	95% or maximum dry density	No deviation from standard.(4)
	Water Contents	ASTM D-2922	1 per 500 cy	Water content within ±2% of optimum	No deviation from standard.(4)
Road Subgrade	Standard Proctor Density	ASTM D-698 or AASHTO T-99 Method A, B, C or D	1 per soil type	N/A	N/A
	In-Place Density	ASTM D-2922	1 per 200' of road	95% or maximum dry density	No deviation from standard.(4)
Asphalt	Mix Design	N/A	N/A	N/A	None. Asphalt design, mixing, placement and testing shall be at the Contractor's discretion.
General Waste Materials	Compaction	Visual	Continuous	8 passes (4 cycles) with sheepsfoot or padfoot roller	No deviation from standard.
	Lift Thickness	Visual Measurement	Continuous	Two foot lifts	No deviation from standard.
	Gradation	Visual Measurement	Continuous	2' minus diameter	Long oversized debris will be laid flat and void space minimized. Must have one dimension less than 2 feet.

TABLE 3-1. QC TESTS FOR SELECTED EARTHEN AND ASPHALT MATERIALS (continued)

Material	Test Description	Test Method	Test Frequency	Standard	Test Rejection Criteria
1/2" minus crushed cushion materials	Gradation	ASTM D-422	1 per 5,000 cy^2	Special Provisions Section 209.07.8 All material <1/2"	No deviation from standard.
	Compaction	Visual	Continuous	Lightly rolled	No deviation from standard.
	Lift Thickness	Visual Measurement	Continuous	Minimum one foot Maximum two-foot	No deviation from standard.
Cover soil/subsoil	Soil Quality	Visual	Continuous	No roots, sticks, leaves, brush, trash or other debris	Remove all material not meeting standard

Notes:

(1) Inspection shall be by the Contractor's QC representatives, equipment operators, laborers or other personnel.
(2) Frequency shown is for each type of material. If there is a change in the material or supplier, the same frequency shall apply to the new material.
(3) Liquid and plastic limit testing not applicable to those materials with less than 1% (by weight) or material passing the No. 40 sieve.
(4) Deviations shall be corrected by reworking material until the standard is met.

and road base) will be performed at least once by Engineering Inspectors for each material. For the remaining QA tests that can be characterized as placement tests (such as in place density and water content), QA tests will be performed at a minimum frequency equal to 10% of the frequency of QC testing. In other words, for every ten QC tests, one QA test will be performed.

For those QC tests whose frequency is listed as continuous in Table 3-1, QA tests will be performed at least once per shift for a minimum of 15 minutes.

The testing frequency listed herein should be considered a minimum. Engineering Inspectors should use their judgment to implement additional testing if they suspect a change in materials or conditions.

4.0 COMPACTED CLAY LINER

A compacted clay liner is a component of the CAMU liner system as shown on Figure 1-1. The Contractor will utilize site soil from site excavation for the bottom liner. The CCL will be constructed from soils excavated onsite. Initial exploratory sampling indicates that on-site soils may be suitable for use in a CCL. However, additional segregation and testing of excavated soils is necessary to confirm this. To this end, the Engineer will observe all excavation and direct the Contractor to stockpile for CCL use only those soils most suitable (meaning clay-like and fine-grained). Soils not designated by the Engineer for CCL use will be stockpiled separately and will eventually be placed as waste within the CAMU. The Engineer will visually assess excavated soils to segregate soils into groups suitable for CCL use and not suitable for CCL use.

Following stockpiling, the Engineer will conduct additional tests to confirm that the stockpile materials are suitable for use in the CCL. These tests will consist of gradation, liquid and plastic limits and re-molded hydraulic conductivity. For purposes of this plan, the tests described above (including the visual inspection during excavation) will be referred to as Stockpile Acceptance Testing. Table 4-1 lists test methods, frequency, standards and rejection criteria for Stockpile Acceptance Testing.

After initial Stockpile Acceptance Testing, the Engineer will evaluate the results. If initial results are unacceptable, the Engineer may direct the Contractor to amend the stockpiles, segregate the stockpiles, or take other measures as deemed necessary. Additional testing for stockpile acceptance may follow.

Eventually, the stockpiles will be accepted for use and the Contractor will begin placing the CCL. A grid pattern will be established across the cell to identify testing locations. The Contractor shall perform QC testing which will consist of visual inspections, in-place moisture and density and an inventory of construction stakes. Table 4-2 lists QC testing methods, frequency, standards and rejection criteria.

TABLE 4-1. STOCKPILE ACCEPTANCE TESTING

Parameter	Test Method	Frequency	Test Standard	Rejection Criteria
Soil Type and Quality	Visual	Continuous	Maximum particle size <1 inch	Reject any excavated material that has not been screened to 1 inch minus
Liquid and Plastic Limits	ASTM D-4318	1 per 1,000 cy	PI>8	Reject portions of the stockpile not meeting the standard or conduct additional hydraulic conductivity tests with failing soils
Remolded Hydraulic Conductivity	ASTM D-5084	1 per 3,500 cy or minimum of 6 tests	Hydraulic conductivity must not exceed $1x10^{-6}$cm/sec	Reject portions of the stockpile not meeting standard.

TABLE 4-2. QC TESTING FOR CCL PLACEMENT

Parameter	Test Method	Frequency	Test Standard	Rejection Criteria
Soil Type and Quality	Visual	Continuous	Maximum particle size <1 inch	Reject all material that has not been screened to 1 inch minus
Scarification	Visual/Tape Measure	100%	Surface scarified to a depth of 0.5-2.0 inches and a spacing of 6-12 inches before accepting additional lifts	Recompact and/or scarify any surface not meeting standard
In-Place Density	ASTM D-2922	5 per acre per lift	95% of maximum dry density Less than 3% of all densities may not meet the standard above. Of those not meeting standard, no dry density less than 5 pcf less than 95% of maximum dry density. Sample locations shall be selected by the Engineering Inspector based on grid pattern established at project outset.	Reject and reprocess those areas with dry density less than 5 pcf less than 95% of maximum dry density or if cumulative failures exceed 3% of all tests
In-Place Water Content	ASTM D-3017	1 per 1,000 cy	Less than 3% of all measured water content may have water content wetter than +2% or dryer than –3% of optimum	Reject or reprocess material that exceeds both +2%/-3% criteria
Construction Stakes	Daily Inventory	Daily	Contractor must return all construction stakes used within the CCL boundary at the end of each shift to the Engineering Inspector	Reject and replace day's work if stake or portion of stake is missing
Proctor Moisture Density Curve	ASTM D-698 or AASHTO T-99	1 per 2,500 cy	N/A	N/A
Compactive Effort	Visual	Continuous	Contractor to establish rolling pattern and equipment that produces necessary compaction	Rework all areas not sufficiently compacted
Lift Thickness	Visual/Tape Measure	5 per acre per lift	No loose lift thickness shall exceed 6 inches. Smaller lifts may be necessary to meet compaction requirements	Remove excess lift thickness.
Hole Repair	Visual	100%	Firmly packed	Reject and replace holes not repaired or incompletely repaired.

Concurrent with QC testing, the Engineering Inspector will conduct QA testing. Table 4-3 lists QA testing requirements.

Following completion of the CCL to the lines and grades shown on the drawings, the Engineer will conduct confirmation testing. The test shall consist of an in place hydraulic conductivity test conducted per ASTM D-5084. A full depth sample shall be taken using methods of ASTM D-1587 from a location selected by the Engineer. The sample will be separated into three distinct specimens and each sample tested. The Engineer shall consider the results and, if any of the specimens have a hydraulic conductivity in excess of $1x10^{-6}$cm/sec, will consult with EPA on what actions will be taken to mitigate the overall conductivity of the CCL.

Both the in-place hydraulic conductivity test and a number of other tests as well as stake placement (if necessary) will result in penetrations of the CCL or a portion of the CCL. The Contractor shall patch these penetrations by placing approved CCL material in each penetration in a lift not to exceed two inches and firmly compacting the CCL materials by hand tamping. A tamper with a tamping head roughly the size of the penetration shall be used. QC measures for hole repairs shall consist of continuous oversight and documentation of the repair. QA measures shall consist of oversight of at least 20% of all hole repairs.

TABLE 4-3. QA TESTING FOR CCL PLACEMENT

Parameter	Test Method	Frequency[1]	Test Standard	Rejection Criteria
Soil Type and Quality	Visual	Continuous	Soil must be fine-grained (all particles <1 inch), clay-like and free of debris	Reject all material that does not meet standard
Scarification	Visual/Measuring Tape	100%	Surface scarified to a depth of 0.5-2.0 inches and at a spacing of 6-12 inches	Reject and recompact and/or scarify any surface not meeting standard
Proctor Moisture Density Curve	ASTM D-698 or AASHTO T-99	1 per 2,500[2] cy	N/A	N/A
In-Place Density	Electrical Gauge	1 per acre per lift[2]	95% of maximum dry density Less than 3% of all densities may not meet the standard above. Of those not meeting standard, no dry density less than 5 pcf, less than 95% of maximum dry density Outliers may not be concentrated in one area or lift	Reject and reprocess those areas with dry density less than 5 pcf less than 95% of maximum dry density or if cumulative failures exceed 3% of all tests
In-Place Water Content	Electrical Gauge	1 per acre per lift[2]	Less than 3% of all measured water content may have water content wetter than +2% or dryer than –3% of optimum Outliers may not be concentrated in one area or lift	Reject or reprocess material that exceeds both +2%/-3% criteria
In-Place Density	ASTM D-1556	1 per every 10 tests above	N/A	Use to corroborate electrical gauge testing
In-Place Water Content	ASTM D-2216	1 per every 10 tests above	N/A	Use to corroborate electrical gauge testing
Hole Repair	Visual	1 per every five QC tests of same	Firmly packed	Reject and replace holes not repaired or incompletely repaired

Notes:

(1) Frequency noted is a minimum. Inspectors may perform additional tests if conditions change.

(2) Minimum of one test required.

5.0 FLEXIBLE MEMBRANE LINERS

Flexible Membrane Liners (FMLs) are a component of the CAMU Phase 2 cell. Both HDPE and RPE FMLs are used within the project.

Before shipping any FMLs to the site, the Contractor shall submit the manufacturer's QA testing results to the Engineering Inspectors. At a minimum, the manufacturer's QA tests shall consist of the tests list in Table 5-1. The manufacturer's QA tests will be conducted on the particular lot to be used for this project.

On delivery of FMLs to the project site, the Engineering Inspector shall collect additional samples for confirmation testing. The Engineering Inspector shall select one roll or pallet of each FML and shall remove an appropriate length for conformance testing.

The tests to be performed shall duplicate those specified in Table 5-1.

TABLE 5-1. MANUFACTURER'S QA TESTS FOR FML

Property	Test Method	Test Frequency	Test Standard(1)			Rejection Criteria
			OR RPE	HDPE 60 mil	HDPE 40 mil	
Gauge (mils nominal)	ASTM D-1593	1 per lot	20	60	40	Material must meet all standards before delivery to site
Tear Strength (pounds)	ASTM D-1004		70	42	28	
Tensile Strength 1. Yield Stress (lb/in) 2. Break Stress (lb/in) 3. Yield Elongation (%) 4. Break Elongation (%)	ASTM D-638 Type IV		300	126 90 12 100	84 60 12 100	
Puncture Resistance (lb)	ASTM D-4833		150	80	60	
Stress Crack Resistance (Hours)	ASTM D-5397		N/A	300	300	
Specific Gravity	ASTM D-1505			≥0.94	≥0.94	

Notes:
(1) Values shown are minimum average roll values.

The Contractor shall implement QC measures during FML installation. QC measures shall include visual inspection of the receiving surface, anchor trenches, panel placement and seams as well as destructive testing of seams. Destructive testing will be conducted on seam samples that are cut from a completed seam. The samples shall be 24 inches by 11 inches minimum. From

the sample, the Contractor shall deliver to the Engineer an 11 inches by 11 inches piece for archival storage. The remainder will be used by the Contractor for field and laboratory testing. Table 5-2 lists the QC tests, their frequency and rejection criteria.

The Engineering Inspectors shall implement QA procedures during FML installation. In general, Engineering Inspectors will perform the same tests as indicated in Table 5-2 at the same frequency. The only exception to this is Destructive Seam Testing (ASTM D-4437 and ASTM D-3083) will be performed once for every ten QC tests of the same.

TABLE 5-2. QUALITY CONTROL CRITERIA FOR FML

Parameter	Test Method	Frequency	Standard	Test Rejection Criteria
Surface Conditions	Visual Inspection	100%	No holes, ridges, voids, rocks, roots, ruts or other non-conformities	Reject and replace all surfaces with any of the items at left
Anchor Trenches	Visual/Tape Measure	100%	See dimensions on project plans	Reject and repair all non-conforming trenches
FML Placement	Visual	100%		Reject and replace non-conforming panels
Seaming	Visual	100%		
Seam Tensile Strength (HDPE only)	ASTM D-638, type M-1	1 per 500 feet of seam	Base material properties – see Table 5-1	Reject and replace non-conforming seams
Seam Shear & Peel (HDPE only)	ASTM D-4437	1 per 500 feet of seam	Shear strength: 120 lb/in – 60 mil 80 lb/in – 40 mil Peel strength: 91 lb/in(2) – 60 mil 78 lb/in(3) – 60 mil 60 lb/in(2) – 40 mil 52 lb/in(3) – 40 mil	Reject and replace non-conforming seams
Trial Seam	ASTM D-3083	1) Beginning of each shift of seaming and every four hours thereafter 2) At any change in seam operator, equipment or weather	Break must be a ductile film tear with at least 80% of minimum sheet strength	Repeat trial seaming until standard is met
Air lance Vacuum Box or Internal Pressure(3)	ASTM D-4437 ASTM D-4437 or As described in specifications	100%	Ripples or bubbles Bubbles emerging from seams Loss of pressure ≤4 psi in 7 minutes	Identify, repair and replace leaking seams

Notes:

(1) Hot wedge seams only
(2) Extrusion fillet weld only
(3) HDPE

only

6.0 GEOCOMPOSITES

Geocomposites are used in the CAMU Phase 2 cell leak detection and leachate collection system. The Contractor will obtain the manufacturer's certification that the material conforms to the Project Specifications and provide copies to the Engineering Inspector. The Engineering Inspector will be present during the delivery and unloading of geocomposites and geofabrics. Confirmation testing requirements are listed in Table 6-1. These will be performed by the manufacturer or Contractor and provided to Engineering Inspectors no later than at delivery of the geocomposite.

The Engineering Inspector will be present during installation of the geocomposite and will visually confirm that overlap and panel fasteners conform to Project Specifications. Copies of manufacturer's certifications and the results of any testing or inspection conducted by the Engineering Inspector will be provided to the Engineer.

Quality control measures to be implemented by the Contractor shall include complete visual inspection of overlaps and seaming procedures. QA measures implemented by the Engineer shall also include complete visual inspection of overlap and seaming procedures.

TABLE 6-1. CONFIRMATION SAMPLING FOR GEOCOMPOSITES

PARAMETER	TEST	MINIMUM TEST FREQUENCY	REJECTION CRITERIA
Crush Strength	ASTM D-1621	1 per lot(1)	Reject any lot sampling unit or lots that do not meet ASTM-D-4759, Section 5.
Thickness	ASTM D-5199	1 per lot(1)	Reject any lot sampling unit or lots that do not meet ASTM-D-4759, Section 5.
Transmissivity	ASTM D-4716 Width @ 14.5 psi Normal pressure & 0.1 ft/ft hydraulic	1 per lot(1)	Reject any lot sampling unit or lots that do not meet ASTM-D-4759, Section 5.

Notes:

(1) A lot is the smaller of 100,000 square feet or one production run.

7.0 GCL

A Geosynthetic Clay Liner (GCL) is a component of the CAMU. The Contractor or manufacturer shall provide acceptance testing of the GCL according to Table 7-1. Test results shall be provided to the Engineering Inspector before any GCL is shipped to the project.

During GCL placement, the Contractor shall perform QC tests according to Table 7-2. The Engineering Inspector shall perform QA tests of the same type and at the same frequency as those tests shown in Table 7-2.

If any holes result in the GCL for any reason, the Contractor shall repair the hole by placing a patch of GCL over the affected area. The patch will have a minimum of 12 inches of overlap on all sides from the affected area. Granular bentonite shall be uniformly scattered over the entire patch area at the same rate as used in panel overlaps. The Contractor and Engineering Inspector shall visually inspect all hole repairs.

TABLE 7-1. ACCEPTANCE TESTING FOR GCL

Parameter	Test Method	Frequency	Test Standard	Rejection Criteria
Mass per Unit Area	ASTM D-5993	1 per lot(1)	0.75 lb/ft^2 MIN	Materials must pass all acceptance testing before delivery to site
Hydraulic Conductivity	ASTM D-5887		5 x 10^{-9}cm/sec MAX	
Shear Strength	ASTM D-5321		500 psf MIN	
Peel Strength	ASTM D-4632		15 lbs MIN	

Notes:

(1) All material used on the project must be from the sampled lot.

TABLE 7-2. QC MEASURES FOR GCL

Parameter	Test Method	Testing Frequency	Test Standard	Rejection Criteria
Overlap	Visual/Measuring Tape	100%	6-8 inches	Manually move panels to meet specifications
Subgrade Smoothness	Visual		No bridging of GCL≥1 inch	Manually repair area
GCL Rips, Tears, Holes	Visual		No irregularities	Patch all irregularities
Granular Bentonite in Overlaps	Visual			Add granular bentonite to meet specification
Freezing/Unrestrained Hydration	Visual		Visibly uneven	Remove and replace affected GCL
Hole Repair	Visual		12 inches of overlap all around with granular bentonite	Remove and replace patch

8.0 LEACHATE COLLECTION AND DETECTION SUMPS AND PIPING

Perforated piping and smooth solid piping are used in the project's leachate collection and detection systems. QA/QC measures for piping shall include obtaining manufacturer's certifications that the materials meet the project specifications, survey verification of pipe grades, verification that pipe joints were constructed according to the specifications, and verification that the pipe is not damaged during backfilling. QA/QC measures for the concrete sump base include verification of formwork to ensure it is complete and has the specified dimensions, verification of concrete placement, and verification of concrete properties.

During construction of the Leachate Collection and Detection Systems, the Contractor shall perform QC tests according to Table 8-1. The Engineering Inspector shall perform QA tests of the same type and at the same frequency as those tests shown in Table 8-1.

TABLE 8-1. QA/QC MEASURES FOR LEACHATE COLLECTION AND DETECTION SUMPS AND PIPING

Parameter	Test Method	Testing Frequency	Test Standard	Rejection Criteria
Pipe Grade	Visual/Level	100%		Manually move piping to meet grade specifications
Pipe Joints	Visual			Repair joints to meet joint specifications.
Backfilling over Pipe	Visual		No damage	Remove and replace all piping damaged during backfilling.
Sump Formwork	Visual			Repair formwork not meeting the required dimensions
Concrete Strength	ASTM C-78	1 per truck	3000 psi 28-day Strength	Reject concrete not meeting the required 28-day strength

9.0 REFERENCES

AASHTO T-99, "The Moisture Density Relations of Soils Using 2.5 kg (5.5 lb) Rammer and a 305mm (12 inch) Drop."

ASTM C-78, "Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)."

ASTM D-422, "Standard Method for Particle-Size Analysis of Soils."

ASTM D-638, "Type M-1, "Tensile Properties of Plastics."

ASTM D-698, "Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort."

ASTM D-1505, "Standard Test Method for Density of Plastic by the Density-Gradient Technique."

ASTM D-1556, "Test Method for Density of Soil In Place by the Sand-Cone Method."

ASTM D-1587, "Standard Practice for Thin-walled Tube Sampling and Soils."

ASTM D-1603, "Standard Test Method for Carbon Black in Olefin Plastics."

ASTM D-1621, "Compressive Properties of Rapid Cellular Plastics."

ASTM D-2216, "Laboratory Determination of Water (Moisture) Content of Rock and Soil."

ASTM D-2922, "Standard Test Methods for Density of Soil and Soil Aggregate In-Place by Nuclear Methods (Shallow Depth)."

ASTM D-3015, ""Standard Practice for Microscopical Examination of Pigment Dispersion in Plastic Compounds."

ASTM D-3017, "Standard Test Methods for Water Content of Soil and Rock In-Place by Nuclear Methods (Shallow Depth)."

ASTM D-4318, "Liquid Limit, Plastic Limit and Plasticity Index of Soils."

ASTM D-4437, "Practice for Determining the Integrity of Field Seams Used in Joining Flexible Polymeric Sheet Geomembranes."

ASTM D-4716, "Standard Test Method for Constant Head Hydraulic Transmissivity (In-plane Flow) of Geotextiles and Geotextile Related Product."

ASTM D-5084, "Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter."

ASTM D-5089, "Standard Practice for Design and Installation of Groundwater Monitoring Wells in Aquifers."

ASTM D-5199, "Measuring Nominal Thickness of Geotextiles and Geomembranes."

ASTM D-5994, "Standard Test Method for Measuring Core Thickness of Textured Geomembrane."

Hydrometrics, 2007. Design Analysis Report, Asarco East Helena, Corrective Action Management Unit (CAMU) Phase 2 Cell, January 2007.

MT-209, "Los Angeles Abrasion (Wear Test)."

MT-217, "Method for Determining Percentage of Mechanically Fractured Particles."

A.2 HEALTH AND SAFETY PLAN

HEALTH & SAFETY PLAN

1.0 SCOPE

This procedure identifies those safety rules that are applicable to all areas of the site and/or all employees subcontractors, sub-tiers, employees, and visitors.

2.0 GENERAL RESPONSIBILITIES

During the course of work, each person who directs the activities of employees will monitor the work activities. The Environmental Health & Safety Plan (EHS) will be incorporated into the planning and execution of work.

2.1 Disciplinary Action

2.1.1 Policy

URS Corporation/Cleveland Wrecking Company (URS/CWC) will provide a safe and healthy workplace for its employees and will strive to minimize injuries to people, damage to property and loss to process. A disciplinary action policy will support URS/CWC and ASARCO, LLC in realizing a safe and healthy workplace.

2.1.2 Standards

The personal safety and health of each employee of URS/CWC is of primary importance. Prevention of Occupational induced injuries and illnesses is of such consequence that it will be given precedence over operational productivity. All Federal, State & local laws and regulations as well as site specific safety rules and plans will be followed by all employees, subcontractors and vendors of URS/CWC.

Deviations and/or revisions shall be reviewed and approved by URS/CWC and ASARCO.

A. All Employees:

1. Will comply with the rules of safe conduct.
2. Will immediately report to their supervisor any known violations.

B. Supervisor:

1. Will investigate reported safety violations.
2. Will consult with management on actions needing discipline.
3. Will initiate the disciplinary process when violations are detected.
4. Will administer disciplinary action in conjunction with Personnel Department.

2.2 Emergency Procedures

2.2.1 Scope

This procedure provides the requirements for orderly emergency evacuation in the event of a major emergency, fire, explosion, chemical spill, serious injury or unusual occurrence.

2.2.2 Definitions

URS/CWC Emergency Notification:

A. Emergency - An emergency is an event that causes or may cause widespread personal injury, death, major property loss, or severe disruption of normal site activities.

B. Emergency Alarm - The emergency alert alarm is a series of short foghorn blasts.

C. All Clear - The all clear signal is long foghorn blast, and sounds when the emergency is under control.

D. Emergency Coordinator - The Project Superintendent, Safety Supervisor or Shift Safety Coordinator.

2.2.3 General

A. An emergency is reported by the most expeditious means:

1. Telephone: Dial ***911*** and report the incident as follows:

   a. Type of emergency
   b. Location: area and building
   c. Signify what material and equipment is involved.
   d. Stay on line until instructed to hang up.

B. All employees are to report to designated areas after the Emergency alarm has sounded, for a head count. The head count will be immediately reported to the ASARCO Supervisor. Those employees that have work in the affected area will not be allowed to return until the all clear signal has sounded. All permits in the affected area will have to be re-authorized prior to starting work.

C. Evacuation of the entire site may be necessary due to the severity of the emergency. URS/CWC supervision will contact ASARCO personnel to evacuate to the pre-determined assembly areas.

2.3 Fire Protection and Prevention

2.3.1 Protection

A. Prior to commencing operations that may produce arcing, sparking or similar sources of ignition; the following requirements will be satisfied.

1. URS/CWC will place or locate fire extinguishers throughout the site as required by the Corporate Safety Program and ASARCO requirements.

2. For all operations involving a potential source of ignition, approved fire protection equipment required to protect personnel, property and facilities will be provided.

3. All flammable and combustible materials will be stored, piled and handled with due regard to their fire characteristic. Flammable liquids will be stored in an approved manner and dispensed only in acceptable, safety containers. Welding gases will be stored in isolated areas and segregated by type of gas.

4. Particular care will be taken when flame-producing operations are located in areas where combustibles are exposed. In such cases, combustible materials will be moved or protected with fire resistant blankets and an adequate number of fire extinguishers in the immediate area.

B. Supervisors will maintain a constant awareness of the fire potential in their areas of responsibility. If a fire occurs, the supervisor will immediately sound the alarm and direct the fire department to the fire location. He will take the necessary action to protect life and Client property.

C. Fire extinguishers will be used only for their intended purpose. This equipment must not be blocked.

D. System Components

1. Extinguishers

a. Carbon Dioxide
b. ABC powder
c. Pressurized Water Containers

E. Responsibilities

1. Project Manager

Will have overall fire prevention and fire suppression authority and provide adequate fire fighting, rescue equipment and protective clothing to meet anticipated needs.

2. Supervisor

Will have direct fire prevention and fire suppression responsibilities consistent with his duties.

2.3.2 Fire Prevention

A. The Fire Department has the primary responsibility for fighting fires. However, all personnel are responsible for being alert to possible fire hazards. In the time period between reporting and arrival of the fire equipment, personnel may be required to participate in initial fire-fighting activities. Therefore, the following requirements will be satisfied.

1. For all operations involving a potential source of ignition, approved fire protection equipment required to protect personnel, property and facilities will be provided. A fire watch shall be posted as required for not less than 30 minutes upon completion of the operation and/or during the operation.

2 All flammable and combustible materials will be stored, piled and handled with due regard to their fire characteristic. Flammable liquids will be stored in an approved manner and dispensed only in acceptable safety containers. Welding gases will be stored in isolated areas and segregated by type of gas.

3. Particular care will be taken when flame-producing operations are located in areas where combustibles are exposed. In such cases, combustible materials will be moved or protected with fire resistant blankets and an adequate number of fire extinguishers in the immediate area (within 25' of flame source).

B. When working at a Client's facilities, client's fire protection requirements may supersede URS/CWC requirements.

C. Know where the nearest phones are located, and phone number of the fire department.

D. Allow plenty of clearance on all sides of temporary heaters. Never place heaters on combustible floor or materials.

E. Buildings and trailers using heating devices will be well ventilated.

F. Know the location of fire extinguishers and the correct type to use for different types of fires.

G. Keep extinguishers in the clear. Do not tamper with them and know how to use them.

IN CASE OF FIRE

1. TURN IN AN ALARM AT ONCE
2. USE THE RIGHT TYPE OF EXTINGUISHER
3. USE AVAILABLE FIRE FIGHTING EQUIPMENT CORRECTLY. DO NOT DELAY
4. BE SURE FIRE EXTINGUISHERS ARE TURNED IN FOR RECHARGING.

2.4 First Aid

2.4.1 First aid and medical services and arrangements for emergency transportation of URS/CWC employees who sustain occupational injuries or illnesses are the responsibility of URS/CWC. Special medical emergency situations may warrant Client assistance.

2.4.2 First Aid Facilities

A. General

1. URS/CWC employees who sustain a first aid type injury, shall be treated by a trained person on site. In the event of a serious injury or illness, a private ambulance where available and authorized and/or the local Fire Department Paramedics will be utilized.

2. A report of industrial injury or illness will be completed for all personnel who report to the first aid facility for treatment. This report will be completed by the attending medical personnel and will specify the type of treatment given.

3. Medical cases that require treatment beyond the scope of the facility will be referred to an off-site physician or hospital as determined by severity of injury/illness.

B. Transportation of Injured or Ill Employees

1. Non-Emergency

It is the responsibility of URS/CWC to provide suitable transportation from the Project site to the first aid facility.

2. Emergency

a. The proper handling of seriously injured or ill employees at the project and their prompt dispatch to the hospital will, to a great extent, minimize confusion and offset the negative reaction which often occurs after a serious incident has taken place.

b. The method of emergency transportation to the first aid facility or hospital will be by community ambulance, "Life Flight" helicopter, or other suitable transportation (necessity of the "Life Flight" helicopter shall be determined and summoned by the Paramedics on scene).

c. The hospital emergency room will be notified when the emergency transport vehicle is dispatched off site by URS/CWC. All available information regarding the nature and extent of the injury or illness will be given to the hospital medical staff.

2.4.3 After attending to an employee's injury/illness, the following information will be noted in the First Aid log:

A. Date and time of injury

B. Employee's social security number

C. Employee's name

D. Name of employee's supervisor

E. Location of accident

F. Nature and cause of injury/illness and exact location of injury (part of body involved.)

G. Treatment rendered

2.4.4 Injury Management

A. An employee who has sustained an on-the-job injury or illness may return to work provided that the attending physician or physician's assistant has given written approval and provided that the normally assigned tasks for that employee are still available which meet his or her physical restrictions or limitations.

2.4.5 Reporting Alleged Industrial Injuries

A. The employee is required to immediately notify the Site Superintendent of any alleged industrial injury. Failure to do so may result in the denial of claim for compensation benefits.

B. This policy will also be stated during the employee new hire orientation and referenced regularly during "Toolbox" safety meeting topics.

2.5 Hazard Communication / Right-To-Know

2.5.1 General

A. The Hazard Communication/Right-to-Know program is necessary to ensure that Client and URS/CWC employees, as well as communities, are informed concerning chemicals in the workplace. The program will meet all requirements of OSHA 29 CFR 1910.1200, SARA Title III, MSHA as well as state and community "Worker Right-To-Know" laws.

B. URS/CWC will provide ASARCO with information pertaining to chemicals and process materials, which are or may be placed in the site area included in URS/CWC's Scope of Work. Information may include such documents as material safety data sheets (MSDS's), chemical information summary sheet, chemical handling procedures, etc.

C. Each contractor will supply URS/CWC with "copies of MSDS's" and inventory information for each chemical brought onto Client property and will include a written hazard communication program in its site-specific safety manual.

D. An MSDS for all contaminants will be made available on site.

2.5.2 Program Requirements

The specific requirements of the hazard communication/ right-to-know program include the following:

A. Copies of MSDS's for chemicals planned for use during the project.

B. Provisions for assuring that all chemical containers are properly labeled when received from vendors and that containers remain properly labeled.

C. Inventory listing of chemicals brought onto Client property.

D. Copy of employee training program URS/CWC will use for indoctrinating employees.

2.5.3 Definitions

Except where noted otherwise, terms used in this section will be consistent in meaning with definitions found in 29 CFR 1910.1200(c).

A. "Chemical" means any element, chemical compound, or mixture of elements and/or compounds.

B. "Container" means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.

C. "Exposure" or "exposed" means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g., accidental or possible) exposure.

D. "Hazard warning" means any words, pictures, symbols, or combination thereof appearing on a label, or other appropriate form of warning, which conveys the hazards of the chemical(s) in the container(s).

E. "Hazardous chemical" means any chemical that is a physical hazard or a health hazard.

F. "Health hazard" means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.

G. "Label" means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

H. "Laboratory" means any distinct area or room where analytical or research functions are carried out and which are not directly part of product manufacture, formulation, preparation, testing, or shipping. Laboratories are characterized by high variety, but small quantities of chemicals and by limited access and low numbers of employees who may come in contact with these chemicals (Not an OSHA definition).

I. "Material safety data sheet (MSDS)" means written or printed material concerning a hazardous chemical, which is prepared in accordance with 29 CFR 1910.1200(g).

J. "Mixture" means any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

K. "Physical hazard" means a chemical for which there is scientifically valid evidence that it is combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

2.5.4 Responsibility

A. URS/CWC is responsible for the development and implementation of a Hazard Communication Program that will apply to the scope of work for the project(s) performed for URS/CWC. URS/CWC will maintain a complete chemical hazard information database (MSDS's). Information may be transmitted via labels, MSDS's, and training programs.

B. It is the responsibility of URS/CWC employees to use the information given to them and to protect themselves and their coworkers at all times against chemical hazards. Where URS/CWC employees believe that hazard information is missing or inadequate, they will be instructed by URS/CWC to request additional information from their supervisor. URS/CWC

management will make every effort to obtain adequate information and to review the information with affected personnel.

2.5.5 Program Elements

A. Material Safety Data Sheets (MSDS):

1. There will be an MSDS on file at the project site for each hazardous chemical, substance, or mixture present at the site or intended for use at the site.

2. Copies of the MSDS's will be used for indoctrinating and training URS/CWC employees and will be maintained readily available for reference by URS/CWC employees.

3. Copies of the MSDS's will also be provided to the ASARCO management prior to bringing chemicals on site.

4. Copies of the MSDS's will be made readily available to all affected subcontractors and other contractors associated with the project.

B. Labeling

1. It will be the responsibility of URS/CWC to ensure that each container of hazardous chemical, which is delivered to the project work site or other Client facilities, is properly and adequately labeled.

2. While it is recognized that it is the responsibility of the chemical manufacturer to label chemical containers, it will be the responsibility of URS/CWC to determine the adequacy of the labels and to maintain labels on containers so they remain legible.

3. Containers of hazardous chemicals will be labeled with the name of the chemical or substance, appropriate hazard warnings (defined below), and the name and location of the manufacturer. Where a number or code system is used, a key to the code system will be included as part of the container label. Hazard warnings may consist of the NFPA Fire Hazards System (Health, Flammability, and Reactivity code numbers), physical hazard warnings, and a hazard statement.

   The NFPA System consists of the familiar blue, red, yellow, and white "diamond" filled with numerical ratings from 0 to 4 for the categories of health, flammability, and reactivity. The white space on the diamond is available for symbols warning against water contact, oxidizers, and so forth. The source for these ratings is NFPA 325M-1094, "Fire Hazard Properties of Flammable Liquids, Gases and Volatile Solids." This system is chosen because it is in wide use and the information is important for fire fighters and/or emergency response teams.

The physical hazard warning will consist of one or more words, which describe the major physical hazard(s), posed by the chemical. The physical hazard categories include, but are not limited to, the following:

Combustible
Compressed Gas
Explosive
Flammable
Organic Peroxide
Oxidizer
Pyrophoric
Unstable
Water-Reactive

The health hazard warning will consist of a word or short phrase, which conveys the major health hazard(s) posed by a hazardous chemical. The health hazard categories include, but are not limited to, the following:

Corrosive
Known Carcinogen
Suspect Carcinogen
Inhalation Hazard
Irritant
Narcotic
Neurotoxin
Poison
Radioactive
Reproductive Toxin
Sensitizer
Skin Absorption Hazard
Skin Contact Hazard–Acidic
Skin Contact Hazard–Caustic

The hazard statement will consist of a short statement, which conveys hazard information important to the user of the chemical. These statements will be specific to the chemical or family of chemicals in the container. Where appropriate, the target organ, which may be affected by overexposure, will be included.

4. When hazardous chemicals are transferred to other containers, the new container will be fully labeled as described above, except when only one employee will be using the transferred chemical. When only a single employee will use or have access to the chemical, the container need be labeled with only the name of the chemical. It is more common, however, that portable containers of solvents and other chemicals are used by more than one employee, and in these cases, complete hazard labels will be attached to the portable container.

Transfers will be made only to "approved" containers (e.g., safety cans for flammables); transfers to containers still labeled with previous contents or to food containers (e.g. soft drink cans or bottles) will be strictly prohibited.

C. Chemical List and Inventory

An inventory record for all hazardous chemicals will be developed and maintained. The inventory record will show in addition to the information required in the list maintained above, the date shipments to the inventory were received and where supplies were taken from inventory for use. An authorized representative of URS/CWC will sign both the list and the inventory record.

D. Education and Training

1. It is the responsibility of URS/CWC to assure that all their employees are adequately trained relative to the chemical hazards to which they may be exposed. Training requirements include initial training and specific training for both existing employees and new-hire employees who may be exposed to chemical hazards.

2. Basic "Hazard Communication" training will be given to existing and new-hire employees which covers the general provisions of the regulations governing chemical hazard communication, employees' rights under the law, how the program works, what an MSDS is and how to read it, and the basic concepts of toxicology (dose-response concepts, routes of entry, hazard categories, etc.).

3. Specific training will be given to employees covering the hazards of specific chemicals that the employees will handle or to which they may otherwise be exposed; safe work procedures to be followed in working with specific chemicals; methods of determining that unacceptable exposures are occurring or are threatening to occur; protective measures to be taken to prevent exposures from occurring (personal protective clothing and devices, etc.), and emergency procedures.

4. URS/CWC will develop a written hazard communication, training program and will submit a copy of the program to the ASARCO Project Manager.

5. Training will include as a minimum:

   a. Hazardous substances currently present in the work area.

   b. Where written procedures, Material Safety Data Sheets, hazardous substance lists and the OSHA Hazard Communications Laws.

c. Measures the employee can use to protect themselves.

d. Methods of observation, such as appearance or odor, that workers can use to detect the presence of hazardous materials.

e. Uses maintenance, and care of personal protective equipment.

f. Performances of non-routine task involving hazardous substances.

2.6 Incident Investigation and Procedures

2.6.1 Purpose and Scope

To establish an effective procedure for the investigation and reporting of all accidents.

2.6.2 Accident Investigation:

A. All accidents or incidents that result in a work related injury or illness will be investigated.

B. All property damage accidents will be investigated.

C. All near miss incidents that had potential for injury or loss.

2.6.3 Reporting

The requirements for accident reporting are as follows:

A. All incidents i.e. property loss, and injuries or illnesses which require medical attention, hospitalization or result in a fatality will be immediately reported. The supervisor will make immediate notification to ASARCO.

B. Final reports will be completed within five working days of occurrence.

C. All accidents that require hospitalization or that result in a fatality will be reported in the following format:

1. Name of injured
2. Date and time of injury
3. Type of injury
4. Location of accident

5. Brief factual description of the event

6. Sequence (activities prior to and after accident)

7. Investigation (facts determined during the investigation)

E. Photographs

1. Photographs will be taken during the investigation of all incidents and accidents as well as accidents involving serious personal injury, substantial property damage, equipment or material failure, and all accidents that may, even remotely, involve third party action.

2. Photographs will be sufficient in number to adequately reflect the general area as well as pertinent details from a variety of angles. Photographs will be taken as soon as possible following the accident. A concise record will be made of the locations and conditions photographed. If photographs contain proprietary information, mark all photographs **"TRADE SECRET."**

F. Exhibits (all exhibits will be referenced in the body of the report)

1. Death Certificate/Coroner report

2. Autopsy Report

3. Sheriff/Police Report and Photographs

4. Witness Statements - All information within the content of the statement will be based upon factual information that can be documented or substantiated. Recommendations, guesses, fault, or any other supposition will not be included in the report.

5. Miscellaneous (Results of analysis or other activities, such as expert consultants report.)

2.7 Occupational Health

2.7.1 Policy

URS/CWC will provide a safe and healthy workplace for its employees and will strive to minimize injuries to people, damage to property, harm to the environment, and loss to process. We will accomplish this through a complete loss control program, which encompasses a personal hygiene program.

A. Combustible garbage will be disposed of in covered metal cans.

B. Refuse from lunches, etc will be disposed of in covered metal cans.

C. Refrigerators will be cleaned out at the end of each week.

D. Employees will only go to the bathroom in approved and provided toilet facilities.

E. The toilet will be flushed after each use.

F. Used toilet paper will be disposed of only in the toilet.

G. Employees will wash their hands after using the toilet.

I. Changing facilities will be provided for certain areas of the facility as deemed necessary.

J. Employees will not feed animals or encourage them to stay around the facility.

K. Employees will practice any other good personal hygiene practices not listed above.

2.8 Orientation of New Employees

2.8.1 All newly hired URS/CWC employees will be required to attend a safety orientation on the first day of employment. URS/CWC will conduct the orientation prior to assigning employees to begin work. This includes craftsmen, laborers, supervisors, office staff, and subcontractor personnel.

2.8.2 A short-term contractor (one-time visit of eight hours or less) does not require safety training if accompanied by an authorized Client representative but will be given appropriate hazard recognition training.

2.9 Personal Protective Equipment

The harmful effects contaminated substances may have on the human body often necessitate the use of protective clothing. Protection against different types of chemicals and differing concentrations of those substances can be quite different. The work function and the probability of exposure to the substance must also be considered when specifying protective clothing.

Once the specific hazard has been identified, appropriate clothing can be selected. The protection level assigned must match the hazard confronted. Protective clothing ensembles, range from safety glasses, hard hats, and safety shoes to fully encapsulating suits with a supplied source of breathing air.

Protective clothing protects primarily because of the properties of the material from which it is made. In selecting the protective material, chemical resistance, strength, flexibility, thermal limits, and cleaning ability should be considered.

2.9.1 Head Protection

The wearing of head protection (hard hats) on field jobs is mandatory for personnel and project visitors. Hard hats will comply with ANSI specifications.

2.9.2 Eye Protection

At a minimum, eye protection (face shields, as applicable) shall be worn at all times. Project management will make conveniently available to all site personnel and visitors a type of protector suitable for the work to be performed.

Eye protection will be required where machines or operations present danger from, flying objects, direct or reflected brightness (glare), hazardous liquids, or a combination of these hazards. Eye protection will meet the following minimum ANSI requirements and:

- Provide adequate protection against the particular hazards for which they are designed.
- Be reasonably comfortable when worn under the designated conditions.
- Fit snugly and not unduly interfere with the wearer's movements.
- Be durable.
- Be easily cleaned and disinfected.

Contact lenses do not provide adequate eye protection and will not be worn in hazardous environments. Persons whose vision require correction and are required to wear eye protection will wear goggles or spectacles of one of the following types:

- Spectacles whose protective lenses provide optical correction (Rx).
- Goggles that can be worn over corrective (Rx) spectacles without disturbing the adjustment of the spectacles.
- Goggles that incorporate corrective (Rx) lenses mounted behind the protective lenses.

The use of both safety glasses and a face shield are advisable as long as they do not impair visibility.

2.9.3 Hearing Protection

According to 29 CFR 1926.52, ear plugs or earmuffs shall be issued when noise levels exceed above the TWA (8 hour day, average) of 85 decibels (dBa), such as around heavy machinery and impact tools.

2.9.4 Respiratory Protection

A. Respiratory protection devices approved by the National Institute of Occupational Safety and Health (NIOSH) or US Bureau of Mines will be worn by employees when exposed to hazardous concentrations of toxic dust, fumes, or mists as required by OSHA.

B. For known exposures that will require repeated respirator usage, a written respiratory protection program will be necessary.

2.9.5 Fall Protection

A. Fall protection and/or arrestors meeting OSHA standards will be worn by all employees when required. Safety harness lanyards will be a minimum of one half inch nylon or equivalent with a maximum length to provide a fall of no greater than six feet.

B. Safety harness lanyards will be secured to a structure capable of supporting the force exerted, if a fall occurs. This securing position will be at waist level or higher.

2.9.6 Foot Protection

Serviceable work shoes or boots with substantial sole and sides that protect the foot are required for all employees (ANSI approved). Athletic type shoes, sandals open toed shoes, etc. are not acceptable.

2.9.7 Suitable Clothing

All employees will wear clothing suitable for their work. Minimum clothing is sturdy work shoes, long pants, and a shirt with sleeves. Shorts, cutoffs, tank tops and/or mesh shirts are not permissible.

2.9.8 Maintenance of Equipment

Personal protective equipment, which has been altered in any manner, so as to reduce its effectiveness, will be repossessed, repaired or destroyed.

2.9.9 Other Personal Protective Equipment

Other equipment may be required for unusual circumstances such as high temperature work, handling corrosive liquid, etc. Requirements not specifically covered in this section will be reviewed with company management.

2.10 Reporting Unsafe Acts and Conditions

2.10.1 URS/CWC supervisors and employees are to report conditions, which present a hazard to themselves, other workers, equipment and/or facilities. URS/CWC will take immediate steps to

investigate and if required correct the conditions. If the condition(s) pose imminent danger to workers, work will be stopped and the condition corrected.

2.10.2 Supervisors are required to respond to complaints of unsafe activity or conditions and correct them immediately.

2.11 Safe Work Areas

2.11.1 Purpose

To ensure that a new or modified operation, process, major item of capital equipment or unusual construction activity is safe by confirming that all health and safety concerns have been addressed in advance.

2.11.2 Scope

This procedure is applicable to all operations.

2.11.3 Requirements

A. A Health and Safety Review will be held when:

1. A new or modified operation is to be started.
2. A new process is developed or an existing process has been expanded or significantly revised.
3. A major item of capital equipment is to be purchased or put into service.
4. An unusual or hazardous construction activity is to be started.
5. A chemical or hazardous substance is to be handled for the first time and the hazardous substance's properties are significantly different from materials usually handled.

Note: Review of these requirements shall be conducted by the URS/CWC Health & Safety.

B. The pre-start up health and safety review will be held before the start up of the operation and after installation or revision is sufficiently completed for a proper evaluation and/or physical inspection.

C. There will be adequate time provided following the evaluation and/or inspection and before start up for the reviewing personnel to completely address concerns that may develop.

2.11.4 Procedure

A. Team Selection:

1. The Safety Supervisor or Construction Manager has the responsibility for establishing the need for a safety review and initiating the review with a written document.

2. When necessary, the initiating manager will select a health and safety review team from different disciplines depending on the type and scope of the project.

3. The team will be composed of safety personnel, and if warranted, members from engineering, technical products, operations, etc., depending on the requirements of the project. Other individuals from specialized functions, both within and outside of the Company, may be appointed to a team as deemed advisable. The senior safety member of the team will act as team leader. Additional members of the team may be composed of a representative from the original project, operational personnel, and at least one or more members not directly related to the project under review.

B. Preparation and Execution:

1. The representative from the project is responsible for familiarizing the team with the project and for reviewing the final report prior to publication.

2. The team will become familiar with the operating aspects of the project or process being evaluated.

3. The team will be aware of Safety and Health considerations identified in the design review and included in the project design. Team members will look for application of design/operating features to address hazards that have been identified in the company's major loss experience. It is not intended that the inspection includes a review of the unit design criteria or construction specifications.

4. When considered necessary, the team will physically inspect the project location to assure that process installation, personal safety, environmental concerns and health hazards are satisfied.

5. Operating procedures and operator training will be reviewed to verify that they contain adequate provisions for start-up, operation, and shut down as well as component failure and emergency response activities. Operating procedures and training will address all health and safety aspects of the project.

6. In some cases, maintenance procedures, training, inspection criteria and critical spare parts availability will be reviewed.

2.11.5 Reporting and Follow-up:

A. The team leader will prepare a written report to the Corporate EHS Manager. The inspection will be documented, and the more significant deficiencies and/or concerns will be highlighted for attention or corrective action prior to start-up. Other deficiencies noted or concerns developed by the team will also be included in the report.

B. The Project Manager is responsible for correcting the significant deficiencies and/or concerns highlighted by the team prior to approval for start-up and operation of the project.

C. The Project Manager will propose an action plan that addresses the safety deficiencies and concerns noted by the team with accountability assignments and completion dates.

2.12 Safe Work Practices

2.12.1 ASARCO Demo Project – East Helena, MT

The purpose of the section is to identify and address safety issues pertinent to this project.

A. Demolition for ASARCO will proceed in the following manner. All work will be performed in accordance with the appropriate **URS Corporation Safety Management Standards** , hereinafter referred to as **"URS SMS".** All site activities associated with **ASARCO** will require compliance with the following SMS.

Project Hazard Analysis
Regulatory Inspections SMS #001
Worker Right to Know (Hazard Communication) SMS #002
Emergency Action Plans SMS #003
Accessing Industrial Sites SMS #004
Aerial Lifts SMS #007
Asbestos SMS #008
Corrosive and Reactive Materials SMS #009
Confined Space Entry SMS #010
Demolition SMS #011
Excavation Safety SMS #013
Fire Prevention SMS #014
Flammable, Combustible Liquids and Gases SMS #015
Hand Tools and Portable Equipment SMS #016
Hazardous Waste Operations SMS #017
Heat Stress SMS #018
Heavy Equipment Operations SMS #019
Hot Work SMS #020
Housekeeping SMS #021

Lead in Construction SMS #022
Medical Surveillance SMS #024
New Employee Health & Safety Orientation SMS #025
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Hand Safety SMS #064
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Incident Investigation SMS #066
Manual Material Handling SMS #069
Powered Industrial Trucks SMS #070

Note: The URS Health and Safety Program and Management System shall be available in the project construction trailer at all times to all URS/CWC employees, subcontractors, vendors, and ASARCO.

B. Protective clothing requirements for heavy wrecking of structures have been identified and are as follows:

1. All equipment operators will wear long pants, a shirt with sleeves (no tank top style shirts), leather type boot, eye protection, hearing protection, respiratory protection in dusty conditions, hard hats and high visibility orange vest.

2. All laborers will wear long pants, shirts with sleeves, hard hat, high visibility orange vest, safety glasses, have hearing protection available, have respiratory protection available for dusty conditions, leather type work gloves, and leather type safety boot.

3. All personnel walking in work areas are to wear high visibility vests, hard

hats, safety glasses, and have proper work style boots. They are to ensure the equipment operators know where they are at all times when working within the swing radius of the excavator or travel path of any equipment.

2.13 Safety Education

2.13.1 Purpose and Scope

To establish training and education guidelines for all employees.

2.13.2 Goals of Education and Training

The primary goal of education and training is to ensure that URS/CWC trained employees are aware of the safety procedures in order to maintain a safe work environment. To this end, the most important knowledge and skill to be acquired by the attendees are:

A. To be able to differentiate hazardous material from non-hazardous. Employees will need to know its nature and characteristics, and why it is a hazardous substance.

B. To protect oneself in the process of moving or handling material. Employees will need to know relevant federal and state regulations on personal safety. They will need to know the protective equipment available (respirators, clothing, etc.) and demonstrate ability to use them properly. They will need to know about other hazards and methods of personal hygiene and decontamination.

C. To protect others from exposure to hazardous materials. They will need to know and demonstrate skill in proper use of equipment.

They will need to know the legal rights and responsibilities of the employee/employer. They will need to know how to safely dispose of hazardous materials and to prevent the contamination of others.

2.13.3 General

A. A proven means for instituting and reinforcing a safety program is through carefully planned and conveyed safety education, training and informational activities. These activities are to be presented logically and systematically to ensure that all employees know their obligations and responsibilities as they apply to the overall safety effort.

B. URS/CWC recommends different means, that these activities relating to work hazards and their controls are conveyed to the employees. These means include, but are not limited to:

1. New hire safety orientation/indoctrination by Safety and Supervisory Representatives.

2. Weekly Manager safety meetings.

3. Daily "Toolbox" safety meetings.

4. Project bulletin boards.

2.13.4 New-Hire Safety Orientation

A. All newly hired employees will be required to attend a safety orientation on the first day of employment. The orientation will be conducted prior to assigning employees to begin work. This includes craftsmen, laborers, supervisors, office staff, and subcontractor personnel.

B. In addition to the above referenced presentation, the following will be discussed:

1. URS/CWC Safety Philosophy - The importance that URS/CWC attaches to health and safety matters, including the desire to fully comply with federal and state safety and health act regulations as well as the URS Corporation Health and Safety Manual.

2. Employees' Safety Responsibilities - Employees are to take care to protect the health and safety of themselves and other workers and to cooperate with URS/CWC's safety effort.

3. First Aid - The reporting procedures for occupational injuries and illness will be reviewed. Every injury, no matter how slight, will be reported to the first aid facility and to the employee's foreman. Any employee who has obtained outside medical treatment for an alleged work site injury or illness will report his or her injury or illness and the name of the attending physician to the first aid facility and his/her supervisor no later than the first normal scheduled workday following his or her outside medical treatment. Failure to comply with this policy may result in the denial of workers compensation benefits and may be cause for termination.

4. "Toolbox" Safety Meetings - Every employee will be informed that attendance at scheduled daily contractor Supervisor "Toolbox" safety meetings is mandatory. This daily meeting will allow employees to ask questions, offer suggestions and air complaints regarding safety on the project.

5. Reporting of Unsafe Acts or Conditions - Each employee will be informed that URS/CWC expects them to report all unsafe acts or conditions to supervision, who will either resolve the problem or refer it to a higher project authority. Any unresolved problem will be reported to the Safety Director. In cases of "imminent danger," the first URS/CWC supervisor the employee can find will be informed of the situation.

6. Personal Protective Equipment - Every employee is required to wear an approved hard hat, safety glasses, and have proper work style boots at all times. In addition, each employee will be made aware that other forms of protective equipment (full body harness and lanyards, face shields, hearing protection, respiratory protection, etc.) may be required. This equipment will comply with all government, Client and URS/CWC personal protective equipment requirements and standards. If the use of personal protective equipment is deemed necessary for a specific work task, its proper use is mandatory. Repeated non-use of personal protective equipment when required will be cause for termination

   Employees that are provided with appropriate personal protective equipment are responsible for inspection of this equipment before using. If the employee determines the equipment is in need of repair or replacement, the employee will notify his/her foreman immediately and obtain a replacement.

7. Emergency Procedures - Each employee is to be informed on established project emergency procedures so that he/she may render assistance in case of serious injury, fires, evacuations, etc.

8. Each new employee or transferee will receive a safety, health and hazardous communication orientation. This will provide the employee with basic information regarding the project Safety & Health Action Plan, OSHA Standards and applicable Client rules and procedures. Additional safety and health instruction may be required for the performance of hazardous or unfamiliar tasks.

2.13.5 Employee Safety Meetings

Each supervisor is responsible for conducting daily "Employee Safety Meetings" with his/her employees. Attendance is mandatory for all employees.

2.13.6 Hazard Communication Training

Training will be conducted prior to employees being subjected to an exposure of a known hazardous substance. Training will address the degree of hazard, precautions to be taken and personal protective equipment required. Material Safety Data Sheets (MSDS) will be used in conjunction with all training. Employees will be instructed to obtain guidance from their supervisor prior to working with any unfamiliar materials.

2.13.7 Documentation

A record will be maintained on site and, as requested, given to the Client.

2.14 Safety Orientation for Supervision

Each supervisor will receive an orientation that outlines his/her duties and responsibilities for safety and health in daily work activities. As a minimum, this orientation will address the following items:

2.14.1 Safe Work Areas

Supervisors will become familiar with the conditions in each area of work to which their employees are assigned. Unsafe conditions that exist in the work area will be corrected prior to commencement of work. If this is not possible, the situation will be brought to the attention of the appropriate person, who will initiate corrective action.

2.14.2 Safe Work Practices

When making work assignments, supervisors will inform employees of the safe work practices, work methods and personal protective equipment required. Supervisors are responsible for ensuring that their employees use the proper personnel protective equipment and proper tools for the task.

2.14.3 Emergency Procedures

Supervisors will become familiar with the emergency procedures developed for their area of responsibility. This will allow them to provide the leadership and guidance required to cope with serious injuries, fires, excavations, etc.

2.14.4 Accident Investigation

Supervisors will participate actively in the investigation of any accident or incident that occurs in their area of responsibility.

A. Personal injury.

B. Equipment or property damage.

C. Near misses that had a potential for serious injury or loss.

2.14.5 Fire Protection and Prevention

Supervisors will maintain a constant awareness of the fire potential in their areas of responsibility. If a fire occurs, the supervisor will immediately sound the alarm and take the necessary action to protect life and property.

A. In areas where fire protection equipment is not present, fire extinguishers or other fire temporary fire protection will be made available.

B. Emergency equipment, such as fire extinguishers and hose reels, will be used only for its intended purpose. This equipment will not be blocked or otherwise tampered and maintained.

C. Flammable liquids will be kept in appropriate safe containers. An ABC Type fire extinguisher will be available within 25' at any flammable liquid storage area.

2.14.6 Enforcement Policy

Supervisors will inform their employees that any person who jeopardizes their safety and health and or the safety and health of others, will be subject to disciplinary action up to and including immediate termination.

2.15 Special Instructions and/or Information

2.15.1 Specialized Training

Training is an ongoing process and will be continued throughout the duration of the project as a new process revised regulatory requirements, or special training needs are identified.

2.16 Supervising for Safety

2.16.1 Policy

URS/CWC will provide a safe and healthful work place for its employees. We will accomplish this through strong management commitment, supervision of the work place and to a total loss control program, which involves controlling injuries to people, damage to property, loss to process, and harm to the environment.

A. Place priority on promoting safety and protecting health in relationship with economic factors.

B. Comply with all applicable laws, regulations and rules pertaining to health, safety and environmental issues.

C. Develop, implement and maintain safe working practices and procedures, and train each employee to perform their jobs in compliance with those practices and procedures.

D. Hold management accountable for ensuring that employees, equipment, facilities and resources, within their area of responsibility, are managed in a manner to minimize all losses.

E. Hold each employee responsible, within the bounds of his/her control, for the maintenance of safe and healthy working conditions; for compliance with safety, health, environmental regulations and practical procedures, and to do their job in a safe and efficient manner.

F. Ensure that safety, health and environmental factors and features are included in new and modified construction, and in the purchase of equipment and materials.

G. Provide a professional Loss Control staff to assist in planning and implementing proactive loss control programs.

2.17 Task Training

2.17.1 Purpose

A key method of successfully instituting and reinforcing any safety and health process is through a carefully planned and executed education and training system.

2.17.2 Scope

The contents of this section apply to all personnel performing work on URS/CWC projects.

2.17.3 Procedures

A. The supervisor is responsible for assuring each member of his/her crew has knowledge of the work being performed and that they are able to train new or transferred employees who are not familiar with the work, equipment or process.

1. *Supervisors will, through interview, determine whether the new or transferred employee* has knowledge sufficient to perform the tasks assigned.

2. Various project personnel, such as superintendents and first line supervisors, will participate in this process as instructors and advisors.

3. All training will be documented and records will be maintained at the site office.

A.3 AIR MONITORING RESULTS

DATA CHEM LABORATORIES, INC.

ANALYTICAL REPORT

Rush

Report Date APR 0 2 2008

Paul Brox
Paul Brox
121 Oak Lane
Butte, MT 59701

Phone: 406-494-5162

E-mail: pbrox@msn.com

Client Project ID: **Paul Brox 032808**
DCL Workorder: **8088007**
DCL Project Manager: Frank Smith

Analytical Results

Sample ID: **Hydro-7007-2008-1** | Media: MCE Filter | Collected: 3/20/2008
Lab ID: 8088007001 | Sampling Location: AsarcoEastHelenaPlan | Received: 3/28/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 901.2 L | Prepped: 4/1/2008 | Analyzed: 4/2/2008

Analyte	ug/sample	ug/m³	RL (ug/sample)
Arsenic	<6.0	<6.7	6.0
Cadmium	<0.10	<0.12	0.10
Lead	<1.8	<2.0	1.8

Sample ID: **Hydro-1054-2008-1** | Media: MCE Filter | Collected: 3/26/2008
Lab ID: 8088007002 | Sampling Location: AsarcoEastHelenaPlan | Received: 3/28/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 896.5 L | Prepped: 4/1/2008 | Analyzed: 4/2/2008

Analyte	ug/sample	ug/m³	RL (ug/sample)
Arsenic	<6.0	<6.7	6.0
Cadmium	<0.10	<0.12	0.10
Lead	**2.5**	**2.7**	1.8

Sample ID: **Hydro-7007-2008-2** | Media: MCE Filter | Collected: 3/26/2008
Lab ID: 8088007003 | Sampling Location: AsarcoEastHelenaPlan | Received: 3/28/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 1029.8 L | Prepped: 4/1/2008 | Analyzed: 4/2/2008

Analyte	ug/sample	ug/m³	RL (ug/sample)
Arsenic	<6.0	<5.8	6.0
Cadmium	<0.10	<0.10	0.10
Lead	<1.8	<1.7	1.8

DATA CHEM LABORATORIES, INC.

ANALYTICAL REPORT

Report Date: July 15, 2008

Paul Brox
Paul Brox
121 Oak Lane
Butte, MT 59701

Phone: 406-494-5162

E-mail: pbrox@msn.com

Client Project ID: **Paul 071408**
DCL Workorder: **8196005**
DCL Project Manager: Frank Smith

Analytical Results

Sample ID: **Hydro-7007-2008-3** | Media: MCE Filter | Collected: 7/10/2008
Lab ID: 8196005001 | Sampling Location: AsarcoEastHelenaPlan | Received: 7/14/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 826.6 L | Prepared: 7/14/2008 | Analyzed: 7/15/2008

Analyte	ug/sample	mg/m³	RL (ug/sample)
Arsenic	<6.0	<0.0073	6.0
Lead	**10**	**0.012**	1.8
Cadmium	**0.51**	**0.00062**	0.10

Sample ID: **Hydro-7007-2008-4** | Media: MCE Filter | Collected: 7/11/2008
Lab ID: 8196005002 | Sampling Location: AsarcoEastHelenaPlan | Received: 7/14/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 1021.6 L | Prepared: 7/14/2008 | Analyzed: 7/15/2008

Analyte	ug/sample	mg/m³	RL (ug/sample)
Arsenic	<6.0	<0.0059	6.0
Lead	**7.2**	**0.0071**	1.8
Cadmium	**0.36**	**0.00036**	0.10

Sample ID: **Hydro-7007-2008-5** | Media: MCE Filter | Collected: 7/11/2008
Lab ID: 8196005003 | Sampling Location: AsarcoEastHelenaPlan | Received: 7/14/2008

Method: NIOSH 7300 | Sampling Parameter: Air Volume 862.3 L | Prepared: 7/14/2008 | Analyzed: 7/15/2008

Analyte	ug/sample	mg/m³	RL (ug/sample)
Arsenic	<6.0	<0.0070	6.0
Lead	**7.1**	**0.0082**	1.8
Cadmium	**0.33**	**0.00038**	0.10

A.4 DUST CONTROL PLAN

DUST CONTROL PLAN

DUST CONTROL PLAN

PURPOSE AND SCOPE OF WORK

URS Corporation/Cleveland Wrecking Company (URS/CWC) will utilize heavy equipment for demolition of structures, processing of debris and haulage of said material, as well as movement of vehicles at the work site, and movement of demolition materials. "Worker safety and protection of the environment is paramount at all URS/CWC projects. URS/CWC will take all necessary precautions to minimize the exposure of nuisance and fugitive dust to employees and local citizens in the community." Control or evaluation of potential dust hazards shall be accomplished through observance by experienced personnel, inspection of the site conditions and equipment, and coordination of hazard observation with supervisory personnel and the site safety officer. The purpose of this procedure is to protect those employees and subcontractors performing operations for which exposures can not be controlled by use of conventional engineering or administrative controls and to require that respiratory protective equipment is selected, used, maintained, and stored in accordance with acceptable practices.

GENERAL REQUIREMENTS

The general requirements of this plan are to provide adequate resources to control dust and to detail the means and methods that will be utilized to implement dust control measures during the cleaning and demolition in order to support scheduled activities/operations within the ASARCO facility. URS/CWC's dust control measures are designed to control the emission of visible fugitive nuisance dust. These controls will be accomplished through the use of administrative, engineering, and physical controls that will include, but not be limited to the following:

- Wetting surfaces with water
- Application of dust suppressants or encapsulates, where applicable
- Minimizing soil, road, and surface disturbances
- Minimize dusting exposure periods and wind erosion before dust-abatement measures are applied
- Curtailing of work activities during high wind conditions (over 30 MPH sustained)
- Controlling vehicle/equipment speeds (10 MPH maximum)
- Restricting traffic to designated roads/corridors
- Equipment Selection

WORK AREAS

The following locations are the main areas of work for the project and may or may not generate nuisance and/or fugitive dust:

- Lay-down Area
- Foot print of the work area

- Processing of debris
- Equipment travel path
- High side and/or Low side haulage vehicle loading area
- Mobilization and De-mobilization of equipment

URS/CWC considers the mitigation of airborne dust generation to be a priority. Throughout the project, URS/CWC will take all necessary steps to effectively control dust in the working area during demolition operations. As previously mentioned, URS/CWC will remove at ground level and at all accessible areas all gross debris accumulation that could be a source of airborne dust. Furthermore, URS/CWC will institute a program of pre-wetting and moistening building interiors and horizontal surfaces where dust has accumulated. This pre-wetting of the structure interiors will limit the ability of remaining dust to become airborne during the demolition process. As the structures are demolished, the dust will be allowed to fall to the ground where it can be gathered, containerized appropriately, and placed into temporary storage or the CAMU.

Application With Water During Demolition

The use of water will be the main source for dust control. URS/CWC will keep all work areas (including roads, access points) within the facility, wet during work activities. This will be accomplished by using existing 2,000-gallon water trucks. Each water truck will be equipped with spray-bars for wetting haul and access roads; water cannons and necessary hoses, valves, and fittings will be used to provide spray water for dust control where needed in remote areas where a water truck can not be utilized.

Furthermore, during the life of the project water truck(s) will be available during the actual demolition of the above grade steel and concrete structures. Localized fine water spray pointed to the source of demolition (and therefore dust source) reduces dust particles to become airborne. Additionally, URS will utilize a Dust Boss™ water misting system. The Dust Boss™ is a fully automatic, oscillating ducted fan with a high pressure misting system that creates a high performance dust barrier. Dust Boss™ uses a high pressure misting system to create an ultrafine mist that attracts dust and drives it to the ground. During structure demolition, this equipment will be pre-positioned in an area that will ensure the generated dust barrier is effective. To minimize water run-off, both the water truck and Dust Boss™ water supply will be used only if necessary.

Dust Control During Stack Demolition

With regards to the felling of the stacks, all stack interior cleaning will have been previously performed to remove all loose dust and debris that could be a potential dust source. Dust generated from the felling process will come from two primary sources: (1) from existing soil and dust particles at grade; and (2) from the fracturing of stack concrete as it impacts the ground. To minimize the amount of dust generated from at grade soil, URS/CWC will utilize water trucks to soak the ground of anticipated stack landing zone. This will be performed on the day of the blast, based on the landing zone analysis of the blasting subcontractor. With regards to the fracturing of stack concrete as it impacts the ground, URS/CWC will several Dust Boss™ water misting

systems. These systems will be positioned adjacent to the landing zone of the stack to be felled. They will be turned on prior to the actual felling of the stack to create curtain of water mist particles around the impact area, thereby, minimizing generation of airborne dust. At all times during the stack felling process, the minimization of dust will be given top priority.

Dust Control During Loading and Debris Transportation

During loading, unloading, and material transfer operations, URS/CWC will minimize material drop heights to reduce emission of fugitive dust. During loading of demolition debris, additional spray water will be utilized to control fugitive dust emissions from this operation. After demolition debris is loaded into the truck beds, URS/CWC will then wet the debris payload down prior to the vehicle leaving the loading areas.

As described above, during debris transportation, URS/CWC will construct a truck wetting station at the exit of the ASARCO site over to the CAMU site. This station will consist of a scaffolding platform on which personnel will spray water on the loaded debris as a final step before it travels outside the property fence line and across the County road. The spray will add a final moisture barrier/binder to the debris for the short distance to the CAMU. Transport vehicles will be limited to a maximum 10 miles per hour while both on-site and during transport. Limiting speeds will prevent dust from become airborne during transport and will prevent the kick-up of dust due to rolling tire action.

At the CAMU dump area, a water truck will be placed to knock down any dust during the dumping and spreading phase of the debris in the CAMU. Use of water will be used to the maximum extent possible without creating a run-off problem. At all times, however, the elimination of dust will be given top priority.

Dust Suppressant

The primary dust control measure to be used will be water. However, the application of an accepted dust suppressant dispersed from the water trucks or special equipment as a dust suppressant may be required during periods of time that the application of water alone is inadequate for dust control. Dust suppressant product information and MSDSs will be submitted for approval prior to usage and/or application.

Area Control

URS/CWC will use specific loading areas for each decontamination/demolition removal location to minimize disturbances and control material transfer operations. During the demolition of each structure, URS/CWC will designate a staging and loading area directly adjacent to each structure. Often this area will be within the footprint of the structure being demolished. This staging and loading area, specific to each structure, will be kept constant and will be maintained to control the migration of dust and debris from moving material unnecessarily.

Water Source

URS/CWC will utilize the exiting the ASARCO provided fill station, adjacent to Upper Lake, as the source of non-potable water to be utilized for dust suppression operations.

Field Quality Control

URS/CWC Project Staff (i.e. Project Superintendent, Foremen, H&SP) will inspect work areas daily to assess the need for implementation (or additional implementation)of dust control measures.

Overall Dust Control Application

URS/CWC will control fugitive dust emissions by using the following overall methods:

- Provide dust suppression (water) before, during, and after demolition of a structure, provided it is safe to do so.
- In cases where structures are to be dropped (stack demolition, elevated structures), URS/CWC will wet the targeted drop area prior to the demolition of the structure.
- Provide dust control during material sizing and loading operations.
- Control material drop heights during loading, unloading and material transfer operations.
- Minimize and control material handling operations.
- On-site vehicular traffic control and haul road maintenance
- If necessary, URS/CWC will apply other approved methods for control of dust during specific procedures.

PERSONAL PROTECTIVE EQUIPMENT

Inhalation of airborne dust shall be minimized through the use of half-face cartridge respirators, and through the practice of water misting to aid in dust control. Eye injuries due to dust particles shall be minimized through the use of safety glasses with side-shields, goggles, or face shields. The following protective equipment shall be utilized and made available to all project personnel in sufficient quantities at the site at all times;

- Half-face respirators with Organic Vapor/HEPA filter cartridges (known as P-100 cartridge filters)
- Safety glasses
- Goggles
- Face shields (as required)
- Hearing protection (as required)
- Serviceable and/or disposable Coveralls

Note: Personnel assigned a half-face respirator are enrolled in the medical surveillance program, medically qualified, fit tested and trained in uses and limitations.

TRAINING

All respirator users must receive the following training:

- Before they are assigned a respirator
- Annually thereafter
- Whenever a new hazard or job is introduced
- Whenever employees fail to demonstrate proper use or knowledge

Training must address, at a minimum, the following:

- Why the respirator is necessary, and what conditions can make the respirator ineffective
- What the limitations and capabilities of the respirator are
- How to use respirators effectively in emergency situations
- How to inspect, put on and remove, and check the seals of the respirator
- What the respirator maintenance and storage procedures are
- How to recognize medical signs and symptoms that may limit or prevent effective use of the respirator

Any employee or subcontractor who has been assigned a reusable respirator must be fit tested either on an annual basis (no more than one year may elapse between fit tests), or when an employee is assigned a respirator of a different make, type or size from that previously tested. Quantitative fit testing is conducted and is performed in house.

A.5 CONSTRUCTION STORM WATER DISCHARGE PERMIT

GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

PERMIT NUMBER MTR000000

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Section 75-5-101 *et seq.*, Montana Codes Annotated (MCA), Administrative Rules of Montana (ARM) 17.30.1301 *et seq.*, and ARM 17.30.1101 *et seq.*, applicants with an Authorization Letter for this *"General Permit for Storm Water Discharges Associated with Industrial Activity"* (hereafter called the "Permit") are permitted to discharge storm water resulting from industrial activity sites (excluding construction, mining, and oil and gas extraction activities) to surface waters in accordance with the conditions set forth in Parts I., II., III., IV., and V. of this Permit.

This Permit shall become effective October 1, 2006.

This Permit and the authorization to discharge shall expire at midnight, September 30, 2011.

FOR THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Bonnie Lovelace

Bonnie Lovelace, Chief
Water Protection Bureau
Permitting & Compliance Division

Issuance date: August 30, 2006

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PREAMBLE

This *General Permit for Storm Water Discharges Associated with Industrial Activity*, hereafter called "Permit," covers storm water discharges from various industrial facilities. The intent of the Permit is to minimize or eliminate waste discharge via storm water runoff from these industrial facilities. Montana law defines various types of waste, including sediment, metals, petroleum products, etc. This Permit is issued to ensure regulated industrial activities minimize the contact of facility storm water with potential pollutants.

Two main criteria determine whether an industrial facility is eligible for coverage under this Permit: the type of industry and the presence of a storm water discharge to surface waters from the facility. Industrial facilities whose Standard Industrial Classification (SIC) Code or Industrial Activity Type places them within the scope of this Permit and which generate a storm water discharge to surface waters shall:

1. Apply for coverage under this Permit.

2. Prepare a Storm Water Pollution Prevention Plan (SWPPP) as outlined in Part IV. of this Permit. The SWPPP will characterize the industrial activity site, storm water discharges, potential pollutants which may affect storm water quality, and Best Management Practices (BMPs) to reduce and/or eliminate potential pollutants entering storm water runoff and surface waters.

3. Monitor storm water discharge from specified industrial activities.

4. Implement BMPs and other provisions of the facility SWPPP.

5. Submit Discharge Monitoring Reports (DMRs) and an annual Compliance Evaluation Report (which includes an evaluation of the storm water quality test results) in order to assess facility storm water discharge quality and to verify BMP effectiveness.

A Permit application fee to cover the cost of reviewing and acting upon the application shall be submitted with the application. Also, the Permittee shall be required to pay an annual fee in order to cover the costs of administering the Storm Water Program's permitting activities.

In the event that a facility is able to demonstrate that it has eliminated its storm water discharge through the implementation of engineered storm water controls and/or other management practices, the Permittee may submit a request for termination of the Permit Authorization.

PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area

This Permit applies to all areas of the State of Montana, except for Indian Reservations.

B. Sources Covered Under This Permit

The Permit covers all new and existing "Storm water discharge associated with industrial activity", as defined in ARM 17.30.1102(29). Regulated industrial activity storm water discharges are primarily referenced in this state rule definition using SIC codes, as these are historically built into the respective federal regulations as well. The SIC code system is largely obsolete and has been replaced with the North American Industry Classification System (NAICS). Parties can correlate SIC codes with NAICS codes for their industrial facility or activity as necessary. References to obtain these are provided on the application form instructions. The Permit does not cover typical construction, mining, and oil and gas extraction activities, which are covered under separate General Permits. This General Permit also does not pertain to storm water discharges subject to Effluent Limitation Guidelines, which are covered under a separate MPDES Permit. However, ground disturbance activities which are inherently part of the development over time of the industrial activity may be included on a case-by-case basis as determined by the Department, and must comply with the requirements stated in Part I.C.5. of this Permit. Coverage or eligibility pertaining to this Permit is limited to storm water discharges from the industrial activities summarized in Attachment A of this Permit.

Pursuant to ARM 17.30.1116, discharges composed entirely of storm water are not regulated as discharges associated with industrial activity if there is no exposure of industrial materials and activities to rain, snow, snowmelt, and/or runoff, and the discharger satisfies the conditions of this Industrial No-Exposure Certification rule. Consequently, permit authorization for storm water discharges normally regulated under this Permit would not be necessary and owners/operators would submit an Industrial No Exposure Certification Form to the Department instead.

This Permit does not authorize discharges subject to federal effluent limitation guidelines as adopted by the Montana Board of Environmental Review in ARM Title 17, Chapter 30, Subchapter 12.

This Permit does not apply to Concentrated Animal Feeding Operations (CAFOs) which are subject to regulation under ARM 17.30.1330.

This Permit does not relieve the Permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgement, or decree.

C. Application Procedures

1. Application Due Dates. The owner (or operator if the owner does not operate the facility) of the facility shall submit an application form provided by the Department. For new industrial activities, the application shall be submitted to the Department at least thirty (30) days prior to the anticipated date of discharge. For existing industrial activity discharges covered by the previous General Permit, a new application shall be submitted at least thirty (30) days prior to the expiration date of the General Permit.

2. Application Form. The application form requires, at a minimum, the following information:

   a. Facility/Site Information.
   b. Facility Contact Person/Position.
   c. Existing or Pending Permits, Certifications, or Approvals (if any exist).
   d. Nature of Business or Activity.
   e. Standard Industrial Classification (SIC) Codes.
   f. Storm Water Outfall/Discharge Locations (latitudes and longitudes).
   g. USGS Topographic Map showing Facility and Receiving Surface Waters.
   h. Storm Water Quality Analytical Data (for new applications if such data exists).
   i. Description and certification pertaining to non-storm water discharges.
   j. Identification of Major Potential Pollutant Sources.
   k. Identification of Major Best Management Practices.
   l. Applicant (Owner/Operator) Information.
   m. Certification and Signature of Application.
   n. For industrial activities which have never received authorization under previously issued General Permits and are submitting a new application (not a renewal), areas with new construction-related disturbance of the ground surface for the construction and/or implementation of BMPs must be clearly identified including the location and extent of disturbance.
   o. For all industrial activities which are issued an initial new authorization under this General Permit and which have not been issued an authorization under the preceding *General Discharge Permit For Storm Water Associated with Industrial Activity*, the required Storm Water Pollution Prevention (SWPPP) must be submitted with the application form. SWPPP requirements are stated in Part IV.A. The SWPPP must include a detailed site map, as required under Part IV.A.2.a. which delineates much of the information provided on the application form.
   p. For all existing industrial activities which previously have been issued authorizations under the preceding *General Discharge Permit For Storm Water Associated with Industrial Activity*, a complete updated and revised SWPPP meeting the requirements of Part IV.A. must be submitted to the Department with the application for renewal of authorization under this

General Permit.

3. Application Submittal. Signed State application forms shall be submitted to:

Department of Environmental Quality
Water Protection Bureau
P.O. Box 200901
Helena, MT 59620-0901

Signatory requirements for the application may be found in Part V.K. of this Permit.

The submitted application package shall include the payment of the permit authorization application fee. For new applications, the application must also include the annual fee for the initial calendar year for which permit authorization is requested. Existing permit authorizations renewing permit coverage under this Permit will be invoiced for annual fees if not already paid.

4. Authorization to Discharge. Facilities covered under this Permit are authorized to discharge storm water in accordance with the Permit upon receipt of an Authorization Letter issued by the Department.

5. Ground Disturbance Activity, SWPPP Erosion and Sediment Control. For industrial activity whose development over time inherently involves total ground disturbance of sediment over one acre in area (i.e. landfill cell development and closure, reclamation activities, gravel pits associated with an industrial activity, management of stockpiled materials, etc.), authorization under this Permit can include such activity provided the SWPPP addresses such ground disturbances using appropriate erosion and sediment control BMPs. Such inclusions under this Permit authorization may eliminate the need for obtaining separate authorization under the Department's *General Permit for Storm Water Discharges Associated with Construction Activity* for these inherent ground disturbance activities. If ground disturbance activities are not an inherent part of the function of the industrial activity, such as for expansions of buildings, roadways, etc. not originally identified in the application, then separate authorization under the Department's *General Permit for Storm Water Discharges Associated with Construction Activity* would typically be necessary. If permittees are uncertain as to whether ground disturbance activities may be authorized under this Permit, the Department should be contacted for assistance on case-by-case determinations.

PART II. EFFLUENT LIMITATIONS

Effective immediately upon issuance of an authorization under this Permit and lasting through the expiration date, the following specific conditions pertaining to effluent limitations shall apply.

A. **There shall be no discharge of process wastewater pollutants to surface waters.**

B. **A discharge of storm water associated with industrial activity may occur based on water generated only through rainfall precipitation and snowmelt.**

C. **No discharge of storm water associated with industrial activity shall cause or contribute to a violation of water quality standards.**

D. **Discharges of storm water containing pollutants associated with industrial activity covered under this General Permit will be controlled through the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Best Management Practices (BMPs) identified in the SWPPP must help eliminate or minimize the discharge of pollutants to surface waters.**

E. **New or increased storm water discharges associated with industrial activity on or after April 29, 1993 shall not cause degradation as described under ARM 17.30.715(3) and 75-5-301(5)(c), MCA.**

PART III. MONITORING, REPORTING, AND RECORDS RETENTION REQUIREMENTS

A. STORM WATER DISCHARGE MONITORING

For those industrial activities identified in Part III.A.2., storm water discharge sampling, testing, and reporting shall be a standard requirement under this Permit. Standard Industrial Classification Codes (SIC) may be obtained from the 1987 Standard Industrial Classification Manual or from websites referenced on the application form instructions.

For those industrial activities not identified in Part III.A.2. of this Permit (not required to perform storm water discharge sampling, testing, and reporting), the Department reserves the right to require storm water sampling, testing, and reporting on a case-by-case basis. For those industrial activities not listed in Part III.A.2., the Permittee shall be subject to all monitoring and reporting requirements stated in this Permit, except sampling parameters and frequency that are established by the Department on a case-by-case basis. Factors which may trigger monitoring requirements could include, but are not limited to: atypical industrial and/or other facility activities, SWPPP implementation effectiveness, storm water quality issues, potential contamination issues, historical issues, compliance issues, and other water quality issues.

Additional monitoring parameters may be required for a facility by the Department on a site by site basis.

Storm water monitoring requirements shall initiate on the effective date of authorization under this Permit or as otherwise directed by the Department.

1. Storm/Sampling Event Characterization Requirements for All Industrial Activities Required to Perform Storm Water Discharge Sampling, Testing, and Reporting

   For those industrial activities required to perform sampling, testing, and reporting of storm water discharges under Part III.A.2. or as otherwise required by the Department, the following information shall be recorded and maintained at the permitted facility (refer to Part III.C.2.) for all storm water discharges which are sampled.

   a. Date, exact place, and time of sampling;

   b. Estimated duration (in hours) of the storm event(s) sampled;

   c. Total rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff;

d. Name(s) of the individuals who performed the sampling or measurements; and

e. Analytical laboratory test result data and reports for storm water samples and/or records which minimally indicate:

i. The date(s) analyses were performed;

ii. The time analyses were initiated;

iii. The initials or name(s) of individual(s) who performed the analyses;

iv. References and written procedures, when available, for the analytical techniques or methods used; and

v. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

2. Specific Industrial Activity Monitoring Parameters

ITEM	INDUSTRIAL ACTIVITY TYPE	PARAMETER(S)
III.A.2.a.	**Petroleum Refining, Storage, and Fueling:** Petroleum Refining (SIC Code 2911); Petroleum Bulk Stations & Terminals (SIC Code 5171); and Railroad Transportation (SIC Code Major Group 40 – SIC Codes 4011 and 4013) with petroleum fueling/storage on site	Oil and grease (EPA Method 1664 – mg/L) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Estimated Flow Rate (gpm)
III.A.2.b.	**Primary Metal Industries:** Facilities classified as SIC Code Major Group 33 (SIC Codes 3312, 3313, 3315, 3316, 3317, 3321, 3322, 3324, 3325, 3331, 3334, 3339, 3341, 3351, 3353, 3354, 3355, 3356, 3357, 3363, 3364, 3365, 3366, 3369, 3398, and 3399)	Oil and grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Total recoverable Arsenic (mg/L) Total recoverable Copper (mg/L) Total recoverable Lead (mg/L) Total recoverable Zinc (mg/L) Estimated Flow Rate (gpm)
III.A.2.c.	**Land Disposal Units:** Storm water discharges from any active or inactive landfill, land application site, or open dump that received any industrial wastes	Oil and grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Total recoverable Iron (mg/L) Nitrate plus nitrite nitrogen (mg/L) Estimated Flow Rate (gpm)
III.A.2.d.	**Wood Treatment (chlorophenolic or creosote):** Storm water discharges for wood treatment, wood surface application, or storage of treated or surface protected wood at any wood preserving or wood surfacing facilities that currently use or have used chlorophenolic formulation or creosote formulation (SIC Code 2491)	Oil & grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Total Phenols (mg/L) Estimated Flow Rate (gpm)
III.A.2.e.	**Wood Treatment (arsenic or chromium preservatives):** Storm water discharges for wood treatment or storage of treated wood at any wood preserving facilities that currently use inorganic preservatives containing arsenic or chromium (SIC Code 2491)	Oil & grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Total recoverable Arsenic (mg/L) Total recoverable Chromium (mg/L) Total recoverable Copper (mg/L) Estimated Flow Rate (gpm)
III.A.2.f.	**Coal Pile Runoff:** Storm water discharges from coal pile runoff	Oil and grease (visual)

ITEM	INDUSTRIAL ACTIVITY TYPE	PARAMETER(S)
		pH Total suspended solids (TSS - mg/L) Estimated Flow Rate (gpm)
III.A.2.g.	**Battery Reclaimers:** Storm water discharges from areas used for the storage of lead acid batteries, reclamation products, or waste products, and from reclamation (including material handling activities) areas at lead-acid battery reclamation facilities	Oil & grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Total recoverable Copper (mg/L) Total recoverable Lead (mg/L) Estimated Flow Rate (gpm)
III.A.2.h.	**Airports:** Storm water discharges from airports (SIC Code 4581) with over 50,000 flight operations per year (includes both takeoffs and landings)and which have storm water discharges from areas where aircraft or airport deicing (preventing the accumulation of or removing frost, snow, or ice) operations occur (including runways, taxiways, ramps, and dedicated deicing stations). The Permittee shall attempt to collect samples during or after storm events when deicing materials were used at the airport, as weather and temperature conditions allow.	Oil and grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Ammonia as N (mg/L) if urea is used as a deicing material Estimated Flow Rate (gpm)
III.A.2.i..	**Animal Handling/ Meat Packing Facilities:** Storm water discharges from animal handling areas, manure management (or storage) areas, and production waste management (or storage) areas that are exposed to precipitation at meat packing plants (SIC Code 2011), poultry packing plants (SIC Code 2015), and facilities that manufacture animal and marine fats and oils (SIC Code 2077)	Oil and grease (visual) Chemical oxygen demand (COD - mg/L) Total suspended solids (TSS - mg/L) Nitrate plus nitrite nitrogen (mg/L) Estimated Flow Rate (gpm)

3. Monitoring Frequency

Sampling, testing, and reporting shall be conducted at least semi-annually (two times per year) for industries classified under Parts III.A.2.a. through III.A.2.i, except as provided by Parts III.B.2., Sampling Waiver, and III.B.3., Representative Discharge. It is recommended that samples not be collected from back-to-back storm events but that the sampled storm event represents runoff characteristic of typical site conditions.

For new authorizations issued under this Permit, the first required monitoring period shall be the first complete Discharge Monitoring Report period following the date of the Permit Authorization Letter (see Part III.B.1.a.).

Frequency may be re-evaluated by the Department after a minimum of three monitoring periods of representative sample data have been collected. The Department may suspend the sampling requirement if after any three monitoring periods (representative sampling events), a facility can demonstrate the following conditions:

a. BMP implementation is satisfactorily reducing and minimizing the potential discharge of pollutants in storm water.

b. The storm water sampling test results for the parameters tested for under Part III. of this Permit have not exceeded the Attachment B "June 2006 Monitoring Parameter Benchmark Values".

c. Storm water discharges have not resulted in being unable to attain a Total Maximum Daily Load (TMDL) or Waste Load Allocation which has been developed and approved by the Department for the receiving surface waters.

d. The permitted storm water discharge(s) do not cause, or have a reasonable potential to cause or contribute to, a violation of applicable water quality standards.

e. There have been no violations of the conditions and requirements in this Permit.

f. There are no significant site characteristics, concerns, or problems (such as spills or releases) which could potentially allow pollutants to come into contact with storm water.

It is the responsibility of the Permittee to research and provide documentation proving that the aforementioned conditions have been met. This documentation shall be included with a written request to the Department for suspension of monitoring requirements.

4. Sample Type

For all discharges, sampling data shall be obtained by collecting a grab sample. The grab sample shall be taken during the first thirty minutes of the discharge. If the collection of a grab sample during the first thirty minutes is impracticable, a sample can be taken during the first hour of the discharge, and the discharger shall submit attached to the Department Discharge Monitoring Report form a description of why a grab sample during the first thirty (30) minutes was impracticable.

A composite sample may be required by the Department on a site-by-site basis. If required, composite samples shall either be flow-weighted or time-weighted. Potential composite samples may be taken with a continuous sampler or as a combination of a minimum of three grab sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen (15) minutes.

5. Sampling and Test Procedures

Samples, analytical testing, and measurements taken for the purpose of monitoring under Part III of this Permit shall be conducted according to test procedures approved under 40 CFR, Part 136, unless other test procedures have been specified in this Permit or approved by the Department.

6. Penalties for Tampering

The Montana Water Quality Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device, method, or practice required to be maintained under this Permit shall, upon conviction, be punished by a fine of not more than $25,000 per day of violation, or imprisonment for not more than one year, or both.

7. Evaluation of Storm Water Quality Monitoring Test Results

On the completion of each sampling event and on receipt of the sampling test results by the Permittee, the Permittee shall evaluate each parameter test result by comparison with the Attachment B "June 2006 Monitoring Parameter Benchmark Values". If there is an exceedance of the benchmark value, the Permittee shall evaluate the source and reason of the exceedance and consider additional BMPs and/or other facility management measures which may need to be initiated to improve the quality of storm water discharges. These measures shall be implemented as necessary and updated in the facility SWPPP as required in Part IV.A.1.c. of this Permit. A summary of this evaluation of storm water quality data, any exceedances of the benchmark values, and additional BMPs and/or other measures which may be necessary shall be stated on the annual Compliance Evaluation Report form required to be submitted to the Department in Part IV.A.4 of this Permit.

B. REPORTING REQUIREMENTS

1. Discharge Monitoring Reports

a. Permittees which are required to conduct sampling pursuant to Parts III.A.1. and III.A.2. of this Permit shall submit monitoring results obtained during the previous six-month reporting period on a Discharge Monitoring Report (DMR) form(s), to be received by the Department no later than the 28th day of the month following the completed reporting period. The six-month semi-annual monitoring periods are from January 1 through June 30 and from July 1 through December 31. Consequently, the DMR forms are due on the 28th day of January and/or July following this respective monitoring period. For new authorizations issued under this Permit, the first required monitoring period for which a respective DMR form must be completed and submitted shall be the first complete six-month semi-annual monitoring period following the date of the original Permit Authorization Letter.

b. DMR forms are provided by the Department. The DMR forms with the required signature shall be completed and submitted for each required point source discharge sampling location (outfall) for each required monitoring period. The DMR forms shall have all pertinent items completed, and shall comply with the signatory requirements stated in Part V.K. of this Permit. If

sampling was not performed for any reason (see Part III.B.2., Sampling Waiver), the DMR form item shall be completed which provides the justification/description required under Part III.B.2.

c. An original copy of the completed DMR form(s), with the required signature page(s) for each form, and all other reports required herein shall be submitted to the Department address below:

Department of Environmental Quality
Water Protection Bureau
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3080

d. The DMR forms contain a box in the upper right corner that is marked "no discharge". This box should not be checked unless on-site controls for storm water runoff prohibited and resulted in "no discharge" of storm water. If no samples were collected for a justified reason, as provided for in the General Permit, then the signed and submitted DMR form must be accompanied by documentation describing why no samples could be collected. The permittee is required to make a concerted effort to collect storm water samples and the Department assumes this is typically achievable. DMR submissions indicating "no discharge" without the required documentation will result in a violation of the permit authorization.

2. Sampling Waiver

The Permittee is required to make a concerted and reasonable effort to collect storm water discharge samples. The Department typically expects that during the term of each monitoring period for the facility (usually six months), sufficient storm water discharge(s) will occur associated with various storm events such that the Permittee will be able to obtain the required storm water samples at the point source discharge(s). However, the Department acknowledges that sometimes sampling of storm water discharges during and/or after storm events may not always be possible.

Examples where discharge sampling may not be reasonably performed include:

- No discharge, such as when the facility has engineered storm water retention/infiltration systems, the infiltration of precipitation into the ground surface is relatively high (low runoff coefficient), the facility site's drainage area is relatively small, extended drought, and/or extended frozen conditions);
- A relatively short duration storm event occurring outside of hours the facility is normally staffed and automatic sampling is impractical;
- Adverse climatic conditions such as weather –flooding, high winds, hurricanes, tornadoes, electrical storms, etc.–that creates dangerous conditions for personnel; and

- Any other conditions which make the collection of a sample impractical.

During each respective six-month monitoring period, if the Permittee is unable to sample storm water discharge related to a storm event, then the completed DMR form item shall provide the required justification/description of why samples could not be collected. This DMR form item justification/description shall include specific documentation of pertinent storm events and conditions which precluded the required sampling of storm water discharges at the point source discharge(s).

3. Representative Discharge

When a facility has two or more point source discharges (outfalls) that, based on a consideration of features and activities within the area drained by the outfalls, the Permittee reasonably believes discharge substantially identical effluents, the Permittee may test the effluent of one such outfall and report that the storm water quality data of such outfall also applies to the substantially identical outfall(s). In addition, for each outfall that the Permittee believes is representative, the Permittee shall provide: an estimate of the size of the drainage area in square feet; an estimate of the runoff coefficient of the drainage area – low (up to 40%), medium (≥40% to 65%), or high (≥65%); and an estimate of the percentage of the total industrial activity drainage area on the site represented by the sampled outfall's industrial activity drainage area. The industrial activity drainage area pertains to those areas of the facility or site that actually discharge storm water from areas where the pertinent regulated industrial activity under this Permit is performed.

4. Twenty-four Hour Notice of Accelerated Erosion

If any measurable quantities of sediment leave the site because of the failure of the erosion control system, the sediment shall be cleaned up immediately –within 24 hours of discovery– and placed back on the site or properly disposed.

Measurable quantities of sediment are deposits of mud, dirt, sediment, or similar material on public or private streets, adjacent property or into the storm and surface water system by:

a. Direct deposit, dropping, discharge, or

b. Established by other evidence of accelerated erosion.

Under no conditions shall the sediment be cleaned up by flushing it into drainageways or surface waters. The Department shall be notified within one working day of the discovery of accelerated erosion.

5. Additional Notification

Facilities with at least one storm water discharge associated with industrial activity to

a municipal separate storm sewer system (also called MS4), in addition to filing copies of monitoring reports with the Department, shall submit to the operator of the municipal separate storm sewer system signed copies of the monitoring results obtained during the previous respective monitoring period.

6. Penalties for Falsification of Reports

The Montana Water Quality Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit (including monitoring reports or reports of compliance) shall, upon conviction, be punished by a fine of not more than $25,000 per day, or by imprisonment for not more than six months per violation, or both.

7. Notification of Facility Contact Changes

The Permittee shall notify the Department in writing of any change of the designated facility contact person/position, mailing address, and/or telephone number (as originally identified in the Permit application) within 15 days of this change.

8. Spill/Release Notification

The Permittee shall submit written notification to the Department's Storm Water Program (mailing address is stated in Part I.C.3. of this Permit) within two business days of the detection of any unregulated significant spill or release in any area(s) which could be exposed to storm water runoff. This notification shall provide: the name of the facility and the storm water discharge permit authorization number; a description of the time and duration of the spill/release; the specific location and contaminant fate of the spill/release; a description of the quantity and type of material spilled/released; measures being taken to investigate and/or remediate the spill/release; any known or potential impacts to storm water discharges due to the spill/release; and any BMPs to be implemented to minimize and/or prevent similar spills/releases in the future.

C. RECORDS RETENTION

1. Permit Retention Requirements

The Permittee shall retain a copy of this Permit, a copy of the Authorization Letter to discharge storm water, and a copy of the Storm Water Pollution Prevention Plan (SWPPP) at the facility site at all times during the active permit coverage period authorized under this Permit. If no permanent offices/buildings are located at the facility site, copies of these documents shall be retained at the office of the contact person identified in the Permit application and at the office of the primary individual responsible for the implementation of the SWPPP (identified in the SWPPP through Part IV.A.3.a.) and shall be brought to the site at all times with these identified

personnel. Should the identity of these responsible contacts/individuals change during the active Permit authorization period, the Permittee shall ensure measures are in place to transfer and familiarize replacement personnel with the requirements pertaining to these documents.

2. Required Period of Record Retention

The Permittee shall retain, for a minimum of three years, records of all storm water monitoring information (including Part III.A.1. of this Permit), all required reports and inspections, and all data used to complete the General Permit application required by Part I.C.

PART IV. SPECIAL CONDITIONS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A Storm Water Pollution Prevention Plan (SWPPP) shall be developed for each facility covered by this Permit. The purpose of the SWPPP is to identify sources of potential pollution to storm water discharges and to select Best Management Practices (BMPs) to reduce discharge of pollutants at the pollutant source and/or to remove pollutants contained in storm water runoff.

The SWPPP shall be developed and submitted with the application for authorization under this General Permit. For new applications, the SWPPP shall be implemented on the date the Authorization Letter under this General Permit is received. The organization of the SWPPP should be completed based on the Part IV.A. outline below. It is preferred that each section heading in the outline be included and addressed in the SWPPP in the same order as in Part IV.A. of this Permit. If a section is not applicable, a brief explanation of why it is not applicable shall be included. However, as SWPPPs are developed and implemented primarily for the use and benefit of the permittee, the Department will allow some flexibility in how the SWPPP is organized, but in any case, the SWPPP must address all criteria in the Part IV.A. outline below. If the permittee does elect to use a SWPPP format and outline different than that in this permit, then the permittee shall develop and submit an index that cross-references these Part IV.A. requirements and where each is addressed in the submitted SWPPP.

The SWPPP shall be prepared in accordance with good engineering practices. Any SWPPP which requires engineered structures, such as detention ponds or diversion structures, shall be prepared by a registered professional engineer or similarly qualified individual.

The Permittee shall be responsible for developing and implementing the provisions of the SWPPP. The Department may elect to review the submitted SWPPP and could notify the Permittee after review that the SWPPP does not meet one or more of the minimum requirements of Part IV.A. After such notification from the Department, the Permittee shall make changes to the SWPPP and submit to the Department a written certification stating the requested changes have been made. Unless otherwise provided by the Department, the Permittee shall have 30 days after such notification to make the required revisions to the SWPPP.

1. Administrative Requirements for the SWPPP

   The SWPPP shall:

   a. Be retained on site in accordance with Part III.C. of this Permit.

   b. Be signed in accordance with the signatory requirements in Part V.K. of

this Permit.

c. Be maintained and kept up-to-date to reflect current conditions and information.

2. Description of Potential Pollutant Sources

The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. SWPPPs shall identify all activities which may potentially be significant pollutant sources, including loading or unloading of dry bulk materials or liquids, outdoor storage of raw materials and/or intermediary products, outdoor process activities, dust or particulate-generating processes, illicit connections and/or management practices, and waste management practices.

The SWPPP shall include, at a minimum, the following items:

a. A site map which indicates the following for storm water drainage areas:
   - Point source discharge(s), such as outfall(s);
   - Each required point source discharge (outfall) sampling location with the formal number indicated on the map as designated on Discharge Monitoring Report forms;
   - Natural and engineered (manmade) storm water drainage and management structures and features;
   - A delineated outline of the drainage area of each storm water point source discharge/outfall;
   - Delineated drainage patterns which clearly indicate the storm water runoff flow direction for the drainage area of each storm water point source discharge/outfall, such as using arrows to show which ways storm water will flow;
   - Major permanent facility structures;
   - The following activities where such activities are exposed to precipitation: processing and storage areas; access roads; railcars and tracks, the location of transfer of substance in bulk; major stationary equipment; and machinery;
   - Paved and/or relatively impervious areas within the drainage area of each point source discharge/outfall;
   - Each past or present area used for the outdoor treatment, storage, and/or disposal of significant materials (products and/or wastes);
   - Each existing structural BMP to reduce pollutants in storm water runoff;
   - Materials loading/unloading area(s);
   - The following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; and liquid storage tanks;

- Each hazardous waste treatment, storage or disposal facility, including each area not required to have a Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit for accumulating hazardous waste under 40 CFR 262.34;
- Each well where liquids associated with the facility are injected underground including any storm water conveyances;
- Location and source of runoff from adjacent property containing significant quantities of pollutants of concern to the facility (an evaluation of how the quality of the storm water running onto the facility site impacts the facility's storm water discharge may be included);
- Location where major spills or leaks identified in Part IV.A.2.d. of this Permit have occurred;
- Springs;
- Surface waters (including perennial water bodies, intermittent/seasonal water bodies, and ephemeral drainage channels) including all receiving surface waters identified in Part IV.A.2.g. of this Permit;
- A map scale; and
- A north arrow.

b. Estimate and define area(s) of relatively impervious surfaces (including paved areas and facility structural roofs) with respect to the total area drained by each storm water point source discharge (outfall).

c. A narrative description of significant materials (products and/or wastes) which in the past have been and/or are currently treated, stored, or disposed in a manner allowing exposure to storm water; the method of treatment, storage or disposal of these materials; and past and/or present materials management practices employed to minimize contact of these materials with storm water runoff.

d. A list of significant spills and leaks of hazardous substances which occurred at the facility up to three years prior to the effective date of this Permit. Such a list shall be updated when a significant spill or leak of hazardous substances occurs and shall include a description of the specific origin and location of the release, a description of the materials released, an estimate of the quantity of the release, and a description of any remediation or cleanup measures which were taken.

e. For each area of the plant which generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of storm water runoff flow and an estimate of the types of pollutants which could be present in the storm water.

f. A summary of existing storm water quality sampling test results characterizing historical pollutants in storm water discharges.

g. The name of the receiving surface water(s) for storm water discharges, including perennial waterbodies, intermittent waterbodies, ephemeral streams, and wetlands. This shall include a detailed narrative description of the storm water runoff flow pattern from the industrial activity site's storm water discharges into these receiving surface waters.

3. Storm Water Best Management Practices (BMPs)

Each facility shall develop a description of storm water BMPs appropriate for the facility and implement such BMPs. The appropriateness and priorities of BMPs in a SWPPP shall reflect the identified potential sources of pollutants to storm water at the facility.

The description of storm water management BMPs shall address the following minimum components, including a schedule for implementing such BMPs:

a. Individual(s) Responsible for Pollution Prevention and Storm Water Management BMPs

The SWPPP shall identify the individual(s) within the facility organization responsible for developing the SWPPP and assisting facility personnel in its implementation, maintenance, and revision. The SWPPP shall describe the title and role of the individual(s) identified, as well as their responsibilities. The pollution prevention portion of the facility's SWPPP shall address the following, at a minimum:

i. The identity of individual(s) responsible for the implementation of the SWPPP.

ii. Facility personnel training programs which inform personnel at all levels of responsibility of the components and goals of the SWPPP. Training shall address topics such as spill response procedures, and proper material management and handling practices. A schedule shall identify the frequency for such training.

iii. Preventative maintenance measures which include the inspection and maintenance of storm water management BMPs (cleaning oil/water separators, catch basins, etc.), as well as inspecting and testing facility equipment and systems to detect conditions which could cause breakdowns or failures resulting in potential discharges of pollutants to storm waters.

iv. Good housekeeping measures to maintain a clean, orderly facility.

Common potential problem areas to address would be waste management areas, storage areas, loading/unloading areas, and drums/tanks/containers. Measures could include a routine schedule for the managing/removal of waste materials, as well as routine inspections of these potential problem areas.

b. Risk Identification and Assessment/Material Inventory

The SWPPP shall include an inventory of the types of materials (products and wastes) handled, the location of material management activities, and the types of material management activities. Factors to consider are the human health or ecological risk of chemicals; the quantity of chemicals used, produced, and/or discharged; the history of any MPDES permit violations; the history of significant leaks and/or spills of hazardous substances; and the characteristics and uses of the receiving surface waters.

c. Spill Prevention and Response Procedures

Areas where potential spills could occur, and their accompanying drainage patterns and/or point source discharges, shall be clearly identified in the SWPPP. BMPs for spill prevention shall be developed to the extent possible. Procedures for cleaning up spills shall be identified in the SWPPP and be made available to appropriate facility personnel. The necessary equipment to implement a clean-up should be made available to facility personnel. Emergency spill/release contact and/or notification numbers shall be listed in the SWPPP including provisions to ensure compliance with Part III.B.8. of this Permit.

d. Storm Water Management

The SWPPP shall contain a description of, and an assessment of the appropriateness of, storm water BMPs other than source control of pollutants. This could include: run-on/runoff controls; diversion structures; flow attenuation by use of open vegetated swales, natural depressions, and other practices; appropriate inlet controls such as oil/water separators; snow management activities; ponds; infiltration devices; and, wet detention/retention devices including constructed wetlands. Where practicable, industrial materials and activities may be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff. BMPs determined to be reasonable and appropriate shall be implemented and maintained.

e. Erosion and Sediment Control

The SWPPP shall identify areas which have a higher potential for soil

erosion due to topography, slope characteristics, facility activities, and/or other factors. BMPs to control erosion should be identified and implemented.

Note: Areas with little to no vegetative cover (0-25 percent on slopes greater than or equal to 15 percent generally have a high potential for soil erosion. Your county Natural Resource Conservation Service office may be able to provide assistance with determining areas with high erosion potentials. A published soil survey can also provide this information.

The SWPPP may include the use of sediment basins, berms, barriers, filter strips, covers, diversion structures, sediment control fences, straw bale dikes, seeding, sodding, and/or other control structures or BMPs. The nature of the fill material to be used, the existing soils located at the site, and the aforementioned erodibility (high, moderate, or slight) of such soils shall be provided.

For potential ground disturbance (construction activities) included under this Permit, please refer to Part I.C.5. of this Permit.

The SWPPP shall identify and locate the BMPs to be used during and after the ground disturbance project to control sediment discharges to surface waters. For the Sediment and Erosion Control section of the SWPPP, the permittee should refer to the SWPPP requirements associated with the Department's *General Permit for Storm Water Discharges Associated with Construction Activity.*

f. Visual Inspections

Qualified personnel shall be identified to inspect designated equipment and facility areas following each significant storm water runoff event. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the storm water drainage system. A tracking or follow-up procedure shall be used to ensure adequate response and corrective actions have been taken in response to the inspection. The Permittee shall maintain records of inspections.

g. Record Keeping and Internal Reporting Procedures

Incidents such as spills, leaks, other releases of potential pollutants, and/or other material/waste management problems, along with other information describing the quality and quantity of storm water discharges, shall be included in the records. Inspections and maintenance activities, such as cleaning oil and grit separators or catch basins, shall be documented and recorded.

h. Non-Storm Water Discharges

Non-storm water discharges are not authorized under this Permit with the exception of the following "allowable" non-storm water discharges: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined in ARM 17.30.1102(8)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water. If not already addressed in sufficient detail in the application or elsewhere in the SWPPP based on the above requirements, and if allowable non-storm water discharges exist at your facility, the SWPPP must address expected pollutant contributions to storm water runoff and respective BMPs to minimize or eliminate such pollutants.

4. Comprehensive Site Inspection and Compliance Evaluation Report

A site inspection shall be conducted annually by appropriate personnel as identified in the SWPPP in order to verify

a. the description of potential pollutant sources is accurate as required under Part IV.A.2.;
b. the site map has been updated or otherwise modified to reflect current conditions;
c. the BMPs to control potential pollutants in storm water discharges associated with industrial activity as identified in the SWPPP are being effectively implemented; and
d. whether any SWPPP revisions such as additional BMPs are necessary.

A Compliance Evaluation Report shall be submitted to the Department by January 28 of each year and shall pertain to the Comprehensive Site Inspection performed during the preceding calendar year. The Department has developed a standard form to be used for the Compliance Evaluation Report, including an attached signature page.

The Compliance Evaluation Report shall summarize the scope and results of the Comprehensive Site Inspection, the name(s) of personnel making the Comprehensive Site Inspection, the date(s) of the Comprehensive Site Inspection, and major observations relating to the implementation of the SWPPP. Major observations should include: the location(s) of potential discharges of pollutants from the site; location(s) of BMPs that need to be maintained; location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional BMPs are needed that did not exist at the time of Comprehensive Site Inspection.

The Compliance Evaluation Report must identify any incidents of noncompliance. A tracking or follow-up procedure (including a schedule for implementation) shall be used to ensure adequate response and corrective actions have been taken in reply to the Comprehensive Site Inspection and/or noncompliances.

Where the Compliance Evaluation Report does not identify any incidents of noncompliance, the Report must contain a certification that the facility is in compliance with the SWPPP and this General Permit.

The Compliance Evaluation Report and any reports of follow-up actions must be signed in accordance with Part V.K. of this Permit. Records of the Comprehensive Site Inspection, the Compliance Evaluation Report, and any related follow-up actions shall be maintained by the Permittee.

B. Water Quality Standards

This General Permit does not authorize storm water discharges that the Department determines will cause, or have a reasonable potential to cause or contribute to, a violation of applicable water quality standards. If such is the case, the Department may notify an applicant or permitted discharger that MPDES permit coverage is necessary under an Individual Permit instead of under this General Permit. The Department will require authorizations under the General Permit to ensure the SWPPP addresses BMPs and measures to help ensure compliance with water quality standards as necessary. This may include additional monitoring requirements to the authorized discharger. More specifically, depending on the actual industrial activity storm water discharge and the receiving surface water(s), the permittee's SWPPP may need to include a section describing how the SWPPP will control discharges of pollutants of concern and ensure storm water discharges will not cause or contribute to instream exceedances of water quality standards.

C. Discharges to Water Quality Impaired Waters

1. Water Quality Controls for Discharges to Impaired Waterbodies

The permittee's SWPPP must include a section describing how the SWPPP will control discharges of pollutants of concern for which the receiving surface waters are listed as impaired waterbodies on the State's 303(d) list, and ensure storm water discharges will not cause or contribute to instream exceedances of water quality standards. This discussion must specifically identify measures and BMPs that will collectively control the discharges of pollutants of concern. Information on impaired waterbodies may be obtained through the Department website http://www.deq.mt.gov As of September 2006 the specific website link is: http://maps2.nris.state.mt.us/scripts/esrimap.dll?name=TMDL2004&Cmd=INST

2. Consistency with Total Maximum Daily Load (TMDL) Allocations

If a TMDL has been approved for any waterbody into which the permittee discharges storm water, and the TMDL considered and addressed MPDES-regulated storm water discharges, then the Department shall incorporate the Waste Load Allocation (WLA), as applicable, into the permittee's permit authorization under this Permit, as required by 75-5-703, MCA. The typical default WLA for industrial activity storm water discharges authorized under this Permit will be to comply with this permit including SWPPP development and implementation, unless otherwise notified by the Department.

D. Releases in Excess of Reportable Quantities

This Permit does not relieve the Permittee of the reporting requirements of 40 CFR, Part 117 and 40 CFR, Part 302. The discharge of hazardous substances, as defined in ARM 17.30.1304(27), in the storm water discharge(s) from a facility shall be minimized in accordance with the applicable SWPPP for the facility and, in no case during any 24-hour period shall the discharge(s) contain a hazardous substance equal to or in excess of reporting quantities.

PART V. STANDARD CONDITIONS

The following standard permit conditions apply to all facilities authorized to discharge under this Permit.

A. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The permittee shall give the Department advance notice of any planned changes at the permitted facility or of an activity, which may result in permit noncompliance.

B. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall first apply for and obtain a new permit. The application form and fee must be submitted at least 30 days before the expiration date of this permit. The Department reserves the authority to administratively extend permit coverage in the event the General Permit is no longer effective, if the permittee has reapplied for permit coverage.

C. Need to Halt or Reduce Activity not a Defense

It may not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

F. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

G. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

H. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

I. Inspection and Entry

The permittee shall allow the Department, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

J. Monitoring and Records (See Part III of General Permit)

K. Signatory and Certification Requirements

All applications, reports, or information submitted to the Department must be signed and certified.

1. All permit applications shall be signed as follows:

a. For a corporation, by a responsible corporate officer. A responsible corporate officer means:

i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes:

i. the chief executive officer of the agency; or

ii. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by permits, other information requested by the Department, must be signed by a person described in Part V.K.1. or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. the authorization is made in writing by a person described in Part V.K.1.;

b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and,

c. the written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part V.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.K.2. must be

submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts V.K.1. or V.K.2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Planned Changes

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit.

M. Anticipated Noncompliance

The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

N. Permit Transfers

This permit is not transferable to a new permittee. A new owner or operator of a facility must apply according to the standard application procedures 30 days prior to taking responsibility for the facility.

O. Monitoring Reports - (See Part III of General Permit)

P. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

Q. Twenty-Four Hour Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. This oral report must be made to the Water Protection Bureau at (406) 444-3080.

2. A written submission must also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3. The following must be included as information which must be reported within 24 hours:

   a. any unanticipated bypass which exceeds any effluent limitation in the permit;

   b. any upset which exceeds any effluent limitation in the permit; and

   c. violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

4. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Protection Bureau.

5. Reports shall be submitted to the address in Part III.B.1.c. of this Permit.

R. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Part IV. or Parts V.L., V.P., or V.Q. at the time monitoring reports are submitted. The reports must contain the information listed Part V.Q. above.

S. Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

T. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. and 3. below.

2. Notice:

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part V.Q. (Twenty-Four Hour Reporting).

3. Prohibition of bypass.

   a. Bypass is prohibited and the Department may take enforcement action against a permittee for a bypass, unless:

      i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

      ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

      iii. The permittee submitted notices as required under Part V.T.2. above.

4. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in Part V.T.3.i.

U. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part V.U.2. below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. an upset occurred and that the permittee can identify the cause(s) of the

upset;

b. the permitted facility was at the time being properly operated;

c. the permittee submitted notice of the upset as required in Part V.Q.3.b. (24-hour notice); and

d. the permittee complied with any remedial measures required under Part V.D.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

V. Penalties for Violations of Permit Conditions

The Montana Water Quality Act provides that any person who violates a permit condition of the Act is subject to a civil penalty not to exceed $25,000 per day or one year in prison, or both, for the first conviction, and $50,000 per day of violation or by imprisonment for not more than two years, or both, for subsequent convictions. Except as provided in permit conditions on Part V.T. (Bypass of Treatment Facilities), nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

W. Penalties for Falsification of Reports

The Montana Water Quality Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than six months per violation, or both.

X. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

Y. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Z. Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards

   The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. Wasteload Allocation

   A wasteload allocation is developed and approved by the Department and/or EPA for incorporation in this permit.

3. Water Quality Management Plan

   A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

AA. Fees

The permittee is required to submit payment of an annual fee as set forth in ARM 17.30.201. If the permittee fails to pay the annual fee within 90 days after the due date for the payment, the Department may:

1. Impose an additional assessment consisting of 15% of the fee plus interest on the required fee computed at the rate established under 15-31-510(3), MCA, or

2. Suspend the processing of the application for a permit or authorization or, if the nonpayment involves an annual permit fee, suspend the permit, certificate or authorization for which the fee is required. The Department may lift suspension at any time up to one year after the suspension occurs if the holder has paid all outstanding fees, including all penalties, assessments and interest imposed under this sub-section. Suspensions are limited to one year, after which the permit will be terminated.

BB. Notice of Termination

Where property ownership has changed, the operator of a facility has changed, the storm water discharge has been eliminated, or the facility is no longer in operation, the owner/operator of the facility may submit a Notice of Termination that is signed in accordance with Part V.K. of this Permit. Termination shall be sent to the following

address:

Department of Environmental Quality
Water Protection Bureau
P.O. Box 200901
Helena, MT 59620-0901

The Notice of Termination shall be completed on a form provided by the Department and shall include the following information.

1. The location of the site described as County, Township, Range, Section, and ¼ Section.

2. The name, address, and telephone number of the owner and the operator of the facility.

3. The MPDES authorization number for the storm water discharge(s) associated with industrial activity of the facility.

4. The reason for requesting termination of coverage under the storm water discharge permit for the site. If the reason specified is that the storm water discharge has been eliminated and/or the potential exposure of pertinent industrial activities to storm water has been eliminated, then the Permittee shall provide detailed explanation and/or documentation which demonstrates and confirms this determination.

CC. Definitions

1. The "**Act**" means the federal Clean Water Act.

2. "**Best Management Practices**" ("BMPs") means schedule of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of state waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

3. "**Coal pile runoff**" means the runoff from or through any coal storage pile.

4. The "**Department**" means the Montana Department of Environmental Quality.

5. "**Flow-weighted composite sample**" means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

6. "**Grab Sample**" for monitoring requirements is defined as a single "dip and take"

sample collected at a representative point in the discharge stream.

7. **"Landfill"** means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

8. **"Land application unit"** means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

9. **"Point source"** means a discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged.

10. **"Process Wastewater"** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

11. The **"Regional Administrator"** is the administrator of the EPA Region with jurisdiction over federal water pollution control activities in the State of Montana.

12. **"Runoff coefficient"** means the fraction of total rainfall that will appear at the conveyance as runoff.

13. **"Severe property damage"** means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

14. **"Significant materials"** includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metal products; raw materials used for food processing or production; hazardous substances designated under Section 101 (14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

15. **"Significant spills"** includes, but is not limited to releases of oil, fuel, or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act or Section 102 of CERCLA.

16. **"Storm water"** means storm water runoff from precipitation, snowmelt runoff, and surface runoff and drainage.

17. **"Surface waters"** means any waters on the earth's surface, including but not limited to streams, lakes, ponds, and reservoirs; and irrigation and drainage systems. Water bodies used solely for treating, transporting, or impounding pollutants shall not be considered surface water.

18. **"Time-weighted composite sample"** means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

19. **"Waste pile"** means any non-containerized accumulation of solid, nonflowing waste that is used for treatment or storage.

ATTACHMENT A
INDUSTRIAL ACTIVITIES COVERED BY THIS PERMIT

SIC CODE(S)[1]	INDUSTRIAL ACTIVITY REPRESENTED
	Timber Products
2411	Log Storage and Handling (Wet deck storage areas only authorized if no chemical additives are used in the spray water or applied to the logs)
2421	General Sawmills and Planing Mills
2426	Hardwood Dimension and Flooring Mills
2429	Special Product Sawmills, Not Elsewhere Classified
2431 – 2439 (except 2434)	Millwork, Veneer, Plywood, and Structural Wood (see *Furniture and Fixtures* for SIC Code 2434)
2441,2448, 2449	Wood Containers
2451, 2452	Wood Buildings and Mobile Homes
2491	Wood Preserving
2493	Reconstituted Wood Products
2499	Wood Products, Not Elsewhere Classified
	Paper and Allied Products
2611	Pulp Mills
2621	Paper Mills
2631	Paperboard Mills
2652 - 2657	Paperboard Containers and Boxes
2671 - 2679	Converted Paper and Paperboard Products, Except Containers and Boxes
	Chemical and Allied Products
2812 - 2819	Industrial Inorganic Chemicals
2821 - 2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
2833 - 2836	Medicinal chemicals and botanical products; pharmaceutical preparations; in vitro and in vivo diagnostic substances; biological products, except diagnostic substances
2841 - 2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
2861 - 2869	Industrial Organic Chemicals
2873 - 2879	Agricultural Chemicals
2873	Facilities that Make Fertilizer Solely from Leather Scraps and Leather Dust
2891 - 2899	Miscellaneous Chemical Products
3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
	Asphalt Paving and Roofing Materials and Lubricants
2951, 2952	Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
	Petroleum Refining

SIC CODE(S)[1]	INDUSTRIAL ACTIVITY REPRESENTED
2911	Petroleum Refining
	Glass Clay, Cement, Concrete, and Gypsum Products
3211	Flat Glass
3221, 3229	Glass and Glassware, Pressed or Blown
3231	Glass Products Made of Purchased Glass
3241	Hydraulic Cement
3251 - 3259	Structural Clay Products
3261 - 3269	Pottery and Related Products
3271 - 3275	Concrete, Gypsum and Plaster Products
3281	Cut Stone and Stone Products
3291 - 3299	Abrasive, Asbestos and Miscellaneous Nonmetallic Mineral Products
	Primary Metals
3312 - 3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
3321 - 3325	Iron and Steel Foundries
3331 - 3339	Primary Smelting and Refining of Nonferrous Metals
3341	Secondary Smelting and Refining of Nonferrous Metals
3351 - 3357	Rolling, Drawing, and Extruding of Nonferrous Metals
3363 - 3369	Nonferrous Foundries (Castings)
3398, 3399	Miscellaneous Primary Metal Products
	Hazardous Waste Treatment, Storage, or Disposal Facilities
SIC Code Not Applicable[2]	Hazardous Waste Treatment Storage or Disposal
	Landfills and Land Application Sites
SIC Code Not Applicable[2]	Landfills, Land Application Sites, and Open Dumps
	Automobile Salvage Yards
5015	Automobile Salvage Yards
	Scrap Recycling Facilities
5093	Scrap Recycling Facilities
	Steam Electric Generating Facilities
SIC Code Not Applicable[2]	Steam Electric Generating Facilities
	Land Transportation and Warehousing
4011, 4013	Railroad Transportation
4111 - 4173	Local and Highway Passenger Transportation
4212 - 4231	Motor Freight Transportation and Warehousing
4311	United States Postal Service
5171	Petroleum Bulk Stations and Terminals
	Water Transportation
4412 - 4499	Water Transportation
	Ship and Boat Building or Repairing Yards
3731, 3732	Ship and Boat Building or Repairing Yards
	Air Transportation
4512 - 4581	Air Transportation Facilities
	Treatment Works
SIC Code Not Applicable[2]	Treatment Works

SIC CODE(S)[1]	INDUSTRIAL ACTIVITY REPRESENTED
	Food and Kindred Products
2011 – 2015	Meat Products
2021 – 2026	Dairy Products
2032 - 2038	Canned, Frozen and Preserved Fruits, Vegetables, and Food Specialties
2041 – 2048	Grain Mill Products
2051 – 2053	Bakery Products
2061 – 2068	Sugar and Confectionery Products
2074 – 2079	Fats and Oils
2082 – 2087	Beverages
2091 – 2099	Miscellaneous Food Preparations and Kindred Products
2111 – 2141	Tobacco Products
	Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products
2211 – 2299	Textile Mill Products
2311 – 2399	Apparel and Other Finished Products Made From Fabrics and Similar Materials
3131 – 3199	Leather and Leather Products, except Leather Tanning and Finishing
	Furniture and Fixtures
2434	Wood Kitchen Cabinets
2511 - 2599	Furniture and Fixtures
	Printing and Publishing
2711 - 2796	Printing, Publishing, and Allied Industries
	Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries
3011	Tires and Inner Tubes
3021	Rubber and Plastics Footwear
3052, 3053	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
3081 - 3089	Miscellaneous Plastics Products
3931	Musical Instruments
3942 – 3949	Dolls, Toys, Games and Sporting and Athletic Goods
3951 - 3955 (except 3952)	Pens, Pencils, and Other Artists' Materials (see *Chemical and Allied Products* for SIC Code 3952)
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
3991 - 3999	Miscellaneous Manufacturing Industries
	Fabricated Metal Products, Jewelry, Silverware, and Plated Ware
3411 - 3499	Fabricated Metal Products, Except Machinery and Transportation Equipment
3911 - 3915	Jewelry, Silverware, and Plated Ware
	Transportation Equipment, Industrial or Commercial Machinery

SIC CODE(S)[1]	INDUSTRIAL ACTIVITY REPRESENTED
3511 - 3599 (except 3571 – 3579)	Industrial and Commercial Machinery (see *Electronic, Electrical, Photographic, and Optical Goods* for SIC Codes 3571 – 3579)
3711 - 3799 (except 3731, 3732)	Transportation Equipment (see *Ship and Boat Building or Repairing Yards* for SIC Codes 3731 and 3732)
	Electronic, Electrical, Photographic, and Optical Goods
3571 – 3579	Computer and Office Equipment
3612 - 3699	Electronic, Electrical Equipment and Components, except Computer Equipment
3812	Measuring, Analyzing and Controlling Instrument, Photographic and Optical Goods
3821 - 3829	Laboratory Apparatus and Analytical, Optical, Measuring, and Controlling Instruments

[1] A complete list of Standard Industrial Classification (SIC) Codes (and conversions from the newer North American Industry Classification System (NAICS)) can be obtained from the Internet at http://www.census.gov/epcd/www/naics.html or in paper form from the document entitled "Standard Industrial Classification Manual", Office of Management and Budget, 1987. SIC Code listings may also be found at http://www.osha.gov/pls/imis/sicsearch.html

[2]Under the regulatory definition for "storm water discharge associated with industrial activity" found in ARM 17.30.1102(29), the definition provides a narrative description for this industrial activity type, and this description does not specifically reference an SIC Code.

ATTACHMENT B
MONITORING PARAMETER BENCHMARK VALUES

DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING AND COMPLIANCE DIVISION
WATER PROTECTION BUREAU
June 2006

The Department of Environmental Quality's Water Protection Bureau typically uses the U.S. Environmental Protection Agency's (EPA) monitoring parameter benchmark values in the evaluation of storm water quality and the effectiveness of BMPs utilized by Permittees. Having parameter concentrations at or below these benchmark values does not relieve the Permittee from compliance with the Montana Water Quality Standards or nondegradation criteria.

The "benchmarks" are the pollutant concentrations above which EPA and/or Department determined represents a level of concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks are also viewed as a level, that if below, a facility represents little potential for water quality concern. As such, the benchmarks also provide an appropriate level to determine whether a facility's SWPPP measures are successfully implemented. The benchmark concentrations are not effluent limitations and should not be interpreted or adopted as such.

These values are levels which EPA and/or DEQ has used to assess storm water discharge and necessary monitoring from any given facility to insure that the facility has been successful in implementing a SWPPP. As such these levels represent a target concentration for a facility to achieve through implementation of SWPPP measures at the facility. The following Table lists the parameter benchmark values and the sources used for the benchmarks.

PARAMETER BENCHMARK VALUES

Parameter Name	Benchmark Level
Biochemical Oxygen Demand (5 Day)	30 mg/L
Chemical Oxygen Demand	120 mg/L
Total Suspended Solids	100 mg/L
Oil and Grease	10 mg/L
Nitrate + Nitrite Nitrogen	0.68 mg/L
Total Phosphorus	2.0 mg/L
Turbidity	50 NTU
pH	6.0-9.0 s.u.
Aluminum, Total (pH 6.5-9)	0.75 mg/L
Ammonia	19 mg/L
Antimony, Total	0.64 mg/L
Parameter Name	**Benchmark Level**
Arsenic, Total	0.15 mg/L
Beryllium, Total	0.13 mg/L

Cadmium, Total*	0.0021 mg/L
Chromium, Total*	1.8 mg/L
Copper, Total*	0.014 mg/L
Cyanide	0.022 mg/L
Iron, Total	1.0 mg/L
Lead, Total*	0.082 mg/L
Magnesium, Total	0.064 mg/L
Mercury, Total	0.0014 mg/L
Nickel, Total*	.47 mg/L
Phenols, Total	0.016 mg/L
Selenium, Total	0.005 mg/L
Silver, Total*	0.0038 mg/L
Zinc, Total*	0.12 mg/L

* These pollutants are dependent on water hardness. The benchmark value listed is based on a hardness of 100 mg/L.

The source of this Table (with the exception of Oil & Grease) is the EPA's Proposed *2006 NPDES Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity.* The Oil & Grease benchmark is a retained benchmark parameter used in prior EPA and Department General Permits. The Oil & Grease benchmark value of 10 mg/L is actually the receiving water standard but is used here for storm water quality purposes.

APPENDIX B

QA/QC TESTS

B.1 COMPACTED CLAY LINER TESTS

A. STOCKPILE CONFIRMATION TESTING

B. COMPACTION TESTING RESULTS

C. HYDRAULIC CONDUCTIVITY TEST RESULTS

B.2 HDPE LINER

A. SECONDARY LINER

B. PRIMARY LINER

C. DESTRUCTIVE SEAM TESTS

B.3 HELENA SAND & GRAVEL BASE COURSE AND CUSHION LAYER GRADATIONS

B.4 ASBESTOS LOCATION MAP

B.5 CAMU TEMPORARY CAP DRAINAGE PLAN

B.6 PUMPING VOLUMES AND ANALYTICAL TEST RESULTS FOR LEAK DETECTION AND LEACHATE COLLECTION SUMPS

B.7 AS-BUILT DRAWINGS OF COMPACTED CLAY LINER AND CUSHION LAYER

B.1 COMPACTED CLAY LINER TESTS

A. STOCKPILE CONFIRMATION TESTING

CAMU Phase 2 Clay Rich Stockpile QA Confirmation Testing

Date	Sample #	LL	PL	PI	Max Dry Density lb/ft^3	Optimum Moisture%	Hydraulic Conductivity cm/s
3/26/2008	1000cy	27	18.5	8.5			
3/27/2008	2000cy	29	17	12			
3/27/2008	3000cy	29	17	12			
3/28/2008	4000cy	28	19	9			
3/31/2008	5000cy	28	20	8			
3/31/2008	6000cy	29	20	9			
4/1/2008	7000cy	30	17	13			
4/2/2008	8000cy	30	21	9			
4/3/2008	9000cy	31	18	13			
4/3/2008	10000cy	28	16	12			
4/3/2008	11000cy	29	20	9			
4/4/2008	12000cy	36	19	17			
4/4/2008	13000cy	31	22	9			
4/5/2008	14000cy	29	18	11			
4/7/2008	15000cy	29	19	10			
4/7/2008	16000cy	30	15	15			
4/8/2008	17000cy	30	21	9			
4/8/2008	18000cy	32	14	18			
4/9/2008	19000cy	31	10	21			
4/9/2008	20000cy	34	13	21			
4/10/2008	21000cy	32	15	17			
4/10/2008	22000cy	30	20	10			
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU1	27	16	11	110.7	15.7	1.9×10^{-7}
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU2	29	16	13	112.6	14.3	8.0×10^{-7}
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU3	29	16	13	107.4	17.8	1.3×10^{-6}
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU4	27	17	10	110.8	16.5	6.6×10^{-6}
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU5	31	16	15	108.8	17.3	1.9×10^{-6}
4/10/2008	HWA Hydraulic Conductvity Sample CRSP-CAMU6	32	19	13	106	18	9.6×10^{-7}

Running Average	12

B. COMPACTION TESTING RESULTS

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 1

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
1	4/11/2008	Subgrade 150N and 150W	NA	Clayey Sand	110.7	15.7		103.7	94%	90	6.2	(9.5)	Pass
2	4/11/2008	Subgrade 300N and 150W	NA	Clayey Sand	110.7	15.7		108.3	98%	90	10.3	(5.4)	Pass
3	4/11/2008	Subgrade 300N and 300W	NA	Clayey Sand	112.2	14.5		106.4	95%	90	10.3	(4.2)	Pass
4	4/11/2008	Subgrade 150N and 300W	NA	Clayey Sand	112.2	14.5		106.3	95%	90	11.5	(3.0)	Pass
5	4/11/2008	Subgrade 200N and 400W	NA	Clayey Sand	112.2	14.5		107.9	96%	90	12.9	(1.6)	Pass
6	4/11/2008	Subgrade Mid West 3:1 Slope	NA	Clayey Sand	112.2	14.5		104.1	93%	90	12	(2.5)	Pass
7	4/11/2008	Subgrade Mid South 3:1 Slope	NA	Clayey Sand	110.7	15.7		96.5	87%	90	13.1	(2.6)	Fail
7a	4/11/2008	Subgrade Mid South 3:1 Slope	NA	Clayey Sand	110.7	15.7		100.2	91%	90	13.3	(2.4)	Pass
9	4/11/2008	Subgrade Mid North 3:1 Slope	NA	Clayey Sand	112.2	14.5		108.9	97%	90	7.6	(6.9)	Pass
10	4/11/2008	Subgrade Mid East 3:1 Slope	NA	Clayey Sand	no proctor this high			130.9			4.9	4.9	Pass
11	4/11/2008	CCL 50N and 200W	1	Sandy Clay	117.6	13.6		117.9	100%	95	11.1	(2.5)	Pass
12	4/11/2008	CCL 50N and 300W	1	Sandy Clay	110.6	15.6		111.6	101%	95	16.8	1.2	Pass
13	4/11/2008	CCL 75N and 300W	1	Sandy Clay	112.6	14.3		113.4	101%	95	15.5	1.2	Pass
14	4/11/2008	CCL 75N and 225W	1	Sandy Clay	112.6	14.3		110.6	98%	95	14	(0.3)	Pass
15	4/11/2008	CCL 75N and 150W	1	Sandy Clay	110.6	15.6		104.8	95%	95	14.4	(1.2)	Pass
16	4/11/2008	CCL 75N and 75W	1	Sandy Clay	112.6	14.3		107.9	96%	95	13.4	(0.9)	Pass
17	4/11/2008	CCL 150N and 75W	1	Sandy Clay	112.6	14.3		107	95%	95	16.2	1.9	Pass
18	4/11/2008	CCL 150N and 150W	1	Sandy Clay	112.6	14.3		113.1	100%	95	14.9	0.6	Pass
19	4/11/2008	CCL 150N and 225W	1	Sandy Clay	112.6	14.3		111.7	99%	95	14	(0.3)	Pass
20	4/11/2008	CCL 150N and 300W	1	Sandy Clay	112.6	14.3		111.3	99%	95	14.9	0.6	Pass
21*	4/12/2008	CCL 300 N and 150 W	1	Sandy Clay	112.6	14.3		115.2	102%	95	15.9	1.6	Pass
22*	4/12/2008	CCL 400 N and 250 W	1	Sandy Clay	111.4	15.7		111.4	100%	95	17.5	1.8	Pass
23	4/12/2008	CCL 200 N and 100 W	1	Sandy Clay	110.6	15.6		105.8	96%	95	15.4	(0.2)	Pass
24	4/12/2008	CCL 200 N and 175 W	1	Sandy Clay	110.6	15.6		104.3	94%	95	17.4	1.8	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 2

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	Compaction % Actual	Compaction % Spec.	Moisture % Actual	Moisture ± Optimum	
25	4/12/2008	CCL 200N and 200W	1	Sandy Clay	110.6	15.6		109.6	99%	95	16.6	1.0	Pass
26	4/12/2008	CCL 200N and 250W	1	Sandy Clay	110.6	15.6		109.9	99%	95	15.3	(0.3)	Pass
27	4/12/2008	CCL 300N and 325W	1	Sandy Clay	110.6	15.6		104.8	95%	95	16.9	1.3	Pass
28	4/12/2008	CCL 300N and 250W	1	Sandy Clay	110.6	15.6		108.8	98%	95	16.4	0.8	Pass
29	4/12/2008	CCL 300N and 200W	1	Sandy Clay	110.6	15.6		105.8	96%	95	14	(1.6)	Pass
30	4/12/2008	CCL 300N and 125W	1	Sandy Clay	111.4	15.7		111.1	100%	95	16.7	1.0	Pass
31	4/12/2008	CCL 400N and 325W	1	Sandy Clay	110.6	15.6		108.4	98%	95	14.7	(0.9)	Pass
32	4/12/2008	CCL 400N and 275W	1	Sandy Clay	110.6	15.6		106.3	96%	95	13.8	(1.8)	Pass
33	4/12/2008	CCL 400N and 150W	1	Sandy Clay	111.4	15.7		111.5	100%	95	13.6	(2.1)	Pass
34	4/12/2008	CCL 400N and 100W	1	Sandy Clay	110.6	15.6		109.5	99%	95	14.8	(0.8)	Pass
35	4/12/2008	CCL 100N and 100W	2	Sandy Clay	117.6	13.6		109.1	93%	95	15	1.4	Pass
36	4/12/2008	CCL 100N and 175W	2	Sandy Clay	112.6	14.3		111.9	99%	95	14.4	0.1	Pass
37	4/12/2008	CCL 100N and 250W	2	Sandy Clay	112.6	14.3		108.1	96%	95	14.2	(0.1)	Pass
38	4/12/2008	CCL 100N and 325W	2	Sandy Clay	112.6	14.3		109.7	97%	95	14.6	0.3	Pass
39	4/12/2008	CCL 200N and 350W	2	Sandy Clay	112.6	14.3		107.3	95%	95	14	(0.3)	Pass
40	4/12/2008	CCL 200N and 275W	2	Sandy Clay	112.6	14.3		107.6	96%	95	13.7	(0.6)	Pass
41	4/12/2008	CCL 200N and 200W	2	Sandy Clay	112.6	14.3		109.3	97%	95	13.1	(1.2)	Pass
42	4/12/2008	CCL 200N and125W	2	Sandy Clay	112.6	14.3		107.8	96%	95	14.2	(0.1)	Pass
43	4/14/2008	CCL 75N and 100W	3	Sandy Clay	111.4	15.7		109.2	98%	95	17.5	1.8	Pass
44	4/14/2008	CCL 75N and 200W	3	Sandy Clay	111.4	15.7		113.6	102%	95	15.1	(0.6)	Pass
45	4/14/2008	CCL 75N and 275W	3	Sandy Clay	111.4	15.7		108.1	97%	95	14.9	(0.8)	Pass
46	4/14/2008	CCL 75N and 350W	3	Sandy Clay	111.4	15.7		108.7	98%	95	17.1	1.4	Pass
47	4/14/2008	CCL 175N and 100W	3	Sandy Clay	112.6	14.3		112.4	100%	95	14.3	0.0	Pass
48	4/14/2008	CCL 175N and 175W	3	Sandy Clay	110.5	17		110	100%	95	17.8	0.8	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 3

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
49	4/14/2008	CCL 175N and 250W	3	Sandy Clay	112.6	14.3		109.9	98%	95	14.8	0.5	Pass
50	4/14/2008	CCL 75N and 300W	3	Sandy Clay	112.6	14.3		112.6	100%	95	16.3	2.0	Pass
51	4/14/2008	CCL 175N and 325W	3	Sandy Clay	111.4	15.7		113	101%	95	17	1.3	Pass
52	4/14/2008	CCL 275N and 100W	3	Sandy Clay	110.6	15.6		105.8	96%	95	14.3	(1.3)	Pass
53	4/14/2008	CCL 5275N and 185W	3	Sandy Clay	110.5	17		106.7	97%	95	17.6	0.6	Pass
54	4/14/2008	CCL 275N and 250W	3	Sandy Clay	110.5	17		106.7	97%	95	17.8	0.8	Pass
55	4/14/2008	CCL 275N and 325W	3	Sandy Clay	112.6	14.3		108.5	96%	95	15	0.7	Pass
56	4/14/2008	CCL 400N and 100W	3	Sandy Clay	111.4	15.7		106.2	95%	95	15.3	(0.4)	Pass
57	4/14/2008	CCL 400N and 185W	3	Sandy Clay	110.6	15.6		108	98%	95	15.7	0.1	Pass
58	4/14/2008	CCL 400N and 275W	3	Sandy Clay	110.6	15.6		110.6	100%	95	14.6	(1.0)	Pass
59	4/14/2008	CCL 400N and 325W	3	Sandy Clay	112.6	14.3		107.4	95%	95	15	0.7	Pass
60	4/14/2008	CCL 400N and 380W	3	Sandy Clay	110.6	15.6		109.2	99%	95	16.2	0.6	Pass
61	4/14/2008	CCL 420N and 100W	3	Sandy Clay	110.5	17		104.7	95%	95	18.8	1.8	Pass
62	4/14/2008	CCL 385N and 6W Trench	1	Sandy Clay	112.6	14.3		110.9	98%	95	15.3	1.0	Pass
63	4/14/2008	CCL 230N and 6W Trench	1	Sandy Clay	110.6	15.6		106	96%	95	19.3	3.7	Pass
64	4/14/2008	CCL 110N and 6W Trench	1	Sandy Clay	110.6	15.6		111.1	100%	95	16.8	1.2	Pass
65	4/14/2008	CCL 275N and 6W Trench	1	Sandy Clay	110.6	15.6		107.8	97%	95	16.4	0.8	Pass
66	4/14/2008	CCL 275N and 75W	2	Sandy Clay	110.6	15.6		110.2	100%	95	17.6	2.0	Pass
67	4/14/2008	CCL 275N and 175W	2	Sandy Clay	110.5	17		111.5	101%	95	15.2	(1.8)	Pass
68	4/14/2008	CCL 275N and 250W	2	Sandy Clay	112.6	14.3		112.6	100%	95	14.9	0.6	Pass
69	4/14/2008	CCL 275N and 325W	2	Sandy Clay	112.6	14.3		110.7	98%	95	15.6	1.3	Pass
70	4/14/2008	CCL 275N and 400W	2	Sandy Clay	112.6	14.3		110.5	98%	95	13.9	(0.4)	Pass
71	4/14/2008	CCL 400N and 400W	2	Sandy Clay	112.6	14.3		114.8	102%	95	13.1	(1.2)	Pass
72	4/14/2008	CCL 400N and 300W	2	Sandy Clay	110.6	15.6		105.6	95%	95	16.8	1.2	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 4

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
73	4/14/2008	CCL 400N and 225W	3	Sandy Clay	110.6	15.6		106.9	97%	95	16.5	0.9	Pass
74	4/14/2008	CCL 400N and 125W	3	Sandy Clay	110.6	15.6		107.2	97%	95	16.4	0.8	Pass
75*	4/14/2008	CCL 400N and 250W	3	Sandy Clay	110.6	15.6		106.8	97%	95	16.4	0.8	Pass
76	4/15/2008	CCL 175N and 20W Trench	2	Sandy Clay	110.6	15.6		104.6	95%	95	16.6	1.0	Pass
77	4/15/2008	CCL 300N and 20W Trench	2	Sandy Clay	114.5	13.7		114.3	100%	95	14.4	0.7	Pass
78	4/15/2008	CCL 220N and 40W Trench	2	Sandy Clay	110.6	15.6		109.7	99%	95	15.7	0.1	Pass
79	4/15/2008	CCL 175N and 40W Trench	2	Sandy Clay	110.6	15.6		106.9	97%	95	14.9	(0.7)	Pass
80	4/15/2008	CCL 200N and 30W Trench	2	Sandy Clay	110.6	15.6		104.7	95%	95	14.2	(1.4)	Pass
81	4/15/2008	CCL 140N and 30W Trench	3	Sandy Clay	114.5	13.7		113.7	99%	95	14	0.3	Pass
82	4/15/2008	CCL 300N and 30W Trench	3	Sandy Clay	110.6	15.6		110.8	100%	95	16.9	1.3	Pass
83*	4/15/2008	CCL 75N and 200W	3	Sandy Clay	111.4	15.7		111.6	100%	95	15.4	(0.3)	Pass
84	4/15/2008	CCL 180N and 75W	4	Sandy Clay	117.6	13.6		117.5	100%	95	15.5	1.9	Pass
85	4/15/2008	CCL 180N and 150W	4	Sandy Clay	117.6	13.6		114.4	97%	95	16.2	2.6	Pass
86	4/15/2008	CCL 180N and 200W	4	Sandy Clay	110.6	15.6		109.9	99%	95	15.5	(0.1)	Pass
87	4/15/2008	CCL 180N and 270W	4	Sandy Clay	111.4	15.7		111.6	100%	95	16.9	1.2	Pass
88	4/15/2008	CCL 180N and 320W	4	Sandy Clay	110.5	17		107.9	98%	95	18.8	1.8	Pass
89	4/15/2008	CCL 180N and 390W	4	Sandy Clay	110.6	15.6		107.8	97%	95	17.1	1.5	Pass
90	4/15/2008	CCL 290N and 400W	4	Sandy Clay	110.6	15.6		110.4	100%	95	15.2	(0.4)	Pass
91	4/15/2008	CCL 290N and 315W	4	Sandy Clay	112.6	14.3		108.9	97%	95	15.9	1.6	Pass
92	4/15/2008	CCL 290N and 250W	4	Sandy Clay	111.4	15.7		111.9	100%	95	15.8	0.1	Pass
93	4/15/2008	CCL 290N and 180W	4	Sandy Clay	110.6	15.6		108.5	98%	95	16.6	1.0	Pass
94	4/15/2008	CCL 290N and 80W	4	Sandy Clay	110.6	15.6		111.8	101%	95	16.5	0.9	Pass
95	4/15/2008	CCL 400N and 110W	4	Sandy Clay	112.6	14.3		110.3	98%	95	13.6	(0.7)	Pass
96	4/15/2008	CCL 400N and 190W	4	Sandy Clay	112.6	14.3		113.6	101%	95	16.3	2.0	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

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COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
97*	4/15/2008	CCL 200N and 25W	4	Sandy Clay	111.4	15.7		111.4	100%	95	15.4	(0.3)	Pass
98*	4/15/2008	CCL 75N and 200W	4	Sandy Clay	111.4	15.7		111.7	100%	95	15.6	(0.1)	Pass
99*	4/15/2008	CCL 400N and 275W	4	Sandy Clay	111.4	15.7		110.6	99%	95	15.8	0.1	Pass
100*	4/15/2008	CCL 175N and 350W	4	Sandy Clay	111.4	15.7		110.3	99%	95	15.6	(0.1)	Pass
101	4/16/2008	CCL 90N and 90W	5	Sandy Clay	110.6	15.6		112.9	102%	95	15.5	(0.1)	Pass
102	4/16/2008	CCL 90N and 175W	5	Sandy Clay	111.4	15.7		111.9	100%	95	16.8	1.1	Pass
103	4/16/2008	CCL 90N and 250W	5	Sandy Clay	110.6	15.6		110.4	100%	95	17.4	1.8	Pass
104	4/16/2008	CCL 90N and 310W	5	Sandy Clay	110.6	15.6		109.3	99%	95	14.9	(0.7)	Pass
105	4/16/2008	CCL175N and 410W	5	Sandy Clay	112.6	14.3		113.4	101%	95	16.6	2.3	Pass
106	4/16/2008	CCL175N and 320W	5	Sandy Clay	110.6	15.6		105.6	95%	95	15.7	0.1	Pass
107	4/16/2008	CCL175N and 250W	5	Sandy Clay	110.6	15.6		112	101%	95	15.2	(0.4)	Pass
108	4/16/2008	CCL175N and 150W	5	Sandy Clay	111.4	15.7		112.7	101%	95	17	1.3	Pass
109	4/16/2008	CCL300N and 100W	5	Sandy Clay	112.6	14.3		112.5	100%	95	14	(0.3)	Pass
110	4/16/2008	CCL300N and 185W	5	Sandy Clay	110.6	15.6		107.3	97%	95	15.3	(0.3)	Pass
111	4/16/2008	CCL300N and 235W	5	Sandy Clay	111.4	15.7		111.3	100%	95	15.9	0.2	Pass
112	4/16/2008	CCL300N and 320W	5	Sandy Clay	110.6	15.6		105.8	96%	95	16.3	0.7	Pass
113	4/16/2008	CCL300N and 400W	5	Sandy Clay	110.6	15.6		108.5	98%	95	13.8	(1.8)	Pass
114	4/16/2008	CCL 375N and 75W	5	Sandy Clay	110.6	15.6		109.6	99%	95	17.1	1.5	Pass
115	4/16/2008	CCL 375N and 180W	5	Sandy Clay	110.6	15.6		109.6	99%	95	14.3	(1.3)	Pass
116	4/16/2008	CCL 375N and 275W	5	Sandy Clay	110.6	15.6		108.8	98%	95	15	(0.6)	Pass
117	4/16/2008	CCL 375N and 320W	5	Sandy Clay	111.4	15.7		111.3	100%	95	16	0.3	Pass
118	4/16/2008	CCL 375N and 390W	5	Sandy Clay	111.4	15.7		110.3	99%	95	14.7	(1.0)	Pass
119	4/16/2008	CCL 175N and 30W Trench	5	Sandy Clay	110.6	15.6		104.8	95%	95	14.7	(0.9)	Pass
120	4/16/2008	CCL 300N and 25W Trench	5	Sandy Clay	110.6	15.6		104.1	94%	95	16.4	0.8	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

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COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
121	4/16/2008	CCL 100N and 110W	6	Sandy Clay	111.4	15.7		109.3	98%	95	15.5	(0.2)	Pass
122	4/16/2008	CCL 100N and 220W	6	Sandy Clay	111.4	15.7		107.2	96%	95	15.4	(0.3)	Pass
123	4/16/2008	CCL 100N and 300W	6	Sandy Clay	111.4	15.7		107.5	96%	95	16.2	0.5	Pass
124	4/16/2008	CCL 100N and 345W	6	Sandy Clay	111.4	15.7		110.7	99%	95	16.3	0.6	Pass
125	4/16/2008	CCL 165N and 100W	6	Sandy Clay	111.4	15.7		109.2	98%	95	17.9	2.2	Pass
126	4/16/2008	CCL 165N and 175W	6	Sandy Clay	111.4	15.7		107.2	96%	95	16.2	0.5	Pass
127	4/16/2008	CCL 165N and 240W	6	Sandy Clay	111.4	15.7		109.8	99%	95	17.5	1.8	Pass
128	4/16/2008	CCL 165N and 300W	6	Sandy Clay	111.4	15.7		107.5	96%	95	17.1	1.4	Pass
129	4/16/2008	CCL 165N and 415W	6	Sandy Clay	111.4	15.7		108.4	97%	95	15.5	(0.2)	Pass
130	4/16/2008	CCL 290N and 125W	6	Sandy Clay	112.6	14.3		113	100%	95	15	0.7	Pass
131	4/16/2008	CCL 290N and 200W	6	Sandy Clay	111.4	15.7		109	98%	95	15	(0.7)	Pass
132	4/16/2008	CCL 290N and 280W	6	Sandy Clay	111.4	15.7		105.5	95%	95	15.5	(0.2)	Pass
133	4/16/2008	CCL 290N and 350W	6	Sandy Clay	111.4	15.7		106.2	95%	95	16.8	1.1	Pass
134	4/16/2008	CCL 290N and 400W	6	Sandy Clay	112.6	14.3		111.1	99%	95	13.2	(1.1)	Pass
135	4/16/2008	CCL 100N and 25W Trench	6	Sandy Clay	111.4	15.7		108	97%	95	14.6	(1.1)	Pass
136	4/16/2008	CCL 260N and 30W Trench	6	Sandy Clay	111.4	15.7		108.8	98%	95	15	(0.7)	Pass
137	4/16/2008	CCL 260N and 30W Trench	6	Sandy Clay	112.6	14.3		114.9	102%	95	14.9	0.6	Pass
138	4/16/2008	CCL 260N and 30W Trench	6	Sandy Clay	112.6	14.3		110.8	98%	95	13.8	(0.5)	Pass
139	4/16/2008	CCL 260N and 30W Trench	6	Sandy Clay	112.6	14.3		111.9	99%	95	13.7	(0.6)	Pass
140*	4/16/2008	CCL 200N and 150W	6	Sandy Clay	112.6	14.3		113.6	101%	95	15	0.7	Pass
141*	4/16/2008	CCL 175N and 20W Trench	6	Sandy Clay	110.6	15.6		109.6	99%	95	15.8	0.2	Pass
142*	4/16/2008	CCL 100N and 350W	6	Sandy Clay	110.6	15.6		109.9	99%	95	15.7	0.1	Pass
143	4/17/2008	CCL 400N and 100W	6	Sandy Clay	112.6	14.3		114.9	102%	95	14.9	0.6	Pass
144	4/17/2008	CCL 400N and 190W	6	Sandy Clay	112.6	14.3		110.8	98%	95	13.8	(0.5)	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

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COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
145	4/17/2008	CCL 400N and 270W	6	Sandy Clay	112.6	14.3		111.9	99%	95	13.7	(0.6)	Pass
146	4/17/2008	CCL 400N and 375W	6	Sandy Clay	112.6	14.3		111.2	99%	95	13.3	(1.0)	Pass
147	4/17/2008	CCL 150N and 40W Trench	6	Sandy Clay	112.6	14.3		111.4	99%	95	13.8	(0.5)	Pass
148	4/17/2008	CCL 150N and 60W Trench	6	Sandy Clay	110.6	15.6		105	95%	95	14.9	(0.7)	Pass
149	4/17/2008	CCL 225N and 40W Trench	6	Sandy Clay	112.6	14.3		115.6	103%	95	14.3	0.0	Pass
150	4/17/2008	CCL 75N and 75W	7	Sandy Clay	112.6	14.3		114.7	102%	95	16	1.7	Pass
151	4/17/2008	CCL 75N and 175W	7	Sandy Clay	111.4	15.7		109.8	99%	95	17.1	1.4	Pass
152	4/17/2008	CCL 75N and 220W	7	Sandy Clay	111.4	15.7		108.8	98%	95	17.4	1.7	Pass
153	4/17/2008	CCL 75N and 300W	7	Sandy Clay	112.6	14.3		113.5	101%	95	15	0.7	Pass
154	4/17/2008	CCL 75N and 385W	7	Sandy Clay	112.6	14.3		114.3	102%	95	15.7	1.4	Pass
155	4/17/2008	CCL 175N and 375W	7	Sandy Clay	111.4	15.7		108.9	98%	95	16.3	0.6	Pass
156	4/17/2008	CCL 175N and 300W	7	Sandy Clay	111.4	15.7		106.8	96%	95	16.8	1.1	Pass
157	4/17/2008	CCL 175N and 225W	7	Sandy Clay	111.4	15.7		110.4	99%	95	16.4	0.7	Pass
158	4/17/2008	CCL 175N and 150W	7	Sandy Clay	112.6	14.3		112.2	100%	95	13.9	(0.4)	Pass
159	4/17/2008	CCL 280N and 125W	7	Sandy Clay	110.6	15.6		105.2	95%	95	16.8	1.2	Pass
160	4/17/2008	CCL 280N and 200W	7	Sandy Clay	110.6	15.6		109.4	99%	95	16.1	0.5	Pass
161	4/17/2008	CCL 280N and 275W	7	Sandy Clay	110.6	15.6		107.2	97%	95	16.6	1.0	Pass
162	4/17/2008	CCL 280N and 320W	7	Sandy Clay	110.6	15.6		106.9	97%	95	16.6	1.0	Pass
163	4/17/2008	CCL 280N and 425W	7	Sandy Clay	110.6	15.6		109.4	99%	95	15.7	0.1	Pass
164	4/17/2008	CCL 420N and 110W	7	Sandy Clay	111.4	15.7		112.6	101%	95	17.1	1.4	Pass
165	4/17/2008	CCL 420N and 200W	7	Sandy Clay	111.4	15.7		109.4	98%	95	16.8	1.1	Pass
166	4/17/2008	CCL 420N and 275W	7	Sandy Clay	111.4	15.7		111.1	100%	95	15.6	(0.1)	Pass
167	4/17/2008	CCL 420N and 370W	7	Sandy Clay	110.6	15.6		107.9	98%	95	16.2	0.6	Pass
168	4/17/2008	CCL 12N and 75W Slope	1	Sandy Clay	112.6	14.3		112.6	100%	95	15.1	0.8	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 8

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
169	4/17/2008	CCL 12N and 200W Slope	1	Sandy Clay	112.6	14.3		108.6	96%	95	15.6	1.3	Pass
170	4/17/2008	CCL 120N and 450W Slope	1	Sandy Clay	111.4	15.7		112.7	101%	95	15.9	0.2	Pass
171	4/17/2008	CCL 225N and 450W Slope	1	Sandy Clay	111.4	15.7		110	99%	95	17	1.3	Pass
172*	4/17/2008	CCL 200N and 125W	7	Sandy Clay	112.6	14.3		112.3	100%	95	15.3	1.0	Pass
173*	4/17/2008	CCL 100N and 200W	7	Sandy Clay	111.4	15.7		111.5	100%	95	15.4	(0.3)	Pass
174*	4/17/2008	CCL 300N and 350W	7	Sandy Clay	111.4	15.7		110.5	99%	95	15.6	(0.1)	Pass
175	4/18/2008	CCL 20N and 175W Slope	2	Sandy Clay	110.6	15.6		104.8	95%	95	15.9	0.3	Pass
176	4/18/2008	CCL 20N and 350W Slope	2	Sandy Clay	110.6	15.6		106.8	97%	95	17.6	2.0	Pass
177	4/18/2008	CCL 250N and 450W Slope	2	Sandy Clay	111.4	15.7		108.9	98%	95	17.7	2.0	Pass
178	4/18/2008	CCL 200N and 450W Slope	2	Sandy Clay	111.4	15.7		110	99%	95	15.5	(0.2)	Pass
179	4/18/2008	CCL 450N and 360W Slope	1	Sandy Clay	111.4	15.7		113.4	102%	95	16.2	0.5	Pass
180	4/18/2008	CCL 450N and 200W Slope	1	Sandy Clay	111.4	15.7		112.9	101%	95	17.9	2.2	Pass
181	4/18/2008	CCL 320N and 10W Slope	1	Sandy Clay	111.4	15.7		112.8	101%	95	15.7	0.0	Pass
182	4/18/2008	CCL 190N and 10W Slope	1	Sandy Clay	111.4	15.7		112.2	101%	95	15.9	0.2	Pass
183	4/25/2008	CCL 15N and 180W Slope	3	Sandy Clay	110.6	15.6		108.3	98%	95	17.4	1.8	Pass
184	4/25/2008	CCL 15N and 350W Slope	3	Sandy Clay	110.6	15.6		108.8	98%	95	17.1	1.5	Pass
185	4/25/2008	CCL 180N and 450W Slope	3	Sandy Clay	108.8	17.3		109.1	100%	95	17.8	0.5	Pass
186	4/25/2008	CCL 250N and 400W Slope	3	Sandy Clay	111.4	15.7		111.1	100%	95	15.6	(0.1)	Pass
187	4/25/2008	CCL 160N and 450W Slope	4	Sandy Clay	112.6	14.3		112.6	100%	95	13.8	(0.5)	Pass
188	4/25/2008	CCL 225N and 450W Slope	4	Sandy Clay	108.8	17.3		107.9	99%	95	17.3	0.0	Pass
189	4/25/2008	CCL 10N and 10W Slope	1	Sandy Clay	110.6	15.6		109.3	99%	95	16.1	0.5	Pass
190	4/25/2008	CCL 75N and 10W Slope	2	Sandy Clay	108.8	17.3		104.7	96%	95	17.8	0.5	Pass
191	4/25/2008	CCL 175N and 10W Slope	2	Sandy Clay	110.6	15.6		105.2	95%	95	16.6	1.0	Pass
192	4/25/2008	CCL 20N and 100W Slope	4	Sandy Clay	110.6	15.6		109.1	99%	95	16.4	0.8	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

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COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
193	4/25/2008	CCL 20N and 275W Slope	4	Sandy Clay	111.4	15.7		110.1	99%	95	15.3	(0.4)	Pass
194	4/25/2008	CCL 125N and 450W Slope	5	Sandy Clay	111.4	15.7		105.9	95%	95	16	0.3	Pass
195	4/25/2008	CCL 300N and 450W Slope	5	Sandy Clay	111.4	15.7		106.1	95%	95	17.3	1.6	Pass
196	4/25/2008	CCL 15N and 375W Slope	5	Sandy Clay	111.4	15.7		110.9	100%	95	17.1	1.4	Pass
197	4/25/2008	CCL 15N and 200W Slope	5	Sandy Clay	111.4	15.7		108.7	98%	95	16.3	0.6	Pass
198	4/25/2008	CCL 70N and 20W Slope	3	Sandy Clay	111.4	15.7		110.6	99%	95	17.1	1.4	Pass
199	4/28/2008	CCL 15N and 180W Slope	3	Sandy Clay	111.4	15.7		108.3	97%	95	17.4	1.7	Pass
200	4/28/2008	CCL 15N and 350W Slope	3	Sandy Clay	111.4	15.7		108.8	98%	95	17.1	1.4	Pass
201	4/28/2008	CCL 180N and 450W Slope	3	Sandy Clay	111.4	15.7		109.4	98%	95	17.8	2.1	Pass
202	4/28/2008	CCL 250N and 450W Slope	3	Sandy Clay	111.4	15.7		111.1	100%	95	15.6	(0.1)	Pass
203	4/28/2008	CCL 160N and 450W Slope	4	Sandy Clay	111.4	15.7		112.6	101%	95	13.8	(1.9)	Pass
204	4/28/2008	CCL 225N and 450W Slope	4	Sandy Clay	108.8	17.3		107.9	99%	95	17.3	0.0	Pass
205	4/28/2008	CCL 10N and 10W Slope	1	Sandy Clay	110.6	15.6		109.3	99%	95	16.1	0.5	Pass
206	4/28/2008	CCL 75N and 10W Slope	2	Sandy Clay	108.8	17.3		104.7	96%	95	17.8	0.5	Pass
207*	4/28/2008	CCL 175N and 10W Slope	2	Sandy Clay	108.8	17.3		105.2	97%	95	16.6	(0.7)	Pass
208	4/28/2008	CCL 20N and 100W Slope	4	Sandy Clay	110.6	15.6		109.1	99%	95	16.4	0.8	Pass
209	4/28/2008	CCL 20N and 275W Slope	4	Sandy Clay	110.6	15.6		110.1	100%	95	15.3	(0.3)	Pass
210	4/28/2008	CCL 125N and 450W Slope	5	Sandy Clay	110.6	15.6		105.9	96%	95	16	0.4	Pass
211	4/28/2008	CCL 300N and 450W Slope	5	Sandy Clay	110.6	15.6		106.1	96%	95	17.3	1.7	Pass
212	4/28/2008	CCL 15N and 375W Slope	5	Sandy Clay	110.6	15.6		110.9	100%	95	17.1	1.5	Pass
213	4/28/2008	CCL 15N and 200W Slope	5	Sandy Clay	110.6	15.6		108.7	98%	95	16.3	0.7	Pass
214	4/28/2008	CCL 70N and 20W Slope	3	Sandy Clay	110.6	15.6		110.6	100%	95	17.1	1.5	Pass
215	4/29/2008	CCL 400N and 400W Slope	1	Sandy Clay	108.8	17.3		104.9	96%	95	18.5	1.2	Pass
216	4/29/2008	CCL 385N and 420W Slope	2	Sandy Clay	111.4	15.7		112.1	101%	95	16.1	0.4	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 10

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
217	4/29/2008	CCL 280N and 10W Slope	4	Sandy Clay	111.4	15.7		111.1	100%	95	15.2	(0.5)	Pass
218*	4/29/2008	CCL 60N and 10W Slope	4	Sandy Clay	111.4	15.7		110.9	100%	95	15.8	0.1	Pass
219	4/29/2008	CCL 12N and 380W Slope	6	Sandy Clay	111.4	15.7		111.1	100%	95	16.2	0.5	Pass
220	4/29/2008	CCL 12N and 150W Slope	6	Sandy Clay	111.4	15.7		111.9	100%	95	17.3	1.6	Pass
221	4/29/2008	CCL 75N and 450W Slope	6	Sandy Clay	111.4	15.7		109.8	99%	95	15.6	(0.1)	Pass
222	4/29/2008	CCL 180N and 450W Slope	6	Sandy Clay	111.4	15.7		110.2	99%	95	16.3	0.6	Pass
223	4/29/2008	CCL 350N and 450W Slope	1	Sandy Clay	110.6	15.6		108.7	98%	95	17.6	2.0	Pass
224	4/29/2008	CCL 425N and 300W Slope	2	Sandy Clay	108.8	17.3		108.7	100%	95	18.5	1.2	Pass
225	4/29/2008	CCL 425N and 110W Slope	2	Sandy Clay	110.6	15.6		110.4	100%	95	15.4	(0.2)	Pass
226	4/29/2008	CCL 75N and 450W Slope	7	Sandy Clay	108.8	17.3		104.9	96%	95	17.2	(0.1)	Pass
227	4/29/2008	CCL 225N and 450W Slope	7	Sandy Clay	108.8	17.3		108.8	100%	95	18.5	1.2	Pass
228	4/29/2008	CCL 260N and 20W Slope	5	Sandy Clay	108.8	17.3		107.7	99%	95	15.6	(1.7)	Pass
229	4/29/2008	CCL 110N and 20W Slope	5	Sandy Clay	111.4	15.7		113.1	102%	95	15.8	0.1	Pass
230	4/29/2008	CCL 450N and 75W Slope	8	Sandy Clay	111.4	15.7		108.8	98%	95	17.8	2.1	Pass
231	4/29/2008	CCL 275N and 450W Slope	8	Sandy Clay	111.4	15.7		113.2	102%	95	15.9	0.2	Pass
232	4/29/2008	CCL 375N and 450W Slope	8	Sandy Clay	111.4	15.7		111.8	100%	95	16	0.3	Pass
233	4/29/2008	CCL 215N and 20W Slope	6	Sandy Clay	111.4	15.7		106.3	95%	95	17	1.3	Pass
234	4/29/2008	CCL 115N and 20W Slope	6	Sandy Clay	111.4	15.7		109.9	99%	95	16.2	0.5	Pass
235	4/30/2008	CCL 425N and 350W Slope	5	Sandy Clay	111.4	15.7		108.2	97%	95	15.4	(0.3)	Pass
236	4/30/2008	CCL 425N and 200W Slope	5	Sandy Clay	111.4	15.7		109.9	99%	95	15	(0.7)	Pass
237	4/30/2008	CCL 20N and 12W Slope	3	Sandy Clay	111.4	15.7		105.2	94%	95	14.2	(1.5)	Pass
238	4/30/2008	CCL 425N and 400W Slope	6	Sandy Clay	111.4	15.7		111.3	100%	95	16.5	0.8	Pass
239	4/30/2008	CCL 425N and 80W Slope	6	Sandy Clay	111.4	15.7		110.6	99%	95	15.9	0.2	Pass
240	4/30/2008	CCL 315N and 25W Slope	4	Sandy Clay	111.4	15.7		112.1	101%	95	15.9	0.2	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 11

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
241	4/30/2008	CCL 425N and 125W Slope	4	Sandy Clay	108.8	17.3		110.5	102%	95	18.7	1.4	Pass
242	4/30/2008	CCL 425N and 325W Slope	4	Sandy Clay	111.4	15.7		114.2	103%	95	14.1	(1.6)	Pass
243	4/30/2008	CCL 350N and 450W Slope	6	Sandy Clay	111.4	15.7		114.1	102%	95	15	(0.7)	Pass
244	4/30/2008	CCL 360N and 20W Slope	6	Sandy Clay	111.4	15.7		113.3	102%	95	15.9	0.2	Pass
245	4/30/2008	CCL 15N and 10W Slope	6	Sandy Clay	111.4	15.7		108.1	97%	95	16	0.3	Pass
246	4/30/2008	CCL 390N and 450W Slope	6	Sandy Clay	111.4	15.7		112	101%	95	14.1	(1.6)	Pass
247	4/30/2008	CCL 425N and 300W Slope	1	Sandy Clay	111.4	15.7		110.2	99%	95	17.2	1.5	Pass
248	4/30/2008	CCL 425N and 200W Slope	2	Sandy Clay	108.8	17.3		108.4	100%	95	18.8	1.5	Pass
249	4/30/2008	CCL 300N and 25W Slope	2	Sandy Clay	111.4	15.7		111.1	100%	95	15.3	(0.4)	Pass
250	5/1/2008	CCL 25N and 20W Slope	4	Sandy Clay	110.8	15.7		114.9	104%	95	14.7	(1.0)	Pass
251*	5/1/2008	CCL 340N and 450W Slope	5	Sandy Clay	111.3	17.1		109.5	98%	95	17	(0.1)	Pass
252	5/1/2008	CCL 425N and 375W Slope	7	Sandy Clay	111.3	17.1		111.5	100%	95	16.1	(1.0)	Pass
253	5/1/2008	CCL 425N and 200W Slope	7	Sandy Clay	111.3	17.1		110	99%	95	18.1	1.0	Pass
254	5/1/2008	CCL 250N and 250W	8	Sandy Clay	110.8	15.7		113.6	103%	95	15.3	(0.4)	Pass
255	5/1/2008	CCL 425N and 400W Slope	6	Sandy Clay	110.8	15.7		109.9	99%	95	16.9	1.2	Pass
256	5/2/2008	CCL 300N and 40W Trench	7	Sandy Clay	110.8	15.7		110.1	99%	95	15	(0.7)	Pass
257	5/2/2008	CCL 200N and 40W Trench	7	Sandy Clay	110.8	15.7		110.6	100%	95	14.5	(1.2)	Pass
258	5/5/2008	CCL 250N and 40W Trench	8	Sandy Clay	111.3	17.1		113.1	102%	95	16.1	(1.0)	Pass
259	5/5/2008	CCL 125N and 40W Trench	8	Sandy Clay	110.8	15.7		110.4	100%	95	15.6	(0.1)	Pass
260	5/5/2008	CCL 100N and 60W Tr. Slope	1	Sandy Clay	110.8	15.7		110.9	100%	95	15	(0.7)	Pass
261	5/5/2008	CCL 300N and 70W Tr. Slope	2	Sandy Clay	110.8	15.7		110.9	100%	95	14.9	(0.8)	Pass
262	5/5/2008	CCL 75N and 70W Tr. Slope	2	Sandy Clay	110.8	15.7		111.7	101%	95	15.7	0.0	Pass
263	5/5/2008	CCL 125N and 50W Tr. Slope	3	Sandy Clay	111.3	17.1		111.6	100%	95	16.7	(0.4)	Pass
264	5/5/2008	CCL 215N and 50W Tr. Slope	3	Sandy Clay	110.8	15.7		115.1	104%	95	15.1	(0.6)	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 12

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
265	5/5/2008	CCL 75N and 40W Tr. Slope	4	Sandy Clay	111.3	17.1		112.3	101%	95	15	(2.1)	Pass
266	5/5/2008	CCL 250N and 40W Tr. Slope	4	Sandy Clay	111.3	17.1		112.2	101%	95	16.4	(0.7)	Pass
267	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		103.1	92%	95	7.5	(6.1)	Pass
268	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		110.7	98%	95	7.8	(5.8)	Pass
269	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		113.4	101%	95	7.2	(6.4)	Pass
270	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		107.7	96%	95	8.6	(5.0)	Pass
271	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		102.9	91%	95	10.9	(2.7)	Pass
272	5/6/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		112.4	100%	95	11.5	(2.1)	Pass
273	5/6/2008	CCL 400N and 30W Slope	5	Sandy Clay	111.3	17.1		110.3	99%	95	16.9	(0.2)	Pass
274	5/6/2008	CCL295N and 15W Slope	6	Sandy Clay	111.3	17.1		114	102%	95	15.3	(1.8)	Pass
275	5/6/2008	CCL 25N and 15W Slope	5	Sandy Clay	111.3	17.1		106.7	96%	95	18	0.9	Pass
276	5/6/2008	CCL 375N and 35W Slope	7	Sandy Clay	111.3	17.1		110.3	99%	95	15.9	(1.2)	Pass
277	5/6/2008	CCL 390N and 400W Slope	3	Sandy Clay	111.3	17.1		113.6	102%	95	15.5	(1.6)	Pass
278	5/6/2008	CCL 425N and 350W Slope	7	Sandy Clay	111.3	17.1		113.7	102%	95	16	(1.1)	Pass
279	5/6/2008	CCL 290N and 450W Slope	8	Sandy Clay	111.3	17.1		114.1	103%	95	15.3	(1.8)	Pass
280	5/7/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		107	95%	95	11.2	(2.4)	Pass
281	5/7/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		110.6	98%	95	11.7	(1.9)	Pass
282	5/12/2008	CCL 275N and 450W Slope	9	Sandy Clay	111.3	17.1		112.9	101%	95	14.8	(2.3)	Pass
283	5/12/2008	CCL 325N and 250W Slope	10	Sandy Clay	111.3	17.1		112.6	101%	95	16.3	(0.8)	Pass
284	5/14/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		97	86%	95	12	(1.6)	Fail
285	5/14/2008	Haul Road Subgrade		Sandy Clay	112.6	13.6		117.8	105%	95	7.1	(6.5)	Pass
286	5/14/2008	Haul Road Subgrade(retest)		Sandy Clay	112.6	13.6		116.1	103%	95	11.3	(2.3)	Pass
287	5/20/2008	CCL 75N and 75W	8	Sandy Clay	112.6	14.3		113.4	101%	95	15.6	1.3	Pass
288	5/20/2008	CCL 75N and 150W	8	Sandy Clay	112.6	14.3		114	101%	95	14.2	(0.1)	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 13

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
289	5/20/2008	CCL 75N and 275W	8	Sandy Clay	112.6	14.3		112.2	100%	95	15.6	1.3	Pass
290	5/20/2008	CCL 75N and 350W	8	Sandy Clay	111.3	17.1		108.3	97%	95	18.3	1.2	Pass
291	5/20/2008	CCL 75N and 390W	8	Sandy Clay	111.3	17.1		115.2	104%	95	13.7	(3.4)	Fail
292	5/20/2008	CCL 75N and 390W (retest)	8	Sandy Clay	112.6	14.3		109.9	98%	95	15.2	0.9	Pass
293	5/20/2008	CCL 180N and 100W	8	Sandy Clay	111.3	17.1		108.2	97%	95	16.8	(0.3)	Pass
294	5/20/2008	CCL 180N and 175W	8	Sandy Clay	111.3	17.1		108	97%	95	17	(0.1)	Pass
295	5/20/2008	CCL 180N and 225W	8	Sandy Clay	111.3	17.1		111.9	101%	95	15.4	(1.7)	Pass
296	5/20/2008	CCL 180N and 325W	8	Sandy Clay	111.3	17.1		108.1	97%	95	17.2	0.1	Pass
297	5/20/2008	CCL 180N and 380W	8	Sandy Clay	111.3	17.1		108.4	97%	95	17.9	0.8	Pass
298	5/20/2008	CCL 275N and 120W	8	Sandy Clay	111.3	17.1		108.8	98%	95	14.3	(2.8)	Pass
299	5/20/2008	CCL 275N and 200W	8	Sandy Clay	111.3	17.1		110.6	99%	95	17	(0.1)	Pass
300	5/20/2008	CCL 275N and 285W	8	Sandy Clay	111.3	17.1		109.4	98%	95	17.6	0.5	Pass
301	5/20/2008	CCL 275N and 350W	8	Sandy Clay	111.3	17.1		105.9	95%	95	15.3	(1.8)	Pass
302	5/20/2008	CCL 275N and 390W	8	Sandy Clay	111.3	17.1		106.3	96%	95	17.7	0.6	Pass
303	5/20/2008	CCL 30N and 100W Slope	8	Sandy Clay	112.6	14.3		115.6	103%	95	14.8	0.5	Pass
304	5/20/2008	CCL 30N and 300W Slope	8	Sandy Clay	112.6	14.3		118	105%	95	14.8	0.5	Pass
305	5/30/2008	CCL 360N and 75W	8	Sandy Clay	111.3	17.1		106.1	95%	95	15.3	(1.8)	Pass
306	5/30/2008	CCL 360N and 175W	8	Sandy Clay	111.3	17.1		113.1	102%	95	15.5	(1.6)	Pass
307	5/30/2008	CCL 360N and 220W	8	Sandy Clay	111.3	17.1		109.7	99%	95	18.9	1.8	Pass
308	5/30/2008	CCL 360N and 300W	8	Sandy Clay	111.3	17.1		109.3	98%	95	17.4	0.3	Pass
309	5/30/2008	CCL 360N and 390W	8	Sandy Clay	111.3	17.1		110.5	99%	95	17.3	0.2	Pass
310	5/30/2008	CCL 250N and 250W	8	Sandy Clay	111.3	17.1		107.1	96%	95	19.2	2.1	Pass
311	5/30/2008	CCL 125N and 125W	8	Sandy Clay	111.3	17.1		110.3	99%	95	14.9	(2.2)	Pass
312*	5/30/2008	CCL 400N and 240W	8	Sandy Clay	111.3	17.1		113.3	102%	95	16.8	(0.3)	Pass

Reported to: Linda Jacobson, EPA

Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

Project Name: CAMU PHASE 2 CELL
Project Location: EAST HELENA, MT
Client: ASARCO, LLC
Specifications: SUBGRADE - 90%, CCL - 95% @+3/-2

Date Reported:

Page #: 14

COMPACTION SOIL DENSITY SUMMARY

Test #	Date Tested	Location of Test	Lift #	Description of Soil	Lab M-D Results		Method of Test	Field Test Results					Pass or Fail
									Compaction		Moisture		
					Max. Dry Density (pcf)	Optimum Moisture (%)		Dry Density (pcf)	% Actual	% Spec.	% Actual	± Optimum	
313	5/20/2008	CCL 400N and 110W	8	Sandy Clay	111.3	17.1		114.1	103%	95	15.3	(1.8)	Pass

Reported to: Linda Jacobson, EPA

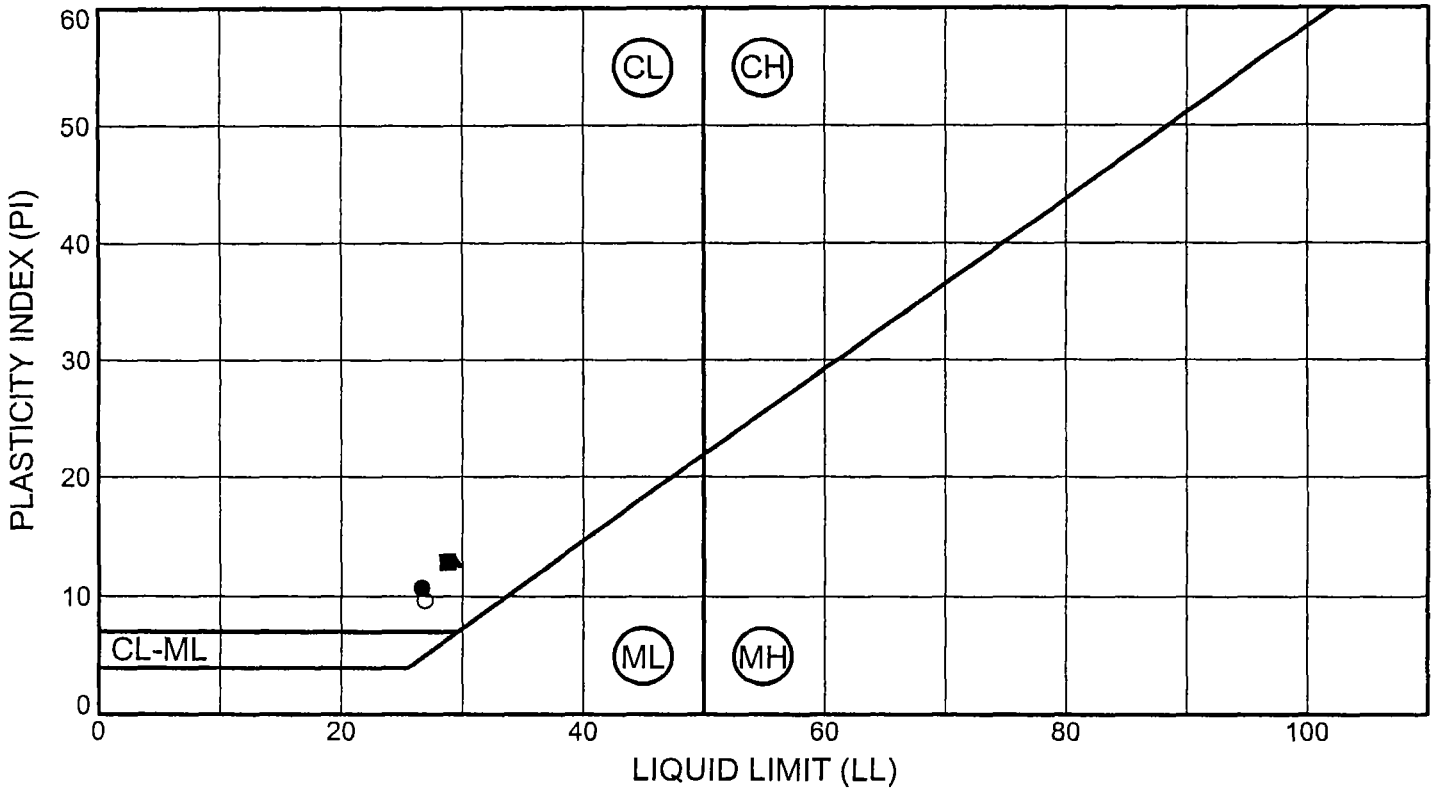
Submitted by: Mark Rhodes, Hydrometrics, Inc.

NOTE: Test numbers suffixed by a letter indicate a retest of that number.
* numbers represent QA Sand Cone or Electrical Density Gage

C. HYDRAULIC CONDUCTIVITY TEST RESULTS

Table 1: Remolding Parameters and Summary of Test Results.

Sample ID	Classification (ASTM D2488)	Remolding Parameters		Liquid Limit	Plastic Index	Permeability, K (cm/sec)
		Moisture Content (%)	Dry Density (pcf)			
CRSP-1	CL	16.0	105.0	27	11	1.4×10^{-7}
CRSP-2	CL	14.3	107.0	29	13	8.0×10^{-7}
CRSP-3	CL	17.8	103.2	29	13	1.3×10^{-6}
CRSP-4	CL	17.3	102.7	27	10	6.6×10^{-6}



SYMBOL	SAMPLE	DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	CRSP-1		(CL) Light olive brown, lean CLAY with sand	12	27	16	11	
■	CRSP-2		(CL) Light olive brown, lean CLAY with sand	11	29	16	13	
▲	CRSP-3		(CL) Light olive brown, lean CLAY with sand	14	29	16	13	
○	CRSP-4		(CL) Light olive brown, lean CLAY with sand	15	27	17	10	

HWA GEOSCIENCES INC.

Geotechnical Testing Program
CAMU Phase 2
E. Helena, Montana
Prepared for: Hydrometrics Inc.

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

PROJECT NO.: 2008-043-21 FIGURE: 1

LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-1*

PROJECT NO: *2008-043-21* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *3/28/2008* Date Received: *4/1/2008* Date Tested: *4/1/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, lean CLAY with sand and gravel (CL)

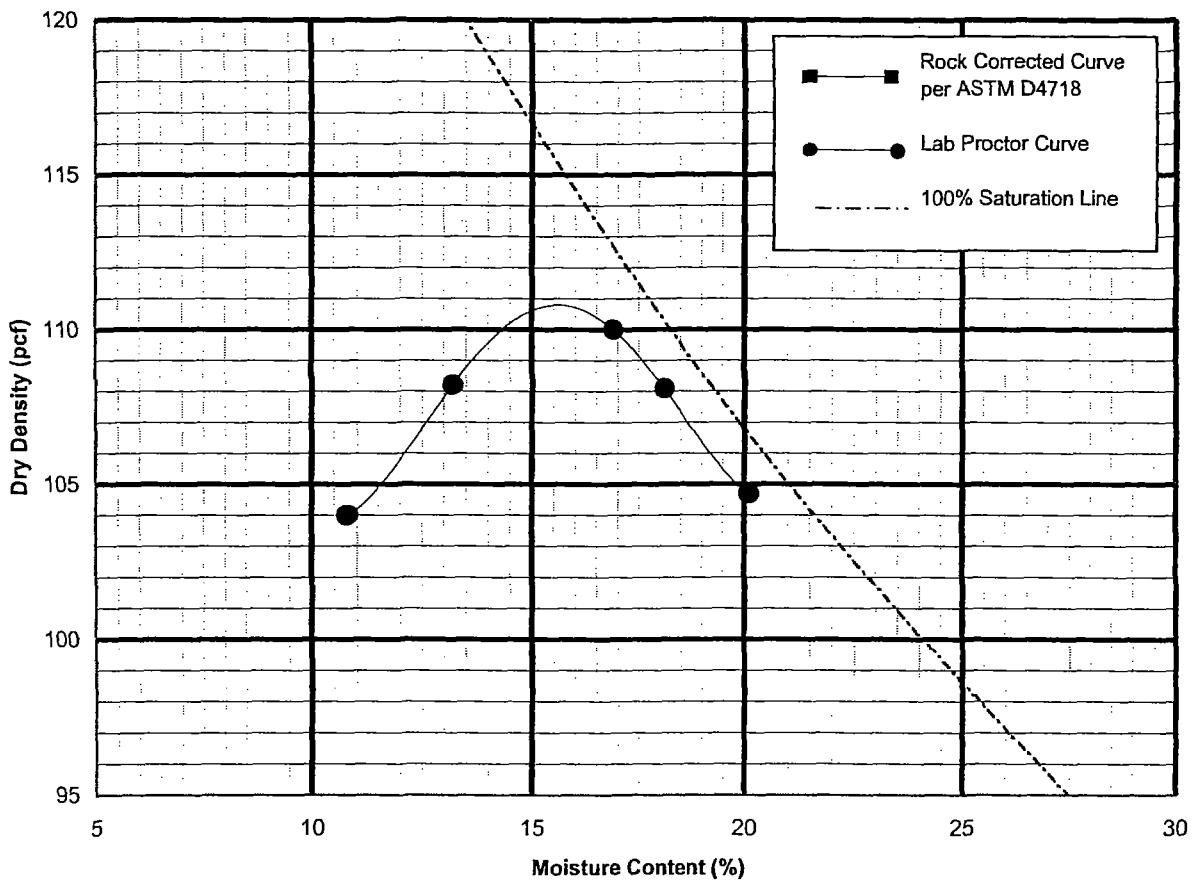
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile-First 3,500 CY

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *12* %

Method: [ ] A [ ] B [X] C Oversize: *1.2* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	*104.0*	*108.2*	*110.0*	*108.1*	*104.7*
Moisture Content (%)	*10.8*	*13.2*	*16.9*	*18.1*	*20.1*



Data Summary*	
Percent Oversize	<5%
Max. Dry Density (pcf)*	110.8
Optimum Moisture (%)*	15.7

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
110.8	*112.6*	*114.4*	*116.3*	*118.3*	*120.3*	*122.5*
15.7	*15.0*	*14.2*	*13.5*	*12.8*	*12.0*	*11.3*

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: *George Minassian* **FIGURE** *2*

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LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-2*

PROJECT NO: *2008-043-21* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *4/2/2008* Date Received: *4/4/2008* Date Tested: *4/7/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, lean CLAY with sand and gravel (CL)

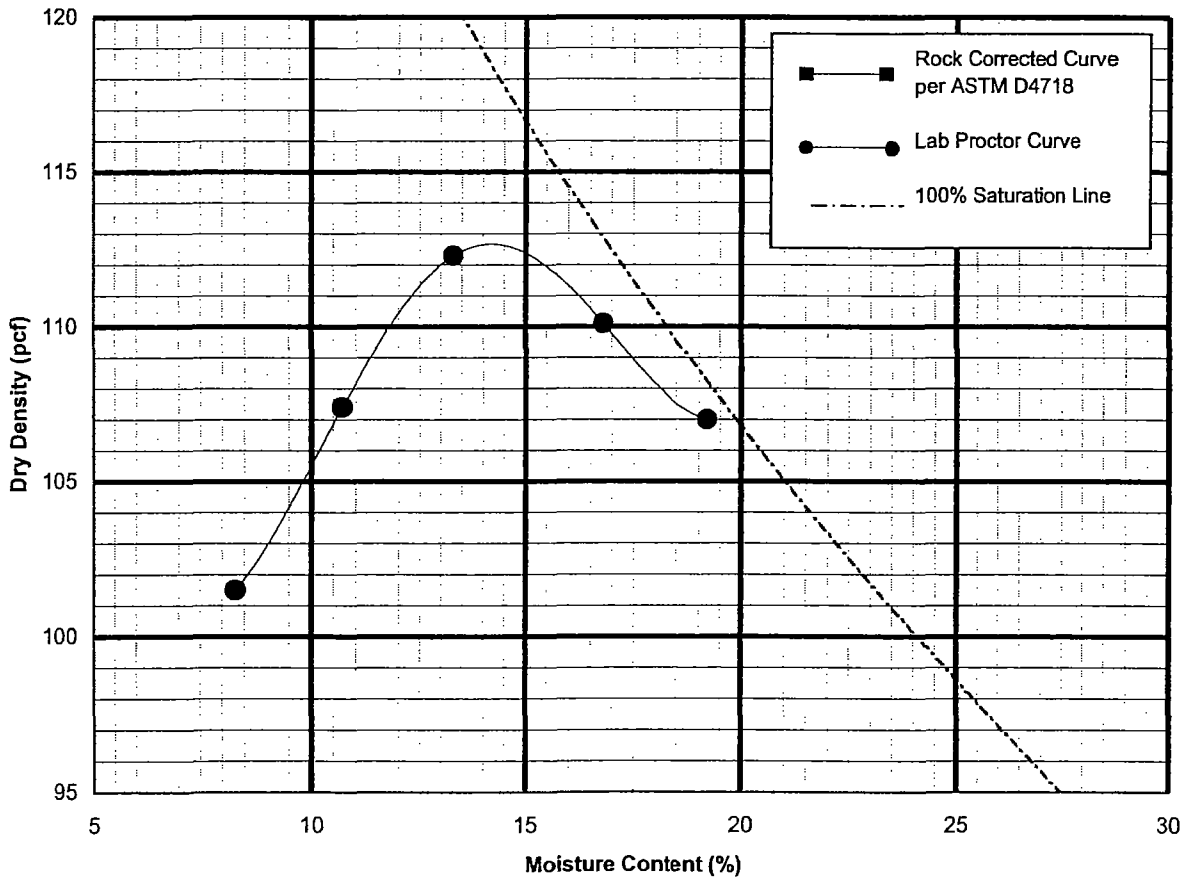
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile, 7000cy

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *10.8* %

Method: [ ] A [ ] B [X] C Oversize: *1.8* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	101.5	107.4	112.3	110.1	107.0
Moisture Content (%)	8.3	10.7	13.3	16.8	19.2



Data Summary*	
Percent Oversize	<5%
Max. Dry Density (pcf)*	112.6
Optimum Moisture (%)*	14.3

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
112.6	114.4	116.2	118.0	119.9	121.9	124.0
14.3	13.6	13.0	12.3	11.6	11.0	10.3

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: *George Minassian* **FIGURE** *3*

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LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-3*

PROJECT NO: *2008-043-21* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *4/8/2008* Date Received: *4/9/2008* Date Tested: *4/9/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, lean CLAY with sand and gravel (CL)

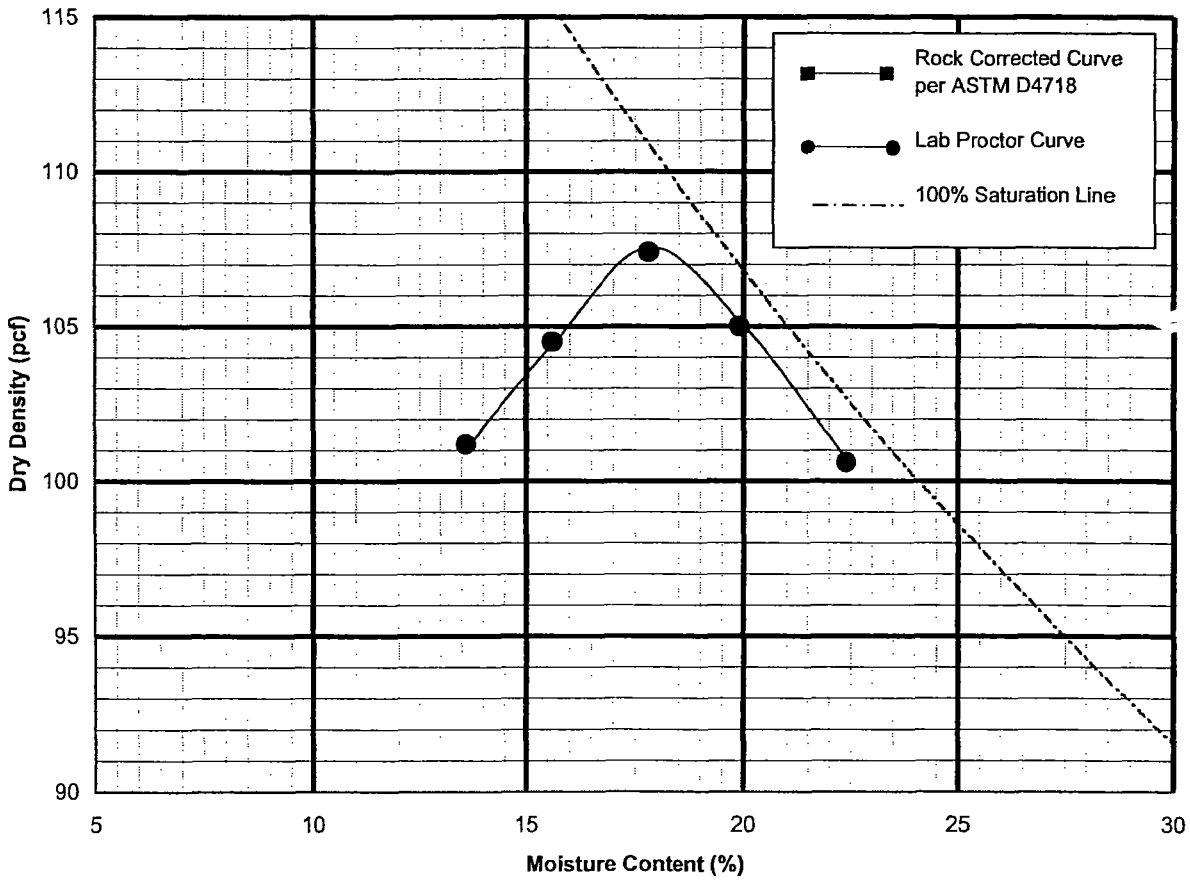
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile, 10,000cy

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *13.6* %

Method: [ ] A [ ] B [X] C Oversize: *1.9* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	101.2	104.5	107.4	105.0	100.6
Moisture Content (%)	13.6	15.6	17.8	19.9	22.4



Data Summary*	
Percent Oversize	<5%
Max. Dry Density (pcf)*	107.4
Optimum Moisture (%)*	17.8

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
107.4	109.2	111.2	113.1	115.2	117.3	119.5
17.8	17.0	16.1	15.3	14.4	13.6	12.8

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: *George Minassian* **FIGURE** *4*

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LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-4*

PROJECT NO: *2008-043-21* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *4/8/2008* Date Received: *4/9/2008* Date Tested: *4/9/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, lean CLAY with sand and gravel (CL)

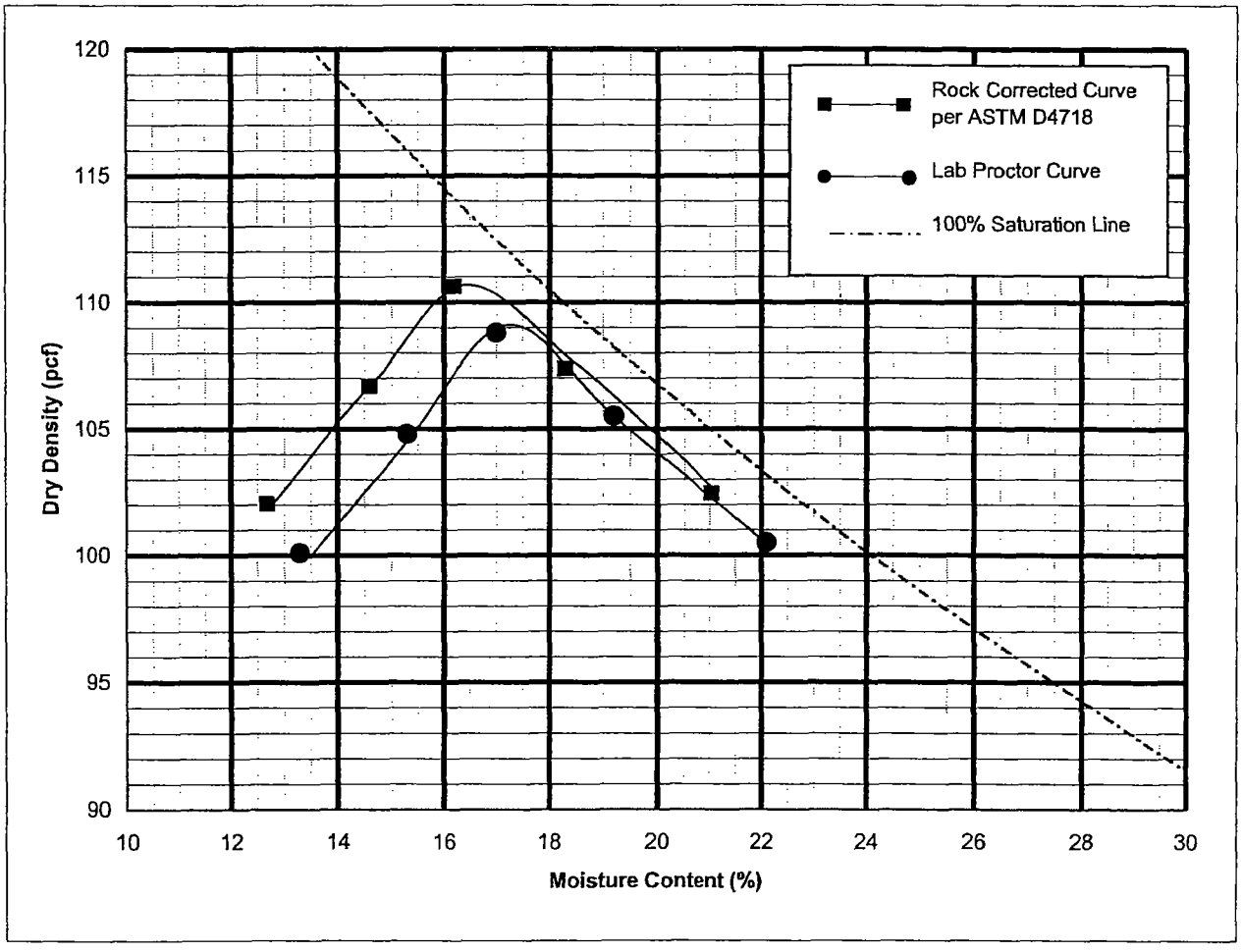
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile, 14,000cy

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *15.3* %

Method: [ ] A [ ] B [X] C Oversize: *5* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	100.1	104.8	108.8	105.5	100.5
Moisture Content (%)	13.3	15.3	17.0	19.2	22.1



Data Summary*	
Percent Oversize	5.0%
Max. Dry Density (pcf)*	110.8
Optimum Moisture (%)*	16.5

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
109.0	110.8	112.7	114.6	116.7	118.8	120.9
17.3	16.5	15.7	14.9	14.0	13.2	12.4

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: *George Minassian* **FIGURE** *5*

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Hydraulic Conductivity (a.k.a. Permeability) Test Report

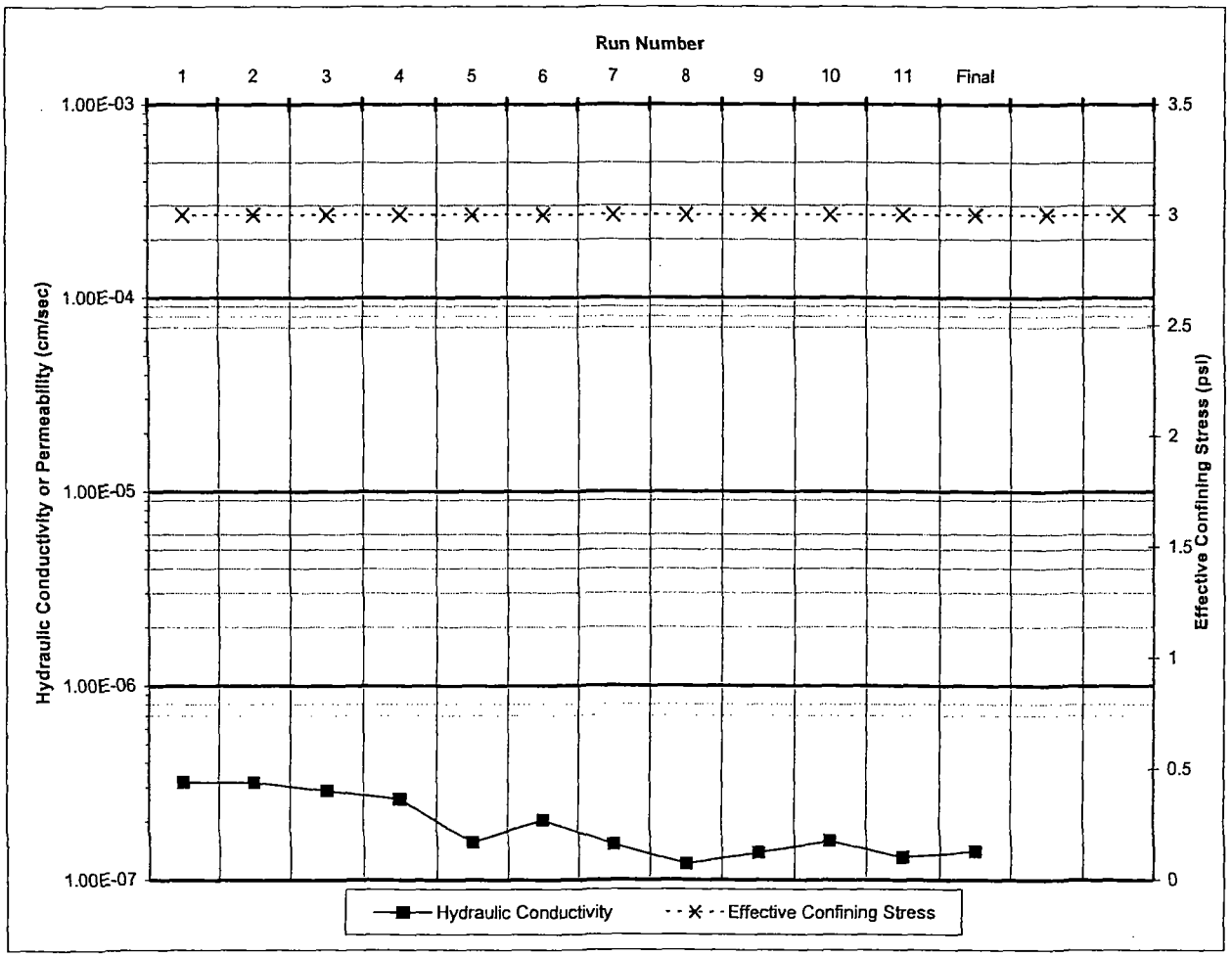
Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	?	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	4/10/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	16.0	Final moisture (%)	17.8
Sample point	?	Initial wet unit wt. (pcf)	121.8	Final wet unit weight (pcf)	124.2
Sample number	CRSP-1	Initial dry unit wt. (pcf)	105.0	Final dry unit weight (pcf)	105.5
Sample depth	?	Initial void ratio	0.575	Final void ratio	0.568
Sample description	Light yellowish brown lean CLAY with sand (CL)	Initial porosity	0.365	Final porosity	0.362
		Initial saturation (%)	73.8	Final saturation (%)	83.1

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	3.2E-07	n.a.		1.10	3
2	3.2E-07	n.a.		1.00	3
3	2.9E-07	n.a.		0.91	3
4	2.6E-07	3.0E-07	12.0%	0.87	3
5	1.6E-07	2.6E-07	38.8%	1.00	3
6	2.0E-07	2.3E-07	31.1%	1.00	3
7	1.5E-07	1.9E-07	35.0%	0.92	3
8	1.2E-07	1.6E-07	28.6%	0.83	3
9	1.4E-07	1.5E-07	32.4%	1.00	3
10	1.6E-07	1.4E-07	15.4%	1.20	3
11	1.3E-07	1.4E-07	15.8%	1.00	3
Final	1.4E-07	1.4E-07	11.8%	1.14	3
					3
					3

Other Information
Maximum Gradient 10.3
Minimum Gradient 8.8
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0



Checked by: George Minassian

FIGURE: 6

Hydraulic Conductivity (a.k.a. Permeability) Test Report

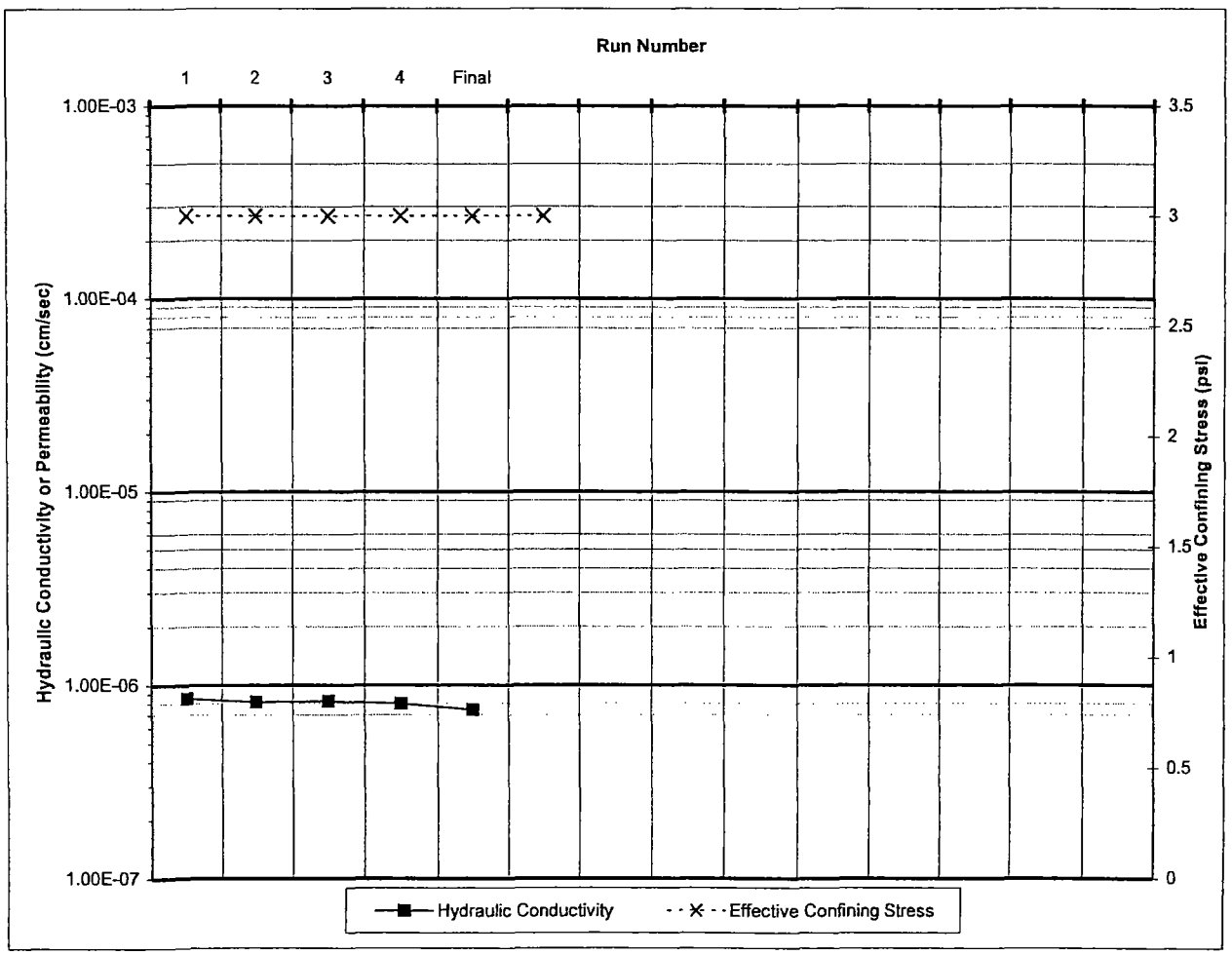
Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	?	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	4/10/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	14.3	Final moisture (%)	18.4
Sample point	?	Initial wet unit wt. (pcf)	122.3	Final wet unit weight (pcf)	126.3
Sample number	CRSP-2	Initial dry unit wt. (pcf)	107.0	Final dry unit weight (pcf)	106.7
Sample depth	?	Initial void ratio	0.546	Final void ratio	0.550
Sample description	Light yellowish brown lean CLAY with sand (CL)	Initial porosity	0.353	Final porosity	0.355
		Initial saturation (%)	69.5	Final saturation (%)	88.6

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	8.5E-07	n.a.		1.00	3
2	8.2E-07	n.a.		0.92	3
3	8.2E-07	n.a.		1.00	3
4	8.0E-07	8.2E-07	3.4%	0.92	3
Final	7.4E-07	**8.0E-07**	6.6%	1.00	3
					3

Other Information
Maximum Gradient 9.7
Minimum Gradient 8.1
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0



Checked by: George Minassian

FIGURE: 7

Hydraulic Conductivity (a.k.a. Permeability) Test Report

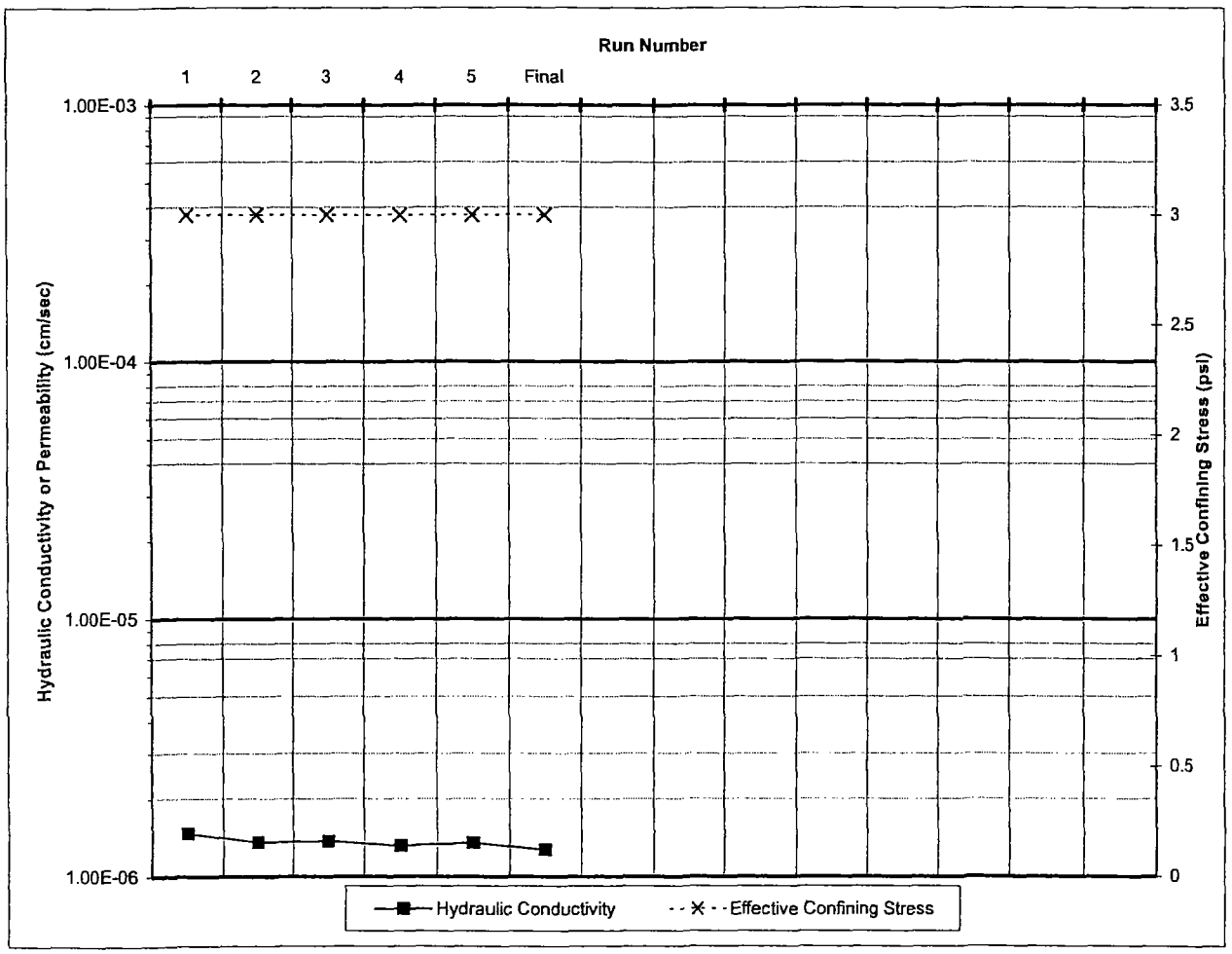
Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometerix	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	4/15/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	17.8	Final moisture (%)	19.6
Sample point	0	Initial wet unit wt. (pcf)	121.5	Final wet unit weight (pcf)	124.0
Sample number	CRSP-3	Initial dry unit wt. (pcf)	103.2	Final dry unit weight (pcf)	103.7
Sample depth	0	Initial void ratio	0.603	Final void ratio	0.595
Sample description	Light yellowish brown lean CLAY with sand (CL)	Initial porosity	0.376	Final porosity	0.373
		Initial saturation (%)	78.2	Final saturation (%)	87.3

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	1.5E-06	n.a.		1.00	3
2	1.4E-06	n.a.		0.90	3
3	1.4E-06	n.a.		0.95	3
4	1.3E-06	1.4E-06	6.6%	1.00	3
5	1.4E-06	1.3E-06	2.4%	1.00	3
Final	1.3E-06	1.3E-06	4.3%	0.94	3

Other Information
Maximum Gradient 10.4
Minimum Gradient 8.5
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0



Checked by: George Minassian

FIGURE: 8

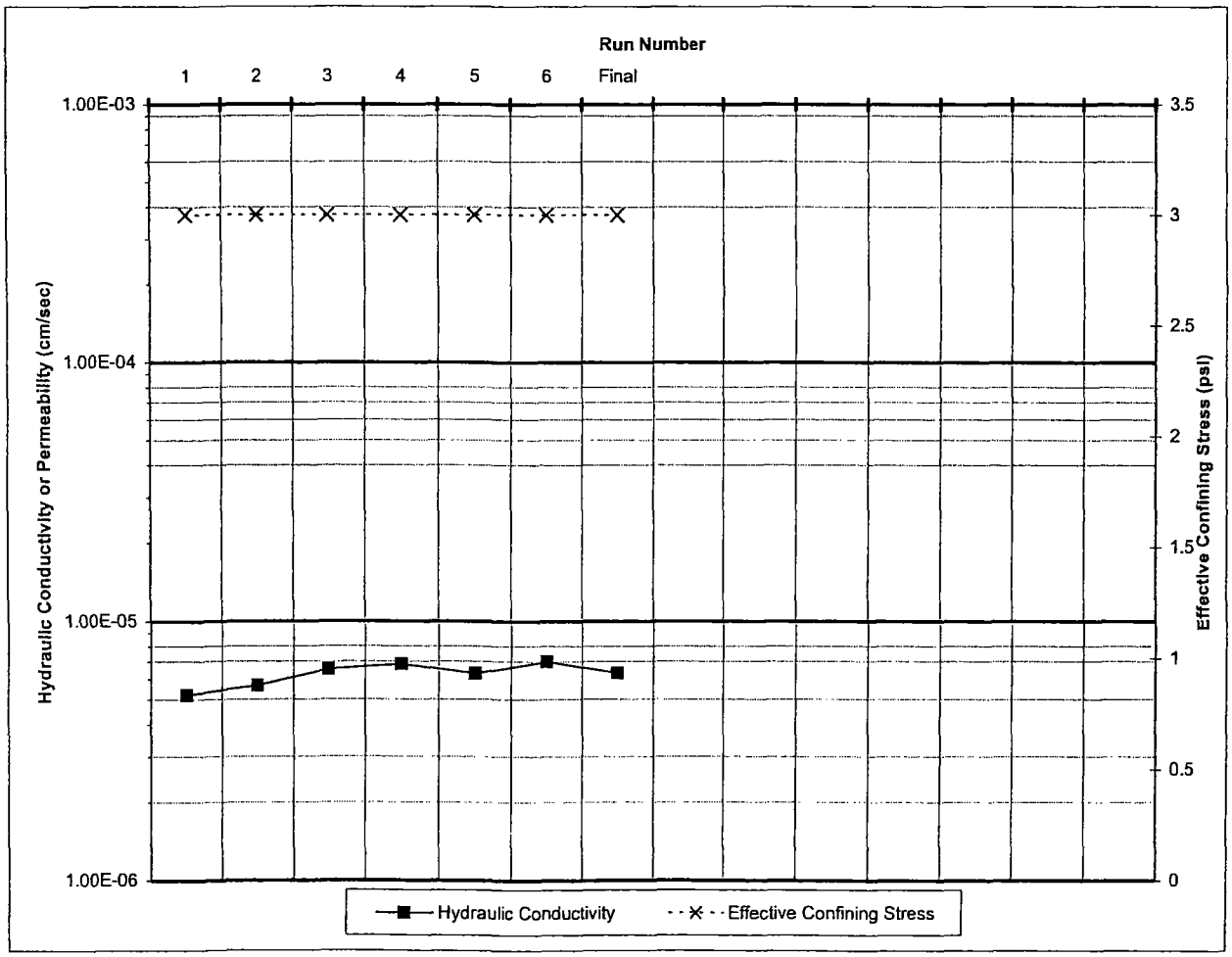
Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	4/10/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	17.8	Final moisture (%)	20.6
Sample point	0	Initial wet unit wt. (pcf)	121.0	Final wet unit weight (pcf)	124.4
Sample number	CRSP-4	Initial dry unit wt. (pcf)	102.7	Final dry unit weight (pcf)	103.1
Sample depth	0	Initial void ratio	0.610	Final void ratio	0.604
Sample description	Light yellowish brown lean CLAY with sand (CL)	Initial porosity	0.379	Final porosity	0.376
		Initial saturation (%)	77.3	Final saturation (%)	90.4

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)	Other Information
1	5.2E-06	n.a.		1.00	3	Maximum Gradient
2	5.7E-06	n.a.		0.93	3	11.0
3	6.5E-06	n.a.		0.97	3	Minimum Gradient
4	6.8E-06	6.0E-06	14.0%	0.98	3	8.7
5	6.3E-06	6.3E-06	10.5%	1.00	3	Max. Back Pressure (psi)
6	7.0E-06	6.7E-06	5.5%	1.00	3	18.0
Final	6.3E-06	**6.6E-06**	6.0%	1.00	3	Min. Back Pressure (psi)
						18.0

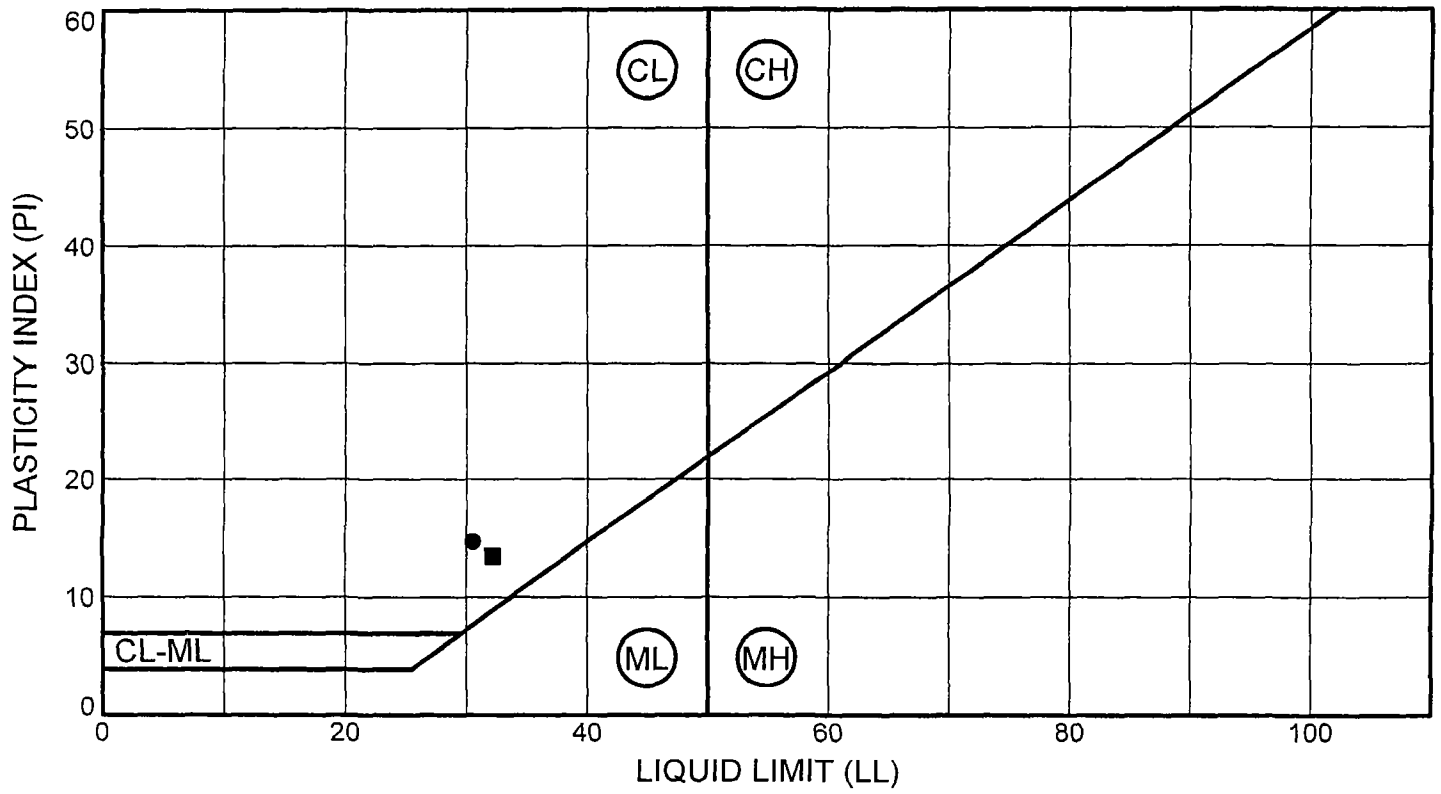


Checked by: George Minassian

FIGURE: 9

Table 1: Remolding Parameters and Summary of Test Results.

Sample ID	Classification (ASTM D2488)	Remolding Parameters		Liquid Limit	Plasticity Index	Permeability, K (cm/sec)
		Moisture Content (%)	Dry Density (pcf)			
CRSP-5	CL	18.1	102.8	31	15	1.9×10^{-6}
CRSP-6	CL	19.1	99.9	32	13	9.6×10^{-7}



SYMBOL	SAMPLE	DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	CRSP-5		(CL) Light olive brown, lean CLAY with sand and gravel	12	31	16	15	
■	CRSP-6		(CL) Light olive brown, lean CLAY	14	32	19	13	

HWA GEOSCIENCES INC.

Geotechnical Testing Program
CAMU Phase 2
E. Helena, Montana
Prepared for: Hydrometrics Inc.

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

PROJECT NO.: 2008-043-21 FIGURE: 1

HWAATTB 2008043.GPJ 4/28/08

LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-5*

PROJECT NO: *2008-043* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *04/14/2008* Date Received: *04/14/2008* Date Tested: *04/14/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, CL with sand and gravel

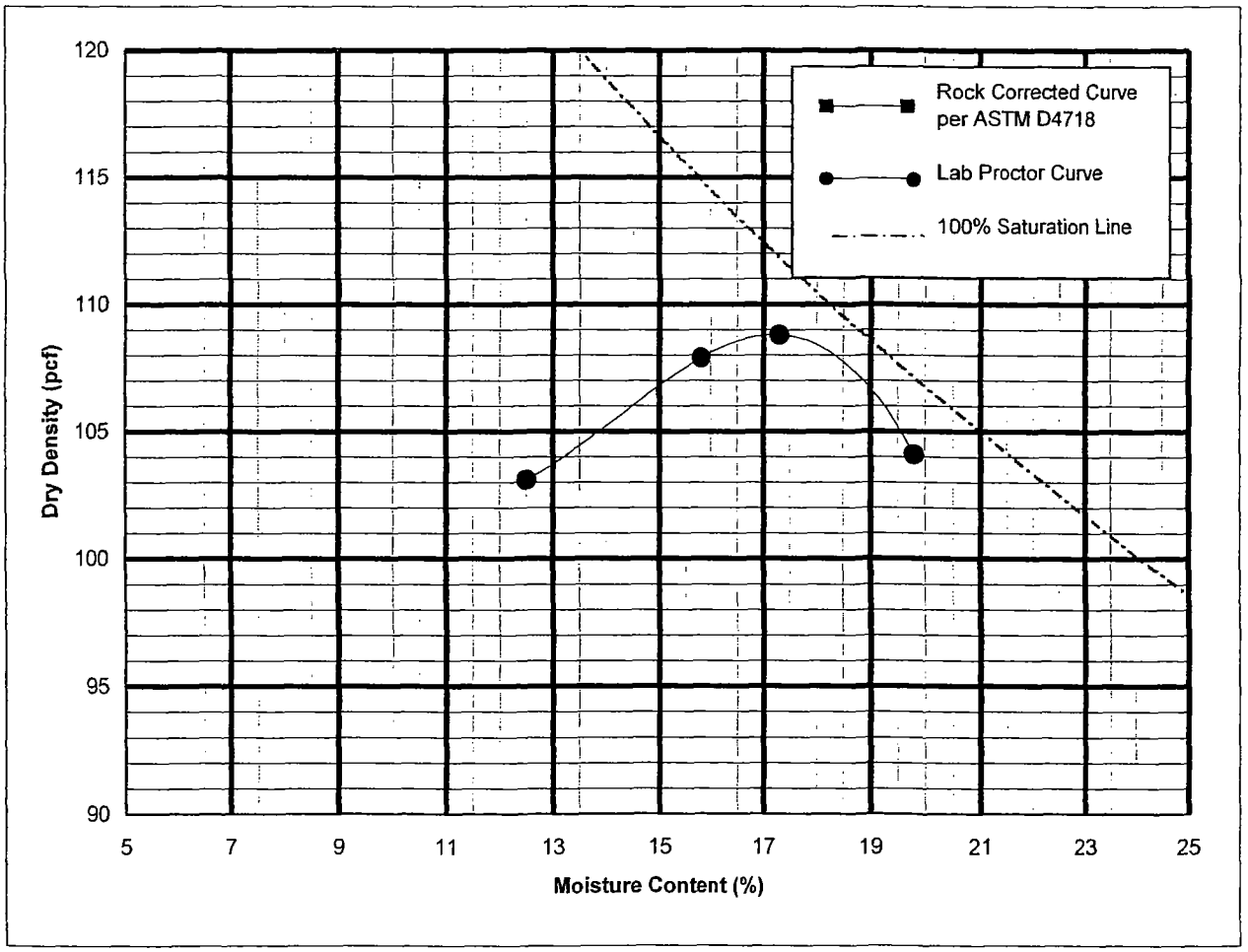
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile, 17,500cy

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *12.5* %

Method: [ ] A [ ] B [X] C Oversize: *1.7* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	*103.1*	*107.9*	*108.8*	*104.1*	
Moisture Content (%)	*12.5*	*15.8*	*17.3*	*19.8*	



Data Summary*	
Percent Oversize	*<5%*
Max. Dry Density (pcf)*	***108.8***
Optimum Moisture (%)*	***17.3***

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
108.8	*110.6*	*112.5*	*114.5*	*116.5*	*118.6*	*120.7*
17.3	*16.5*	*15.7*	*14.9*	*14.0*	*13.2*	*12.4*

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: _____ **FIGURE** 2

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LABORATORY COMPACTION CHARACTERISTICS OF SOIL

HWA GEOSCIENCES INC.

CLIENT: *Hydrometrics, Inc.*

PROJECT: *Camu Phase 2 Clay Rich Stockpile* **SAMPLE ID:** *CRSP-6*

PROJECT NO: *2008-043* Sampled By: *Client* Tested By: *AAC*

Date Sampled: *04/15/2008* Date Received: *04/16/2008* Date Tested: *04/17/2008*

MATERIAL TYPE OR DESCRIPTION:
Light yellowish brown, CL with sand and gravel

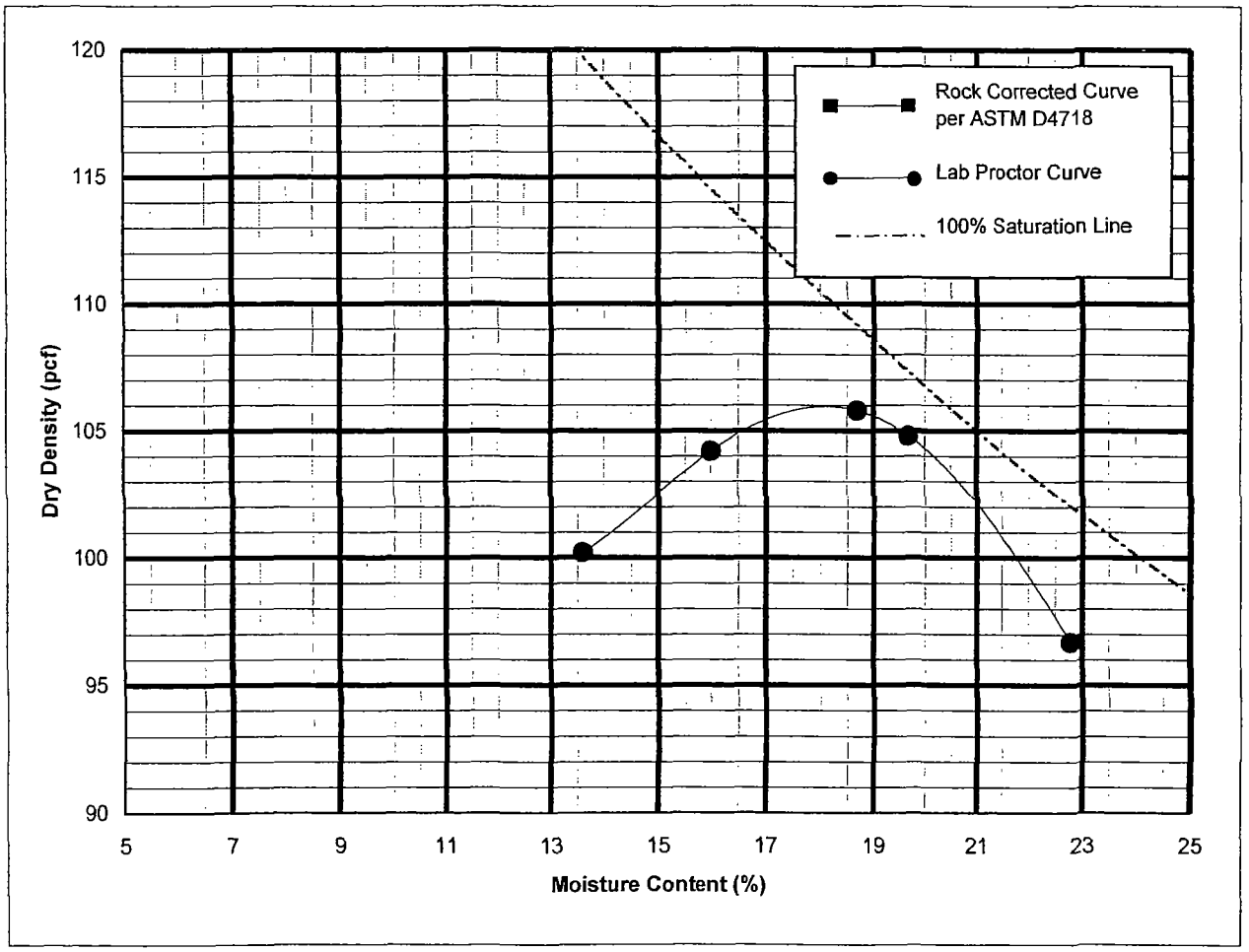
MATERIAL SOURCE, SAMPLE LOCATION AND DEPTH:
Clay Rich Stockpile, last 3,500cy

Designation: [X] ASTM D 698 [ ] ASTM D 1557 Natural Moisture Content: *13.6* %

Method: [ ] A [ ] B [X] C Oversize: *0.7* % retained on: *3/4* in.

Preparation: [X] Dry [ ] Moist Rammer: [X] Auto [ ] Manual Assumed S.G.: *2.6*

Test Data					
Dry Density (pcf)	*100.2*	*104.2*	*105.8*	*104.8*	*96.7*
Moisture Content (%)	*13.6*	*16.0*	*18.7*	*19.7*	*22.8*



Data Summary*	
Percent Oversize	<5%
Max. Dry Density (pcf)*	106.0
Optimum Moisture (%)*	18.0

Test Values At Other Oversize Percentages						
0.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%
106.0	*107.9*	*109.8*	*111.8*	*113.9*	*116.1*	*118.3*
18.0	*17.2*	*16.3*	*15.5*	*14.6*	*13.8*	*12.9*

* values corrected for oversize material per ASTM D4718, using assumed Specific Gravity shown and oversize moisture content of 1%

Reviewed By: _____ **FIGURE** *3*

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Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	04/18/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	18.1	Final moisture (%)	19.1
Sample point	0	Initial wet unit wt. (pcf)	121.4	Final wet unit weight (pcf)	123.9
Sample number	CRSP-5	Initial dry unit wt. (pcf)	102.8	Final dry unit weight (pcf)	104.0
Sample depth	0	Initial void ratio	0.608	Final void ratio	0.590
Sample description	Light yellowish brown CL with sand	Initial porosity	0.378	Final porosity	0.371
		Initial saturation (%)	78.8	Final saturation (%)	85.8

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	2.4E-06	n.a.		0.93	3
2	2.6E-06	n.a.		0.94	3
3	2.2E-06	n.a.		0.97	3
4	2.0E-06	2.3E-06	11.5%	0.94	3
5	1.9E-06	2.2E-06	18.0%	0.92	3
6	1.9E-06	2.0E-06	10.3%	1.00	3
Final	1.9E-06	**1.9E-06**	5.9%	0.94	3

Other Information
Maximum Gradient
10.7
Minimum Gradient
8.9
Max. Back Pressure (psi)
18.0
Min. Back Pressure (psi)
18.0

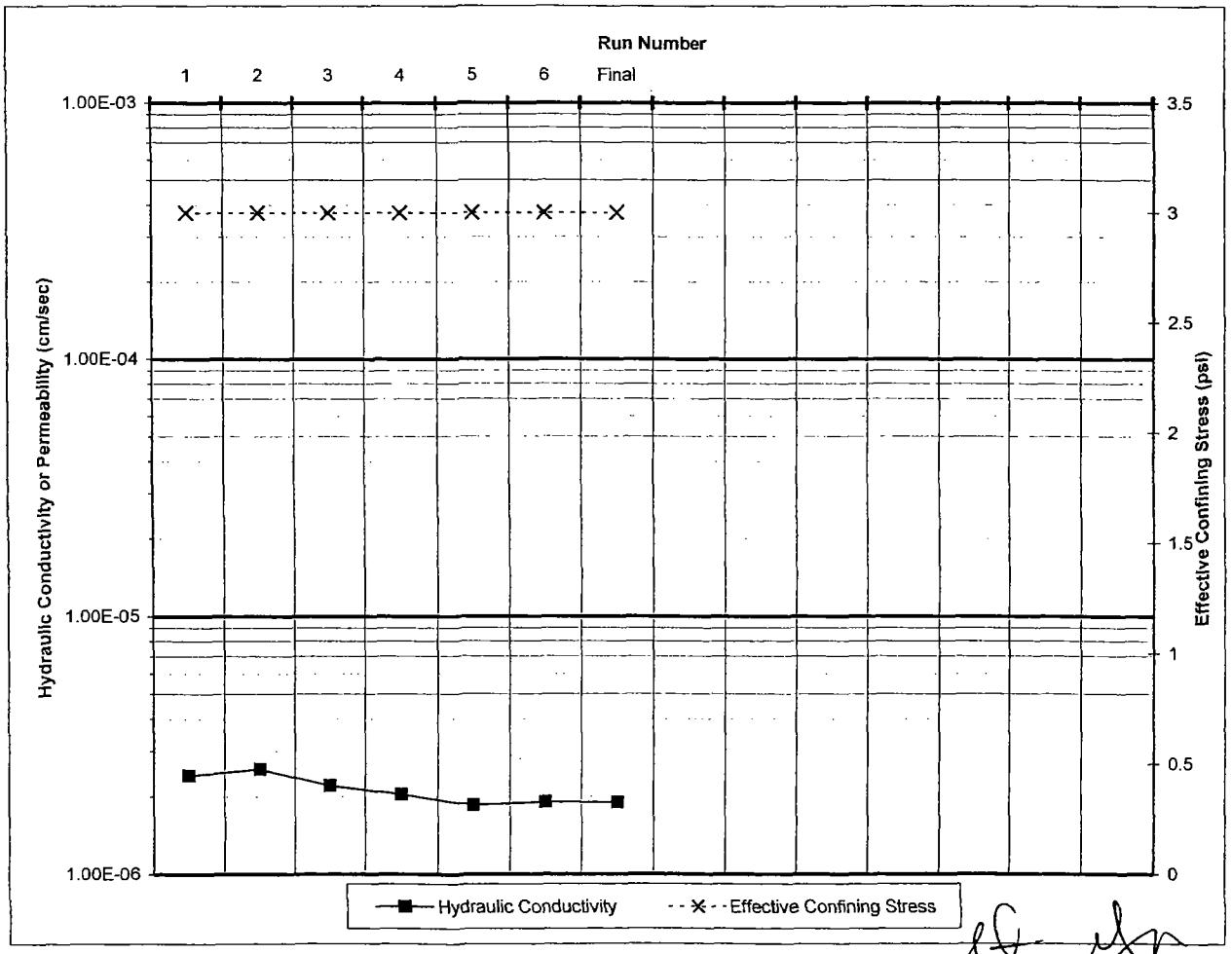

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FIGURE: 4

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	42.61	Final Sample Area (cm2)	42.61
Project number	2008043	Initial Sample Length (cm)	13.54	Final Sample Length (cm)	13.54
Date	04/21/2008	Initial Sample Volume (cc)	576.9	Final Sample Volume (cc)	576.9
Technician	EJB	Initial moisture (%)	19.1	Final moisture (%)	21.3
Sample point	0	Initial wet unit wt. (pcf)	118.8	Final wet unit weight (pcf)	121.0
Sample number	CRSP-6	Initial dry unit wt. (pcf)	99.7	Final dry unit weight (pcf)	99.8
Sample depth	0	Initial void ratio	0.658	Final void ratio	0.658
Sample description	Light yellowish brown CL with sand	Initial porosity	0.397	Final porosity	0.397
		Initial saturation (%)	76.9	Final saturation (%)	85.8

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	1.1E-06	n.a.		1.00	3
2	9.9E-07	n.a.		0.89	3
3	9.9E-07	n.a.		0.94	3
4	9.8E-07	1.0E-06	5.2%	1.00	3
5	9.6E-07	9.8E-07	1.9%	0.92	3
Final	9.2E-07	9.6E-07	5.0%	0.89	3

Other Information	
Maximum Gradient	10.4
Minimum Gradient	8.4
Max. Back Pressure (psi)	18.0
Min. Back Pressure (psi)	18.0

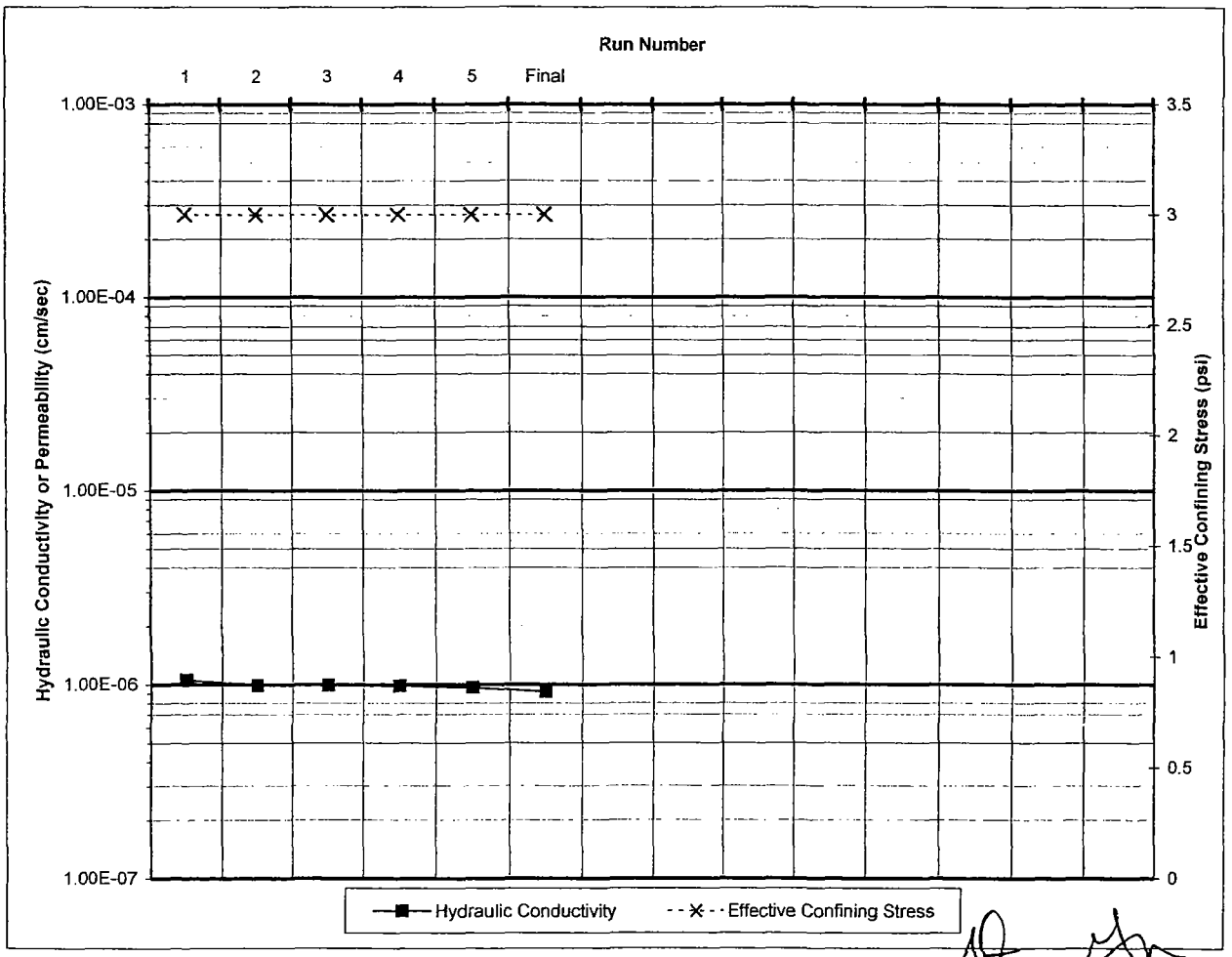

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FIGURE: 5

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.77	Final Sample Area (cm2)	41.77
Project number	2008043	Initial Sample Length (cm)	11.45	Final Sample Length (cm)	11.45
Date	05/05/2008	Initial Sample Volume (cc)	478.1	Final Sample Volume (cc)	478.1
Technician	EJB	Initial moisture (%)	14.6	Final moisture (%)	18.9
Sample point	ST-1	Initial wet unit wt. (pcf)	123.9	Final wet unit weight (pcf)	128.5
Sample number	ST-1A	Initial dry unit wt. (pcf)	108.2	Final dry unit weight (pcf)	108.1
Sample depth	1.375-1.75'	Initial void ratio	0.529	Final void ratio	0.530
Sample description	Light olive brown, CI-ML with sand and gravel	Initial porosity	0.346	Final porosity	0.346
		Initial saturation (%)	73.1	Final saturation (%)	94.5

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	8.0E-06	n.a.		1.00	3
2	8.3E-06	n.a.		0.97	3
3	8.2E-06	n.a.		1.00	3
4	8.2E-06	8.2E-06	1.9%	1.02	3
5	9.8E-06	8.6E-06	13.5%	1.00	3
6	9.3E-06	8.9E-06	10.1%	1.00	3
Final	9.8E-06	9.3E-06	11.6%	1.01	3

Other Information
Maximum Gradient 12.5
Minimum Gradient 8.6
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0

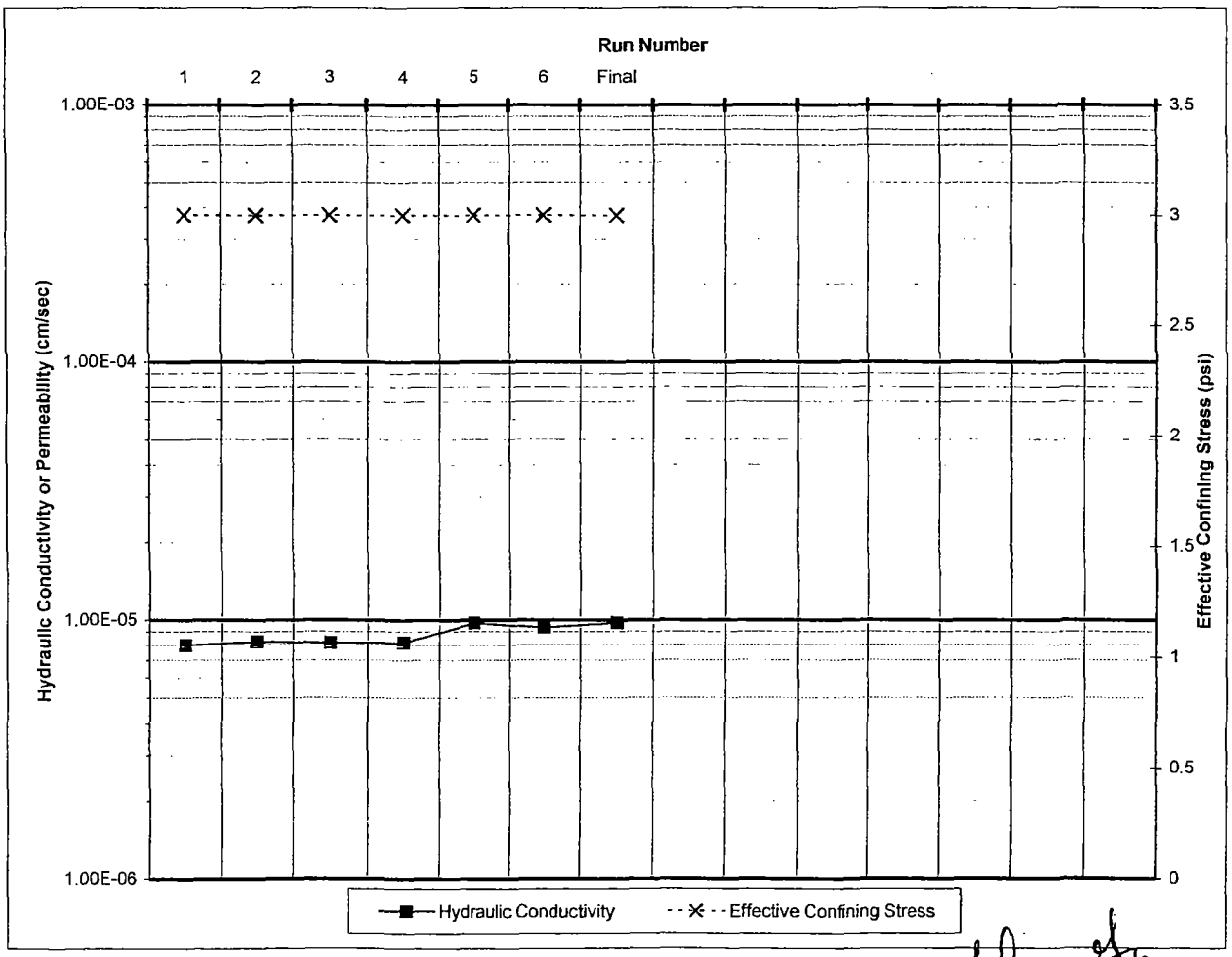

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FIGURE: 1

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.77	Final Sample Area (cm2)	41.77
Project number	2008043	Initial Sample Length (cm)	11.45	Final Sample Length (cm)	11.45
Date	05/05/2008	Initial Sample Volume (cc)	478.1	Final Sample Volume (cc)	478.1
Technician	EJB	Initial moisture (%)	14.6	Final moisture (%)	18.9
Sample point	ST-1	Initial wet unit wt. (pcf)	123.9	Final wet unit weight (pcf)	128.5
Sample number	ST-1A	Initial dry unit wt. (pcf)	108.2	Final dry unit weight (pcf)	108.1
Sample depth	1.375-1.75'	Initial void ratio	0.529	Final void ratio	0.530
Sample description	Light olive brown, CI-ML with sand and gravel	Initial porosity	0.346	Final porosity	0.346
		Initial saturation (%)	73.1	Final saturation (%)	94.5

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	5.3E-06	n.a.		0.76	3
2	6.0E-06	n.a.		0.89	3
3	5.8E-06	n.a.		0.96	3
4	6.0E-06	5.8E-06	8.2%	0.93	3
5	5.7E-06	5.9E-06	2.7%	0.97	3
Final	5.9E-06	5.9E-06	2.5%	1.00	3

Other Information
Maximum Gradient
12.2
Minimum Gradient
10.5
Max. Back Pressure (psi)
36.0
Min. Back Pressure (psi)
36.0

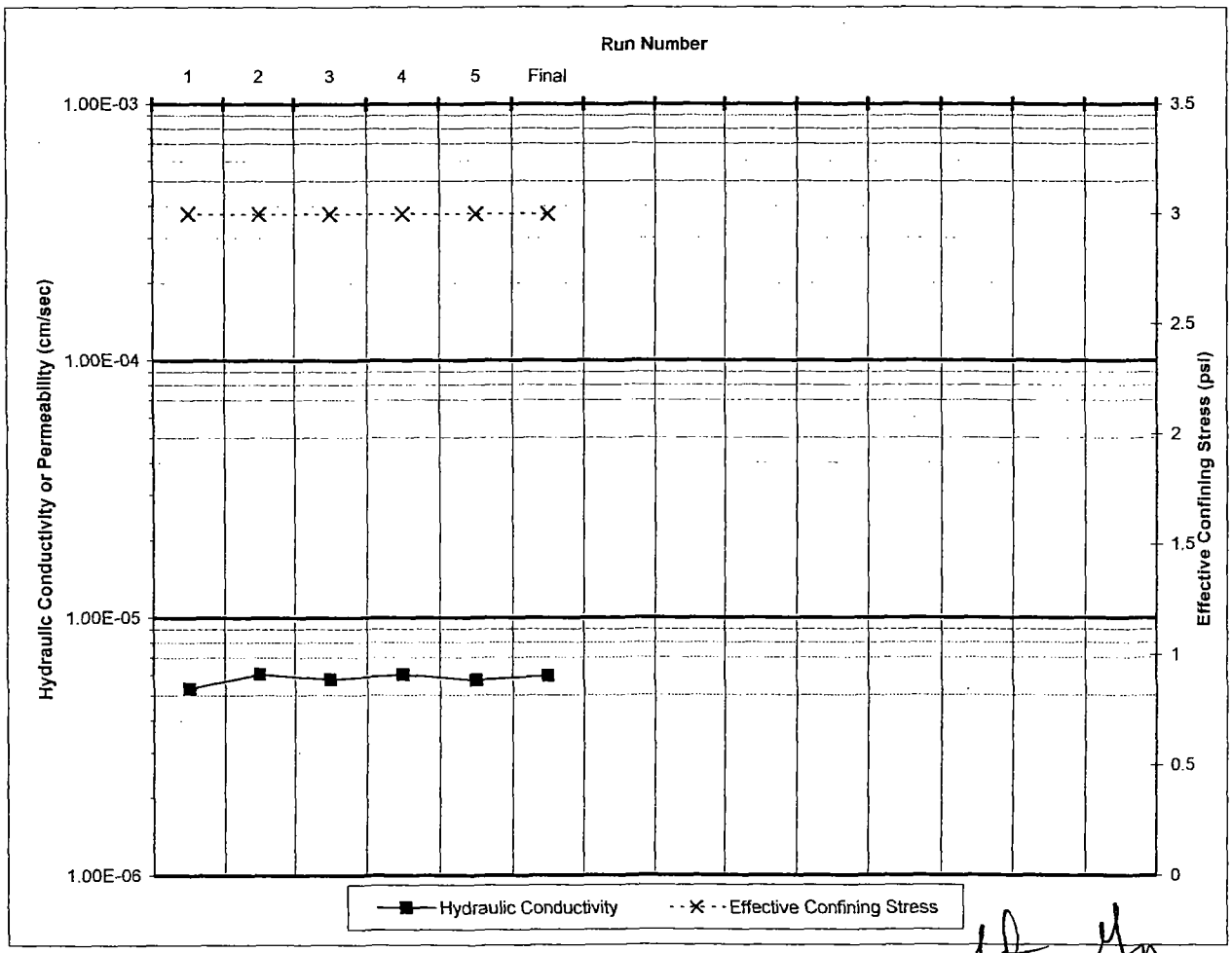

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FIGURE: 2

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.42	Final Sample Area (cm2)	41.42
Project number	2008043	Initial Sample Length (cm)	11.57	Final Sample Length (cm)	11.57
Date	05/05/2008	Initial Sample Volume (cc)	479.2	Final Sample Volume (cc)	479.2
Technician	EJB	Initial moisture (%)	16.8	Final moisture (%)	18.4
Sample point	ST-1	Initial wet unit wt. (pcf)	125.7	Final wet unit weight (pcf)	127.4
Sample number	ST-1B	Initial dry unit wt. (pcf)	107.6	Final dry unit weight (pcf)	107.6
Sample depth	0.83-1.21'	Initial void ratio	0.537	Final void ratio	0.537
Sample description	Light olive brown, CL-ML with sand and gravel	Initial porosity	0.349	Final porosity	0.349
		Initial saturation (%)	83.0	Final saturation (%)	90.8

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	2.5E-06	n.a.		0.99	3
2	2.1E-06	n.a.		1.00	3
3	1.8E-06	n.a.		1.00	3
4	1.6E-06	2.0E-06	24.1%	1.00	3
5	1.4E-06	1.7E-06	22.2%	1.00	3
6	1.3E-06	1.5E-06	16.4%	1.00	3
7	1.2E-06	1.4E-06	18.3%	1.02	3
8	9.9E-07	1.2E-06	18.9%	0.93	3
Final	1.2E-06	**1.2E-06**	16.7%	1.05	3

Other Information
Maximum Gradient 12.9
Minimum Gradient 10.1
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0

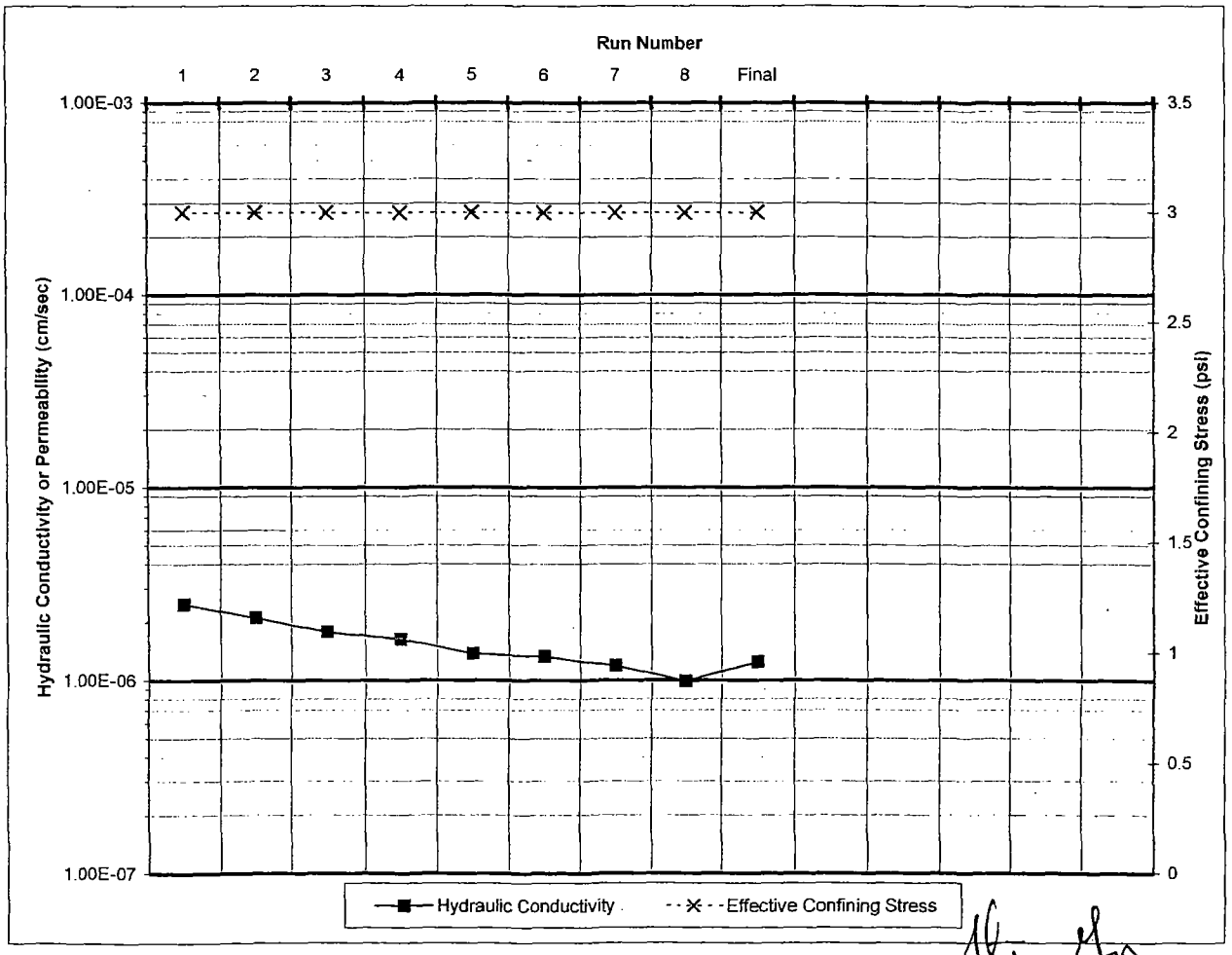

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FIGURE: 3

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.42	Final Sample Area (cm2)	41.42
Project number	2008043	Initial Sample Length (cm)	11.57	Final Sample Length (cm)	11.57
Date	05/05/2008	Initial Sample Volume (cc)	479.2	Final Sample Volume (cc)	479.2
Technician	EJB	Initial moisture (%)	16.8	Final moisture (%)	18.4
Sample point	ST-1	Initial wet unit wt. (pcf)	125.7	Final wet unit weight (pcf)	127.4
Sample number	ST-1B Consolidated with 22 psi	Initial dry unit wt. (pcf)	107.6	Final dry unit weight (pcf)	107.6
Sample depth	0.83-1.21"	Initial void ratio	0.537	Final void ratio	0.537
Sample description	Light olive brown, CL-ML with sand and gravel	Initial porosity	0.349	Final porosity	0.349
		Initial saturation (%)	83.0	Final saturation (%)	90.8

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	6.1E-07	n.a.		0.62	3
2	6.2E-07	n.a.		0.86	3
3	4.9E-07	n.a.		1.00	3
Final	4.9E-07	**5.5E-07**	11.6%	0.91	3

Other Information	
Maximum Gradient	12.1
Minimum Gradient	11.3
Max. Back Pressure (psi)	36.0
Min. Back Pressure (psi)	36.0

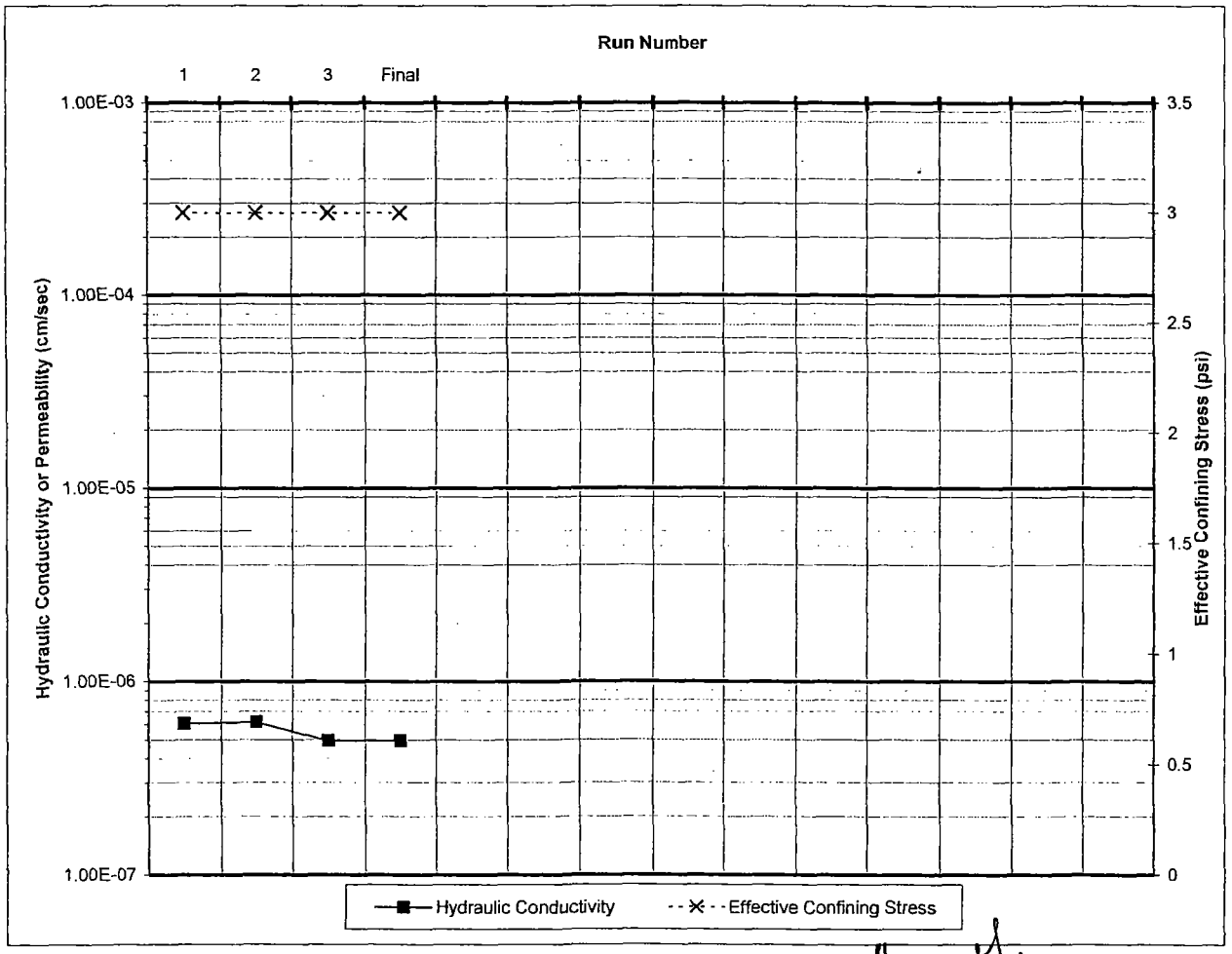

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FIGURE: 4

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.59	Final Sample Area (cm2)	41.59
Project number	2008043	Initial Sample Length (cm)	11.87	Final Sample Length (cm)	11.87
Date	05/05/2008	Initial Sample Volume (cc)	493.6	Final Sample Volume (cc)	493.6
Technician	EJB	Initial moisture (%)	14.9	Final moisture (%)	16.5
Sample point	ST-1	Initial wet unit wt. (pcf)	131.9	Final wet unit weight (pcf)	133.8
Sample number	ST-1C	Initial dry unit wt. (pcf)	114.8	Final dry unit weight (pcf)	114.9
Sample depth	0.16-0.58'	Initial void ratio	0.440	Final void ratio	0.439
Sample description	Light olive brown CL-ML with sand and gravel	Initial porosity	0.306	Final porosity	0.305
		Initial saturation (%)	89.7	Final saturation (%)	99.5

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	7.5E-06	n.a.		1.00	3
2	6.5E-06	n.a.		0.98	3
3	5.6E-06	n.a.		1.00	3
4	5.9E-06	6.4E-06	17.1%	1.00	3
5	5.4E-06	5.8E-06	11.8%	1.00	3
Final	5.3E-06	**5.5E-06**	6.4%	1.00	3

Other Information	
Maximum Gradient	12.5
Minimum Gradient	10.1
Max. Back Pressure (psi)	18.0
Min. Back Pressure (psi)	18.0

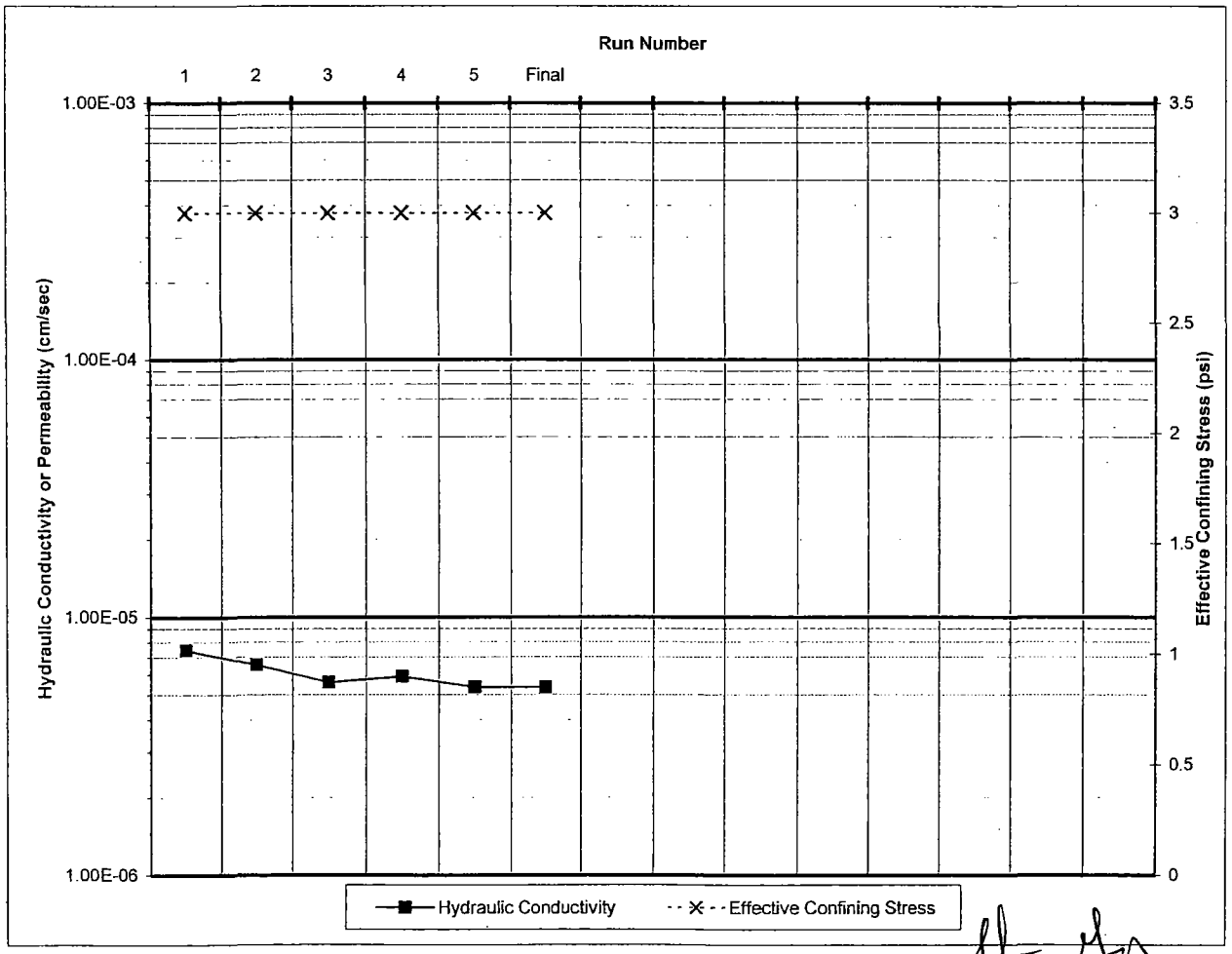

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FIGURE: 5

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.59	Final Sample Area (cm2)	41.59
Project number	2008043	Initial Sample Length (cm)	11.87	Final Sample Length (cm)	11.87
Date	05/05/2008	Initial Sample Volume (cc)	493.6	Final Sample Volume (cc)	493.6
Technician	EJB	Initial moisture (%)	14.9	Final moisture (%)	16.5
Sample point	ST-1	Initial wet unit wt. (pcf)	131.9	Final wet unit weight (pcf)	133.8
Sample number	ST-1C, consolidated with 22 psi	Initial dry unit wt. (pcf)	114.8	Final dry unit weight (pcf)	114.9
Sample depth	0.16-0.58'	Initial void ratio	0.440	Final void ratio	0.439
Sample description	Light olive brown CL-ML with sand and gravel	Initial porosity	0.306	Final porosity	0.305
		Initial saturation (%)	89.7	Final saturation (%)	99.5

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	7.7E-06	n.a.		0.97	3
2	7.3E-06	n.a.		1.03	3
3	6.3E-06	n.a.		1.00	3
4	4.7E-06	6.5E-06	27.4%	1.04	3
5	4.5E-06	5.7E-06	28.0%	1.10	3
6	4.3E-06	5.0E-06	26.4%	1.03	3
7	3.1E-06	4.2E-06	25.6%	1.03	3
8	2.6E-06	3.6E-06	28.4%	1.09	3
9	2.8E-06	3.2E-06	35.0%	1.10	3
10	1.0E-06	2.4E-06	57.0%	1.13	3
11	1.4E-06	2.0E-06	47.9%	1.03	3
12	9.5E-07	1.6E-06	81.1%	0.97	3
13	6.1E-07	1.0E-06	42.9%	1.17	3
Final	9.1E-07	9.7E-07	47.3%	1.23	3

Other Information
Maximum Gradient
12.6
Minimum Gradient
9.8
Max. Back Pressure (psi)
36.0
Min. Back Pressure (psi)
36.0

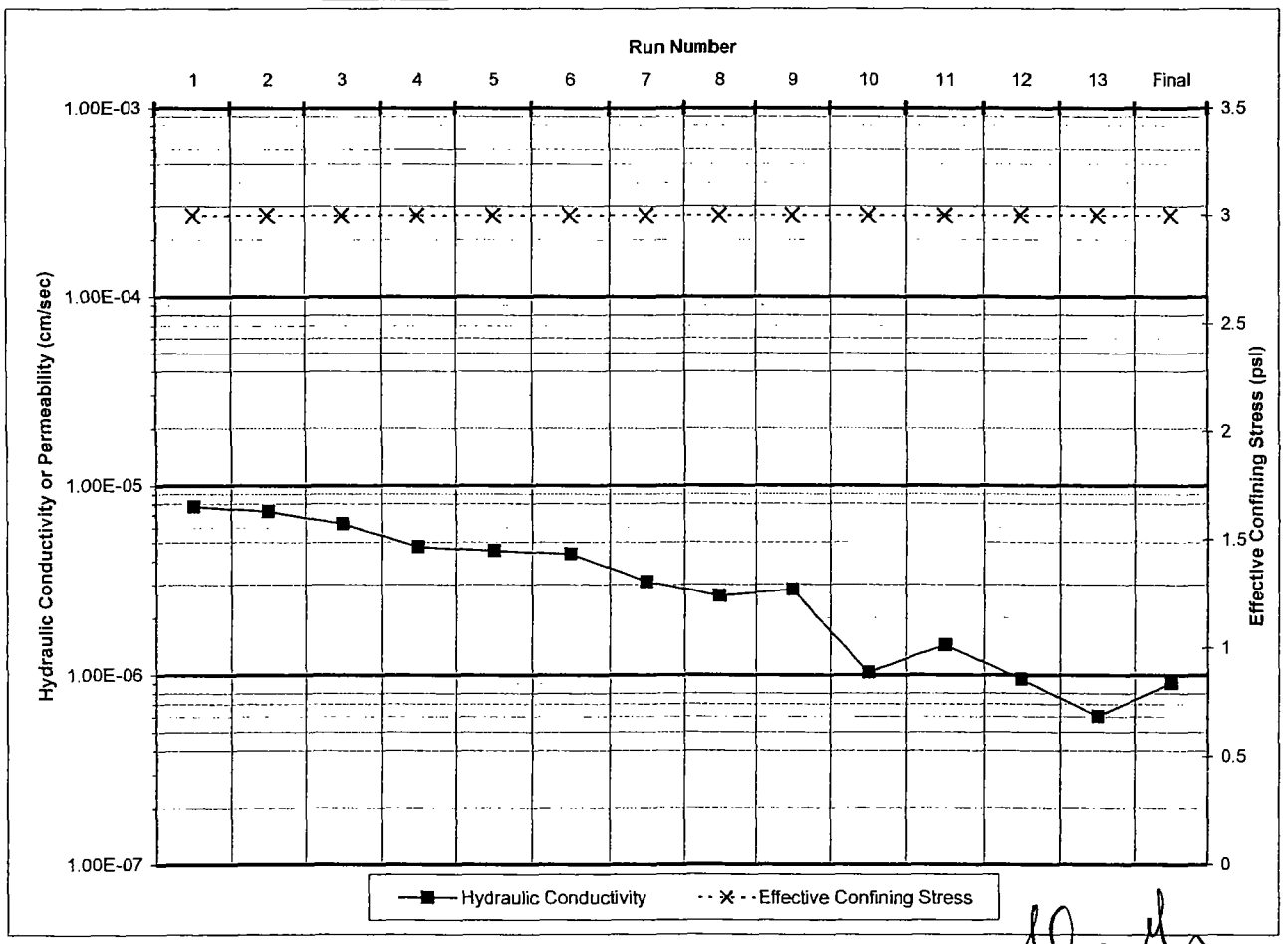

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FIGURE: 6

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.16	Final Sample Area (cm2)	41.16
Project number	2008043	Initial Sample Length (cm)	14.16	Final Sample Length (cm)	14.16
Date	05/12/2008	Initial Sample Volume (cc)	582.8	Final Sample Volume (cc)	582.8
Technician	EJB	Initial moisture (%)	14.9	Final moisture (%)	18.2
Sample point	?	Initial wet unit wt. (pcf)	123.0	Final wet unit weight (pcf)	126.5
Sample number	ST-2	Initial dry unit wt. (pcf)	107.0	Final dry unit weight (pcf)	107.1
Sample depth	Bottom 6 inches of Shelby Tube	Initial void ratio	0.545	Final void ratio	0.544
Sample description	Light olive brown, CL with sand and gravel	Initial porosity	0.353	Final porosity	0.353
		Initial saturation (%)	72.4	Final saturation (%)	88.6

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	6.6E-06	n.a.		0.97	3
2	6.5E-06	n.a.		1.03	3
3	6.8E-06	n.a.		0.98	3
4	6.7E-06	6.7E-06	3.1%	0.99	3
5	7.1E-06	6.8E-06	5.0%	0.98	3
6	7.2E-06	7.0E-06	3.4%	1.00	3
7	3.8E-07	5.4E-06	92.9%	1.00	22
8	3.1E-07	3.8E-06	92.1%	0.91	22
9	2.7E-07	2.0E-06	253.1%	0.92	22
10	2.7E-07	3.1E-07	24.5%	1.00	22
11	2.6E-07	2.7E-07	11.7%	1.00	22
12	2.5E-07	2.6E-07	3.5%	0.98	22
Final	2.6E-07	**2.6E-07**	2.7%	1.00	22

Other Information
Maximum Gradient
19.9
Minimum Gradient
7.9
Max. Back Pressure (psi)
37.0
Min. Back Pressure (psi)
18.0

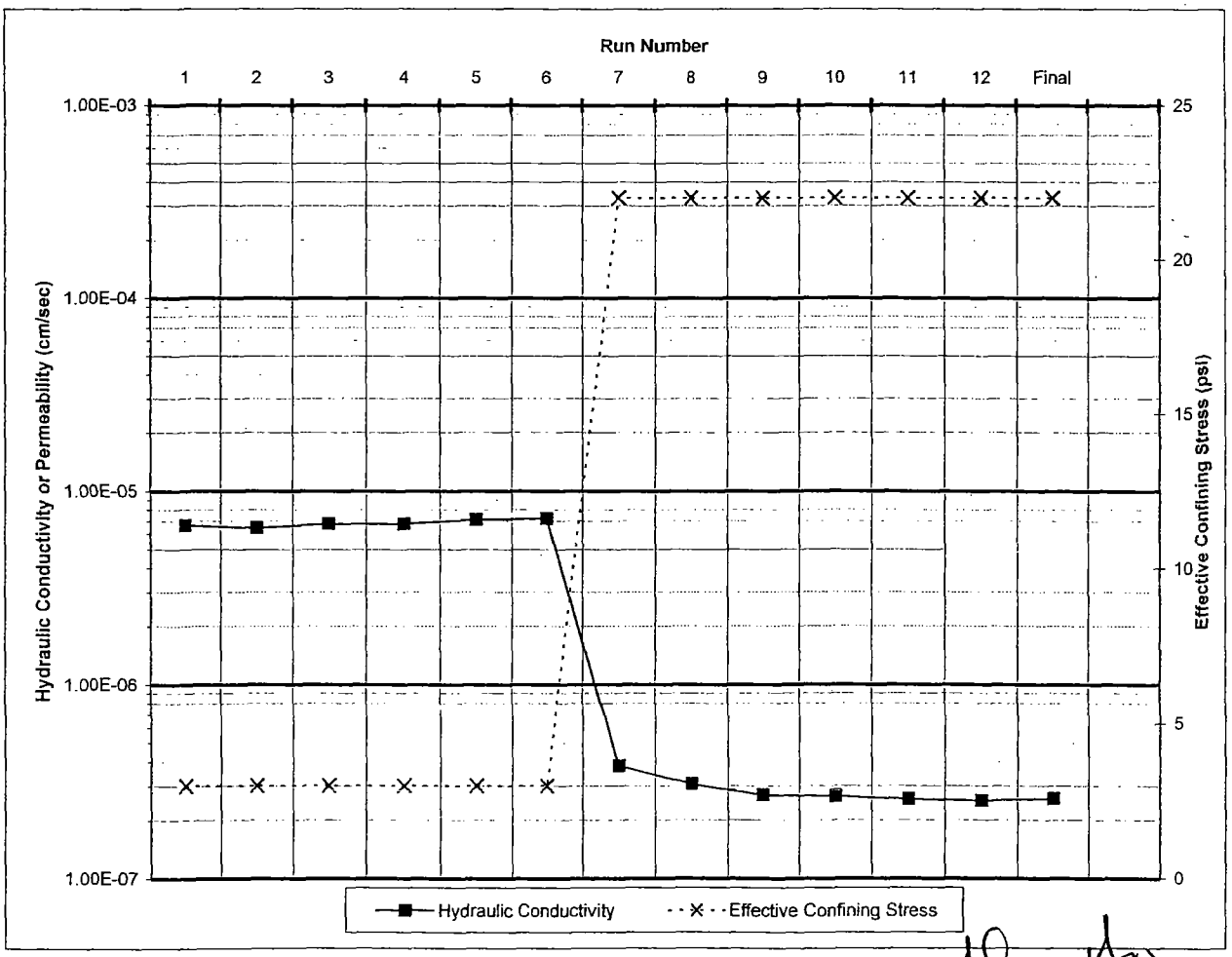

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FIGURE: 1

Hydraulic Conductivity (a.k.a. Permeability) Test Report

Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.45	Final Sample Area (cm2)	41.45
Project number	2008043	Initial Sample Length (cm)	13.17	Final Sample Length (cm)	13.17
Date	05/12/2008	Initial Sample Volume (cc)	545.7	Final Sample Volume (cc)	545.7
Technician	EJB	Initial moisture (%)	15.8	Final moisture (%)	17.8
Sample point	?	Initial wet unit wt. (pcf)	122.7	Final wet unit weight (pcf)	124.8
Sample number	ST-3	Initial dry unit wt. (pcf)	106.0	Final dry unit weight (pcf)	105.9
Sample depth	Bottom 6 inches of Shelby Tube	Initial void ratio	0.560	Final void ratio	0.561
Sample description	Light olive brown, CL with sand and gravel	Initial porosity	0.359	Final porosity	0.359
		Initial saturation (%)	74.7	Final saturation (%)	84.1

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	6.4E-07	n.a.		0.67	3
2	7.3E-07	n.a.		1.20	3
3	6.1E-07	n.a.		0.87	3
4	2.6E-08	5.0E-07	94.7%	2.00	22
5	2.1E-08	3.5E-07	110.5%	1.15	22.5
6	1.5E-08	1.7E-07	262.8%	1.00	22.5
7	2.5E-08	2.2E-08	32.2%	1.00	22.5
8	2.8E-08	2.2E-08	33.7%	2.00	22.5
9	2.1E-08	2.2E-08	33.4%	1.25	22.5
10	2.5E-08	2.5E-08	16.6%	2.33	22.5
11	1.9E-08	2.3E-08	22.5%	3.38	22.5
12	2.3E-08	2.2E-08	13.3%	2.18	22.5
13	2.3E-08	2.2E-08	14.9%	1.50	22.5
Final	2.7E-08	2.3E-08	16.6%	2.50	22.5

Other Information
Maximum Gradient 27.4
Minimum Gradient 10.6
Max. Back Pressure (psi) 18.0
Min. Back Pressure (psi) 18.0

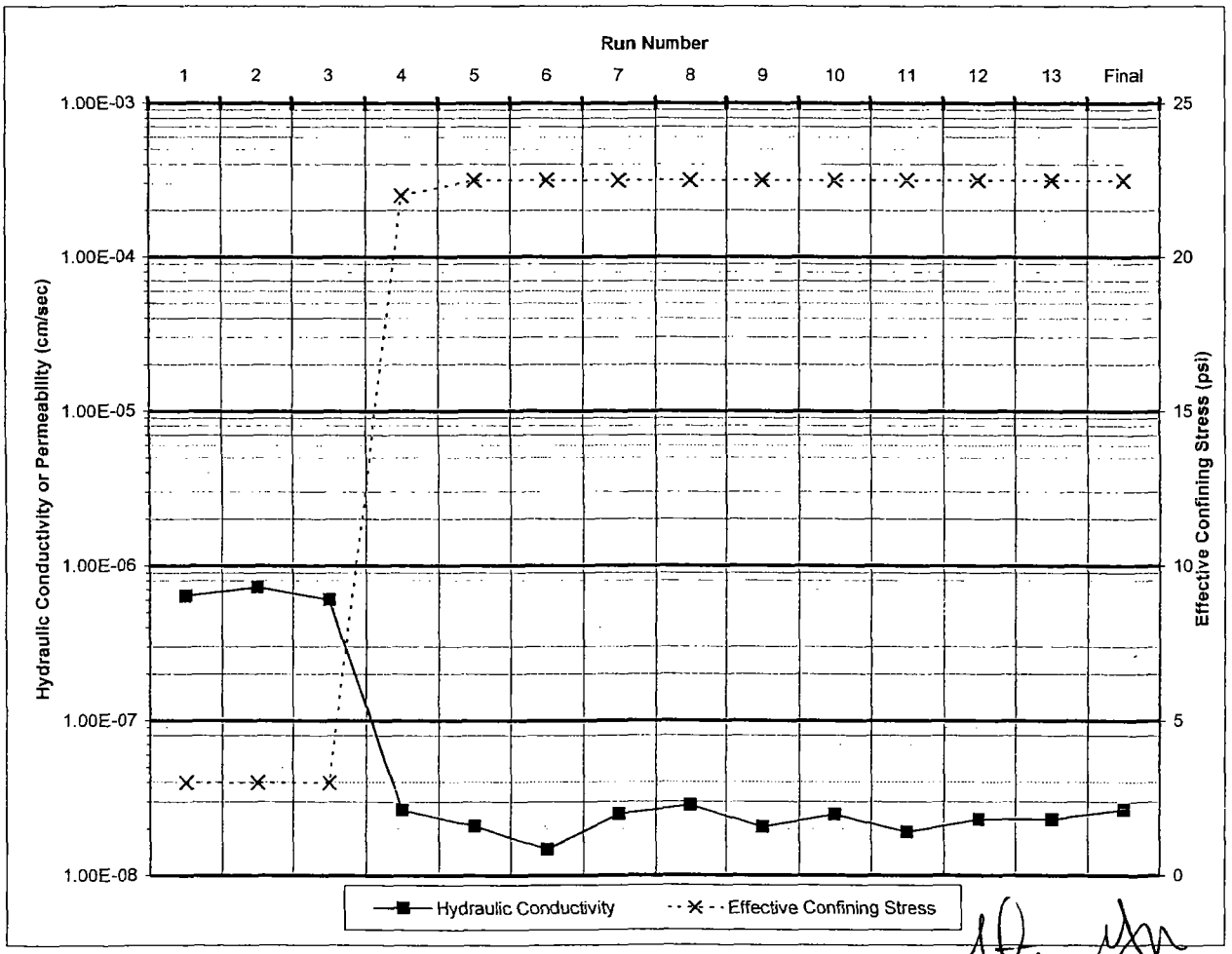

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FIGURE: 2

Hydraulic Conductivity (a.k.a. Permeability) Test Report

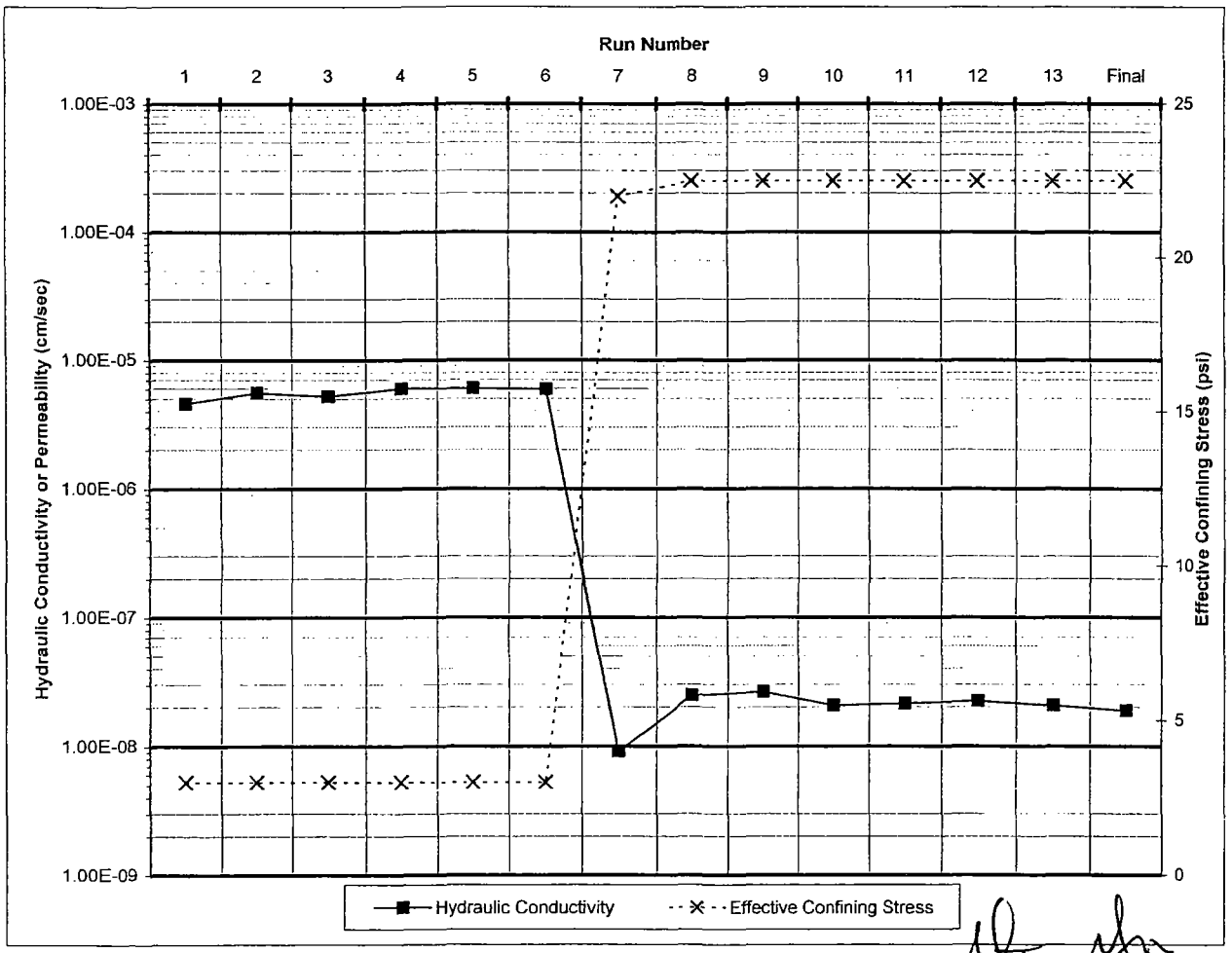
Method ASTM D 5084

HWA GEOSCIENCES INC.

Project	Camu Phase 2	Assumed Specific Gravity	2.65		
Client	Hydrometrics	Initial Sample Area (cm2)	41.68	Final Sample Area (cm2)	41.68
Project number	2008043	Initial Sample Length (cm)	14.32	Final Sample Length (cm)	14.32
Date	05/12/2008	Initial Sample Volume (cc)	596.9	Final Sample Volume (cc)	596.9
Technician	EJB	*Initial moisture (%)*	15.4	*Final moisture (%)*	18.7
Sample point	?	Initial wet unit wt. (pcf)	118.8	Final wet unit weight (pcf)	121.7
Sample number	ST-4	Initial dry unit wt. (pcf)	103.0	Final dry unit weight (pcf)	102.5
Sample depth	Middle 6 inches of Shelby Tube	Initial void ratio	0.606	Final void ratio	0.613
Sample description	Light olive brown, CL with sand and gravel	Initial porosity	0.377	Final porosity	0.380
		Initial saturation (%)	67.4	Final saturation (%)	80.9

Run No.	Hydraulic Conductivity (cm/s)	Running Average of 4 Readings (cm/s)	Maximum % Deviation from Average (should be less than 25%)	Flow Ratio (0.75 to 1.25 required)	Effective Confining Stress (psi)
1	4.6E-06	n.a.		0.97	3
2	5.6E-06	n.a.		1.00	3
3	5.2E-06	n.a.		0.90	3
4	6.0E-06	5.3E-06	14.2%	0.95	3
5	6.0E-06	5.7E-06	8.2%	1.00	3
6	5.9E-06	5.8E-06	9.6%	0.94	3
7	9.1E-09	4.5E-06	99.8%	-2.00	22
8	2.5E-08	3.0E-06	101.1%	0.50	22.5
9	2.6E-08	1.5E-06	296.0%	2.00	22.5
10	2.1E-08	2.0E-08	55.0%	3.00	22.5
11	2.1E-08	2.3E-08	13.0%	1.60	22.5
12	2.2E-08	2.3E-08	16.0%	1.00	22.5
13	2.1E-08	2.1E-08	5.1%	1.60	22.5
Final	1.9E-08	**2.1E-08**	9.5%	1.73	22.5

Other Information
Maximum Gradient
25.2
Minimum Gradient
8.3
Max. Back Pressure (psi)
18.0
Min. Back Pressure (psi)
18.0



Checked by: _____

FIGURE: 3

B.2 HDPE LINER

A. SECONDARY LINER

TRIAL WELD FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	5/29/2008
Sheet:	1

DATE/ TIME	SEAMER INITIALS	MACHINE NUMBER	AMBIENT TEMP	WEATHER	EXTRUSION WELDS BARREL TEMP	PREHEAT TEMP	PEEL / TENSILE	WEDGE TEMP	SET SPEED FT/MIN	[illegible]	PASS / FAIL	COMMENTS
5/29/2008 9:55 AM	AM	2211	60	CLOUDY				800	6	142-148,147-145,148-146	P	218-216
5/29/2008 10:55	AM	50	65	CLOUDY				850	6	129/140 127/127	P	171-187
5/29/2008 11:30 AM	AM	806	70	CLOUDY				820	6.5	139/129,134/131,135/138	P	213-218
5/30/2008 7:55 AM	AM	50	55	PARTLY CLOUDY				820	5.5	141-160,143-146,157-147	P	224-231
5/30/2008 1:20 PM	AM	5089	70	PARTLY CLOUDY	500	320	138,129 105				P	133-137
5/31/2008 8:20 AM	AM	50	60	CLEAR				820	6	153-150,141-140,156-146	P	234-230
5/31/2008 1:25 PM	AM	50	80	CLEAR				820	6	120-118,143-122,130-134	P	247-223
6/1/2008 8:13 AM	AM	50	60	PARTLY CLOUDY				830	6	123-135,139-139,121-130	P	241-238
6/1/2008 12:55 PM	AM	50	75	PARTLY CLOUDY				830	6	137-120,149-116,124-135	P	199-203
6/2/2008 8:25 AM	AM	50	59	PARTLY CLOUDY				830	5.5	128-148,131-167,120-137	P	223-209

TRIAL WELD FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	6/5/2008
Sheet:	2

DATE/ TIME	SEAMER INITIALS	MACHINE NUMBER	AMBIENT TEMP	WEATHER	BARREL TEMP	PREHEAT TEMP	PEEL / TENSILE	WEDGE TEMP	SET SPEED FT/MIN	[illegible]	PASS / FAIL	COMMENTS
6/2/2008 1:30 PM	AM	50	70	PARTLY CLOUDY				830	6	118-102,123-103,171-105	P	227-222
6/2/2008 5:30 PM	AM	50	60	PARTLY CLOUDY				830	6	132-140,133-145,153-116	P	219-225
6/3/2008 7:55 AM	AM	50	50	CLOUDY				840	5.5	135-155,139-135,109-171	P	199-215
6/3/2008 1:50 PM	AM	129	65	CLOUDY	500	350	110,122 110				P	152-150
6/3/2008 12:30 PM	MC	5089	65	CLOUDY	520	350	120,119 122				P	160-170
6/5/2008 11:30	MC	5089	60	PARTLY CLOUDY	500	350	125,129 120				P	162-170

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	5/29/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	1
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
5/29/2008 11:05 AM	1	S-1/S-2	39'	AM	50	850	CLOUDY	0-15	70	
5/29/2008 11:20 AM	2	S-2/S-3	39'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 11:35 AM	3	S-3/S-4	39'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 11:45 AM	4	S-4/S-5	40'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 11:55 AM	5	S-5/S-6	40'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:00 AM	6	S-6/S-7	41'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:10 PM	7	S-7/S-8	41'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:20 PM	8	S-8/S-9	42'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:25 PM	9	S-9/S-10	42'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:35 PM	10	S-10/S-11	42'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:45 PM	11	S-11/S-12	42'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 12:55 PM	12	S-12/S-13	43'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 1:05 PM	13	S-13/S-14	43'	AM	806	820	CLOUDY	0-15	70	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	5/29/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	2
MATERIAL DESCRIPTION:	60 MIL HDPE (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
5/29/2008 1:20 PM	14	S-14/S-15	43'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 1:30 PM	15	S-16/S-17	26'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 1:40 PM	16	S-1/S-16, S-17	31'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 2:40 PM	17	S-18/S-19	23'	AM	806	820	CLOUDY	0-15	70	BUTTSEAM
5/29/2008 2:55 PM	18	SOUTH BUTTSEAM	372'	AM	806	820	CLOUDY	0-15	70	s-18,s-19/south buttseam
5/29/2008 4:30 PM	19	S-20/S-21	23'	AM	806	820	CLOUDY	0-15	70	BUTTSEAM
5/29/2008 4:35 PM	20	S-18,S-19/S-20,S-21	384'	AM	806	820	CLOUDY	0-15	70	
5/29/2008 5:45 PM	21	S-20,S21/S-22	386'	AM	806	820	CLOUDY	0-15	70	
5/30/2008 9:10 AM	22	S-23/S-24	23'	AM	50	820	PARTLY CLOUDY	0-15	60	BUTTSEAM
5/30/2008 9:20 AM	23	S-22/S-23, S-24	386'	AM	50	820	PARTLY CLOUDY	0-15	60	
5/30/2008 10:24 AM	24	S-25/S-26	23'	AM	50	820	PARTLY CLOUDY	0-15	60	BUTTSEAM
5/30/2008 11:20 AM	25	S-23,S-24/ S-25,S-26	387'	AM	50	820	PARTLY CLOUDY	0-15	60	
5/31/2008 9:30 AM	26	S-27/S-28	23'	AM	50	820	CLEAR	0-5	60	BUTTSEAM
5/31/2008 9:35 AM	27	S-25,S-26/ S-27,S-28	388'	AM	50	820	CLEAR	0-5	60	
5/31/2008 11:15 AM	28	S-27,S-28/ S-29	387'	AM	50	820	CLEAR	0-5	60	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/4/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	3
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
5/31/2008 12:25 PM	29	S-30/S-31	23'	AM	50	820	CLEAR	0-5	80	BUTTSEAM
5/31/2008 1:35 PM	30	S-29/S-30, S-31	387'	AM	50	820	CLEAR	0-5	80	
5/31/2008 2:50 PM	31	S-32/S-33	23'	AM	50	820	CLEAR	0-5	80	BUTTSEAM
5/31/2008 2:55 PM	32	S-30,S-31/ S-32,S-33	387'	AM	50	820	CLEAR	0-5	80	
5/31/2008 4:15 PM	33	S-34/S-35	23'	AM	50	820	CLOUDY	0-5	75	BUTTSEAM
5/31/2008 4:20 PM	34	S-32,S-33/ S-34,S-35	386'	AM	50	820	CLOUDY	0-5	75	
5/31/2008 5:35 PM	35	S-36/S-37	23'	AM	50	820	CLOUDY	0-5	70	BUTTSEAM
5/31/2008 5:40 PM	36	S-34,S-35/ S-36,S-37	386'	AM	50	820	CLOUDY	0-5	70	
6/1/2008 8:55 AM	37	S-36,S-37/ S-38	383'	AM	50	835	CLOUDY	0-5	60	
6/1/2008 10:15 AM	38	S-39/S-40	23'	AM	50	835	CLOUDY	0-5	60	BUTTSEAM
6/1/2008 10:20 AM	39	S-38/S-39, S-40	383'	AM	50	835	CLOUDY	0-5	65	
6/1/2008 11:30 AM	40	S-41/S-42	23'	AM	50	835	CLOUDY	0-5	65	BUTTSEAM
6/1/2008 11:35 AM	41	S-39,S-40/ S-41,S-42	383'	AM	50	835	CLOUDY	0-5	65	
6/1/2008 1:50 PM	42	S-43/S-44	23'	AM	50	835	CLOUDY	0-5	70	BUTTSEAM
6/1/2008 1:20 PM	43	S-41,S-42/ S-43,S-44	386'	AM	50	835	CLOUDY	0-5	70	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/4/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	4
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/1/2008 2:35 PM	44	S-43,S-44/ S-45	388'	AM	50	835	CLOUDY	0-5	70	
6/1/2008 3:50 PM	45	S-45/S-46	388'	AM	50	835	CLOUDY	0-5	70	
6/2/2008 9:20 AM	46	S-49/S-50	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 9:30 AM	47	S-50/S-51	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 9:35 AM	48	S-48/S-49	34'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 9:45 AM	49	S-47/S-48	18'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 9:55 AM	50	S-51/S-52	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:02 AM	51	S-52/S-53	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:10 AM	52	S-53/S-54	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:20 AM	53	S-54/S-55	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:30 AM	54	S-55/S-56	35'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:40 AM	55	S-56/S-57	34'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:45 AM	56	S-57/S-58	34'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 10:55 AM	57	S-58/S-59	34'	AM	50	835	PARTLY CLOUDY	0-5	60	
6/2/2008 11:05 AM	58	S-59/S-60	34'	AM	50	835	PARTLY CLOUDY	0-5	60	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/4/2008
NWLG PROJECT #:	NO7070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	5
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/2/2008 11:15 AM	59	S-60/S-61	34'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 11:20 AM	60	S-61/S-62	34'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 11:30 AM	61	S-62/S-63	35'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 11:40	62	S-63/S-64	36'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 11:50 AM	63	NORTH BUTTSEAM	388'	AM	50	830	PARTLY CLOUDY	0-5	70	north buttseam s-46/ s 47 to s-64
6/2/2008 1:10 PM	64	S-15/S-65	43'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 1:35 PM	65	S-66/S-67	41'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 1:40 PM	66	S-65/S-66	45'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 1:45 PM	67	S-67/S-68	25'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 1:55 PM	68	S-69/S-70	76'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 2:08 PM	69	S-70/S-71	75'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 2:30 PM	70	S-69/S-65,66,67,68	80'	AM	50	830	PARTLY CLOUDY	0-5	70	80' south east buttseam
6/2/2008 2:50 PM	71	S-71/S72	72'	AM	50	830	PARTLY CLOUDY	0-5	70	
6/2/2008 5:20 PM	72	S-73/S-74	23'	AM	50	830	PARTLY CLOUDY	0-20	60	BUTTSEAM
6/2/2008 5:30 PM	73	S-72/S-73 S-74	70'	AM	50	830	PARTLY CLOUDY	0-20	60	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/4/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	6
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/2/2008 5:50 PM	74	S-73,S-74/ S-75	68'	AM	50	830	PARTLY CLOUDY	0-20	60	
6/2/2008 6:05 PM	75	S-75/S-76	68'	AM	50	830	PARTLY CLOUDY	0-20	60	
6/2/2008 6:25 PM	76	S-76/S-77	68'	AM	50	830	PARTLY CLOUDY	0-20	60	
6/2/2008 6:40 PM	77	S-77/S-78	70'	AM	50	830	PARTLY CLOUDY	0-20	60	
6/2/2008 7:00 PM	78	S.E BUTTSEAM	203'	AM	50	830	PARTLY CLOUDY	0-20	60	
6/3/2008 8:15 AM	79	S-78/S-79	70'	AM	50	830	CLOUDY	0-10	58	
6/3/2008 8:30 AM	80	S-80/S-81	23'	AM	50	830	CLOUDY	0-10	58	BUTTSEAM
6/3/2008 8:40 AM	81	S-79/S-80, S-81	72'	AM	50	830	CLOUDY	0-10	58	
6/3/2008 8:55 AM	82	S-80,S-81/ S-82	74'	AM	50	830	CLOUDY	0-10	58	
6/3/2008 9:10 AM	83	S-82/S-83	74'	AM	50	830	CLOUDY	0-10	58	
6/3/2008 9:30 AM	84	S-83/S-84	76'	AM	50	830	CLOUDY	0-10	58	
6/3/2008 9:45 AM	85	S-84/S-85	77'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 10:05 AM	86	S-85/S-86	76'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 10:20 AM	87	S-86/S-87	76'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 10:40 AM	88	S-89/S-90	32'	AM	50	830	PARTLY CLOUDY	0-10	65	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/4/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	7
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/3/2008 10:45 AM	89	S-88/S-89	37'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 10:50 AM	90	S-90/S-91	13'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 10:55 AM	91	S-87/S-88,89,90,91	75'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 11:10 AM	92	S-64/S-88	37'	AM	50	830	PARTLY CLOUDY	0-10	65	
6/3/2008 11:20 AM	93	EAST BUTTSEAM	180'	AM	50	830	PARTLY CLOUDY	0-10	65	east buttseam s-79 to s-87

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED(SECONDARY LINER)

DATE: 6/4/2008
SHEET: 1 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
05/30/08	S-16/S-19	JM	30	11:26	30	11:33	0	PASS		34' SOUTH BUTTSEAM
05/30/08	S-1/S-16	JM	30	11:26	30	11:33	0	PASS		22' BUTTSEAM
05/30/08	S-1/S-19	JM	30	11:26	30	11:33	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-1/S-17	JM	30	11:27	30	11:34	0	PASS		18' BUTTSEAM
05/30/08	S-16/S-17	JM	30	11:27	30	11:34	0	PASS		26' SEAM
05/30/08	S-1/S-2	JM	30	11:35	30	11:42	0	PASS		39' SEAM
05/30/08	S-2/S-19	JM	30	11:36	30	11:43	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-2/S-3	JM	30	11:38	30	11:45	0	PASS		39' SEAM
05/30/08	S-3/S-19	JM	30	11:39	30	11:46	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-3/S-4	JM	30	11:40	30	11:47	0	PASS		39' SEAM
05/30/08	S-4/S-19	JM	30	11:45	30	11:52	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-4/S-5	JM	30	11:46	30	11:53	0	PASS		40' SEAM
05/30/08	S-5/S-19	JM	30	11:47	30	11:54	0	PASS		15' SOUTH BUTTSEAM
05/30/08	S-18/S-19	JM	30	11:48	30	11:55	0	PASS		22' BUTTSEAM
05/30/08	S-5/S-18	JM	30	11:49	30	11:56	0	PASS		8' SOUTH BUTTSEAM
05/30/08	S-5/S-6	JM	30	12:14	30	12:21	0	PASS		40' SEAM S. SLOPE
05/30/08	S-6/S-18	AV	30	12:14	30	12:21	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-6/S-7	AV	30	12:15	30	12:22	0	PASS		41' SEAM S. SLOPE
05/30/08	S-7/S-18	AV	30	12:14	30	12:21	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-7/S-8	AV	30	12:15	30	12:23	0	PASS		42' SEAM S. SLOPE
05/30/08	S-8/S-18	AV	30	12:39	30	12:46	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-8/S-9	AV	30	12:39	30	12:46	0	PASS		42' SEAM S. SLOPE
05/30/08	S-9/S-18	AV	30	12:39	30	12:46	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-9/S-10	AV	30	12:39	30	12:46	0	PASS		42' SEAM S. SLOPE
05/30/08	S-10/S-18	AV	30	12:44	30	12:51	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-10/S-11	AV	30	12:58	30	1:05	0	PASS		42' SEAM S. SLOPE
05/30/08	S-11/S-18	AV	30	12:58	30	1:05	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-11/S-12	AV	30	12:58	30	1:05	0	PASS		42' SEAM S. SLOPE
05/30/08	S-12/S-18	AV	30	12:58	30	1:05	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-12/S-13	AV	30	1:18	30	1:25	0	PASS		43' SEAM S. SLOPE
05/30/08	S-13/S-18	AV	30	1:16	30	1:23	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-13/S-14	AV	30	1:16	30	1:23	0	PASS		43' SEAM S. SLOPE
05/30/08	S-14/S-18	AV	30	1:16	30	1:23	0	PASS		22' SOUTH BUTTSEAM
05/30/08	S-14/S-15	AV	30	1:16	30	1:23	0	PASS		43' SEAM S. SLOPE
05/30/08	S-18/S-21	AV	30	2:14	30	2:21	0	PASS		22' SEAM E. BUTTSEAM TO E.END OF S-20
05/30/08	S-20/S-21	AV	30	2:14	30	2:21	0	PASS		22' BUTTSEAM
05/30/08	S-21/S-22	AV	30	2:25	30	2:32	0	PASS		22' SEAM E. BUTTSEAM TO E.END OF S-20
05/30/08	S-18/S-20	AV	30	1:31	30	1:38	0	PASS		226' SEAM BUTTSEAM TO BUTTSEM
05/30/08	S-19/S-20	AV	30	1:31	30	1:38	0	PASS		137' SEAM BUTTSEAM TO W. END
05/30/08	S-20/S-22	AV	30	2:30	30	2:37	0	PASS		363' SEAM BUTTSEAM TO W. END
05/30/08	S-22/S-24	AV	30	2:44	30	2:51	0	PASS		301' SEAM BUTTSEAM TO W. END

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (SECONDARY LINER)

DATE: 6/4/2008
SHEET: 2 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
05/30/08	S-22/S-23	AV	30	2:43	30	2:50	0	P		87' E. BUTTSEAM TO W. END OF S-23
05/30/08	S-23/S-24	AV	30	2:38	30	2:45	0	P		23' BUTTSEAM
05/30/08	S-23/S-25	AV	30	2:50	30	2:57	0	P		87' SEAM
05/30/08	S-24/S-25	AV	30	2:51	30	2:58	0	P		110' BUTTSEAM TO BUTTSEAM
05/30/08	S-24/S-26	AV	30	2:53	30	2:59	0	P		191' BUTTSEAM TO W. END
05/30/08	S-25/S-26	AV	30	2:54	30	3:01	0	P		23' BUTTSEAM
06/03/08	S-15/S-65	EB	30	7:20	30	7:27	0	P		43' SEAM SOUTH SLOPE
06/03/08	S-65/S-69	EB	30	7:22	30	7:29	0	P		10' SOUTH BUTTSEAM
06/03/08	S-18/S-69	EB	30	7:21	30	7:28	0	P		23' BUTTSEAM
06/03/08	S-65/S-66	EB	30	7:23	30	7:30	0	P		45' SEAM S.E. CORNER
06/03/08	S-66/S-69	EB	30	7:24	30	7:31	0	P		22' SOUTH BUTTSEAM
06/03/08	S-66/S-67	EB	30	7:32	30	7:39	0	P		41' SEAM S.E. CORNER
06/03/08	S-67/S-69	EB	30	7:33	30	7:40	0	P		23' SOUTH BUTTSEAM
06/03/08	S-67/S-68	EB	30	7:34	30	7:41	0	P		25' SEAM S.E. BUTTSEAM
06/03/08	S-68/S-69	EB	30	7:35	30	7:42	0	P		17' SOUTH BUTTSEAM
06/03/08	S-69/S-70	EB	30	7:45	30	7:52	0	P		76' SEAM EAST SLOPE
06/03/08	S-21/S-70	EB	30	7:46	30	7:53	0	P		22' EAST BUTTSEAM
06/03/08	S-70/S-71	EB	30	7:47	30	7:54	0	P		75' SEAM ON EAST SLOPE
06/03/08	S-22/S-71	EB	30	7:48	30	7:55	0	P		22' SOUTH BUTTSEAM
06/03/08	S-71/S-72	EB	30	8:00	30	8:07	0	P		72' SEAM ON EAST SLOPE
06/03/08	S-23/S-72	EB	30	8:01	30	8:08	0	P		22' SOUTH BUTTSEAM
06/03/08	S-72/S-73	EB	30	8:02	30	8:09	0	P		55' SEAM ON EAST SLOPE
06/03/08	S-72/S-74	EB	30	8:03	30	8:10	0	P		15' SEAM
06/03/08	S-73/S-74	EB	30	8:16	30	8:23	0	P		22' BUTTSEAM
06/03/08	S-73/S-75	EB	30	8:17	30	8:24	0	P		55'SEAM ON EAST SLOPE
06/03/08	S-74/S-75	EB	30	8:18	30	8:25	0	P		15' SEAM
06/03/08	S-25/S-74	EB	30	8:40	30	8:47	0	P		22' SOUTH BUTTSEAM
06/03/08	S-25/S-27	EB	30	8:41	30	8:48	0	P		199' SEAM
06/03/08	S-27/S-75	EB	30	8:42	30	8:49	0	P		22' SOUTH BUTTSEAM
06/03/08	S-27/S-29	EB	30	8:44	30	8:51	0	P		302' SEAM
06/03/08	S-75/S-76	EB	30	8:45	30	8:52	0	P		68' SEAM ON EAST SLOPE
06/03/08	S-29/S-76	EB	30	8:54	30	9:01	0	P		22' SOUTH BUTTSEAM
06/03/08	S-76/S-77	EB	30	8:55	30	9:02	0	P		68' SEAM ON EAST SLOPE
06/03/08	S-29/S-30	EB	30	8:56	30	9:03	0	P		24' SEAM
06/03/08	S-30/S-77	EB	30	8:57	30	9:04	0	P		22' SOUTH BUTTSEAM
06/03/08	S-77/S-78	EB	30	9:09	30	9:16	0	P		68' SEAM ON EAST SLOPE
06/03/08	S-32/S-78	EB	30	9:10	30	9:17	0	P		22' SOUTH BUTTSEAM
06/03/08	S-30/S-32	EB	30	9:11	30	9:18	0	P		24' SEAM
06/03/08	S-30/S-31	EB	30	9:12	30	9:19	0	P		22' BUTTSEAM
06/03/08	S-31/S-32	EB	30	9:13	30	9:20	0	P		117' SEAM
06/03/08	S-26/S-27	EB	30	9:28	30	9:35	0	P		108' SEAM

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (SECONDARY LINER)

DATE: 6/4/2008
SHEET: 3 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/03/08	S-26/S-28	EB	30	9:29	30	9:36	0	P		85' SEAM
06/03/08	S-27/S-28	EB	30	9:30	30	9:37	0	P		22' BUTTSEAM
06/03/08	S-28/S-29	EB	30	9:31	30	9:38	0	P		60' SEAM
06/03/08	S-31/S-33	EB	30	9:44	30	9:51	0	P		248' BUTTSEAM TO WEST END
06/03/08	S-32/S-33	EB	30	9:45	30	9:52	0	P		22' BUTTSEAM
06/03/08	S-33/S-34	EB	30	9:48	30	9:55	0	P		108' BUTTSEAM TO BUTTSEAM
06/03/08	S-34/S-35	EB	30	9:49	30	9:56	0	P		22' BUTTSEAM
06/03/08	S-33/S-35	EB	30	9:50	30	9:57	0	P		140' BUTTSEAM TO WEST END
06/03/08	S-35/S-36	EB	30	10:20	30	10:27	0	P		140' BUTTSEAM TO WEST END
06/03/08	S-34/S-36	EB	30	10:21	30	10:28	0	P		217' BUTTSEAM TO BUTTSEAM
06/03/08	S-36/S-38	EB	30	10:22	30	10:29	0	P		357' BUTTSEAM TO WEST END
06/03/08	S-36/S-37	EB	30	10:23	30	10:30	0	P		22' BUTTSEAM
06/03/08	S-38/S-40	EB	30	10:35	30	10:42	0	P		297' SEAM
06/03/08	S-39/S-40	EB	30	10:36	30	10:43	0	P		22' BUTTSEAM
06/03/08	S-40/S-41	EB	30	10:37	30	10:44	0	P		114' BUTTSEAM TO BUTTSEAM
06/03/08	S-40/S-42	EB	30	10:38	30	10:45	0	P		186' SEAM
06/03/08	S-41/S-42	EB	30	10:39	30	10:46	0	P		22' BUTTSEAM
06/03/08	S-41/S-43	EB	30	10:55	30	11:02	0	P		199' SEAM
06/03/08	S-42/S-43	EB	30	10:56	30	11:03	0	P		109' SEAM
06/03/08	S-42/S-44	EB	30	10:57	30	11:04	0	P		77' SEAM
06/03/08	S-43/S-44	EB	30	10:58	30	11:05	0	P		22' BUTTSEAM
06/03/08	S-43/S-45	EB	30	10:59	30	11:06	0	P		309' SEAM
06/03/08	S-44/S-45	EB	30	11:10	30	11:17	0	P		77' SEAM
06/03/08	S-45/S-46	EB	30	11:11	30	11:18	0	P		388' WEST END TO EAST BUTTSEAM
06/03/08	S-46/S-47	EB	30	11:30	30	11:37	0	P		11' OF NORHT BUTTSEAM
06/03/08	S-47/S-48	EB	30	11:31	30	11:38	0	P		18'SEAM ON N.W.CORNER
06/03/08	S-46/S-48	EB	30	11:32	30	11:39	0	P		22' OF NORHT BUTTSEAM
06/03/08	S-48/S-49	EB	30	11:33	30	11:40	0	P		34' SEAM ON N. W. CORNER
06/03/08	S-46/S-49	EB	30	11:34	30	11:41	0	P		22' NORHT BUTTSEAM
06/03/08	S-46/S-50	EB	30	11:42	30	11:49	0	P		22' NORHT BUTTSEAM
06/03/08	S-50/S-51	EB	30	11:43	30	11:50	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-51	EB	30	11:44	30	11:51	0	P		22' NORHT BUTTSEAM
06/03/08	S-51/S-52	EB	30	11:45	30	11:52	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-52	EB	30	11:46	30	11:53	0	P		22' NORHT BUTTSEAM
06/03/08	S-52/S-53	EB	30	11:54	30	12:01	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-53	EB	30	11:55	30	12:02	0	P		22' NORHT BUTTSEAM
06/03/08	S-53/S-54	EB	30	11:56	30	12:03	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-54	EB	30	11:57	30	12:04	0	P		22' NORHT BUTTSEAM
06/03/08	S-54/S-55	EB	30	11:58	30	12:05	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-55	EB	30	12:50	30	12:57	0	P		22' NORHT BUTTSEAM
06/03/08	S-55/S-56	EB	30	12:51	30	12:58	0	P		35' SEAM ON NORHT SLOPE

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED

DATE: 6/4/2008
SHEET: 4 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/03/08	S-46/S-56	EB	30	12:52	30	12:59	0	P		22' NORHT BUTTSEAM
06/03/08	S-56/S-57	EB	30	12:53	30	13:00	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-46/S-57	EB	30	13:02	30	13:09	0	P		22' NORHT BUTTSEAM
06/03/08	S-57/S-58	EB	30	13:03	30	13:10	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-46/S-58	EB	30	13:04	30	13:11	0	P		22' NORHT BUTTSEAM
06/03/08	S-58/S-59	EB	30	13:05	30	13:12	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-87/S-89	EB	30	13:15	30	13:22	0	P		10' NORHT BUTTSEAM ON N.E. CORNER
06/03/08	S-89/S-90	EB	30	13:16	30	13:23	0	P		32' SEAM ON NORHT EAST CORNER
06/03/08	S-87/S-90	EB	30	13:17	30	13:24	0	P		22' NORHT BUTTSEAM ON N.E. CORNER
06/03/08	S-90/S-91	EB	30	13:18	30	13:25	0	P		13' SEAM ON NORHT EAST CORNER
06/03/08	S-87/S-91	EB	30	13:19	30	13:26	0	P		8' NORHT BUTTSEAM ON N.E. CORNER
06/03/08	S-88/S-89	EB	30	13:27	30	13:34	0	P		37' SEAM ON NORHT EAST CORNER
06/03/08	S-87/S-88	EB	30	13:28	30	13:35	0	P		21' NORHT BUTTSEAM
06/03/08	S-46/S-59	EB	30	13:36	30	13:43	0	P		22' NORHT BUTTSEAM
06/03/08	S-59/S-60	EB	30	13:37	30	13:44	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-46/S-60	EB	30	13:38	30	13:45	0	P		22' NORHT BUTTSEAM
06/03/08	S-60/S-61	EB	30	13:39	30	13:46	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-46/S-61	EB	30	13:50	30	13:57	0	P		22' NORHT BUTTSEAM
06/03/08	S-61/S-62	EB	30	13:51	30	13:58	0	P		34' SEAM ON NORHT SLOPE
06/03/08	S-46/S-62	EB	30	13:52	30	13:59	0	P		22' NORHT BUTTSEAM
06/03/08	S-62/S-63	EB	30	13:53	30	14:00	0	P		35' SEAM ON NORHT SLOPE
06/03/08	S-46/S-63	EB	30	14:01	30	14:08	0	P		22' NORHT BUTTSEAM
06/03/08	S-63/S-64	EB	30	14:02	30	14:09	0	P		36' SEAM ON NORHT SLOPE
06/03/08	S-46/S-64	EB	30	14:03	30	14:10	0	P		13' NORHT BUTSEAM
06/03/08	S-64/S-88	EB	30	14:04	30	14:11	0	P		37' SEAM ON NORHT SLOPE
06/03/08	S-46/S-87	EB	30	14:14	30	14:21	0	P		22' EAST BUTSEAM
06/03/08	S-86/S-87	EB	30	14:15	30	14:22	0	P		76' SEAM ON EAST SLOPE
06/03/08	S-45/S-86	EB	30	14:16	30	14:23	0	P		22' EAST BUTSEAM
06/03/08	S-85/S-86	EB	30	14:24	30	14:31	0	P		76' SEAM ON EAST SLOPE
06/03/08	S-43/S-85	EB	30	14:25	30	14:32	0	P		22' EAST BUTSEAM
06/03/08	S-84/S-85	EB	30	14:26	30	14:33	0	P		76' SEAM ON EAST SLOPE
06/03/08	S-41/S-84	EB	30	14:34	30	14:41	0	P		22' EAST BUTSEAM
06/03/08	S-39/S-41	EB	30	14:35	30	14:42	0	P		86' BUTTSEAM TO BUTTSEAM
06/03/08	S-83/S-84	EB	30	14:36	30	14:43	0	P		76' SEAM ON EAST SLOPE
06/03/08	S-39/S-83	EB	30	14:37	30	14:44	0	P		22' EAST BUTSEAM
06/03/08	S-38/S-39	EB	30	14:45	30	14:52	0	P		86' SEAM
06/03/08	S-82/S-83	EB	30	14:46	30	14:53	0	P		74' SEAM ON EAST SLOPE
06/03/08	S-38/S-82	EB	30	14:47	30	14:54	0	P		22' EAST BUTSEAM
06/03/08	S-37/S-38	EB	30	14:55	30	15:02	0	P		29' SEAM
06/03/08	S-81/S-82	EB	30	14:56	30	15:03	0	P		8' SEAM
06/03/08	S-37/S-81	EB	30	14:57	30	15:04	0	P		22' EAST BUTSEAM

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (SECONDARY LINER)

DATE: 6/4/2008
SHEET: 5 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/03/08	S-80/S-82	EB	30	14:58	30	15:05	0	P		74' SEAM ON EAST SLOPE
06/03/08	S-80/S-81	EB	30	15:03	30	15:10	0	P		22' EAST BUTTSEAM
06/03/08	S-34/S-37	EB	30	15:04	30	15:11	0	P		29' SEAM
06/03/08	S-79/S-81	EB	30	15:05	30	15:12	0	P		8' SEAM
06/03/08	S-79/S-80	EB	30	15:06	30	15:13	0	P		64' SEAM ON EAST SLOPE
06/03/08	S-34/S-79	EB	30	15:14	30	15:21	0	P		22' EAST BUTTSEAM
06/03/08	S-32/S-34	EB	30	15:15	30	15:22	0	P		139' SEAM
06/03/08	S-78/S-79	EB	30	15:16	30	15:23	0	P		70' SEAM ON EAST SLOPE

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	5/30/2008
SHEET	1

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
5/30/2008	DS#1	S-6/S-7	T-059	RA	1	131	133	P	192		P	
					2							
					3							
					4							
					5							
5/30/2008	DS#2	S-20/S-22	T-059	RA	1	137	137	P	181		P	
					2							
					3							
					4							
					5							
	DS#3	S-23/S-24	T-059	RA	1	114	110	P	136		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#4	S-29/S-31	T-059	JM	1	104	126	P	170		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#5	S-34/S-35	T-059	JM	1	95	116	P	215		P	
					2							
					3							
					4							
					5							
	DS#6	S-38/S-40	T-059	JM	1	127	118	P	182		P	
					2							
6/5/2008					3							
					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	6/5/2008
SHEET	2

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	TENSILE VALUE LBS / IN		PASS / FAIL	LAB PASS / FAIL PEEL / TENSILE
6/5/2008	DS#7	S-41/S-42	T-059	JM	1	101	105	P	199		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#8	S-45/S-46	T-059	JM	1	110	133	P	178		P	
					2							
					3							
					4							
					5							
	DS#8E	S-45/S-46	T-059	JM	1	119	127	P				
					2	132	138	P				
					3							
					4							
					5							
6/5/2008	DS#8W	S-45/S-46	T-059	JM	1	116	123	P				
					2	125	140	P				
					3							
					4							
					5							
6/5/2008	DS#9	S-59/S-60	T-059	JM	1	157	118	P	197		P	
					2							
					3							
					4							
					5							
	DS#10	S-29/S-76	T-059	JM	1	106	139	P	224		P	
					2							
					3							
					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	6/5/2008
SHEET	3

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/5/2008	DS#11	S-76/S-77	T-O59	JM	1	116	135	P	220		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#12	S-28/S-29	T-059	JM	1	111	162	P	233		P	
					2							
					3							
					4							
					5							
	DS#13	S-31/S-32	T-059	JM	1	104	150	P	223		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#13E	S-31/S-32	T-059	JM	1	146	144	P				
					2	125	140	P				
					3							
					4							
					5							
6/5/2008	DS#13W	S-31/S-33	T-059	JM	1	133	115	P				
					2	125	148	P				
					3							
					4							
					5							
	DS#14	S-39/S-40	T-059	JM	1	116	146	P	231		P	
					2							
					3							
					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (SECONDARY LINER)

Date:	6/5/2008
SHEET	4

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/5/2008	DS#15	S-25/S-26	T-059	JM	1	114	137	P	169		P	
					2							
					3							
					4							
					5							
6/5/2008	DS#16	S-82/S-83	T-059	JM	1	109	140	P	173		P	
					2							
					3							
					4							
					5							
	DS#17	S-46/S-54	T-059	JM	1	162	133	P	209		P	
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/4/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e., DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
5/30/2008	R-1	S-1/S-16,S-17	5089	AM	1'x1' patch over a.t. holes, at buttseam	5/30/2008	YES
5/30/2008	R-2	S-19/S-16,S-1	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-3	S-19/S-1,S-2	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-4	S-19/S-2,S-3	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-5	S-19/S-3,S-4	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-6	S-19/S-4,S-5	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-7	S-18,S-19/S-5	5089	AM	1'x1' patch over a.t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-8	S-18/S-5,S-6	5089	AM	1'X1' patch over a. t. holes, at s. buttseam	5/30/2008	YES
5/30/2008	R-9	S-18/S-6,S-7	5089	AM	1'X1' patch over a. t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-10	S-6/ S-7	5089	AM	4'x2' patch over DS#1, 13' from south end	5/30/2008	YES
5/30/2008	R-11	S-18/S-7,S-8	5089	AM	1'X1' patch over a. t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-12	S-18/S-8,S-9	5089	AM	1'X1' patch over a. t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-13	S-18/S-9,S-10	5089	AM	1'x1' pacth over a.t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-14	S-18/S-10,S-11	5089	AM	1'x1' pacth over a.t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-15	S-18/S-11,S-12	5089	AM	1'x1' pacth over a.t. holes at s. buttseam	5/30/2008	YES
5/30/2008	R-16	S-18/S-12,S-13	5089	AM	1'x1' pacth over a.t. holes at s. buttseam	5/30/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/04/008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
5/30/008	R-17	S-18/S-13,S-14	5089	AM	1'x1' patch over a.t. holes at s.buttseam	5/30/2008	YES
5/30/2008	R-18	S-18/S-14,S-15	5089	AM	1'x1' patch over a.t. holes at s.buttseam	5/30/2008	YES
5/30/2008	R-19	S-18/S-20,S-21	5089	AM	1'x1' patch over a.t. holes at buttseam	5/30/2008	YES
5/30/2008	R-20	S-20,S-21/S-22	5089	AM	1'x1' patch over a.t. holes at buttseam	5/30/2008	YES
5/30/2008	R-21	S-22/S-23,S-24	5089	AM	1'x1' patch over a.t. holes at buttseam	5/30/2008	YES
5/30/2008	R-22	S-23/S-24	5089	AM	4'x2' patch over DS#3, 301' from west end	5/30/2008	YES
5/30/2008	R-23	S-23,S-24/S-25	5089	AM	1'x1' patch over a.t. holes at buttseam	5/30/2008	YES
5/30/2008	R-24	S-20/S-22	5089	AM	4'x2' patch over DS#2, 221' from west end	5/30/2008	YES
5/30/2008	R-25	S-24/S-25,S-26	5089	AM	1'x1' patch over a.t. holes, at buttseam	5/30/2008	YES
5/30/2008	R-26	S-18,S-19/S-20	5089	AM	1'x1' patch over a.t. holes, at buttseam	5/30/2008	YES
6/3/2008	R-27	S-15,S-65/ S-69,S-18	5089	RT	two patch 1'x1',3'x2' over a.t. holes at s.buttseam	6/5/2008	YES
6/3/2008	R-28	S-65,S-66/S-69	5089	RT	1'x1' patch over a.t. holes, at s. buttseam	6/5/2008	YES
6/3/2008	R-29	S-66,S-67/S-69	5089	RT	two patch 1'x1',3'x2' over a.t. holes at s. buttseam	6/5/2008	YES
6/3/2008	R-30	S-67,S-68/S-69	5089	RT	1'x1' patch over a.t. holes at s.buttseam	6/5/2008	YES
6/3/2008	R-31	S-69,S-70/ S-18,S-21	5089	RT	1'x1' patch over a.t. holes at e.buttseam	6/5/2008	YES
6/3/2008	R-32	S-70,S-71/ S 21,S-22	5089	RT	1'x1' patch over a.t. holes at e.buttseam	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/4/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/3/2008	R-33	S-22,S-23/ S-71,S-72	5089	RT	1'x1' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-34	S-23,S-25/ S-72,S-74	5089	RT	3'x2' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-35	S-72/S-73,S-74	5089	RT	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-36	S-73	5089	RT	1'x1' patch,nine bead over wrinkle, 15' from east end	6/5/2008	YES
6/3/2008	R-37	S-73	5089	RT	nine beads over wrinkle, 45' from east end	6/5/2008	YES
6/3/2008	R-38	S-73,S-74/S-75	5089	RT	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-39	S-25,S-27/ S 74,S-75	5089	RT	1'x1' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-40	S-27,S-29/ S-75,S-76	5089	RT	1'x1' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-41	S-29/S-76	5089	RT	4'x2' patch over DS#10, 68' from east end	6/5/2008	YES
6/3/0/08	R-42	S-29,S-30/ S 76,S-77	5089	RT	1'x1' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-43	S-29/S-30,S-31	5089	RT	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-44	S-75/S-76	5089	RT	1'x1' patch over burn out at east trench	6/5/2008	YES
6/3/2008	R-45	S-76/S-77	5089	RT	4'x2' patch over DS#11, 16' from e. end	6/5/2008	YES
6/3/2008	R-46	S-77	5089	RT	tree bead's over wrinkles, 15' from e. end	6/5/2008	YES
6/3/2008	R-47	S-30,S-32/ S 77,S-78	5089	RT	1'x1' patch over a.t. holes at e. buttseam	6/5/2008	YES
6/3/2008	R-48	S-30,S-31/S-32	5089	RT	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/3/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/3/2008	R-49	S-31/S-32	5089	MC	4'x2' patch over DS#13, 260' from west end	6/5/2008	YES
6/3/2008	R-50	S-31/S-32,S-33	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-51	S-32,S-33/S-34	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-52	S-29/S-31	5089	MC	4'x2' patch over DS#4, 184' from west end	6/5/2008	YES
6/3/2008	R-53	S-25,S-26/S-27	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-54	S-25/S-26	5089	MC	4'x2' patch over DS#15, 191' from west end	6/5/2008	YES
6/3/2008	R-55	S-26/S-27,S-28	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-56	S-27,S-28/S-29	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-57	S-28/S-29	5089	MC	4'x2' patch over DS#12, 60' from west end	6/5/2008	YES
6/3/2008	R-58	S-33/S-34,S-35	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-59	S-34/S-35	5089	MC	4'x2' patch over DS#15, 140' from west end	6/5/2008	YES
6/3/2008	R-60	S-34,S-35/S-36	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-61	S-38/S-40	5089	MC	4'x2' patch over DS#6, 180' from west end	6/5/2008	YES
6/3/2008	R-62	S-38/S-39,S-40	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES
6/3/2008	R-63	S-39/S-40	5089	MC	4'x2' patch over DS#14, 297' from west end	6/5/2008	YES
6/3/2008	R-64	S-39,S-40/S-41	5089	MC	1'x1' patch over a.t. holes at buttseam	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/4/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e., DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/3/2008	R-65	S-40/S-41,S-42	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/008	R-66	S-41,S-42/S-43	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/008	R-67	S-42/S-43,S-44	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/2008	R-68	S-43/S-44	5089	MC	4'x2' patch, 77' from west end	6/5/2008	YES
6/3/2008	R-69	S-43,S-44/S-45	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/2008	R-70	S-45/S-46	5089	MC	4'x2' patch over DS#8, 76' from west end	6/5/2008	YES
6/3/2008	R-71	S-46/S-47,S-48	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-72	S-46/S-48,S-49	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-73	S-46/S-49,S-50	5089	MC	34'x2' cap over seam, at norht slope	6/5/2008	YES
6/3/2008	R-74	S-46/S-50,S-51	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-75	S-46/S-51,S-52	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-76	S-46/S-52,S-53	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-77	S-46/S-53,S-54	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-78	S-46/S-54	5089	MC	4'x2' patch over DS#17, 35' from north end	6/5/2008	YES
6/3/2008	R-79	S-46/S-54,S-55	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-80	S-46/S-55,S-56	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/4/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e., DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/3/2008	R-81	S-46/S-56,S-57	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-82	S-46/S-57,S-58	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-83	S-46/S-58,S-59	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-84	S-46/S-59,S-60	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-85	S-59/S-60	5089	MC	4'x2' patch over DS#9, 12' from norht end	6/5/2008	YES
6/3/2008	R-86	S-46/S-60,S-61	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-87	S-46/S-61,S-62	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-88	S-46/S-62,S-63	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-89	S-46/S-63,S-64	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-90	S-46,S-64/ S-87,S88	5089	MC	3'x3' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-91	S-87/S-88,S-89	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-92	S-89	5089	MC	24" boot, 36' from n.w. end	6/5/2008	YES
6/3/2008	R-93	S-87/S-89	5089	MC	24" boot, 37' from n.w. end	6/5/2008	YES
6/3/2008	R-94	S-87/S-89,S-90	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-95	S-87/S-90,S-91	5089	MC	1'x1' patch over a.t. holes, at n. buttseam	6/5/2008	YES
6/3/2008	R-96	S-41/S-42	5089	MC	4'x2' patch over DS#7, 186' from west end	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/4/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e., DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/3/2008	R-97	S-45,S-46/ S 86,S-87	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-98	S-43,S-45/ S 85,S-86	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-99	S-41,S-43/ S 84,S-85	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-100	S-39,S-41/ S-83,S-84	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-101	S-38,S-39/ S 82,S-83	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-102	S-82/S-83	5089	MC	4'x2' patch over DS#16, 20' from east end	6/5/2008	YES
6/3/2008	R-103	S-80,S-81/S-82	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-104	S-37,S-38/ S 81,S-82	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-105	S-36,S-37/S-38	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/2008	R-106	S-34/S-36,S-37	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/2008	R-107	S-34,S-37/ S 79,S-81	5089	MC	1'x1' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-108	S-79/S-80,S-81	5089	MC	1'x'1 patch over a.t. holes, at buttseam	6/5/2008	YES
6/3/2008	R-109	S-32,S-34/ S 78,S79	5089	MC	5'x2' patch over a.t. holes, at e.buttseam	6/5/2008	YES
6/3/2008	R-110	S-78/S-79	5089	MC	1'x1' patch over burn out, at east trench	6/5/2008	YES
6/5/2008	R-111	S-30,S-31/S-32	5089	MC	2'x1' patch over DS#13E,115' ext. welding over failed seam	6/5/2008	YES
6/5/2008	R-112	S-31/S-33	5089	MC	1'x1' patch over DS#13W, 244' from west end	6/5/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/5/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (SECONDARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/5/2008	R-113	S-45/S-46	5089	MC	4'x2' patch over DS#8E, 86' from west end	6/5/2008	YES
6/5/2008	R-114	S-45/S-46	5089	MC	84' extrusion welding over failed on west end seam	6/5/2008	YES
6/5/2008	R-115	S-45/S-46	5089	MC	2'x2' patch over DS#8W, 14' from west end	6/5/2008	YES

Panel Placement Form

Project Name:	ASARCO 2007 PHASE II CELL
Material Decript:	60 MIL HDPE TEXTURED (SECONDARY LINER)
Project Number:	N07070

Date:	6/4/2008
SHEET:	1

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
5/29/2008	s-1	186	39'	23'	s. slope
5/29/2008	s-2	186	39'	23'	s. slope
5/29/2008	s-3	186	39'	23'	s. slope
5/29/2008	s-4	186	40'	23'	s. slope
5/29/2008	s-5	186	40'	23'	s. slope
5/29/2008	s-6	186	41'	23'	s. slope
5/29/2008	s-7	186	41'	23'	s. slope
5/29/2008	s-8	186	42'	23'	s. slope
5/29/2008	s-9	186	42'	23'	s. slope
5/29/2008	S-10	186	42'	23'	s. slope
5/29/2008	S-11	186	42'	23'	s. slope
5/29/2008	S-12	186	43'	23'	s. slope
5/29/2008	S-13	186	43'	23'	s. slope
5/29/2008	S-14	186	43'	23'	s. slope
5/29/2008	S-15	186	43'	23'	s. slope
5/29/2008	S-16	139	34'	23'	s. slope
5/29/2008	S-17	139	26'	8'	south west corner, corner from s-16
5/29/2008	S-18	139	248'	23'	floor panel souht area
5/29/2008	S-19	136	137'	23'	west slope to s-18
5/29/2008	S-20	136	363'	23'	west slope to s-21
5/29/2008	S-21	185	22'	23'	floor panel
5/29/2008	S-22	185	386'	23'	west slope to collection trench
5/30/2008	S-23	185	87'	23'	floor panel
5/30/2008	S-24	228	301'	23'	west slope to s-23
5/30/2008	S-25	228	199'	23'	floor panel
5/30/2008	S-26	227	191'	23'	west slope to s-25
5/31/2008	S-27	227	306'	23'	floor panel
5/31/2008	S-28	137	85'	23'	west slope to s-27
5/31/2008	S-29	137	387'	23'	west slope to collection trench
5/31/2008	S-30	137	24'	23'	floor panel, from collection trench
5/31/2008	S-31	138	364'	23'	west slope to s-30
5/31/2008	S-32	138	139'	23'	floor panel
5/31/2008	S-33	226	248'	23'	west slope to s-32

Project Name:	ASARCO 2007 PHASE II CELL
Material Decript:	60 MIL HDPE TEXTURED (SECONDARY LINER)
Project Number:	N07070

DATE:	6/4/2008
SHEET:	2

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
5/31/2008	S-34	226	246'	23'	floor panel
5/31/-08	S-35	225	140'	23'	west slope to s-34
5/31/2008	S-36	225	357'	23'	west slope to s-37
5/31/2008	S-37	184	29'	23'	floor panel
6/1/2008	S-38	184	383'	23'	west slope to collection trench
6/1/2008	S-39	184	86'	23'	floor panel
6/1/2008	S-40	224	297'	23'	west slope to s-39
6/1/2008	S-41	224	199'	23'	floor panel
6/1/2008	S-42	183	186'	23'	west slope to s-41
6/1/2008	S-43	183	309'	23'	floor panel
6/1/2008	S-44	230	77'	23'	west slope
6/1/2008	S-45	230	388'	23'	west slope to collection trench
6/1/2008	S-46	197	388'	23'	west slope to collection trench
6/2/2008	S-47	230	18'	11'	north west corner
6/2/2008	S-48	230	34'	23'	north west corner
6/2/2008	S-49	197	34'	23'	north west corner
6/2/2008	S-50	197	35'	23'	north slope
6/2/2008	S-51	197	35'	23'	north slope
6/2/2008	S-52	182	35'	23'	north slope
6/2/2008	S-53	182	35'	23'	north slope
6/2/2008	S-54	182	35'	23'	north slope
6/2/2008	S-55	182	35'	23'	north slope
6/2/2008	S-56	182	35'	23'	north slope
6/2/2008	S-57	182	34'	23'	north slope
6/2/2008	S-58	182	34'	23'	north slope
6/2/2008	S-59	182	34'	23'	north slope
6/2/2008	S-60	182	34'	23'	north slope
6/2/2008	S-61	182	34'	23'	north slope
6/2/2008	S-62	182	35'	23'	north slope
6/2/2008	S-63	182	36'	23'	north slope
6/2/2008	S-64	182	37'	23'	north slope
6/2/2008	S-65	223	45'	23'	south slope
6/2/2008	S-66	223	45'	23'	south east corner

Project Name:	ASARCO 2007 PHASE II CELL
Material Decript:	60 MIL HDPE TEXTURED (SECONDARY LINER)
Project Number:	N07070

Date:	6/4/2008
SHEET:	3

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
6/2/2008	S-67	223	41'	23'	south east corner
6/2/2008	S-68	223	25'	17'	south east corner
6/2/2008	S-69	223	80'	23'	south east corner
6/2/2008	S-70	223	76'	23'	east slope slope
6/2/2008	S-71	223	75'	23'	east slope
6/2/2008	S-72	223	72'	23'	east slope
6/2/2008	S-73	223	55'	23'	east slope
6/2/2008	S-74	169	15'	23'	east slope
6/2/2008	S-75	169	68'	23'	east slope
6/2/2008	S-76	169	68'	23'	east slope
6/2/2008	S-77	169	68'	23'	east slope
6/2/2008	S-78	169	70'	23'	east slope
6/3/2008	S-79	169	70'	23'	east slope
6/3/2008	S-80	169	64'	23'	east slope
6/3/2008	S-81	241	8'	23'	east slope
6/3/2008	S-82	241	74'	23'	east slope
6/3/2008	S-83	241	76'	23'	east slope
6/3/2008	S-84	241	76'	23'	east slope
6/3/2008	S-85	241	76'	23'	east slope
6/3/2008	S-86	241	76'	23'	east slope
6/3/2008	S-87	241	76'	23'	east slope
6/3/2008	S-88	235	37'	23'	north slope
6/3/2008	S-89	235	37'	23'	north east corner
6/3/2008	S-90	235	32'	23'	north east corner
6/3/2008	S-91	235	13'	8'	north east corner

B. PRIMARY LINER

TRIAL WELD FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/10/2008
Sheet:	1

					EXTRUSION WELDS							
DATE/ TIME	SEAMER INITIALS	MACHINE NUMBER	AMBIENT TEMP	WEATHER	BARREL TEMP	PREHEAT TEMP	PEEL / TENSILE	WEDGE TEMP	SET SPEED FT/MIN	[illegible]	PASS / FAIL	COMMENTS
6/608 1:13 PM	MC	1109	65	CLOUDY				850	5	130-113,134-130,130-130	P	232-234
6/6/2008 1:20 PM	AM	50	65	CLOUDY				840	5.5	122-131,133-161	P	226-297
6/6/2008 2:00 PM	EB	4806	65	CLOUDY				825	6	120-149,142-116,132-140	P	200-208
6/7/2008 8:17 AM	MC	1109	60	CLOUDY				850	5	131-147,136-136,140-148	P	234-238
6/7/2008 9:00 AM	AM	397	60	CLOUDY				830	5	129-150,131-111,130-142	P	274-272
6/7/2008 8:30 AM	GM	4806	60	CLOUDY				825	6	154-129,130-133,133-135	P	239-267
6/8/2008 11:00 AM	AM	5089	48	CLOUDY	520	350	153,151 147				P	190-160
6/9/2008 6:45 AM	MC	1109	45	CLEAR				850	5	135-153,135-148,152-140	P	247-233
6/9/2008 6:55 AM	AM	397	45	CLEAR				820	5	152-140,141-149,134-144	P	250-250
6/9/2008 7:05 AM	GM	4806	45	CLEAR				825	5.5	136-147,128-144,145-170	P	265-267

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TRIAL WELD FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/10/2008
Sheet:	2

DATE/ TIME	SEAMER INITIALS	MACHINE NUMBER	AMBIENT TEMP	WEATHER	BARREL TEMP	PREHEAT TEMP	PEEL / TENSILE	WEDGE TEMP	SET SPEED FT/MIN		PASS / FAIL	COMMENTS
6/9/2008 7:30 PM	FC	463	50	CLEAR				850	5	135-140,130-139,142-149	P	255-250
6/9/2008 12:30 PM	MC	1109	50	PARTLY CLOUDY				850	4.5	140-140,136-140,134-153	P	259-260
6/9/2008 3:00 PM	MC	5089	60	PARTLY CLOUDY	520	350	125,151 134				P	151-161
6/10/2008 7:45 AM	MC	1109	50	PARTLY CLOUDY				850	5	155-158,138-164,138-157	P	238-219
6/10/2008 7:55 AM	AM	397	50	PARTLY CLOUDY				800	5	170-140,148-141,149-154	P	258-269
6/10/2008	RT	5089	50	PARTLY CLOUDY	500	400	104,95 95				P	170-168
6/12/2008 2:35 PM	AM	5089	50	CLOUDY	500	350	143,106 140				P	158-162
6/13/2008 6:13 AM	AM	397	50	CLEAR				800	5.5	129-153,134-149,145-136	P	283-233
6/13/2008 6:45 AM	GM	4806	50	CLEAR				825	5.5	153-150,142-142,140-136	P	217-218
6/13/2008 10:20 AM	AM	5089	60	CLEAR	500	350	125,120 130				P	147-147

TRIAL WELD FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/14/2008
Sheet:	3

					EXTRUSION WELDS							
DATE/ TIME	SEAMER INITIALS	MACHINE NUMBER	AMBIENT TEMP	WEATHER	BARREL TEMP	PREHEAT TEMP	PEEL / TENSILE	WEDGE TEMP	SET SPEED FT/MIN		PASS / FAIL	COMMENTS
6/14/2008 7:05 AM	AM	5089	50	CLEAR	500	350	120,130 125				P	170-163

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/7/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	1
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/6/2008 1:38 PM	1	P-2/P-3	40'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 1:20 PM	2	P-3/P-4	37'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 1:30 PM	3	P-4/P-5	24'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 1:40 PM	4	P-1/P-6	393'	AM	50	840	CLEAR	0-15	60	
6/6/2008 1:46 PM	5	P-2/P-7	40'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 2:00 PM	6	P-7/P-8	40'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 2:15 PM	7	P-8/P-9	40'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 2:30 PM	8	P-9/P-10	40'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 2:50 PM	9	P-10/P-11	41'	MC	1109	850	CLEAR	0-15	60	
6/6/2008 2:15 PM	10	P-11/P-12	41'	EB	4806	825	CLEAR	0-15	60	
6/6/2008 2:25 PM	11	P-12/P-13	42'	EB	4806	825	CLEAR	0-15	60	
6/6/2008 2:35 PM	12	P-13/P-14	43'	EB	4806	825	CLEAR	0-15	65	
6/6/2008 2:45 PM	13	P-14/P-15	43'	EB	4806	825	CLEAR	0-15	65	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/7/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	2
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/6/2008 2:55 PM	14	P-15/P-16	43'	EB	4806	825	CLEAR	0-15	65	
6/6/2008 3:06 PM	15	P-16/P-17	44'	EB	4806	825	CLEAR	0-15	65	
6/6/2008 2:53	16	P-17/P-18	44'	MC	1109	850	CLEAR	0-15	65	
6/6/2008 3:05 PM	17	P-18/P-19	44'	MC	1109	850	CLEAR	0-15	65	
6/6/2008 3:20 PM	18	P-19/P-20	45'	MC	1109	850	CLEAR	0-20	65	
6/6/2008 3:20 PM	20	P-21/P-22	23'	EB	4806	825	CLEAR	0-20	65	
6/6/2008 3:25 PM	21	P-22/P-23	23'	EB	4806	825	CLEAR	0-20	65	
6/6/2008 3:10 PM	22	SOUTH BUTTSEAM	390'	AM	50	825	CLEAR	0-20	65	390' s.buttseam, p-5 to p-20.
6/6/2008 3:35 PM	23	P-6/P-21,22, 23	80'	EB	4806	825	CLEAR	0-30	65	
6/7/2008 8:15 AM	24	P-23/P-24	23'	MC	1109	850	PARTLY CLOUDY	0-10	55	
6/7/2008 8:45 AM	25	P-6/P-24	320'	MC	1109	850	PARTLY CLOUDY	0-10	55	
6/7/2008 8:45 AM	26	P-21,22,23, 24/P-25	390'	GM	4806	825	PARTLY CLOUDY	0-10	55	
6/7/2008 9:30 AM	27	P-25/P-27	215'	AM	397	830	PARTLY CLOUDY	0-20	60	
6/7/2008 9:45 AM	28	P-20/P-31	45'	MC	1109	850	PARTLY CLOUDY	0-20	60	
6/7/2008 10:00 AM	29	P-31/P-32	45'	MC	1109	850	PARTLY CLOUDY	0-20	60	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/10/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	3
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/7/2008 11:15 AM	30	P-28/P-29	23'	MC	1109	850	CLOUDY	0-40	60	
6/7/2008 11:05 AM	31	P-27/P-28, P-29	215'	AM	397	830	CLOUDY	0-40	60	
6/7/2008 12:00 PM	32	P-28,P-29/ P-30	313'	MC	1109	850	CLOUDY	0-40	60	
6/9/2008 7:00 AM	33	P-26/P-27	23'	MC	1109	850	CLEAR	0-15	50	
6/9/2008 7:15	34	P-25/P-26	178'	MC	1109	850	CLEAR	0-15	50	
6/9/2008 7:50 AM	35	P-26/P-28	178'	MC	1109	850	CLEAR	0-15	50	
6/9/2008 7:25 AM	36	P-30/P-33	23'	GM	4806	825	CLEAR	0-15	50	
6/9/2008 7:30 AM	37	P28/P-33	78'	GM	4806	825	CLEAR	0-15	50	
6/9/2008 7:15 AM	38	P/34/P-35	23'	AM	397	830	CLEAR	0-15	50	
6/9/2008 7:20 AM	39	P-36/P-37	23'	AM	397	830	CLEAR	0-15	50	
6/9/2008 7:30 AM	40	P-34,P-35/ P-36,P-37	386'	AM	397	830	CLEAR	0-15	50	
6/9/2008 7:48 AM	41	P-30,P-33/ P-34,P-35	386'	GM	4806	825	CLEAR	0-15	50	
6/9/2008 8:30 AM	42	P-36,P-37/ P-38	385'	MC	1109	850	CLEAR	0-15	50	
6/9/2008 7:55 AM	43	P-38/P-39	385'	FC	463	850	CLEAR	0-15	50	
6/9/2008 8:50 AM	44	P-39/P-40, P-41,P-42	385'	AM	397	830	CLEAR	0-15	50	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/10/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	4
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/9/2008 9:08 AM	45	P-40,41,42/ P-43,44	385'	GM	4806	825	CLEAR	0-15	55	
6/9/2008 9:21 AM	46	P-41/P-42	23'	FC	463	850	CLEAR	0-15	55	
6/9/2008 9:50 AM	47	P-40/P-41	23'	AM	397	830	CLEAR	0-15	55	
6/9/2008 8:50 AM	48	P-43/P-44	23'	FC	463	850	CLEAR	0-15	55	
6/9/2008 9:15 AM	49	P-45/P-46	23'	MC	1109	850	CLEAR	0-15	55	
6/9/2008 9:30 AM	50	P-43,P-44/ P-45,P-46	385'	MC	1109	850	CLEAR	0-15	55	
6/9/2008 9:30 AM	51	P-45,P-46/ P-47	385'	FC	463	850	CLEAR	0-15	55	
6/9/2008 10:15 AM	52	P-47/P-48	385'	AM	397	830	CLEAR	0-15	60	
6/9/2008 10:35 AM	53	P-49/P-50	23'	GM	4806	825	CLEAR	0-15	60	
6/9/2008 10:35 AM	54	P-50/P-51	23'	GM	4806	825	CLEAR	0-15	60	
6/9/2008 10:30 AM	55	P-48/P-49, P-50,P-51	385'	MC	1109	850	CLEAR	0-15	60	
6/9/2008 10:45 AM	56	P-52/P-53	12'	GM	4806	825	CLEAR	0-15	60	
6/9/2008 10:50 AM	57	P-53/P-54	34'	GM	4806	825	CLEAR	0-15	60	
6/9/2008 11:00 AM	58	P-54/P-55	37'	GM	4806	825	CLEAR	0-15	60	
6/9/2008 11:10 AM	59	P-55/P-56	37'	GM	4806	825	CLEAR	0-15	60	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/10/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	5
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/9/2008 10:55 AM	60	P-56/P-57	37'	FC	463	850	CLEAR	0-15	60	
6/9/2008 11:04 AM	61	P-57/P-58	36'	FC	463	850	CLEAR	0-15	60	
6/9/2008 11:18 AM	62	P-58/P-59	36'	FC	463	850	CLOUDY	0-15	60	
6/9/2008 11:27 AM	63	P-59/P-50	36'	FC	463	850	CLOUDY	0-15	60	
6/9/2008 11:40 AM	64	P-60/P-61	34'	FC	463	850	CLOUDY	0-15	60	
6/9/2008 11:25 AM	65	P-61/P-62	34'	GM	4806	825	CLOUDY	0-15	60	
6/9/2008 11:32 AM	66	P-62/P-63	34'	GM	4806	825	CLOUDY	0-15	60	
6/9/2008 11:40 AM	67	P-63/P-64	34'	GM	4806	825	CLOUDY	0-15	60	
6/9/2008 11:48 AM	68	P-64/P-65	34'	GM	4806	825	CLOUDY	0-15	60	
6/9/2008 11:30 AM	69	P-65/P-66	34'	MC	1109	850	CLOUDY	0-15	60	
6/9/2008 11:40 AM	70	P-66/P-67	34'	MC	1109	850	CLOUDY	0-15	60	
6/9/2008 11:50 AM	71	P-67/P-68	34'	MC	1109	850	CLOUDY	0-15	60	
6/9/2008 11:40	72	P-68/P-69	35'	AM	397	830	CLOUDY	0-15	60	
6/9/2008 12:30 PM	73	NORTH BUTTSEAM	387'	MC	1109	850	CLOUDY	0-15	60	387' n.buttseam p-52 to p-69.
6/10/2008 8:00 AM	74	P-70/P-71	68'	MC	1109	850	MOSTLY CLOUDY	0-10	50	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/13/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	6
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/10/2008 8:20 AM	75	P-71/P-73	67'	MC	1109	850	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:30 AM	76	P-73/P-74	67'	MC	1109	850	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:45 AM	77	P-74/P-75	66'	MC	1109	850	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:10 AM	78	P-75/P-76	66'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:25 AM	79	P-76/P-77	66'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:40 AM	80	P-77/P-78	66'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 8:55 AM	81	P-78/P-79	66'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 9:15 AM	82	P-80/P-81	23'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 9:25 AM	83	P-79/P-80, P-81	72'	AM	397	830	MOSTLY CLOUDY	0-10	50	
6/10/2008 9:40 AM	84	P-32/P-72	28'	MC	1109	850	MOSTLY CLOUDY	0-10	50	
6/10/2008 10:00 AM	85	P-70/P-31, P-32,P-72	63'	MC	1109	850	MOSTLY CLOUDY	0-30	50	
6/10/2008 9:55 AM	86	EAST BUTTSEAM	225'	AM	397	830	MOSTLY CLOUDY	0-30	50	225' e.buttseam, p-70 to p-80
6/13/2008 7:20 AM	87	P-80,P-81/ P-82	72'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 6:55 AM	88	P-82/P-83	72'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 7:20 AM	89	P-83/P-84	73'	AM	397	830	MOSTLY CLOUDY	0-15	55	

PANEL SEAMING FORM

PROJECT NAME:	ASARCO 2007 PHASE II CELL	Date:	6/13/2008
NWLG PROJECT #:	N07070		
NWLG SUPERINTENDANT:	JOEL MONDRAGON	SHEETS:	7
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WIND MPH	AMBIENT TEMP	COMMENTS
6/13/2008 7:40 AM	90	P-84/P-85	75'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 7:55 AM	91	P-85/P-86	75'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 7:40 AM	92	P-87/P-88	23'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 7:50 AM	93	P-86/P-87, P-88	75'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:05 AM	94	P-87,P-88/ P-89	75'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:15 AM	95	PACTH II/ P-92	7'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:20 AM	96	P-91/P-92	30'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:25 AM	97	P-90/P-91	36'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:35 AM	98	P-69/P-90	35'	GM	4806	825	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:30 AM	99	P-89/P-90, P-91,P-92	71'	AM	397	830	MOSTLY CLOUDY	0-15	55	
6/13/2008 8:55 AM	100	EAST BUTTSEAM	157'	AM	397	830	MOSTLY CLOUDY	0-15	55	157' e.buttseam, p-82 to p-89.

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (PRIMARY LINER)

DATE: 6/13/2008
SHEET: 1 of 5

DATE	SEAM#	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/07/08	P-1/P-5	EB	30	7:45	30	7:52	0	P		11' SUOTH BUTTSEAM
06/07/08	P-4/P-5	EB	30	7:46	30	7:53	0	P		24' SEAM ON S.W. CORNER
06/07/08	P-4/P-1	EB	30	7:47	30	7:54	0	P		22' SOUTH BUTTSEAM
06/07/08	P-3/P-4	EB	30	7:48	30	7:55	0	P		37' SEAM ON S.W. CORNER
06/07/08	P-3/P-1	EB	30	7:49	30	7:56	0	P		22' SOUTH BUTTSEAM
06/07/08	P-3/P-2	EB	30	7:50	30	7:57	0	P		40' SEAM ON S.SLOPE
06/07/08	P-1/P-2	EB	30	7:58	30	8:05	0	P		22' SOUTH BUTTSEAM
06/07/08	P-2/P-7	EB	30	7:59	30	8:06	0	P		40' SEAM ON S.SLOPE
06/07/08	P-1/P-7	EB	30	8:00	30	8:07	0	P		22' SOUTH BUTTSEAM
06/07/08	P-7/P-8	EB	30	8:01	30	8:08	0	P		40' SEAM ON S.SLOPE
06/07/08	P-8/P-1	EB	30	8:02	30	8:09	0	P		22' SOUTH BUTTSEAM
06/07/08	P-8/P-9	EB	30	8:03	30	8:10	0	P		40' SEAM ON S.SLOPE
06/07/08	P-1/P-9	EB	30	8:20	30	8:27	0	P		22' SOUTH BUTTSEAM
06/07/08	P-9/P-10	EB	30	8:21	30	8:28	0	P		40' SEAM ON S.SLOPE
06/07/08	P-10/P-1	EB	30	8:22	30	8:29	0	P		22' SOUTH BUTTSEAM
06/07/08	P-10/P-11	EB	30	8:23	30	8:30	0	P		41' SEAM ON S. SLOPE
06/07/08	P-11/P-1	EB	30	8:24	30	8:31	0	P		22' SOUTH BUTTSEAM
06/07/08	P-11/P-12	EB	30	8:25	30	8:32	0	P		41' SEAM ON S. SLOPE
06/07/08	P-12/P-1	EB	30	8:42	30	8:49	0	P		22' SOUTH BUTTSEAM
06/07/08	P-12/P-13	EB	30	8:43	30	8:50	0	P		42' SEAM ON S. SLOPE
06/07/08	P-13/P-1	EB	30	8:44	30	8:51	0	P		22' SOUTH BUTTSEAM
06/07/08	P-13/P-14	EB	30	8:45	30	8:52	0	P		43' SEAM ON S. SLOPE
06/07/08	P-14/P-1	EB	30	8:46	30	8:53	0	P		22' SOUTH BUTTSEAM
06/07/08	P-14/P-15	EB	30	8:47	30	8:54	0	P		43' SEAM ON S. SLOPE
06/07/08	P-15/P-1	EB	30	8:55	30	9:02	0	P		22' SOUTH BUTTSEAM
06/07/08	P-15/P-16	EB	30	8:56	30	9:03	0	P		43' SEAM ON S. SLOPE
06/07/08	P-16/P-1	EB	30	8:57	30	9:04	0	P		22' SOUTH BUTTSEAM
06/07/08	P-16/P-17	EB	30	8:58	30	9:05	0	P		44' SEAM ON S. SLOPE
06/07/08	P-17/P-1	EB	30	8:59	30	9:06	0	P		22' SOUTH BUTTSEAM
06/07/08	P-17/P-18	EB	30	9:00	30	9:07	0	P		44' SEAM ON S. SLOPE
06/07/08	P-18/P-1	EB	30	9:08	30	9:15	0	P		22' SOUTH BUTTSEAM
06/07/08	P-18/P-19	EB	30	9:09	30	9:16	0	P		44' SEAM ON S. SLOPE
06/07/08	P-19/P-1	EB	30	9:10	30	9:17	0	P		22' SOUTH BUTTSEAM
06/07/08	P-19/P-20	EB	30	9:11	30	9:18	0	P		45' SEAM ON S. SLOPE
06/07/08	P-20/P-1	EB	30	9:12	30	9:19	0	P		22' SOUTH BUTTSEAM
06/07/08	P-1/P-6	EB	30	9:15	30	9:22	0	P		393' SEAM
06/07/08	P-6/P-22	EB	30	9:31	30	9:38	0	P		27' SEAM
06/07/08	P-22/P-23	EB	30	9:32	30	9:39	0	P		22' BUTTSEAM
06/07/08	P-6/P-23	EB	30	9:33	30	9:40	0	P		23' SEAM BUTTSEAM TO BUTTSEAM
06/07/08	P-6/P-21	EB	30	9:42	30	9:49	0	P		30' SEAM
06/07/08	P-21/P-22	EB	30	9:43	30	9:50	0	P		22' BUTTSEAM

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (PRIMARY LINER)

DATE: 6/13/2008
SHEET: 2 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/07/08	P-21/P-25	EB	30	10:10	30	10:17	0	P		30' SEAM
06/07/08	P-22/P-25	EB	30	10:11	30	10:18	0	P		27' SEAM
06/07/08	P-23/P-24	EB	30	10:12	30	10:19	0	P		22' SEAM
06/07/08	P-6/P-24	EB	30	10:13	30	10:20	0	P		320' SEAM
06/07/08	P-23/P-25	EB	30	10:14	30	10:21	0	P		23' SEAM
06/07/08	P-24/P-25	EB	30	11:15	30	11:22	0	P		196' BUTTSEAM TO W. BURN OUT
06/07/08	P-25/P-27	EB	30	11:27	30	11:34	0	P		215' SEAM
06/07/08	P-24/P-25	EB	30	11:30	30	11:37	0	P		124' BURN OUT TO WEST END
06/07/08	P-27/P-28	EB	30	11:40	30	11:47	0	P		26' SEAM
06/07/08	P-28/P-29	EB	30	11:41	30	11:48	0	P		22' BUTTSEAM
06/07/08	P-28/P-30	EB	30	11:42	30	11:49	0	P		126' SEAM
06/07/08	P-27/P-29	EB	30	11:43	30	11:50	0	P		187' SEAM
06/07/08	P-29/P-30	EB	30	11:51	30	11:58	0	P		183' BURN OUT TO WEST END
06/09/08	P-25/P-26	EB	30	10:08	30	10:15	0	P		178' SEAM
06/09/08	P-26/P-27	EB	30	10:09	30	10:16	0	P		22' BUTTSEAM
06/09/08	P-26/P-28	EB	30	10:10	30	10:17	0	P		178' SEAM
06/09/08	P-28/P-33	EB	30	10:11	30	10:18	0	P		78' SEAM
06/09/08	P-33/P-30	EB	30	10:12	30	10:19	0	P		22' BUTTSEAM
06/09/08	P33/P-34	EB	30	10:13	30	10:20	0	P		78' SEAM
06/09/08	P-30/P-34	EB	30	10:21	30	10:28	0	P		157' SEAM
06/09/08	P-34/P-35	EB	30	10:22	30	10:29	0	P		22' BUTTSEAM
06/09/08	P-30/P-35	EB	30	10:23	30	10:30	0	P		157' BUTTSEAM TO W. END
06/09/08	P-34/P-36	EB	30	10:24	30	10:31	0	P		186' SEAM
06/09/08	P-35/P-36	EB	30	10:25	30	10:32	0	P		157' BUTTSEAM TO W. END
06/09/08	P-34/P-37	EB	30	10:35	30	10:42	0	P		46' BUTTSEAM TO BUTTSEAM
06/09/08	P-36/P-37	EB	30	10:36	30	10:43	0	P		22' BUTTSEAM
06/09/08	P-37/P-38	EB	30	10:37	30	10:44	0	P		46' BUTTSEAM TO BUTTSEAM
06/09/08	P-38/P-39	EB	30	10:39	30	10:46	0	P		385' E.BUTTSEAM TO W.END
06/09/08	P-39/P-40	EB	30	10:50	30	10:57	0	P		68' BUTTSEAM TO BUTTSEAM
06/09/08	P-39/P41	EB	30	10:51	30	10:58	0	P		115' BUTSEAM TO BUTTSEAM
06/09/08	P-40/P-41	EB	30	10:52	30	10:59	0	P		22' BUTTSEAM
06/09/08	P-40/P-43	EB	30	10:53	30	11:00	0	P		68' BUTTSEAM TO BUTTSEAM
06/09/08	P-41/P-43	EB	30	10:54	30	11:01	0	P		115' BUTSEAM TO BUTTSEAM
06/09/08	P-41/P-42	EB	30	10:55	30	11:02	0	P		22' BUTTSEAM
06/09/08	P-39/P-42	EB	30	11:05	30	11:12	0	P		206' BUTTSEAM TO W. END
06/09/08	P-42/P-43	EB	30	11:06	30	11:13	0	P		113' BUTTSEAM TO BUTTSEAM
06/09/08	P-42/P-44	EB	30	11:07	30	11:14	0	P		93' BUTTSEAM TO W. END
06/09/08	P-43/P-44	EB	30	11:08	30	11:15	0	P		22' BUTTSEAM
06/09/08	P-43/P-45	EB	30	11:09	30	11:16	0	P		293' BUTTSEAM TO BUTTSEAM
06/09/08	P-44/P-45	EB	30	11:21	30	11:28	0	P		9' BUTTSEAM TO BUTTSEAM
06/09/08	P-44/P-46	EB	30	11:22	30	11:29	0	P		84' BUTTSEAM TO W. END

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (PRIMARY LINER)

DATE: 6/13/2008
SHEET: 3 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/09/08	P-45/P-46	EB	30	11:23	30	11:30	0	P		22' BUTTSEAM
06/09/08	P-45/P-47	EB	30	11:24	30	11:31	0	P		302' SEAM
06/09/08	P-46/P-47	EB	30	11:25	30	11:32	0	P		84' SEAM
06/09/08	P-47/P-48	EB	30	14:50	30	14:57	0	P		386' SEAM
06/09/08	P-48/P-49	EB	30	14:51	30	14:58	0	P		117' SEAM
06/09/08	P-49/P-50	EB	30	14:52	30	14:59	0	P		23' BUTTSEAM
06/09/08	P-48/P-50	EB	30	14:53	30	15:00	0	P		29' SEAM
06/09/08	P-50/P-51	EB	30	14:54	30	15:01	0	P		23' BUTTSEAM
06/09/08	P-48/P-51	EB	30	14:55	30	15:02	0	P		246' SEAM
06/09/08	P-51/P-52	EB	30	15:10	30	15:17	0	P		6' NORTH BUTTSEAM
06/09/08	P-52/P-53	EB	30	15:11	30	15:18	0	P		12' SEAM ON NORTH WEST CORNER
06/09/08	P-51/P-53	EB	30	15:12	30	15:19	0	P		22' NORTH BUTTSEAM
06/09/08	P-53/P-54	EB	30	15:13	30	15:20	0	P		34' SEAM ON NORTH WEST CORNER
06/09/08	P-51/P-54	EB	30	15:14	30	15:21	0	P		18' NORTH BUTTSEAM
06/09/08	P-54/P-55	EB	30	15:15	30	15:22	0	P		37' SEAM ON NORTH SLOPE
06/09/08	P-51/P-55	EB	30	15:23	30	15:30	0	P		22' NORTH BUTTSEAM
06/09/08	P-55/P-56	EB	30	15:24	30	15:31	0	P		37' SEAM ON NORTH SLOPE
06/09/08	P-51/P-56	EB	30	15:25	30	15:32	0	P		22' NORTH BUTTSEAM
06/09/08	P-56/P-57	EB	30	15:26	30	15:33	0	P		37' SEAM ON NORTH SLOPE
06/09/08	P-51/P-57	EB	30	15:27	30	15:34	0	P		22' NORTH BUTTSEAM
06/09/08	P-57/P-58	EB	30	15:28	30	15:35	0	P		37' SEAM ON NORTH SLOPE
06/09/08	P-51/P-58	EB	30	15:36	30	15:43	0	P		22' NORTH BUTTSEAM
06/09/08	P-58/P-59	EB	30	15:37	30	15:44	0	P		36' SEAM ON NORTH SLOPE
06/09/08	P-51/P-59	EB	30	15:38	30	15:45	0	P		22' NORTH BUTTSEAM
06/09/08	P-59/P-60	EB	30	15:39	30	15:46	0	P		36' SEAM ON NORTH SLOPE
06/09/08	P-51/P-60	EB	30	15:40	30	15:47	0	P		22' NORTH BUTTSEAM
06/09/08	P-60/P-61	EB	30	15:41	30	15:48	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-51/P-61	EB	30	15:49	30	15:56	0	P		22' NORTH BUTTSEAM
06/09/08	P-61/P-62	EB	30	15:50	30	15:57	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-51/P-62	EB	30	15:51	30	15:58	0	P		22' NORTH BUTTSEAM
06/09/08	P-62/P-63	EB	30	15:52	30	15:59	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-51/P-63	EB	30	15:53	30	16:00	0	P		15' NORTH BUTTSEAM
06/09/08	P-50/P-63	EB	30	15:54	30	16:01	0	P		7' NORTH BUTTSEAM
06/09/08	P-63/P-64	EB	30	16:02	30	16:09	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-50/P-64	EB	30	16:03	30	16:10	0	P		20' NORTH BUTTSEAM
06/09/08	P-64/P-65	EB	30	16:04	30	16:11	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-49/P65	EB	30	16:05	30	16:12	0	P		22' NORTH BUTTSEAM
06/09/08	P-65/P-66	EB	30	16:06	30	16:13	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-49/P-66	EB	30	16:07	30	16:14	0	P		22' NORTH BUTTSEAM
06/09/08	P-66/P-67	EB	30	16:15	30	16:22	0	P		34' SEAM ON NORTH SLOPE
06/09/08	P-49/P-67	EB	30	16:16	30	16:23	0	P		22' NORTH BUTTSEAM

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELLL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (PRIMARY LINER)

DATE: 6/13/2008
SHEET: 4 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/09/08	P-67/P-68	EB	30	16:17	30	16:24	0	P		35' SEAM ON NORTH SLOPE
06/09/08	P-49/P-68	EB	30	16:18	30	16:25	0	P		22' NORTH BUTTSEAM
06/09/08	P-68/P-69	EB	30	16:19	30	16:26	0	P		35' SEAM ON NORTH SLOPE
06/09/08	P-49/P-69	EB	30	16:20	30	16:27	0	P		22' NORTH BUTTSEAM
06/12/08	P-38/P-80	EB	30	13:30	30	13:37	0	P		22' EAST BUTTSEAM
06/12/08	P-79/P-80	EB	30	13:31	30	13:38	0	P		20' SEAM
06/12/08	P-37/P-79	EB	30	13:32	30	13:39	0	P		22' EAST BUTTSEAM
06/12/08	P-81/P-81	EB	30	13:33	30	13:40	0	P		22' BUTTSEAM
06/12/08	P-79/P-81	EB	30	13:34	30	13:41	0	P		52' SEAM ON EAST SLOPE
06/12/08	P-78/P-79	EB	30	13:35	30	13:42	0	P		66' SEAM ON EAST SLOPE
06/12/08	P-34/P-78	EB	30	13:36	30	13:43	0	P		22' EAST BUTTSEAM
06/12/08	P-77/P-78	EB	30	13:44	30	13:51	0	P		66' SEAM ON EAST SLOPE
06/12/08	P-33/P-77	EB	30	13:45	30	13:52	0	P		22' EAST BUTTSEAM
06/12/08	P-76/P-77	EB	30	13:46	30	13:53	0	P		66' SEAM ON EAST SLOPE
06/12/08	P-28/P-76	EB	30	13:47	30	13:54	0	P		22' EAST BUTTSEAM
06/12/08	P-75/P-76	EB	30	13:48	30	13:55	0	P		66' SEAM ON EAST SLOPE
06/12/08	P-26/P-75	EB	30	13:56	30	14:03	0	P		22' EAST BUTTSEAM
06/12/08	P-74/P-75	EB	30	13:57	30	14:04	0	P		66' SEAM ON EAST SLOPE
06/12/08	P-25/P-74	EB	30	13:58	30	14:05	0	P		22' EAST BUTTSEAM
06/12/08	P-73/P-74	EB	30	13:59	30	14:06	0	P		67' SEAM ON EAST SLOPE
06/12/08	P-21/P-73	EB	30	14:00	30	14:07	0	P		22' EAST BUTTSEAM
06/12/08	P-71/P-73	EB	30	14:01	30	14:08	0	P		9' BURN OUT TO EAST BUTTSEAM
06/12/08	P-71/P-73	EB	30	14:02	30	14:09	0	P		58' BURN OUT TO EAST END
06/12/08	P-6/P-71	EB	30	14:30	30	14:37	0	P		22' EAST BUTTSEAM
06/12/08	P-70/P-71	EB	30	14:31	30	14:38	0	P		68' SEAM ON ESAT SLOPE
06/12/08	P-1/P-70	EB	30	14:32	30	14:39	0	P		22' EAST BUTTSEAM
06/12/08	P-20/P-31	EB	30	14:33	30	14:40	0	P		45' SEAM ON SOUTH SLOPE
06/12/08	P-31/P-70	EB	30	14:34	30	14:41	0	P		22' SOUTH BUTTSEAM
06/12/08	P-31/P-32	EB	30	14:35	30	14:42	0	P		42' SEAM ON SOUTH ESAT CORNER
06/12/08	P-32/P-70	EB	30	14:43	30	14:50	0	P		22' SOUTH BUTTSEAM
06/12/08	P-32/P-72	EB	30	14:44	30	14:51	0	P		22' BUTTSEAM
06/12/08	P-70/P-72	EB	30	14:45	30	14:52	0	P		18' SOUTH BUTTSEAM
06/12/08	P-72/PATC	EB	30	14:46	30	14:53	0	P		8' SEAM
06/12/08	P-32/PATC	EB	30	14:47	30	14:54	0	P		5' BUTTSEAM
06/13/08	P-89/P-92	EB	30	9:00	30	9:07	0	P		22' NORTH BUTTSEAM
06/13/08	P-89/PATC	EB	30	9:01	30	9:08	0	P		4' NORTH BUTTSEAM
06/13/08	P-92/PATC	EB	30	9:02	30	9:09	0	P		7' SEAM ON NORTHEAST CORNER
06/13/08	P-91/P-92	EB	30	9:03	30	9:10	0	P		30' SEAM ON NORTH EAST CORNER
06/13/08	P-89/P-91	EB	30	9:04	30	9:11	0	P		13' NORTH BUTTEAM
06/13/08	P-90/P-91	EB	30	9:05	30	9:12	0	P		36' SEAM ON NORTH EAST CORNER
06/13/08	P-69/P-90	EB	30	9:14	30	9:21	0	P		36' SEAM ON NORTH EAST CORNER

NORTHWEST LININGS / NON DESTRUCTIVE TEST LOG

PROJECT NAME: ASARCO 2007 PHASE II CELL
NWLG PROJECT# N07070
NWLG SUPERINTENDANT: JOEL MONDRAGON
MATERIAL DESCRIPTION: 60 MIL HDPE TEXTURED (PRIMARY LINER)

DATE: 6/13/2008
SHEET: 5 of 5

DATE	SEAM #	TESTER INITIALS	AIR PRESURE TESTING						VACUUM BOX PASS / FAIL	COMMENTS / LOCATION
			START PRESSURE	START TIME	ENDING PRESSURE	ENDING TIME	PRESSURE LOSS	PASS / FAIL		
06/13/08	P-89/P-90	EB	30	9:15	30	9:22	0	P		22' NORTH BUTTSEAM
06/13/08	P-49/P-89	EB	30	9:16	30	9:23	0	P		22' EAST BUTTSEAM
06/13/08	P-88/P-89	EB	30	9:17	30	9:24	0	P		18' SEAM
06/13/08	P-48/P-88	EB	30	9:18	30	9:25	0	P		22' EAST BUTTSEAM
06/13/08	P-87/P-89	EB	30	9:19	30	9:26	0	P		57' SEAM
06/13/08	P-87/P-88	EB	30	9:20	30	9:27	0	P		20' BUTTSEAM
06/13/08	P-86/P-87	EB	30	9:30	30	9:37	0	P		57' SEAM
06/13/08	P-86/P-88	EB	30	9:31	30	9:38	0	P		18' SEAM
06/13/08	P-47/P-86	EB	30	9:32	30	9:39	0	P		22' EAST BUTTSEAM
06/13/08	P-85/P-86	EB	30	9:33	30	9:40	0	P		75' SEAM ON EAST SLOPE
06/13/08	P-45/P-85	EB	30	9:34	30	9:41	0	P		22' EAST BUTTSEAM
06/13/08	P-84/P-85	EB	30	9:35	30	9:42	0	P		75' SEAM ON EAST SLOPE
06/13/08	P-43/P-84	EB	30	9:45	30	9:52	0	P		22' EAST BUTTSEAM
06/13/08	P-83/P-84	EB	30	9:46	30	9:53	0	P		73' SEAM ON EAST SLOPE
06/13/08	P-40/P-83	EB	30	9:47	30	9:54	0	P		22' EAST BUTTSEAM
06/13/08	P-82/P-83	EB	30	9:48	30	9:55	0	P		72' SEAM ON EAST SLOPE
06/13/08	P-39/P-82	EB	30	9:49	30	9:56	0	P		22' EAST BUTTSEAM
06/13/08	P-80/P-82	EB	30	9:50	30	9:57	0	P		20' SEAM
06/13/08	P-81/P-82	EB	30	9:58	30	10:05	0	P		52' SEAM ON EAST SLOPE

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/13/2008
SHEET	1

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/9/2008	DS#1	P-1/P-6	T-059	RA	1	135	129	P	205		P	
					2							
					3							
					4							
					5							
6/14/2008	DS#1W	P-1/P-6	T-059	RA	1	142	136	P				
					2	171	116	P				
					3							
					4							
					5							
	DS#1E	P-1/P-6	T-059	RA	1	129	144	P	222		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#2	P-12/P-13	T-059	RA	1	142	142	P	210		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#3	P-22/P-23	T-059	RA	1	126	134	P	146		P	
					2							
					3							
					4							
					5							
	DS#4	P-24/P-25	T-059	RA	1	138	154	P	204		P	
					2							
6/9/2008					3							
					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/13/2008
SHEET	2

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/9/2008	DS#5	P-26/P-27	T-059	RA	1	140	135	P	157		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#6	P-30/P-35	T-059	RA	1	138	135	P	203		P	
					2							
					3							
					4							
					5							
	DS#7	P-38/P-39	T-059	RA	1	152	146	P	196		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#8	P-43/P-44	T-059	RA	1	141	130	P	152		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#9	P-47/P-48	T-059	RA	1	137	144	P	202		P	
					2							
					3							
					4							
					5							
	DS#10	P-50/P-51	T-059	RA	1	133	131	P	159		P	
					2							
6/9/2008					3							
					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/13/2008
SHEET	3

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/9/2008	DS#11	P-59/P-60	T-059	RA	1	143	126	P	210		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#12	P-6/P-24	T-059	RA	1	139	135	P	208		P	
					2							
					3							
					4							
					5							
	DS#13	P-28/P-30	T-059	RA	1	138	126	P	203		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#14	P-36/P-37	T-059	RA	1	121	128	P	160		P	
					2							
					3							
					4							
					5							
6/9/2008	DS#15	P-43/P-45	T-059	RA	1	159	143	P	200		P	
					2							
					3							
					4							
					5							
	DS#16	P-49/P-66	T-059	RA	1	135	116	P	148		P	
					2							
					3							
6/13/2008					4							
					5							

DESTRUCTIVE TEST LOG

PROJECT NAME:	ASARCO 2007 PHASE II CELL
NWLG PROJECT #	N07070
NWLG SUPERINTENDANT:	JOEL MONDRAGON
MATERIAL DESCRIPTION:	60 MIL HDPE TEXTURED (PRIMARY LINER)

Date:	6/13/2008
SHEET	4

DATE / TIME	SAMPLE I.D. SHOW I.D. ON AS BUILT	SEAM #	TEST MACHINE I.D.	TESTER INITIALS		PEEL VALUES LBS/IN			TENSILE VALUE			LAB PASS / FAIL PEEL / TENSILE
						INSIDE TRACK	OUTSIDE TRACK	PASS / FAIL	LBS / IN		PASS / FAIL	
6/13/2008	DS#17	P-79/P-81	T-059	RA	1	133	144	P	198		P	
					2							
					3							
					4							
					5							
6/13/2008	DS#18	P-48/P-88	T-059	RA	1	127	120		151		P	
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							
					1							
					2							
					3							
					4							
					5							

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/10/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/8/2008	R-1	P-1/P-4,P-5	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-2	P-1/P-3,P-4	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-3	P-1/P-2,P-3	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-4	P-1/P-6	5089	AM	4'x2' patch over DS#1, 60' from west end	6/8/2008	YES
6/8/2008	R-5	P-1/P-2,P-7	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-6	P-1/P-7,P-8	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-7	P-1/P-8,P-9	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-8	P-1/P-9,P-10	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-9	P-1/P-10,P-11	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-10	P-1/P-11,P-12	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-11	P-1/P-12,P-13	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-12	P-12/P-13	5089	AM	4'x2' patch over DS#2, 12' from south end	6/8/2008	YES
6/8/2008	R-13	P-1/P-13,P-14	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-14	P-1/P-14,P-15	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-15	P-1/P-15,P-16	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-16	P-1/P-16,P-17	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/10/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/8/2008	R-17	P-1/P-17,P-18	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-18	P-1/P-18,P-19	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-19	P-1/P-19,P-20	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/8/2008	YES
6/8/2008	R-20	P-6/P-21,P-22	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-21	P-21,P-22/P-25	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-22	P-22,P-23/P-25	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-23	P-22/P-23	5089	AM	4'x2' patch over DS#3, 343' from west end	6/8/2008	YES
6/8/2008	R-24	P-6/P-22,P-23	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-25	P-6/P-23,P-24	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-26	P-23,P-24/P-25	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-27	P-25	5089	AM	2 bead over wrinkle,187' from west end	6/8/2008	YES
6/8/2008	R-28	P-24/P-25	5089	AM	1'x1' patch over burn out, 124' from west end	6/8/2008	YES
6/8/2008	R-29	P-27	5089	AM	3 bead over wrinkle, 188' form west end	6/8/2008	YES
6/8/2008	R-30	P-27/P-28,P-29	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-31	P-28,P-29/P-30	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/8/2008	YES
6/8/2008	R-32	P-29/P-30	5089	AM	1'x1' patch over burn out, 183' from west end	6/8/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/10/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/8/2008	R-33	P-27	5089	AM	24'x2' cap over wind cut panel-27, 35' from west end	6/8/2008	YES
6/9/2008	R-34	P-6/P-24	5089	MC	4'x2' patch over DS#12, 178' from west end	6/9/2008	YES
6/9/2008	R-35	P-24/P-25	5089	MC	4'x2' patch over DS#4 250' from west end	6/9/2008	YES
6/9/2008	R-36	P-25/P-26,P-27	5089	MC	two patch 1'x1' over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-37	P-26/P-27	5089	MC	4'x2' patch over DS#5, 215' from west end	6/9/2008	YES
6/9/2008	R-38	P-26,P-27/P-28	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-39	P-28/P-30	5089	MC	4'x2' patch over DS#13, 245' from west end	6/9/2008	YES
6/9/2008	R-40	P-28/P-30,P-33	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-41	P-30	5089	MC	4'x2' patch over forklit hole, 310' from wset end	6/9/2008	YES
6/9/2008	R-42	P-30,P-33/P-34	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-43	P-30/P-34,P-35	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-44	P-30/P-35	5089	MC	4'x2' patch over DS#6, 128' from west end	6/9/2008	YES
6/9/2008	R-45	P-34/P-35	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-46	P-38/P-39	5089	MC	4'x2' patch over DS#7, 237' from west end	6/9/2008	YES
6/9/2008	R-47	P-39/P-41,P-42	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-48	P-42	5089	MC	seven patchs 1'x1' over forklit holes, every 7' at east end panel		YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/10/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/9/2008	R-49	P-41,P-42/P-43	5089	MC	1'x1' patch over a.t. holes, at buttseam	6/9/2008	YES
6/9/2008	R-50	P-43/P-45	5089	MC	4'x2' patch over DS#15, 215' from west end	6/9/2008	YES
6/10/2008	R-51	P-42/P-43,P-44	5089	RT	1'x1' patch over a.t. holes, at buttseam	6/10/2008	YES
6/10/2008	R-52	P-43/P-44	5089	RT	4'x2' patch over DS#8, 93' from west end	6/10/2008	YES
6/10/2008	R-53	P-43,P-44/P-45	5089	RT	1'x1' patch over a.t. holes, at buttseam	6/10/2008	YES
6/10/2008	R-54	P-44/P-45,P-46	5089	RT	1'x1' patch over a.t. holes, at buttseam	6/10/2008	YES
6/10/2008	R-55	P-46	5089	RT	four bead,1'x1' patch over forklit holes, 80' from west end	6/10/2008	YES
6/10/2008	R-56	P-45,P-46/P-47	5089	RT	1'x1' patch over a.t. holes, at buttseam	6/10/2008	YES
6/12/2008	R-57	P-47/P-48	5089	AM	4'x2' patch over DS#9, 203' from west end	6/12/2008	YES
6/12/2008	R-58	P-51/P-52,P-53	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-59	P-51/P-53,P-54	5089	AM	two patch 1'x1' over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-60	P-51/P-54,P-55	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-61	P-51/P-55,P-56	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-62	P-51/P-56,P-57	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-63	P-51/P-57,P-58	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-64	P-51/P-58,P-59	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/14/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/12/2008	R-65	P-51/P-59,P-60	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-66	P-59/P-60	5089	AM	4'x2' patch over DS#11, 13' from north end	6/12/2008	YES
6/12/2008	R-67	P-51/P-60,P-61	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-68	P-51/P-61,P-62	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-69	P-51/P-62,P-63	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-70	P-50,P-51/P-63	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-71	P-50/P-63,P-64	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-72	P-50/P-51	5089	AM	4'x2' patch over DS#10, 246' from north end	6/12/2008	YES
6/12/2008	R-73	P-48/P-50,P-51	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-74	P-48/P-49,P-50	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-75	P-49,P-50/ P-64,P-65	5089	AM	4'x2' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-76	P-49/P-65,P-66	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-77	P-49/P-66,P-67	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-78	P-49/P-67,P-68	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-79	P-49/P-68,P-69	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/12/2008	YES
6/12/2008	R-80	P-40,P-41/P-43	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/14/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/12/2008	R-81	P-39/P-40,P-41	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-82	P-36,P-37/P-38	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-83	P-36/P-37	5089	AM	4'x2' patch over DS#14, 341' from west end	6/12/2008	YES
6/12/2008	R-84	P-34/P-36,P-37	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-85	P-37,P-38/ P-79,P-80	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-86	P-79/P-80,P-81	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-87	P-34,P-37/ P-78,P-79	5089	AM	2'x2' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-88	P-33,P-34/ P-77,P-78	5089	AM	2'x2' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-89	P-28,P-33/ P-76,P-77	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-90	P-26,P-28/ P 75,P-76	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-91	P-25,P-26/ P-74,P-75	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-92	P-21,P-25/ P 73,P-74	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-93	P-6,P-21/ P-71,P-73	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/12/2008	YES
6/12/2008	R-94	P-71/P-73	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/12/2008	R-95	P-6/P-71	5089	AM	1' extrusion welding, at east buttseam	6/12/2008	YES
6/12/2008	R-96	P-1,P-6/ P-70,P-71	5089	AM	1'x1' patch,2' ext.welding over a.t. holes, at east buttseam	6/12/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/14/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/12/2008	R-97	P-1,P-20/ P 31,P-70	5089	AM	8'x2' patch over a.t. holes, at south buttseam	6/12/2008	YES
6/12/2008	R-98	P-31,P-32/P-70	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/12/2008	YES
6/12/2008	R-99	P-32,P-72/P70	5089	AM	1'x1' patch over a.t. holes, at south buttseam	6/12/2008	YES
6/12/2008	R-100	P-32/ P 72,PATCH	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/12/2008	YES
6/13/2008	R-101	P-49/P-66	5089	AM	4'x2' patch over DS#16, 34' from north end	6/13/2008	YES
6/13/2008	R-102	P-49,P-69/ P-89,P-90	5089	AM	6'x2' patch over a.t. holes, at north buttseam	6/13/2008	YES
6/13/2008	R-103	P-69/P-90	5089	AM	1'x1' patch over bead, at north end	6/13/2008	YES
6/13/2008	R-104	P-90/P-91	5089	AM	24" BOOT, 33' from north end	6/13/2008	YES
6/13/2008	R-105	P-89/P-91	5089	AM	24" BOOT, 35' from north end	6/13/2008	YES
6/13/2008	R-106	P-89/P-91,P-92	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/13/2008	YES
6/13/2008	R-107	P-89/P-92, PATCH	5089	AM	1'x1' patch over a.t. holes, at north buttseam	6/13/2008	YES
6/13/2008	R-108	P-48,P-49/ P 88,P-89	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-109	P-87,P-88/P-89	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/13/2008	YES
6/13/2008	R-110	P-48/P-88	5089	AM	4'x2' patch over DS#18, 75' from east end	6/13/2008	YES
6/13/2008	R-111	P-47,P-48/ P 86,P-88	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-112	P-86/P-87,P-88	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/13/2008	YES

Northwest Linings Repair Report

Project Name:	ASARCO 2007 PHASE II CELL	**Date:**	6/14/2008
NWL Project #:	N07070		
NWL Superintendent:	JOEL MONDRAGON	**SHEET:**	
Material Description:	60 MIL HDPE TEXTURED (PRIMARY LINER)		

Repair Date/Time	Repair ID # Locate ID # on as built	Panel/Seam #	Extruder #	Operator	TYPE OF REPAIR/DETAILS/LOCATION (i.e.. DT Patch, Rock Hole, Burn Out , Failed Seam, Etc.)	Repair VBOX Date	Repair Passed VBOX
6/13/2008	R-113	P-45,P-47/ P 85,P-86	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-114	P-43,P-45/ P 84,P-85	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-115	P-40,P-43/ P 83,P-84	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-116	P-39,P-40/ P 82,P-83	5089	AM	1'x1' patch over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-117	P-38,P-39/ P-80,P-82	5089	AM	two patch 4'x3',2'x2',over a.t. holes, at east buttseam	6/13/2008	YES
6/13/2008	R-118	P-80,P-81/P-82	5089	AM	1'x1' patch over a.t. holes, at buttseam	6/13/2008	YES
6/13/2008	R-119	P-79/P-81	5089	AM	4'x2' patch over DS#17, 12' from east end	6/13/2008	YES
6/14/2008	R-120	P-1/P-6	5089	AM	1'x1' patch over DS#1E, 70' from west end	6/14/2008	YES
6/14/2008	R-121	P-1/P-6	5089	AM	1'x1' patch over DS#1W, 51' from west end	6/14/2008	YES
6/14/2008	R-122	P-1/P-6	5089	AM	70' extrusion welding over failed seam, at west end	6/14/2008	YES

Project Name:	ASARCO 2007 PHASE 2 CELL
Material Decript:	60 MIL TEXTURE HDPE (PRIMARY LINER)
Project Number:	N07070

Date:	
SHEET:	1

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
6/6/2008	P-1	281	393'	23'	ACROSS FLOOR W. END TO EDGE OF E. TRENCH
6/6/2008	P-2	281	40'	23'	S. SLOPE
6/6/2008	P-3	281	40'	23'	S. SLOPE
6/6/2008	P-4	176	37'	23'	S. SLOPE
6/6/2008	P-5	176	11'	23'	S. SLOPE
6/6/2008	P-6	176	393'	23'	ACROSS FLOOR W. END TO EDGE OF E. TRENCH
6/6/2008	P-7	176	40'	23'	S. SLOPE
6/6/2008	P-8	194	40'	23	S. SLOPE
6/6/2008	P-9	194	40'	23'	S. SLOPE
6/6/2008	P-10	194	41'	23'	S. SLOPE
6/6/2008	P-11	194	41'	23'	S. SLOPE
6/6/2008	P-12	194	42'	23'	S. SLOPE
6/6/2008	P-13	194	43'	23'	S. SLOPE
6/6/2008	P-14	194	43'	23'	S. SLOPE
6/6/2008	P-15	194	43'	23'	S. SLOPE
6/6/2008	P-16	194	44'	23'	S. SLOPE
6/6/2008	P-17	194	44'	23'	S. SLOPE
6/6/2008	P-18	194	44'	23'	S. SLOPE
6/6/2008	P-19	242	45'	23'	S. SLOPE
6/6/2008	P-20	242	45'	23'	S. SLOPE
6/7/2008	P-21	176	30'	23'	FLOOR PANEL
6/7/2008	P-22	194	27'	23'	FLOOR PANEL
6/7/2008	P-23	218	23'	23'	FLOOR PANEL
6/7/2008	P-24	242	320'	23'	FLOOR PANEL
6/7/2008	P-25	236	393'	23'	ACROSS FLOOR W. END TO EDGE OF E. TRENCH
6/9/1980	P-26	196	178'	23'	FLOOR PANEL
6/7/2008	P-27	231	215'	23'	FLOOR PANEL
6/7/2008	P-28	231	203'	23'	FLOOR PANEL
6/7/2008	P-28	243	187'	23'	FLOOR PANEL
6/7/2008	P-30	243	313'	23'	FLOOR PANEL
6/7/2008	P-31	242	45'	23'	S. SLOPE
6/7/2008	P-32	242	45'	23'	S. SLOPE
6/9/2008	P-33	196	78'	23'	FLOOR PANEL

Project Name:	ASARCO 2007 PHASE 2 CELL
Material Decript:	60 MIL TEXTURE HDPE (PRIMARY LINER)
Project Number:	N07070

Date:	
SHEET:	2

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
6/9/2008	P-34	196	235'	23'	FLOOR PANEL
6/9/2008	P-35	166	157'	23'	FLOOR PANEL
6/9/2008	P-36	166	341'	23'	FLOOR PANEL
6/9/2008	P-37	240	46'	23'	FLOOR PANEL
6/9/2008	P-38	240	385'	23'	FLOOR PANEL
6/9/2008	P-39	216	385'	23'	FLOOR PANEL
6/9/2008	P-40	240	68'	23'	FLOOR PANEL
6/9/2008	P-41	216	115'	23'	FLOOR PANEL
6/9/2008	P-42	173	206'	23'	FLOOR PANEL
6/9/2008	P-43	173	293'	23'	FLOOR PANEL
6/9/2008	P-44	235	93'	23'	FLOOR PANEL
6/9/2008	P-45	235	302'	23'	FLOOR PANEL
6/9/2008	P-46	168	134'	23'	FLOOR PANEL
6/9/2008	P-47	168	386'	23'	FLOOR PANEL
6/9/2008	P-48	217	386'	23'	FLOOR PANEL
6/9/2008	P-49	217	112'	23'	FLOOR PANEL
6/9/2008	P-50	168	29'	23'	FLOOR PANEL
6/9/2008	P-51	175	246'	23'	FLOOR PANEL
6/9/2008	P-52	175	12'	6'	N. SLOPE
6/9/2008	P-53	175	34'	23'	N. SLOPE
6/9/2008	P-54	175	37'	23'	N. SLOPE
6/9/2008	P-55	175	37'	23'	N. SLOPE
6/9/2008	P-56	175	37'	23'	N. SLOPE
6/9/2008	P-57	175	37'	23'	N. SLOPE
6/9/2008	P-58	175	36'	23	N. SLOPE
6/9/2008	P-59	175	36'	23'	N. SLOPE
6/9/2008	P-60	187	36'	23'	N. SLOPE
6/9/2008	P-61	187	34'	23'	N. SLOPE
6/9/2008	P-62	187	34'	23'	N. SLOPE
6/9/2008	P-63	187	34'	23'	N. SLOPE
6/9/2008	P-64	187	34'	23'	N. SLOPE
6/9/2008	P-65	187	34'	23'	N. SLOPE
6/9/2008	P-66	187	34'	23'	N. SLOPE

Project Name:	ASARCO 2007 PHASE II CELL
Material Decript:	60 MIL HDPE TEXTURED (PRIMARY LINER)
Project Number:	N07070

Date:	
SHEET:	3

Date/Time	Panel #	Roll Number	Panel Lenth	Panel Width	Comment/Panel Locations
6/9/2008	P-67	187	34'	23'	N. SLOPE
6/9/2008	P-68	187	35'	23'	N. SLOPE
6/9/2008	P-69	187	35'	23'	N. SLOPE
6/10/2008	P-70	187	70'	23'	E. SLOPE
6/10/2008	P-71	187	68'	23'	E. SLOPE
6/10/2008	P-72	182	18'	23'	E. SLOPE
6/10/2008	P-73	237	67'	23'	E. SLOPE
6/10/2008	P-74	237	67'	23'	E. SLOPE
6/10/2008	P-75	237	66'	23'	E. SLOPE
6/10/2008	P-76	237	66'	23'	E. SLOPE
6/10/2008	P-77	237	66'	23'	E. SLOPE
6/10/2008	P-78	237	66'	23'	E. SLOPE
6/10/2008	P-79	237	66'	23'	E. SLOPE
6/10/2008	P-80	237	66'	23'	E. SLOPE
6/10/2008	P-81	172	52'	23'	E. SLOPE
6/13/2008	P-82	172	72'	23'	E. SLOPE
6/13/2008	P-83	172	73'	23'	E. SLOPE
6/13/2008	P-84	172	75'	23'	E. SLOPE
6/13/2008	P-85	172	75'	23'	E. SLOPE
6/13/2008	P-86	172	75'	23'	E. SLOPE
6/13/2008	P-87	172	57'	23'	E. SLOPE
6/13/2008	P-88	178	18'	23'	E. SLOPE
6/13/2008	P-89	178	75'	23'	E. SLOPE
6/13/2008	P-90	178	36'	23'	E. SLOPE
6/13/2008	P-91	178	36'	23'	NORHT EAST CORNER
6/13/2008	P-92	178	30'	23'	NORHT EAST CORNER

C. DESTRUCTIVE SEAM TESTS

Precision Geosynthetic Laboratories

CLIENT: ***HYDROMETRICS, INC.***
PROJECT NAME: ***CAMU Phase 2***

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080532)

MATERIAL DESCRIPTION: HDPE Geomembrane

SAMPLES SENT BY: M. Rhodes, Hydrometrics, Inc.

DATE RECEIVED: May 31, 2008 **DATE REPORTED:** June 30 , 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU HDPE-1	47322

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D5994	Core Thickness
ASTM D1004	Tear Resistance
ASTM D6693	Tensile Dog Bone
ASTM D4833	Puncture Resistance
ASTM D5397	NCTL 1 Point

TEST CONDITIONS: The sample was conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

TEST RESULTS:

The test results are summarized in Table 1. The units in which the data are reported are included on this table.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP
Initial: CVZ #:0.13
DATE: 7/1/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1.

MATERIAL PROPERTIES

CLIENT: HYDROMETRICS INC

PROJECT NAME: CAMU Phase 2

Date Received: **5/31/2008**
Date Reported: **7/1/2008**
Client Sample ID: **CAMU HDPE 1**
Material Description: **HDPE Textured Geomembrane**

QC'd By: _____
PGL Job No.: **G080532**
PGL Control No.: **47322**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60o +/- 2 to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz) Loading Time: 5 sec Specimen Size: 4" x 4"															
		58	58	60	58	59	59	58	60	59	61	59	1	58	61	
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2^0 C (73.4+/-3.6^0 F, and 50+/-5% relative humidity. Rate of Separation: 2"/min (HDPE) 2"/min (VLDPE/LLDPE)															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	142	152	155	Limited Sample							150	7	142	155	
	TD	157	159	157								158	1	157	159	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	203	210	207	Limited Sample							207	3	203	210	
	TD	179	128	176								161	29	128	179	
	Elongation at Yield (percent)															
	MD	20	18	17	Limited Sample							19	2	17	20	
	TD	17	16	16								10	9	16	17	
	Elongation at Break (percent)				*Gauge Length = 2.0 in.*											
	MD	564	627	589	Limited Sample							593	32	564	627	
	TD	536	372	547								485	97	372	547	
ASTM D1004 Die C	Tear Resistance (lbs)															
	Machine: Tensile machine equipped with constant rate of extension and chart recorder.															
	MD	52	49	55	Limited Sample							52	3	49	55	
	TD	51	50	51								51	0	50	51	
ASTM D4833	Puncture Resistance (lbs)															
	Specimens were tested as directed in Test Method D4833. They were clamped without tension between circular plates of a ring clamp attachment secured in the tensile machine. Test specimens extended to or beyond the outer edges of the clamping plates.															
		129	128	134	122	Limited Sample						128	5	122	134	
ASTM D5397* Single Point*	Notched Constant Tensile Load (300 hours)															
	Yield Stress used in the test: 2494.9 lb/in															
		>300	>300	>300	>300	>300						>300	N/A	N/A	N/A	

*- Sub to Sageos
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION
DC#1987 Record #268

Precision Geosynthetic Laboratories

ISO 9001 - 2000

Precision Geosynthetic Laboratories

May 31, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***Camu Helena, MT***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of three (3) 60 mil HDPE seam samples received on May 31, 2008.

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080531)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

Precision Geosynthetic Laboratories

CLIENT: ***HYDROMETRICS, INC.***
PROJECT NAME: ***Camu Helena, MT***

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080531)

MATERIAL DESCRIPTION: 60 mil HDPE seam

SAMPLES SENT BY: M. Rhodes, Hydrometrics, Inc.

DATE RECEIVED: May 31, 2008 **DATE REPORTED:** May 31, 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU-LAYI-1	47319
CAMU-LAYI-2	47320
CAMU-LAYI-3	47321

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D4437 NSF Mod	Peel Adhesion
ASTM D4437 NSF Mod	Shear Bonded Strength

TEST CONDITIONS: The samples were conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

TEST RESULTS:

The test results are summarized in Tables 1 & 2. The units in which the data are reported are included on these tables.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP
Initial: CVZ #:0.13
DATE: 5/31/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By: [illegible]
PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**
DATE REC'D: **31-May-08** PGL JOB #: **G080531** DATE REPORT: **31-May-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-1	**47319**	203	BRK	FTB		1 Outside	165		SE1	FTB	
		208	BRK	FTB		2 Outside	158		SE1	FTB	
		200	BRK	FTB		3 Outside	146		SE1	FTB	
		202	BRK	FTB		4 Outside	144		SE1	FTB	
		206	BRK	FTB		5 Outside	149		SE1	FTB	
						AVG:	**152**				
						STD. DEV.	**9**				
						1 Inside	155		SE1	FTB	
						2 Inside	165		SE1	FTB	
						3 Inside	155		SE1	FTB	
						4 Inside	148		SE1	FTB	
						5 Inside	155		SE1	FTB	
	AVG.	**204**				***AVG:***	**156**				
	STD. DEV.	**3**				*STD. DEV.*	**6**				
CAMU LAYI-2	**47320**	199	BRK	FTB		1 Outside	135		SE1	FTB	
		197	BRK	FTB		2 Outside	142		SE1	FTB	
		201	BRK	FTB		3 Outside	141		SE1	FTB	
		201	BRK	FTB		4 Outside	146		SE1	FTB	
		198	BRK	FTB		5 Outside	156		SE1	FTB	
						AVG:	**144**				
						STD. DEV.	**8**				
						1 Inside	170		SE1	FTB	
						2 Inside	147		SE1	FTB	
						3 Inside	149		SE1	FTB	
						4 Inside	156		SE1	FTB	
						5 Inside	156		SE1	FTB	
	AVG:	**199**				***AVG:***	**156**				
	STD. DEV.	**2**				*STD. DEV.*	**9**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 2.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **31-May-08** PGL JOB #: **G080531** DATE REPORT: **31-May-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min *Specimen size: 1" x 10"*						*Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)* *Specimen size: 1" x 10"*					
SHEAR EVALUATION						***PEEL EVALUATION***					
SAMPLE ID	*PGL CONTROL #*	*MAXIMUM STRENGTH (lb/in- width)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in- width)*	*% Incursion (%)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*
CAMU	**47321**	166	BRK	FTB		1 Outside	125		SE1	FTB	
LAYI-3		170	BRK	FTB		2 Outside	125		SE1	FTB	
		171	BRK	FTB		3 Outside	128		SE1	FTB	
		167	BRK	FTB		4 Outside	123		SE1	FTB	
		168	BRK	FTB		5 Outside	120		SE1	FTB	
						AVG:	**124**				
						STD. DEV.	**3**				
						1 Inside	134		SE1	FTB	
						2 Inside	144		SE1	FTB	
						3 Inside	144		SE1	FTB	
						4 Inside	150		SE1	FTB	
						5 Inside	135		SE1	FTB	
	AVG.	**168**				***AVG:***	**141**				
	STD. DEV.	**2**				*STD. DEV.*	**7**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

Precision Geosynthetic Laboratories

June 4, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***Camu Helena, MT***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of fourteen (14) 60 mil HDPE seam samples received on June 4, 2008.

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080546)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

Precision Geosynthetic Laboratories

CLIENT: ***HYDROMETRICS, INC.***
PROJECT NAME: ***Camu Helena, MT***

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080546)

MATERIAL DESCRIPTION: 60 mil HDPE seam

SAMPLES SENT BY: M. Rhodes, Hydrometrics, Inc.

DATE RECEIVED: June 4, 2008 **DATE REPORTED:** June 4, 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU LAYI-4	47388
CAMU LAYI-5	47389
CAMU LAYI-6	47390
CAMU LAYI-7	47391
CAMU LAYI-8	47392
CAMU LAYI-9	47393
CAMU LAYI-10	47394
CAMU LAYI-11	47395
CAMU LAYI-12	47396
CAMU LAYI-13	47397
CAMY LAYI-14	47398
CAMU LAYI-15	47399
CAMU LAYI-16	47400
CAMU LAYI-17	47401

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D4437 NSF Mod	Peel Adhesion
ASTM D4437 NSF Mod	Shear Bonded Strength

TEST CONDITIONS: The samples were conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TEST RESULTS:

The test results are summarized in Tables 1 to 7. The units in which the data are reported are included on these tables.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP

Initial: CVZ #:0.13

DATE: 6/4/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min						*Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or*					
Specimen size: 1" x 10"						*Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)*					
SHEAR EVALUATION						***PEEL EVALUATION***					
SAMPLE ID	*PGL CONTROL #*	*MAXIMUM STRENGTH (lb/in- width)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in- width)*	*% Incursion (%)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*
CAMU LAYI-4	**47388**	199	BRK	FTB		1 Outside	135		SE1	FTB	
		200	BRK	FTB		2 Outside	133		SE1	FTB	
		215	BRK	FTB		3 Outside	129		SE1	FTB	
		202	BRK	FTB		4 Outside	132		SE1	FTB	
		209	BRK	FTB		5 Outside	130		SE1	FTB	
						AVG:	**132**				
						STD. DEV.	**2**				
						1 Inside	159		SE1	FTB	
						2 Inside	142		SE1	FTB	
						3 Inside	142		SE1	FTB	
						4 Inside	142		SE1	FTB	
						5 Inside	142		SE1	FTB	
	AVG.	**205**				***AVG:***	**146**				
	STD. DEV.	**7**				*STD. DEV.*	**8**				
CAMU LAYI-5	**47389**	157	BRK	FTB		1 Outside	***112***	***60%***	***AD-BRK***	FTB	
		149	BRK	FTB		2 Outside	100		SE1	FTB	
		166	BRK	FTB		3 Outside	94		SE1	FTB	
		152	BRK	FTB		4 Outside	99		SE1	FTB	
		156	BRK	FTB		5 Outside	87		SE1	FTB	
						AVG:	**98**				
						STD. DEV.	**9**				
						1 Inside	140		SE1	FTB	
						2 Inside	126		SE1	FTB	
						3 Inside	132		SE1	FTB	
						4 Inside	128		SE1	FTB	
						5 Inside	126		SE1	FTB	
	AVG:	**156**				***AVG:***	**130**				
	STD. DEV.	**6**				*STD. DEV.*	**6**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 2:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.**
PROJECT: **Camu Helena, MT/ Phase 2**
DATE REC'D: **4-Jun-08**

MATERIAL: **60 HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGL JOB #: **G080546**

QC'd By:
TEST METHOD: **ASTM D4437 NSF MOD**
DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-6	**47390**	198	BRK	FTB		1 Outside	130		SE1	FTB	
		195	BRK	FTB		2 Outside	128		SE1	FTB	
		205	BRK	FTB		3 Outside	130		SE1	FTB	
		198	BRK	FTB		4 Outside	127		SE1	FTB	
		200	BRK	FTB		5 Outside	127		SE1	FTB	
						AVG:	**128**				
						STD. DEV.	**1**				
						1 Inside	138		SE1	FTB	
						2 Inside	148		SE1	FTB	
						3 Inside	145		SE1	FTB	
						4 Inside	140		SE1	FTB	
						5 Inside	149		SE1	FTB	
	AVG.	**199**				***AVG:***	**144**				
	STD. DEV.	**4**				*STD. DEV.*	**5**				
CAMU LAYI-7	**47391**	152	BRK	FTB		1 Outside	101		SE1	FTB	
		152	BRK	FTB		2 Outside	104		SE1	FTB	
		166	BRK	FTB		3 Outside	113		SE1	FTB	
		151	BRK	FTB		4 Outside	99		SE1	FTB	
		159	BRK	FTB		5 Outside	105		SE1	FTB	
						AVG:	**104**				
						STD. DEV.	**5**				
						1 Inside	152		SE1	FTB	
						2 Inside	152		SE1	FTB	
						3 Inside	166		SE1	FTB	
						4 Inside	151		SE1	FTB	
						5 Inside	159		SE1	FTB	
	AVG:	**156**				***AVG:***	**156**				
	STD. DEV.	**6**				*STD. DEV.*	**6**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 3:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-8	**47392**	208	BRK	FTB		1 Outside	***126***	***75%***	***AD-BRK***	FTB	
		203	BRK	FTB		2 Outside	***115***	***75%***	***AD-BRK***	FTB	
		218	BRK	FTB		3 Outside	***121***	***75%***	***AD-BRK***	FTB	
		206	BRK	FTB		4 Outside	***117***	***75%***	***AD-BRK***	FTB	
		212	BRK	FTB		5 Outside	***115***	***75%***	***AD-BRK***	FTB	
						AVG:	**119**				
						STD. DEV.	**5**				
						1 Inside	165		SE1	FTB	
						2 Inside	160		SE1	FTB	
						3 Inside	156		SE1	FTB	
						4 Inside	154		SE1	FTB	
						5 Inside	151		SE1	FTB	
	AVG.	**209**				***AVG:***	**157**				
	STD. DEV.	**6**				*STD. DEV.*	**6**				
CAMU LAYI-9	**47393**	190	BRK	FTB		1 Outside	138		SE1	FTB	
		187	BRK	FTB		2 Outside	140		SE1	FTB	
		206	BRK	FTB		3 Outside	134		SE1	FTB	
		193	BRK	FTB		4 Outside	140		SE1	FTB	
		194	BRK	FTB		5 Outside	133		SE1	FTB	
						AVG:	**137**				
						STD. DEV.	**3**				
						1 Inside	127		SE1	FTB	
						2 Inside	140		SE1	FTB	
						3 Inside	145		SE1	FTB	
						4 Inside	150		SE1	FTB	
						5 Inside	141		SE1	FTB	
	AVG:	**194**				***AVG:***	**141**				
	STD. DEV.	**7**				*STD. DEV.*	**8**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 4:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min						*Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or*					
Specimen size: 1" x 10"						*Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)*					
SHEAR EVALUATION						***PEEL EVALUATION***					
SAMPLE ID	*PGL CONTROL #*	*MAXIMUM STRENGTH (lb/in- width)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in- width)*	*% Incursion (%)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*
CAMU LAYI-10	**47394**	151	BRK	FTB		1 Outside	124		SE1	FTB	
		150	BRK	FTB		2 Outside	117		SE1	FTB	
		154	BRK	FTB		3 Outside	113		SE1	FTB	
		151	BRK	FTB		4 Outside	118		SE1	FTB	
		156	BRK	FTB		5 Outside	120		SE1	FTB	
						AVG:	**118**				
						STD. DEV.	**4**				
						1 Inside	130		SE1	FTB	
						2 Inside	126		SE1	FTB	
						3 Inside	123		SE1	FTB	
						4 Inside	127		SE1	FTB	
						5 Inside	129		SE1	FTB	
	AVG.	**152**				***AVG:***	**127**				
	STD. DEV.	**2**				*STD. DEV.*	**3**				
CAMU LAYI-11	**47395**	202	BRK	FTB		1 Outside	136		SE1	FTB	
		198	BRK	FTB		2 Outside	126		SE1	FTB	
		205	BRK	FTB		3 Outside	132		SE1	FTB	
		218	BRK	FTB		4 Outside	125		SE1	FTB	
		208	BRK	FTB		5 Outside	123		SE1	FTB	
						AVG:	**128**				
						STD. DEV.	**5**				
						1 Inside	171		SE1	FTB	
						2 Inside	156		SE1	FTB	
						3 Inside	140		SE1	FTB	
						4 Inside	145		SE1	FTB	
						5 Inside	148		SE1	FTB	
	AVG:	**207**				***AVG:***	**152**				
	STD. DEV.	**8**				*STD. DEV.*	**12**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	*Break in the top sheeting*
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 5:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-12	**47396**	196	BRK	FTB		1 Outside	128		SE1	FTB	
		190	BRK	FTB		2 Outside	122		SE1	FTB	
		211	BRK	FTB		3 Outside	124		SE1	FTB	
		177	BRK	FTB		4 Outside	123		SE1	FTB	
		200	BRK	FTB		5 Outside	125		SE1	FTB	
						AVG:	**124**				
						STD. DEV.	**2**				
						1 Inside	136		SE1	FTB	
						2 Inside	133		SE1	FTB	
						3 Inside	136		SE1	FTB	
						4 Inside	135		SE1	FTB	
						5 Inside	135		SE1	FTB	
	AVG.	**195**				***AVG:***	**135**				
	STD. DEV.	**12**				*STD. DEV.*	**1**				
CAMU LAYI-13	**47397**	202	BRK	FTB		1 Outside	***145***	***75%***	***AD-BRK***	FTB	
		199	BRK	FTB		2 Outside	***119***	***75%***	***AD-BRK***	FTB	
		208	BRK	FTB		3 Outside	***120***	***75%***	***AD-BRK***	FTB	
		200	BRK	FTB		4 Outside	***130***	***75%***	***AD-BRK***	FTB	
		205	BRK	FTB		5 Outside	***117***	***75%***	***AD-BRK***	FTB	
						AVG:	**126**				
						STD. DEV.	**12**				
						1 Inside	152		SE1	FTB	
						2 Inside	149		SE1	FTB	
						3 Inside	155		SE1	FTB	
						4 Inside	151		SE1	FTB	
						5 Inside	153		SE1	FTB	
	AVG:	**203**				***AVG:***	**152**				
	STD. DEV.	**4**				*STD. DEV.*	**2**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 6:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-14	**47398**	130	BRK	FTB		1 Outside	113		SE1	FTB	
		148	BRK	FTB		2 Outside	119		SE1	FTB	
		159	BRK	FTB		3 Outside	110		SE1	FTB	
		135	BRK	FTB		4 Outside	109		SE1	FTB	
		149	BRK	FTB		5 Outside	112		SE1	FTB	
						AVG:	**113**				
						STD. DEV.	**4**				
						1 Inside	137		SE1	FTB	
						2 Inside	135		SE1	FTB	
						3 Inside	137		SE1	FTB	
						4 Inside	145		SE1	FTB	
						5 Inside	136		SE1	FTB	
	AVG.	**144**				***AVG:***	**138**				
	STD. DEV.	**12**				*STD. DEV.*	**4**				
CAMU LAYI-15	**47399**	156	BRK	FTB		1 Outside	123		SE1	FTB	
		153	BRK	FTB		2 Outside	119		SE1	FTB	
		166	BRK	FTB		3 Outside	123		SE1	FTB	
		157	BRK	FTB		4 Outside	121		SE1	FTB	
		163	BRK	FTB		5 Outside	120		SE1	FTB	
						AVG:	**121**				
						STD. DEV.	**2**				
						1 Inside	143		SE1	FTB	
						2 Inside	137		SE1	FTB	
						3 Inside	137		SE1	FTB	
						4 Inside	145		SE1	FTB	
						5 Inside	136		SE1	FTB	
	AVG:	**159**				***AVG:***	**140**				
	STD. DEV.	**5**				*STD. DEV.*	**4**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 7.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By: [signature]

PROJECT: **Camu Helena, MT/ Phase 2** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **4-Jun-08** PGL JOB #: **G080546** DATE REPORT: **4-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAYI-16	**47400**	159	BRK	FTB		1 Outside	150		SE1	FTB	
		165	BRK	FTB		2 Outside	150		SE1	FTB	
		169	BRK	FTB		3 Outside	155		SE1	FTB	
		171	BRK	FTB		4 Outside	149		SE1	FTB	
		164	BRK	FTB		5 Outside	150		SE1	FTB	
						AVG:	**151**				
						STD. DEV.	**2**				
						1 Inside	158		SE1	FTB	
						2 Inside	163		SE1	FTB	
						3 Inside	156		SE1	FTB	
						4 Inside	156		SE1	FTB	
						5 Inside	150		SE1	FTB	
	AVG.	**165**				***AVG:***	**157**				
	STD. DEV.	**5**				*STD. DEV.*	**5**				
CAMU LAYI-17	**47401**	203	BRK	FTB		1 Outside	131		SE1	FTB	
		198	BRK	FTB		2 Outside	124		SE1	FTB	
		208	BRK	FTB		3 Outside	122		SE1	FTB	
		194	BRK	FTB		4 Outside	123		SE1	FTB	
		201	BRK	FTB		5 Outside	120		SE1	FTB	
						AVG:	**124**				
						STD. DEV.	**4**				
						1 Inside	150		SE1	FTB	
						2 Inside	145		SE1	FTB	
						3 Inside	146		SE1	FTB	
						4 Inside	141		SE1	FTB	
						5 Inside	140		SE1	FTB	
	AVG:	**201**				***AVG:***	**144**				
	STD. DEV.	**5**				*STD. DEV.*	**4**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

Precision Geosynthetic Laboratories

June 6, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***Camu Helena, MT***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of four (4) 60 mil HDPE seam samples received on June 6, 2008.

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080572)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

Precision Geosynthetic Laboratories

CLIENT: *HYDROMETRICS, INC.*
PROJECT NAME: *Camu Helena, MT*

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080572)

MATERIAL DESCRIPTION: 60 mil HDPE seam

SAMPLES SENT BY: M. Rhodes, Hydrometrics, Inc.

DATE RECEIVED: June 6, 2008 **DATE REPORTED:** June 6, 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU LAYI-8E	47567
CAMU LAYI-8W	47568
CAMU LAYI-13W	47569
CAMU LAYI-13E	47570

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D4437 NSF Mod	Peel Adhesion
ASTM D4437 NSF Mod	Shear Bonded Strength

TEST CONDITIONS: The samples were conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

TEST RESULTS:

The test results are summarized in Tables 1 and 2. The units in which the data are reported are included on these tables.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP

Initial: CVZ #:0.13

DATE: 6/6/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:
PROJECT: **Camu Helena, MT** SEAM TYPE: **Weld** TEST METHOD: **ASTM D4437 NSF MOD**
DATE REC'D: **6-Jun-08** PGL JOB #: **G080572** DATE REPORT: **6-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU	**47567**	206	BRK	FTB		1 Outside	134		SE1	FTB	
LAYI-8E		199	BRK	FTB		2 Outside	134		SE1	FTB	
		208	BRK	FTB		3 Outside	140		SE1	FTB	
FUSION		205	BRK	FTB		4 Outside	132		SE1	FTB	
		LIMITED SAMPLE				5 Outside	128		SE1	FTB	
						AVG:	**134**				
						STD. DEV.	**4**				
						1 Inside	148		SE1	FTB	
						2 Inside	140		SE1	FTB	
						3 Inside	150		SE1	FTB	
						4 Inside	138		SE1	FTB	
						5 Inside	142		SE1	FTB	
	AVG.	**204**				***AVG:***	**144**				
	STD. DEV.	**4**				*STD. DEV.*	**5**				
CAMU	**47568**	167	BRK	FTB		1 Outside	122		SE3	FTB	
LAYI-8W		196	BRK	FTB		2 Outside	118		SE3	FTB	
		204	BRK	FTB		3 Outside	116		SE3	FTB	
EXTRUSION		215	BRK	FTB		4 Outside	102		SE3	FTB	
		LIMITED SAMPLE				5 Outside	**LIMITED SAMPLE**				
						AVG:	**115**				
						STD. DEV.	**9**				
						1 Inside	N/A				
						2 Inside					
						3 Inside					
						4 Inside					
						5 Inside					
	AVG:	**196**				***AVG:***					
	STD. DEV.	**21**				*STD. DEV.*					

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	*Failure in adhesion*

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	*Break in the bottom sheeting with some adhesion failure*

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 2.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **6-Jun-08** PGL JOB #: **G080572** DATE REPORT: **6-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU	**47569**	191	BRK	FTB		1 Outside	***119***	***75%***	***AD-BRK***	FTB	
LAYI-13W		194	BRK	FTB		2 Outside	***118***	***75%***	***AD-BRK***	FTB	
		196	BRK	FTB		3 Outside	***122***	***75%***	***AD-BRK***	FTB	
FUSION		200	BRK	FTB		4 Outside	***114***	***75%***	***AD-BRK***	FTB	
		205	BRK	FTB		5 Outside	***116***	***75%***	***AD-BRK***	FTB	
						AVG:	**118**				
						STD. DEV.	**3**				
						1 Inside	148		SE1	FTB	
						2 Inside	142		SE1	FTB	
						3 Inside	158		SE1	FTB	
						4 Inside	130		SE1	FTB	
						5 Inside	142		SE1	FTB	
	AVG.	**197**				***AVG:***	**144**				
	STD. DEV.	**5**				*STD. DEV.*	**10**				
CAMU	**47570**	188	BRK	FTB		1 Outside	98		SE3	FTB	
LAYI-13E		186	BRK	FTB		2 Outside	90		SE3	FTB	
		197	BRK	FTB		3 Outside	70		SE3	FTB	
EXTRUSION		196	BRK	FTB		4 Outside	84		SE3	FTB	
		200	BRK	FTB		5 Outside	86		SE3	FTB	
						AVG:	**86**				
						STD. DEV.	**10**				
						1 Inside	N/A				
						2 Inside					
						3 Inside					
						4 Inside					
						5 Inside					
	AVG:	**193**				***AVG:***					
	STD. DEV.	**6**				*STD. DEV.*					

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

Precision Geosynthetic Laboratories

June 10, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***Camu Helena, MT***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of fifteen (15) 60 mil HDPE seam samples received on June 10, 2008.

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080590)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

Precision Geosynthetic Laboratories

CLIENT: ***HYDROMETRICS, INC.***
PROJECT NAME: ***Camu Helena, MT***

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080590)

MATERIAL DESCRIPTION: 60 mil HDPE seam

SAMPLES SENT BY: G. Lorenson, Hydrometrics, Inc.

DATE RECEIVED: June 10, 2008 **DATE REPORTED:** June 10, 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU LAY2-1	47625
CAMU LAY2-2	47626
CAMU LAY2-3	47627
CAMU LAY2-4	47628
CAMU LAY2-5	47629
CAMU LAY2-6	47630
CAMU LAY2-7	47631
CAMU LAY2-8	47632
CAMU LAY2-9	47633
CAMU LAY2-10	47634
CAMU LAY2-11	47635
CAMU LAY2-12	47636
CAMU LAY2-13	47637
CAMU LAY2-14	47638
CAMU LAY2-15	47639

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D4437 NSF Mod	Peel Adhesion
ASTM D4437 NSF Mod	Shear Bonded Strength

TEST CONDITIONS: The samples were conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

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TEST RESULTS:

The test results are summarized in Tables 1 to 8. The units in which the data are reported are included on these tables.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP

Initial: CVZ #:0.13

DATE: 6/10/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **10-Jun-08** PGL JOB #: **G080590** DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-1	**47625**	189	BRK	FTB		1 Outside	***134***	***75%***	***AD-BRK***	***FTB***	
		190	BRK	FTB		2 Outside	***132***	***75%***	***AD-BRK***	***FTB***	
		201	BRK	FTB		3 Outside	***126***	***75%***	***AD-BRK***	***FTB***	
		195	BRK	FTB		4 Outside	***126***	***75%***	***AD-BRK***	***FTB***	
		199	BRK	FTB		5 Outside	***124***	***75%***	***AD-BRK***	***FTB***	
						AVG:	**128**				
						STD. DEV.	**4**				
						1 Inside	158		SE1	FTB	
						2 Inside	156		SE1	FTB	
						3 Inside	152		SE1	FTB	
						4 Inside	145		SE1	FTB	
						5 Inside	134		SE1	FTB	
	AVG.	**195**				***AVG:***	**149**				
	STD. DEV.	**5**				*STD. DEV.*	**10**				
CAMU LAY2-2	**47626**	197	BRK	FTB		1 Outside	147		SE1	FTB	
		200	BRK	FTB		2 Outside	146		SE1	FTB	
		198	BRK	FTB		3 Outside	144		SE1	FTB	
		202	BRK	FTB		4 Outside	140		SE1	FTB	
		207	BRK	FTB		5 Outside	150		SE1	FTB	
						AVG:	**145**				
						STD. DEV.	**4**				
						1 Inside	146		SE1	FTB	
						2 Inside	154		SE1	FTB	
						3 Inside	158		SE1	FTB	
						4 Inside	140		SE1	FTB	
						5 Inside	144		SE1	FTB	
	AVG:	**201**				***AVG:***	**148**				
	STD. DEV.	**4**				*STD. DEV.*	**7**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	*Break in the bottom sheeting*
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 2.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:
PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**
DATE REC'D: **10-Jun-08** PGL JOB #: **G080590** DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min						*Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or*					
Specimen size: 1" x 10"						*Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)*					
SHEAR EVALUATION						***PEEL EVALUATION***					
SAMPLE ID	*PGL CONTROL #*	*MAXIMUM STRENGTH (lb/in- width)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in- width)*	*% Incursion (%)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*
CAMU LAY2-3	**47627**	145	BRK	FTB		1 Outside	136		SE1	FTB	
		157	BRK	FTB		2 Outside	140		SE1	FTB	
		152	BRK	FTB		3 Outside	138		SE1	FTB	
		154	BRK	FTB		4 Outside	130		SE1	FTB	
		154	BRK	FTB		5 Outside	133		SE1	FTB	
						AVG:	**135**				
						STD. DEV.	**4**				
						1 Inside	134		SE1	FTB	
						2 Inside	125		SE1	FTB	
						3 Inside	135		SE1	FTB	
						4 Inside	130		SE1	FTB	
						5 Inside	126		SE1	FTB	
	AVG.	**152**				***AVG:***	**130**				
	STD. DEV.	**4**				*STD. DEV.*	**5**				
CAMU LAY2-4	**47628**	197	BRK	FTB		1 Outside	150		SE1	FTB	
		195	BRK	FTB		2 Outside	138		SE1	FTB	
		208	BRK	FTB		3 Outside	142		SE1	FTB	
		208	BRK	FTB		4 Outside	144		SE1	FTB	
		206	BRK	FTB		5 Outside	136		SE1	FTB	
						AVG:	**142**				
						STD. DEV.	**5**				
						1 Inside	142		SE1	FTB	
						2 Inside	138		SE1	FTB	
						3 Inside	144		SE1	FTB	
						4 Inside	140		SE1	FTB	
						5 Inside	138		SE1	FTB	
	AVG:	**203**				***AVG:***	**140**				
	STD. DEV.	**6**				*STD. DEV.*	**3**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

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TABLE 3:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.**
PROJECT: **Camu Helena, MT**
DATE REC'D: **10-Jun-08**

MATERIAL: **60 HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGL JOB #: **G080590**

QC'd By:
TEST METHOD: **ASTM D4437 NSF MOD**
DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-5	**47629**	144	BRK	FTB		1 Outside	152		SE1	FTB	
		146	BRK	FTB		2 Outside	144		SE1	FTB	
		156	BRK	FTB		3 Outside	152		SE1	FTB	
		149	BRK	FTB		4 Outside	140		SE1	FTB	
		154	BRK	FTB		5 Outside	132		SE1	FTB	
						AVG:	**144**				
						STD. DEV.	**8**				
						1 Inside	132		SE1	FTB	
						2 Inside	132		SE1	FTB	
						3 Inside	140		SE1	FTB	
						4 Inside	129		SE1	FTB	
						5 Inside	132		SE1	FTB	
	AVG.	**150**				***AVG:***	**133**				
	STD. DEV.	**5**				*STD. DEV.*	**4**				
CAMU LAY2-6	**47630**	197	BRK	FTB		1 Outside	138		SE1	FTB	
		200	BRK	FTB		2 Outside	159		SE1	FTB	
		208	BRK	FTB		3 Outside	144		SE1	FTB	
		200	BRK	FTB		4 Outside	148		SE1	FTB	
		207	BRK	FTB		5 Outside	148		SE1	FTB	
						AVG:	**147**				
						STD. DEV.	**8**				
						1 Inside	142		SE1	FTB	
						2 Inside	140		SE1	FTB	
						3 Inside	146		SE1	FTB	
						4 Inside	139		SE1	FTB	
						5 Inside	147		SE1	FTB	
	AVG:	**203**				***AVG:***	**143**				
	STD. DEV.	**5**				*STD. DEV.*	**4**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 4:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** | MATERIAL: **60 HDPE SEAM** | QC'd By:

PROJECT: **Camu Helena, MT** | SEAM TYPE: **Fusion Weld** | TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **10-Jun-08** | PGL JOB #: **G080590** | DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-7	**47631**	197	BRK	FTB		1 Outside	126		SE1	FTB	
		199	BRK	FTB		2 Outside	136		SE1	FTB	
		187	BRK	FTB		3 Outside	134		SE1	FTB	
		200	BRK	FTB		4 Outside	140		SE1	FTB	
		207	BRK	FTB		5 Outside	133		SE1	FTB	
						AVG:	**134**				
						STD. DEV.	**5**				
						1 Inside	154		SE1	FTB	
						2 Inside	160		SE1	FTB	
						3 Inside	156		SE1	FTB	
						4 Inside	164		SE1	FTB	
						5 Inside	152		SE1	FTB	
	AVG.	**198**				***AVG:***	**157**				
	STD. DEV.	**7**				*STD. DEV.*	**5**				
CAMU LAY2-8	**47632**	151	BRK	FTB		1 Outside	130		SE1	FTB	
		153	BRK	FTB		2 Outside	118		SE1	FTB	
		137	BRK	FTB		3 Outside	138		SE1	FTB	
		151	BRK	FTB		4 Outside	130		SE1	FTB	
		157	BRK	FTB		5 Outside	***134***	***50%***	***AD-BRK***	***FTB***	
						AVG:	**130**				
						STD. DEV.	**7**				
						1 Inside	141		SE1	FTB	
						2 Inside	139		SE1	FTB	
						3 Inside	144		SE1	FTB	
						4 Inside	130		SE1	FTB	
						5 Inside	127		SE1	FTB	
	AVG:	**150**				***AVG:***	**136**				
	STD. DEV.	**8**				*STD. DEV.*	**7**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 5:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.**
PROJECT: **Camu Helena, MT**
DATE REC'D: **10-Jun-08**

MATERIAL: **60 HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGL JOB #: **G080590**

QC'd By: [signature]
TEST METHOD: **ASTM D4437 NSF MOD**
DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-9	**47633**	200	BRK	FTB		1 Outside	154		SE1	FTB	
		197	BRK	FTB		2 Outside	148		SE1	FTB	
		200	BRK	FTB		3 Outside	152		SE1	FTB	
		201	BRK	FTB		4 Outside	146		SE1	FTB	
		207	BRK	FTB		5 Outside	147		SE1	FTB	
						AVG:	**149**				
						STD. DEV.	**3**				
						1 Inside	140		SE1	FTB	
						2 Inside	135		SE1	FTB	
						3 Inside	142		SE1	FTB	
						4 Inside	136		SE1	FTB	
						5 Inside	135		SE1	FTB	
	AVG.	**201**				***AVG:***	**138**				
	STD. DEV.	**4**				*STD. DEV.*	**3**				
CAMU LAY2-10	**47634**	156	BRK	FTB		1 Outside	135		SE1	FTB	
		145	BRK	FTB		2 Outside	138		SE1	FTB	
		153	BRK	FTB		3 Outside	140		SE1	FTB	
		148	BRK	FTB		4 Outside	142		SE1	FTB	
		153	BRK	FTB		5 Outside	137		SE1	FTB	
						AVG:	**138**				
						STD. DEV.	**3**				
						1 Inside	122		SE1	FTB	
						2 Inside	130		SE1	FTB	
						3 Inside	125		SE1	FTB	
						4 Inside	123		SE1	FTB	
						5 Inside	116		SE1	FTB	
	AVG:	**151**				***AVG:***	**123**				
	STD. DEV.	**4**				*STD. DEV.*	**5**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom-sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 6:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **10-Jun-08** PGL JOB #: **G080590** DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE) Specimen size: 1" x 10"					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-11	**47635**	203	BRK	FTB		1 Outside	138		SE1	FTB	
		198	BRK	FTB		2 Outside	139		SE1	FTB	
		213	BRK	FTB		3 Outside	157		SE1	FTB	
		206	BRK	FTB		4 Outside	142		SE1	FTB	
		209	BRK	FTB		5 Outside	146		SE1	FTB	
						AVG:	**144**				
						STD. DEV.	**8**				
						1 Inside	164		SE1	FTB	
						2 Inside	160		SE1	FTB	
						3 Inside	162		SE1	FTB	
						4 Inside	157		SE1	FTB	
						5 Inside	162		SE1	FTB	
	AVG.	**206**				***AVG:***	**161**				
	STD. DEV.	**6**				*STD. DEV.*	**3**				
CAMU LAY2-12	**47636**	193	BRK	FTB		1 Outside	149		SE1	FTB	
		197	BRK	FTB		2 Outside	143		SE1	FTB	
		202	BRK	FTB		3 Outside	150		SE1	FTB	
		199	BRK	FTB		4 Outside	136		SE1	FTB	
		207	BRK	FTB		5 Outside	140		SE1	FTB	
						AVG:	**144**				
						STD. DEV.	**6**				
						1 Inside	160		SE1	FTB	
						2 Inside	146		SE1	FTB	
						3 Inside	163		SE1	FTB	
						4 Inside	142		SE1	FTB	
						5 Inside	152		SE1	FTB	
	AVG:	**200**				***AVG:***	**153**				
	STD. DEV.	**5**				*STD. DEV.*	**9**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 7:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **10-Jun-08** PGL JOB #: **G080590** DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min						*Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or*					
Specimen size: 1" x 10"						*Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)*					
SHEAR EVALUATION						***PEEL EVALUATION***					
SAMPLE ID	*PGL CONTROL #*	*MAXIMUM STRENGTH (lb/in- width)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*	*SPECIMEN NUMBER*	*MAXIMUM STRENGTH (lb/in- width)*	*% Incursion (%)*	*Locus of Break*	*Classification*	*PROJECT SPEC. (lb/in- width)*
CAMU LAY2-13	**47637**	196	BRK	FTB		1 Outside	148		SE1	FTB	
		196	BRK	FTB		2 Outside	139		SE1	FTB	
		197	BRK	FTB		3 Outside	138		SE1	FTB	
		204	BRK	FTB		4 Outside	140		SE1	FTB	
		202	BRK	FTB		5 Outside	136		SE1	FTB	
						AVG:	**140**				
						STD. DEV.	**5**				
						1 Inside	152		SE1	FTB	
						2 Inside	140		SE1	FTB	
						3 Inside	141		SE1	FTB	
						4 Inside	136		SE1	FTB	
						5 Inside	136		SE1	FTB	
	AVG.	**199**				***AVG:***	**141**				
	STD. DEV.	**4**				*STD. DEV.*	**7**				
CAMU LAY2-14	**47638**	156	BRK	FTB		1 Outside	140		SE1	FTB	
		152	BRK	FTB		2 Outside	124		SE1	FTB	
		159	BRK	FTB		3 Outside	128		SE1	FTB	
		149	BRK	FTB		4 Outside	120		SE1	FTB	
		153	BRK	FTB		5 Outside	117		SE1	FTB	
						AVG:	**126**				
						STD. DEV.	**9**				
						1 Inside	145		SE1	FTB	
						2 Inside	140		SE1	FTB	
						3 Inside	140		SE1	FTB	
						4 Inside	132		SE1	FTB	
						5 Inside	128		SE1	FTB	
	AVG:	**154**				***AVG:***	**137**				
	STD. DEV.	**4**				*STD. DEV.*	**7**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 8:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **10-Jun-08** PGL JOB #: **G080590** DATE REPORT: **10-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min
Specimen size: 1" x 10"

Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)
Specimen size: 1" x 10"

SHEAR EVALUATION						PEEL EVALUATION					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-15	**47639**	197	BRK	FTB		1 Outside	153		SE1	FTB	
		193	BRK	FTB		2 Outside	148		SE1	FTB	
		206	BRK	FTB		3 Outside	150		SE1	FTB	
		198	BRK	FTB		4 Outside	150		SE1	FTB	
		200	BRK	FTB		5 Outside	144		SE1	FTB	
						AVG:	**149**				
						STD. DEV.	**3**				
						1 Inside	152		SE1	FTB	
						2 Inside	***158***	***25%***	***AD-BRK***	***FTB***	
						3 Inside	162		SE1	FTB	
						4 Inside	156		SE1	FTB	
						5 Inside	156		SE1	FTB	
	AVG.	**199**				***AVG:***	**157**				
	STD. DEV.	**5**				*STD. DEV.*	**4**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

Precision Geosynthetic Laboratories

June 16, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***Camu Helena, MT***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of three (3) 60 mil HDPE seam samples received on June 16, 2008.

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080617)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

Precision Geosynthetic Laboratories

CLIENT: ***HYDROMETRICS, INC.***
PROJECT NAME: ***Camu Helena, MT***

VERIFICATION OF MATERIAL PROPERTIES
(PGL Job No. G080617)

MATERIAL DESCRIPTION: 60 mil HDPE seam

SAMPLES SENT BY: M. Rhodes, Hydrometrics, Inc.

DATE RECEIVED: June 16, 2008 **DATE REPORTED:** June 16, 2008

SAMPLE IDENTIFICATIONS:

SAMPLE ID	PRECISION CONTROL NUMBER
CAMU-LAY2-16	47770
CAMU-LAY2-17	47771
CAMU-LAY2-18	47772

TESTS REQUIRED:

TEST METHOD	DESCRIPTION
ASTM D4437 NSF Mod	Peel Adhesion
ASTM D4437 NSF Mod	Shear Bonded Strength

TEST CONDITIONS: The samples were conditioned for a minimum one hour in the laboratory at 22 ± 2°C (71.6 ± 3.6°F) and at 60 ± 10% relative humidity prior to test.

TEST RESULTS:

The test results are summarized in Tables 1 & 2. The units in which the data are reported are included on these tables.

PRECISION GEOSYNTHETIC LABORATORIES

GAI-LAP
Initial: CVZ #:0.13
DATE: 6/16/08

Carmelo V. Zantua
Technical/Laboratory Director

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

TABLE 1:
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **16-Jun-08** PGL JOB #: **G080617** DATE REPORT: **16-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Specimen size: 1" x 10"	Crosshead Speed: 2"/min					Grip Separation: 1" Specimen size: 1" x 10"	Crosshead speed: 2"/min (for HDPE) or 20"/min (for LLDPE/VLDPE)				
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-16	**47770**	159	BRK	FTB		1 Outside	145		SE1	FTB	
		160	BRK	FTB		2 Outside	141		SE1	FTB	
		165	BRK	FTB		3 Outside	142		SE1	FTB	
		168	BRK	FTB		4 Outside	148		SE1	FTB	
		165	BRK	FTB		5 Outside	155		SE1	FTB	
						AVG:	**146**				
						STD. DEV.	**6**				
						1 Inside	151		SE1	FTB	
						2 Inside	151		SE1	FTB	
						3 Inside	148		SE1	FTB	
						4 Inside	155		SE1	FTB	
						5 Inside	151		SE1	FTB	
	AVG.	**164**				***AVG:***	**151**				
	STD. DEV.	**4**				*STD. DEV.*	**3**				
CAMU LAY2-17	**47771**	211	BRK	FTB		1 Outside	162		SE1	FTB	
		209	BRK	FTB		2 Outside	163		SE1	FTB	
		212	BRK	FTB		3 Outside	161		SE1	FTB	
		209	BRK	FTB		4 Outside	159		SE1	FTB	
		210	BRK	FTB		5 Outside	162		SE1	FTB	
						AVG:	**161**				
						STD. DEV.	**1**				
						1 Inside	161		SE1	FTB	
						2 Inside	159		SE1	FTB	
						3 Inside	162		SE1	FTB	
						4 Inside	167		SE1	FTB	
						5 Inside	162		SE1	FTB	
	AVG:	**210**				***AVG:***	**162**				
	STD. DEV.	**1**				*STD. DEV.*	**3**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	*Failure in adhesion*

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	*Break in the bottom sheeting with some adhesion failure*

Precision Geosynthetic Laboratories

DC#1724, Record#176

TABLE 2.
SEAM SHEAR AND PEEL TEST RESULTS

CLIENT: **HYDROMETRICS, INC.** MATERIAL: **60 HDPE SEAM** QC'd By:

PROJECT: **Camu Helena, MT** SEAM TYPE: **Fusion Weld** TEST METHOD: **ASTM D4437 NSF MOD**

DATE REC'D: **16-Jun-08** PGL JOB #: **G080617** DATE REPORT: **16-Jun-08**

Use Tensile Testing Machine, 1" x 1.5" sand papered face / serrated pneumatic grips with grip pressure of 80psi.

Grip separation: 2" plus seam width Crosshead Speed: 2"/min Specimen size: 1" x 10"						Grip Separation: 1" Crosshead speed: 2"/min (for HDPE) or Specimen size: 1" x 10" 20"/min (for LLDPE/VLDPE)					
SHEAR EVALUATION						**PEEL EVALUATION**					
SAMPLE ID	PGL CONTROL #	MAXIMUM STRENGTH (lb/in- width)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in- width)	% Incursion (%)	Locus of Break	Classification	PROJECT SPEC. (lb/in- width)
CAMU LAY2-18	**47772**	162	BRK	FTB		1 Outside	150		SE1	FTB	
		163	BRK	FTB		2 Outside	141		SE1	FTB	
		160	BRK	FTB		3 Outside	139		SE1	FTB	
		162	BRK	FTB		4 Outside	143		SE1	FTB	
		165	BRK	FTB		5 Outside	142		SE1	FTB	
						AVG:	**143**				
						STD. DEV.	**4**				
						1 Inside	150		SE1	FTB	
						2 Inside	148		SE1	FTB	
						3 Inside	142		SE1	FTB	
						4 Inside	155		SE1	FTB	
						5 Inside	143		SE1	FTB	
	AVG.	**162**				***AVG:***	**147**				
	STD. DEV.	**2**				*STD. DEV.*	**5**				

LOCUS OF BREAK CODE BASED ON NSF54

HOT WEDGE	AD	Adhesion Failure
	BRK	Break in Sheeting
	SE1	Break at Outer Edge of the seam
	SE2	Break at Inner Edge of the seam through both sheets
	AD-BRK	Break in first seam after some adhesion failure
CLASSIFICATION	FTB	FILM-TEAR BOND.
	NON-FTB	Failure in adhesion

EXTRUSION	AD1	Failure in Adhesion. Specimens delaminated under the bead
	AD2	Failure in Adhesion. Specimens delaminated from the extrudate
	AD-WLD	Break through the fillet
	SE1	Break at Seam Edge in the bottom sheet
	SE2	Break at Seam Edge in the top Sheet
	SE3	Break at Seam Edge in the bottom sheet (for PEEL only)
	BRK1	Break in the bottom sheeting
	BRK2	Break in the top sheeting
	AD-BRK	Break in the bottom sheeting with some adhesion failure

Precision Geosynthetic Laboratories

DC#1724, Record#176

Precision Geosynthetic Laboratories

July 1, 2008

Mark Rhodes
HYDROMETRICS, INC.
3020 Bozeman Avenue
Helena, MT 59601

RE: ***CAMU Phase 2***

Dear Mr. Rhodes:

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the ***final*** laboratory report for the testing of one (1) HDPE Textured Geomembrane sample received on May 31, 2008.

It shall be noted that the sample tested is believed to be a true representative of the material produced under the designation herein stated. In addition, the attached laboratory test results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the intended final use and purpose of the material.

By accepting the data and results presented on this report, the Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liabilities in excess of the aforementioned limit.

The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself.

It is a policy of the company to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks. Similarly, retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at longer time, please advise us in writing.

Should you have any questions or if we may be of further service to you, please do not hesitate to contact us at telephone number: 800-522-4599.

Sincerely,

PRECISION GEOSYNTHETIC LABORATORIES

Carmelo V. Zantua
Technical/Laboratory Director

Enclosure: (Job No. G080532)

1160 North Gilbert Street, Anaheim, CA. 92801, Tel# 714-520-9631, Fax# 714-520-9637

B.3 HELENA SAND & GRAVEL BASE COURSE AND CUSHION LAYER GRADATIONS

HAUL ROAD BASE COURSE SUBMITTAL

TETRA TECH

Tetra Tech, Inc.
303 Irene Street, P.O. Box 4699
Helena, MT 59604
Telephone: (406) 443-5210
FAX: (406) 449-3729

REPORT OF MOISTURE-DENSITY RELATIONS

CLIENT: HELENA SAND AND GRAVEL
P.O. BOX 5960
HELENA, MT 59604

PROJECT NO.: 6561283
REPORT NO.: 18507
DATE OF SERVICE: 4/04/2007
AUTHORIZATION: Jerry Bowser
REPORT DATE: 4/10/2007

PROJECT: HELENA SAND AND GRAVEL

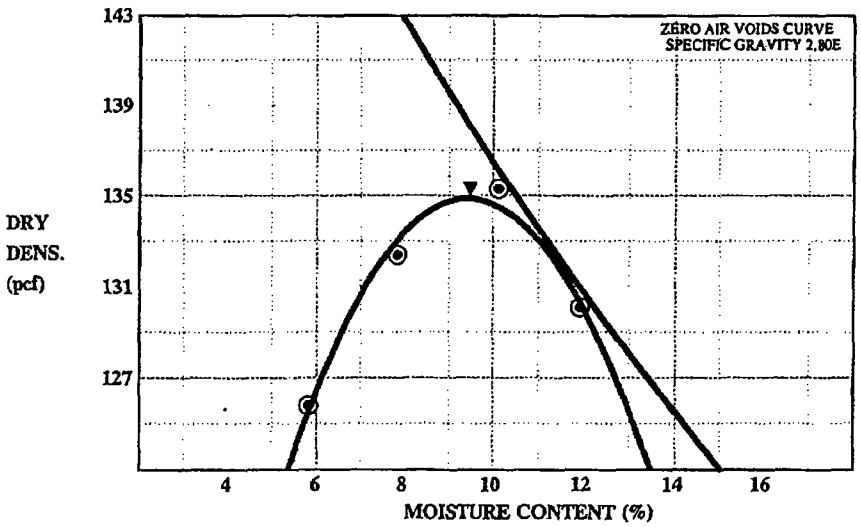
SERVICES: Obtain sample of material used for construction, prepare samples and perform moisture-density relations test to establish the maximum density and optimum moisture of the material.

PROJECT DATA

CONTRACTOR: Helena Sand and Gravel
DATE SAMPLED: 4/04/2007
SAMPLED BY: J. Whitford, CET IV, CWI
TEST FOR: Base Course
SAMPLE LOCATION: Big Sky Pit

TEST DATE: 4/04/2007
MATERIAL: Big Sky Pit; 3/4" Base Course
CLASSIFICATION: Well Graded Gravel w/Sand
MATERIAL PREPARATION METHOD Moist
RAMMER TYPE: Manual
METHOD OF TEST: ASTM D698-C
ASTM D2488

REPORT OF TESTS



MAXIMUM DENSITY, PCF: 135.0

OPTIMUM MOISTURE (%): 9.5

E = Estimated Value

Report Of Tests Continued On Page 2

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

1006 JW

HELENA SAND AND GRAVEL
PROJECT NO. 6561283
DATE OF SERVICE: 4/04/2007

REPORT NO. 18507

REPORT OF TESTS

ADDITIONAL COMMENTS:

BIG SKY PIT
BASE COURSE
4/4/2007
LAB NO. 18507

SIEVE ANALYSIS

Sieve Size	PERCENT PASSING
1"	
3/4"	100
1/2"	76
3/8"	61
NO.4	47
NO.10	36
NO.20	22
NO.40	11
NO.80	4
NO.200	2.3

Technician: Jesse Whitford, CET IV, CWI
Materials Lab Manager

Report Distribution:
(1) HELENA SAND AND GRAVEL

TETRA TECH, INC.

Jesse Whitford, CET IV, CWI
Materials Lab Manager

1006 JW

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

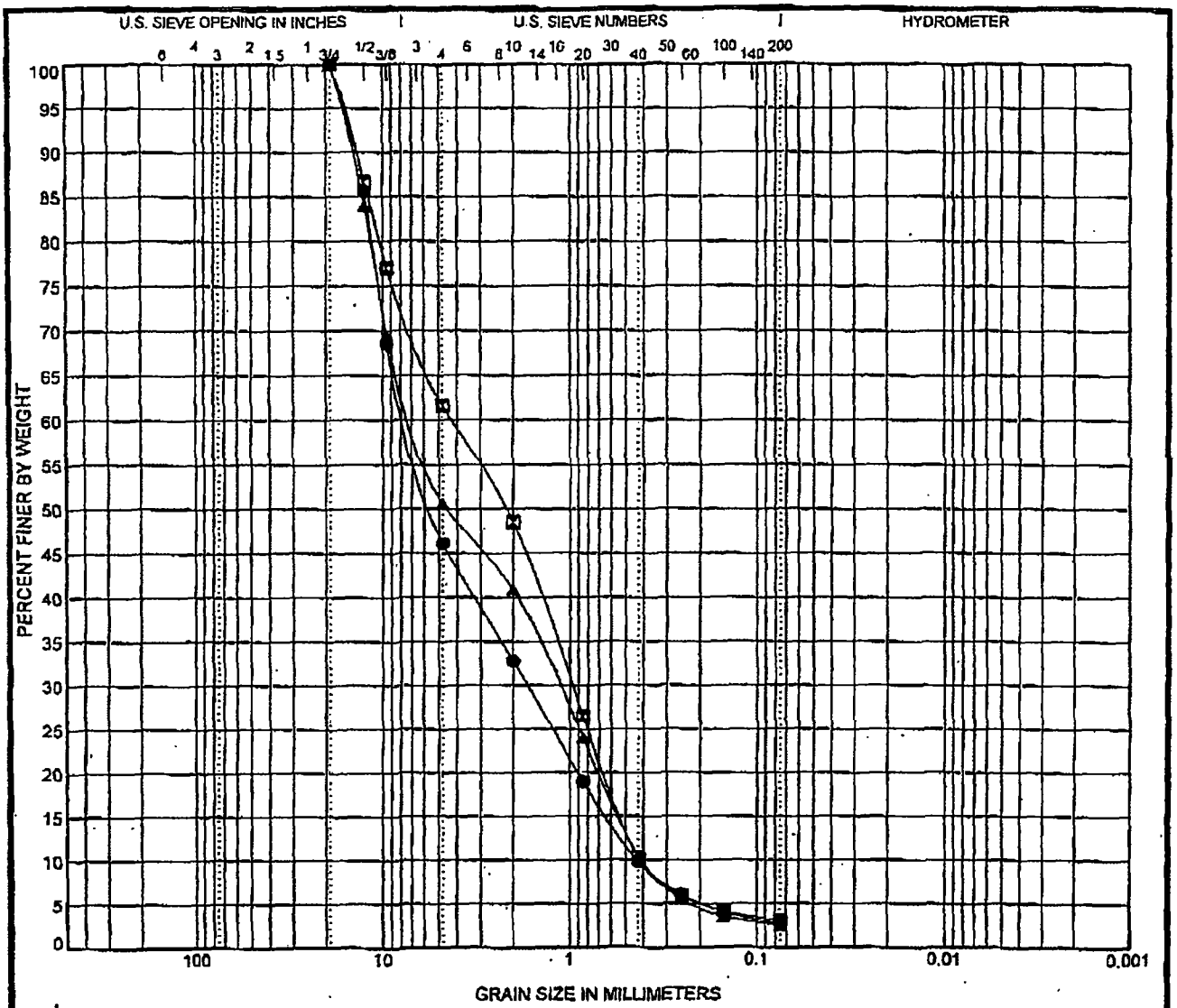
CUSHION LAYER SUBMITTAL

PIONEER TECHNICAL SERVICES, INC.
201 East Broadway, Suite C
Helena, Montana 59601
Phone (406)457-8252 Fax (406)442-1158
www.pioneer-technical.com

Grain Size Analysis

Job:	Helena Sand & Gravel Materials Testing - 12602
Sample Location:	Big Sky Pit
Sample Description:	3/4" Road Mix Stockpile Samples
Lab Sample Number:	6093 - North Side of Stockpile
	6094 - North West Corner of Stockpile
	6095 - West Side of Stockpile
	6096 - South Southwest Side of Stockpile
	6097 - South West Corner of Stockpile
	6098 - South Side of Stockpile

Lab Number:		6093	6094	6095	6096	6097	6098
Sieve Size (mm)	Sieve Size	Percent Passing					
19	3/4"	100	100	100	100	100	100
12.5	1/2"	86	87	84	86	89	87
9.5	3/8"	69	77	70	74	79	75
4.75	# 4	46	62	51	57	62	58
2	# 10	33	49	41	43	49	45
0.85	# 20	19	26	24	27	31	28
0.425	# 40	10	10	11	15	17	15
0.25	# 60	6	6	5	9	10	10
0.15	# 100	4	4	4	6	7	7
0.075	# 200	2.7	3.1	2.5	4.1	4.7	4.4



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification			Classification	LL	PL	PI	Cc	Cu
●	Lab No. 6093	1.0	POORLY GRADED GRAVEL with SAND(GP)				0.90	16.94
⊠	Lab No. 6094	1.0	POORLY GRADED SAND with GRAVEL(SP)				0.54	10.38
▲	Lab No. 6095	1.0	POORLY GRADED GRAVEL with SAND(GP)				0.49	16.65

Specimen Identification			D100	D50	D15	D10	%Gravel	%Sand	%Silt	%Clay
●	Lab No. 6093	1.0	19	5.351	0.628	0.431	53.8	43.4	2.7	
⊠	Lab No. 6094	1.0	19	2.203	0.52	0.412	38.4	58.5	3.1	
▲	Lab No. 6095	1.0	19	4.484	0.535	0.402	49.3	48.1	2.5	

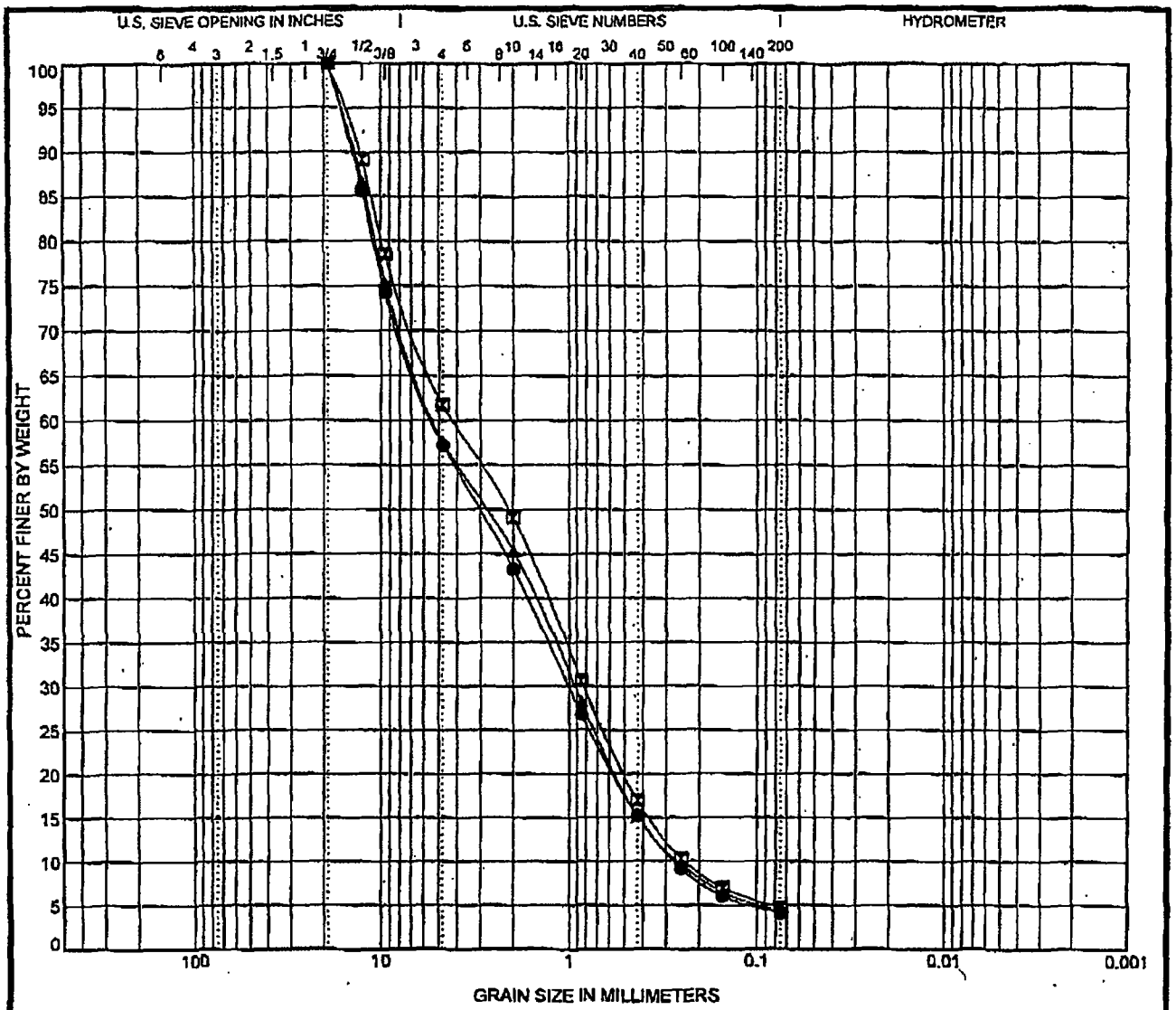
PIONEER TECHNICAL SERVICES, INC.

GRAIN SIZE DISTRIBUTION

Project: Helena Sand & Gravel 2008 Materials Te

Number: 12602

US_GRAIN_SIZE_ASTM 2X08 H&G MATERIALS TESTING - 12602.GPJ PIONEER.GDT 3/21/08



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	Lab No. 6096	1.0	POORLY GRADED SAND with GRAVEL(SP)				0.71	19.79
⊠	Lab No. 6097	1.0	POORLY GRADED SAND with GRAVEL(SP)				0.68	17.76
▲	Lab No. 6098	1.0	POORLY GRADED SAND with GRAVEL(SP)				0.64	20.10

	Specimen Identification		D100	D50	D15	D10	%Gravel	%Sand	%Silt	%Clay
●	Lab No. 6096	1.0	19	3.03	0.416	0.268	42.7	53.2	4.1	
⊠	Lab No. 6097	1.0	19	2.127	0.362	0.237	38.2	57.0	4.7	
▲	Lab No. 6098	1.0	19	2.775	0.419	0.259	42.3	53.3	4.4	

PIONEER TECHNICAL SERVICES, INC.

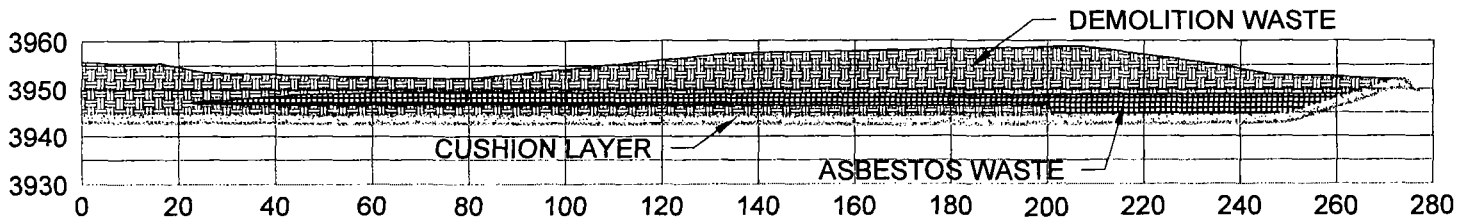
GRAIN SIZE DISTRIBUTION

Project: Helena Sand & Gravel 2008 Materials Te

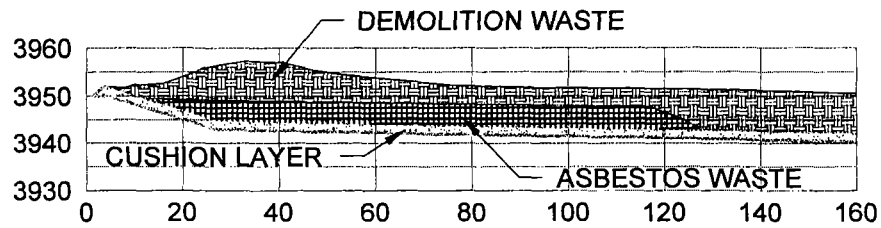
Number: 12602

US GRAIN SIZE ASTM 2008 HS&G MATERIALS TESTING - 12602.GPJ PIONEER.GDT 3/21/08

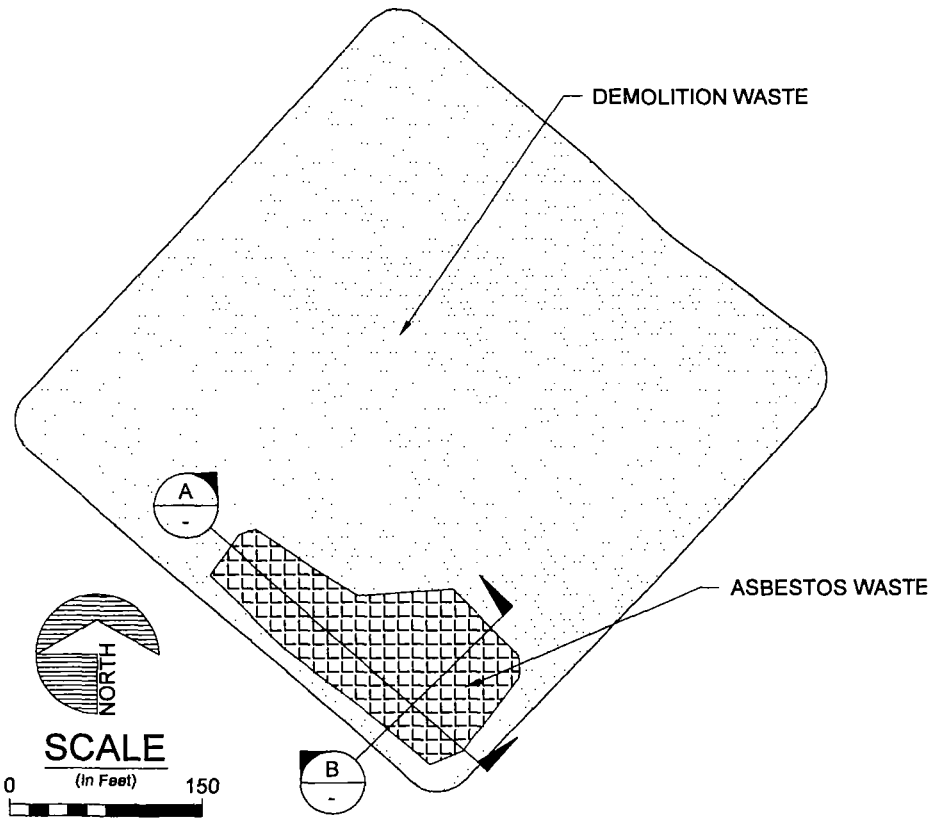
B.4 ASBESTOS LOCATION MAP



A - SECTION
SCALE = 1" = 40'



B - SECTION
SCALE = 1" = 40'



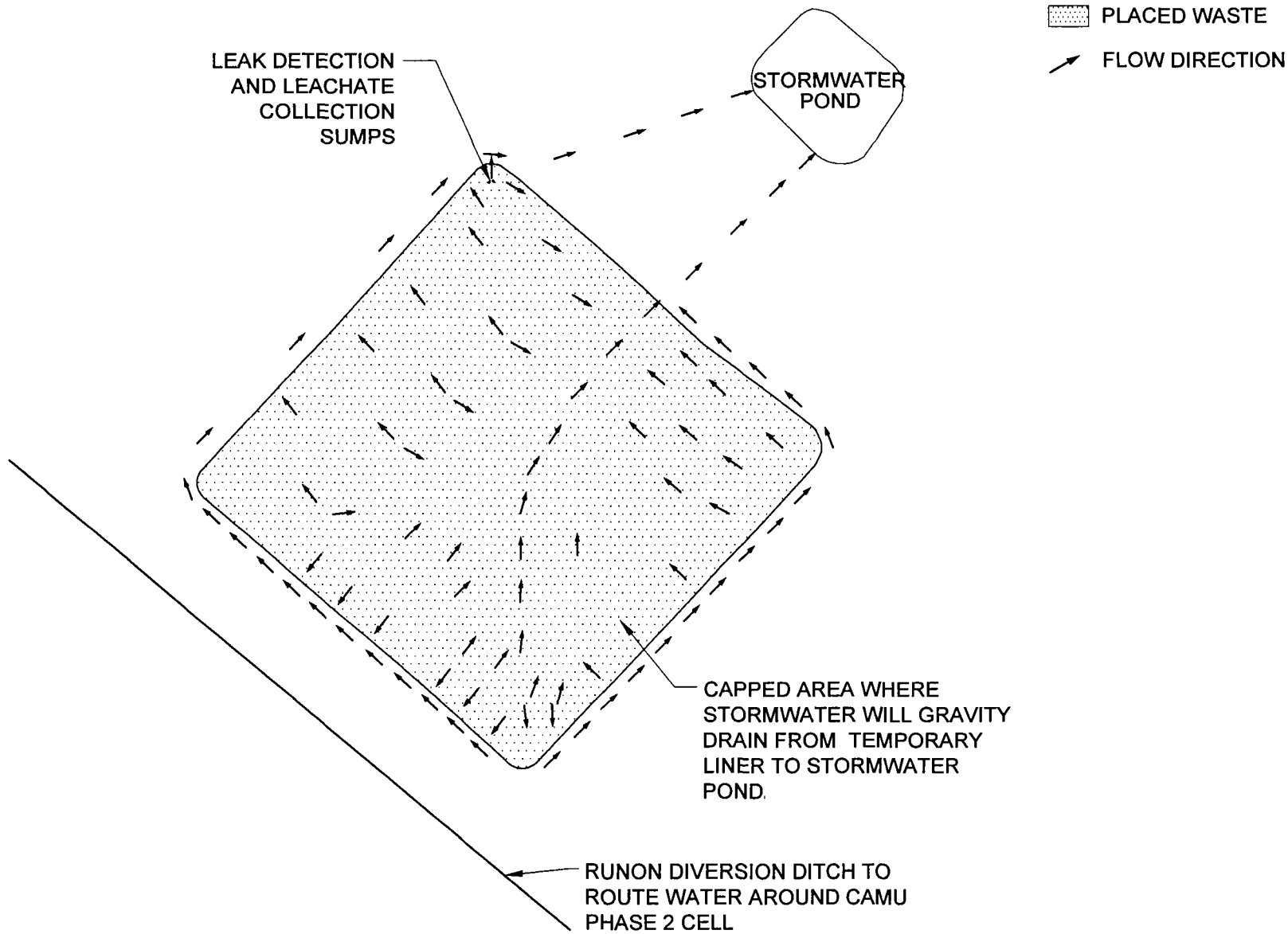
PLAN VIEW

2008 CONSTRUCTION REPORT ASARCO EAST HELENA PLANT CAMU PHASE 2 CELL CONSTRUCTION PROJECT	ASBESTOS LOCATION MAP	FIGURE B-1

Hydrometrics, Inc.
Consulting Scientists and Engineers

UPDATE TIME: 2:04 PM
MRHODES\HEL\20090127\I:\LAND PROJECTS\700701\DWG\700701H004.DWG

B.5 CAMU TEMPORARY CAP DRAINAGE PLAN



2008 CONSTRUCTION REPORT ASARCO EAST HELENA PLANT CAMU PHASE 2 CELL CONSTRUCTION PROJECT	**CAMU TEMPORARY CAP DRAINAGE PLAN**	FIGURE **B-2**

UPDATE TIME: 2:06 PM
MRHODES\HEL\20090127\I:\LAND PROJECTS\700701\DWG\700701H005.DWG

Hydrometrics, Inc.
Consulting Scientists and Engineers

B.6 PUMPING VOLUMES AND ANALYTICAL TEST RESULTS FOR LEAK DETECTION AND LEACHATE COLLECTION SUMPS

PUMPING VOLUMES

LEACHATE COLLECTION SUMP			
Date	Volume (GALLONS)	Field Parameters (if measured)	Flow Rate
9/2/2008	340		
9/3/2008	220		
9/4/2008	150		
9/5/2008	130		
9/8/2008	120		
9/9/2008	400		
9/10/2008	285		
9/11/2008	200		
9/12/2008	200		
9/15/2008	420		
9/16/2008	350		
9/24/2008	325		
9/25/2008	430		
9/26/2008	175		
9/29/2008	175		
9/30/2008	150		
10/1/2008	150		1 Liter in 45 sec.
10/7/2008	100		1 Liter in 60 sec.
10/9/2008	100	Temp-12.9, D.O.-6.17 mg/L, pH-7.50, SC-1273 µS/cm	1 Liter in 35 sec.
10/14/2008	100		1 Liter in 60 sec.
10/15/2008	70		0.5 Liter in 60 sec.
10/16/2008	75		0.25 Liter in 60 sec.
10/17/2008	70	Temp-9.64, D.O.-6.17 mg/L, pH-7.25, SC-1352 µS/cm	0.25 Liter in 60 sec.
10/20/2008	60		
11/10/2008	450		
11/14/2008	450		
11/17/2008	3900		
11/18/2008	8000	Temp-9.65, D.O.-4.51 mg/L, pH-7.61, SC-3315 µS/cm	
11/20/2008	900		
11/21/2008	850		
12/18/2008	1700		
1/14/2009	1350		
1/15/2009	1350		
1/20/2009	450		

Total Volume **24195 Gallons**

LEAK DETECTION SUMP		
Date	Volume (GALLONS)	Flow Rate
9/24/2008	34	
9/25/2008	94	
9/26/2008	60	
9/29/2008	65	
9/30/2008	34	
10/1/2008	17	slow drip, not measurable
10/7/2008	15	none
10/9/2008	dry	none
10/14/2008	dry	none
10/15/2008	dry	none
10/16/2008	dry	none
10/17/2008	dry	none
10/20/2008	dry	none
11/18/2008	15	none pH - 7.62 SC - 541µS/cm
11/20/2008	dry	
11/21/2008	dry	
12/18/2008	dry	
1/14/2009	dry	
1/15/2009	dry	
1/20/2009	dry	

Total Volume **334 Gallons**

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ANALYTICAL SUMMARY REPORT

October 15, 2008

Asarco LLC
PO Box 1230
East Helena, MT 59635

Workorder No.: H08100053

Project Name: 7007 Asarco E. Helena CAMU SUMP Sampling

Energy Laboratories Inc received the following 2 samples from Asarco LLC on 10/3/2008 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H08100053-001	0809-CAMU-1000 (LEAK DETECTION SUMP)	09/26/08 7:30	10/03/08	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Conductivity Hardness as CaCO3 Anions by Ion Chromatography Solids, Total Dissolved
H08100053-002	0809-CAMU-1001 (LEACHATE COLLECTION SUMP)	09/26/08 7:45	10/03/08	Aqueous	Same As Above

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT, EPA # MT00005
eli-c - Energy Laboratories, Inc. - Casper, WY, EPA# WY00002
eli-g - Energy Laboratories, Inc. - Gillette, WY, EPA# WY00006
eli-h - Energy Laboratories, Inc. - Helena, MT, EPA# MT00945
eli-r - Energy Laboratories, Inc. - Rapid City, SD, EPA# SD00012
eli-t - Energy Laboratories, Inc. - College Station, TX, EPA# TX01520

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES, INC. will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories are indicated within the Laboratory Analytical Report.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

ELI appreciates the opportunity to provide you with this analytical service. For additional information, including certifications, and analytical services visit our web page www.energylab.com.

Report Approved By: Jennifer Hay

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CLIENT: Asarco LLC

Project: 7007 Asarco E. Helena CAMU SUMP Sampling

Sample Delivery Group: H08100053

Date: *15-Oct-08*

CASE NARRATIVE

The following Case Narrative contains exceptions or comments pertaining to the analysis of samples submitted by Asarco LLC on 10/3/2008 3:00:00 PM. These samples were assigned ELI Workorder Number H08100053.

TDS received past hold time. Contacted G. Lorenson with Hydrometrics & he stated to analyze even though past hold time.
Wj

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LABORATORY ANALYTICAL REPORT

Client: Asarco LLC
Client Sample ID: 0809-CAMU-1000
Project: 7007 Asarco E. Helena CAMU SUMP Sampling
Matrix: Aqueous

Lab ID: H08100053-001
Collection Date: 09/26/08 07:30
DateReceived: 10/03/08
Report Date: 10/15/08

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
PHYSICAL PROPERTIES												
Conductivity	525	umhos/cm		1		A2510 B	10/07/08 16:25 / jlh			COND_081007A	2	081007A-COND-PROBE W
Solids, Total Dissolved TDS @ 180 C	303	mg/L	H	10		A2540 C	10/06/08 14:36 / abb			SOLIDS_081006A	4	081006A-SLDS-TDS-W
INORGANICS												
Alkalinity, Total as CaCO3	260	mg/L		4		A2320 B	10/06/08 16:21 / kjw			TITTR_081006A	25	081006A-ALK-W
Chloride	6	mg/L		1		E300.0	10/08/08 21:04 / abb			IC101-H_081008A	35	R49026
Sulfate	7	mg/L		1		E300.0	10/08/08 21:04 / abb			IC101-H_081008A	35	R49026
Hardness as CaCO3	218	mg/L		1		A2340 B	10/14/08 17:47 / sld			WATERCALC_081014B	3	R49153
METALS, DISSOLVED												
Aluminum	ND	mg/L		0.1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Antimony	ND	mg/L		0.005		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Arsenic	0.026	mg/L		0.005		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Barium	0.1	mg/L		0.1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Beryllium	ND	mg/L		0.001		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Cadmium	ND	mg/L		0.001		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Calcium	63	mg/L		1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Chromium	ND	mg/L		0.001		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Cobalt	ND	mg/L		0.01		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Copper	ND	mg/L		0.004		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Iron	0.37	mg/L		0.02		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Lead	ND	mg/L		0.005		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Magnesium	15	mg/L		1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Manganese	2.45	mg/L		0.01		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Mercury	ND	mg/L		0.001		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Nickel	ND	mg/L		0.01		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Potassium	8	mg/L		1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Selenium	ND	mg/L		0.005		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Silver	ND	mg/L		0.005		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Sodium	26	mg/L		1		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Thallium	ND	mg/L		0.002		E200.8	10/10/08 04:15 / eli-b			SUB-B118955	31	B_R118955
Vanadium	ND	mg/L		0.01		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881
Zinc	ND	mg/L		0.01		E200.7	10/08/08 22:08 / eli-b			SUB-B118881	32	B_R118881

Report Definitions:
RL - Analyte reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

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LABORATORY ANALYTICAL REPORT

Client: Asarco LLC
Client Sample ID: 0809-CAMU-1001
Project: 7007 Asarco E. Helena CAMU SUMP Sampling
Matrix: Aqueous

Lab ID: H08100053-002
Collection Date: 09/26/08 07:45
DateReceived: 10/03/08
Report Date: 10/15/08

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
PHYSICAL PROPERTIES												
Conductivity	1240	umhos/cm		1		A2510 B	10/07/08 16:28 / jlh			COND_081007A	3	081007A-COND-PROBE W
Solids, Total Dissolved TDS @ 180 C	893	mg/L	H	10		A2540 C	10/06/08 14:36 / abb			SOLIDS_081006A	5	081006A-SLDS-TDS-W
INORGANICS												
Alkalinity, Total as CaCO3	110	mg/L		4		A2320 B	10/06/08 16:29 / kjw			TITTR_081006A	26	081006A-ALK-W
Chloride	21	mg/L		1		E300.0	10/08/08 22:03 / abb			IC101-H_081008A	38	R49026
Sulfate	530	mg/L		1		E300.0	10/08/08 22:03 / abb			IC101-H_081008A	38	R49026
Hardness as CaCO3	585	mg/L		1		A2340 B	10/14/08 17:47 / sld			WATERCALC_081014B	4	R49153
METALS, DISSOLVED												
Aluminum	ND	mg/L		0.1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Antimony	ND	mg/L		0.005		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Arsenic	0.006	mg/L		0.005		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Barium	0.3	mg/L		0.1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Beryllium	ND	mg/L		0.001		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Cadmium	0.001	mg/L		0.001		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Calcium	179	mg/L		1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Chromium	ND	mg/L		0.001		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Cobalt	ND	mg/L		0.01		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Copper	0.013	mg/L		0.004		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Iron	0.06	mg/L		0.02		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Lead	ND	mg/L		0.005		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Magnesium	34	mg/L		1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Manganese	0.09	mg/L		0.01		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Mercury	ND	mg/L		0.001		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Nickel	ND	mg/L		0.01		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Potassium	14	mg/L		1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Selenium	ND	mg/L		0.005		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Silver	ND	mg/L		0.005		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Sodium	36	mg/L		1		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Thallium	ND	mg/L		0.002		E200.8	10/10/08 04:54 / eli-b			SUB-B118955	32	B_R118955
Vanadium	ND	mg/L		0.01		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881
Zinc	ND	mg/L		0.01		E200.7	10/08/08 22:12 / eli-b			SUB-B118881	33	B_R118881

Report Definitions:
RL - Analyte reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

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Toll Free 877.472.0711 * 406.442.0711 * FAX 406.442.0712 * helena@energylab.com

Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: 081006A-ALK-W

Date: *15-Oct-08*

Run ID :Run Order: **TITTR_081006A: 1** SampType: **Method Blank** Sample ID: **MBLK1_081006A** Method: **A2320 B**
Analysis Date: **10/06/08 11:01** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	ND	1									

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **TITTR_081006A: 2** SampType: **Laboratory Control Sample** Sample ID: **LCS1_081006A** Method: **A2320 B**
Analysis Date: **10/06/08 11:10** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	600	4.0	600		**101**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **TITTR_081006A: 11** SampType: **Sample Matrix Spike** Sample ID: **H08100027-008AMS** Method: **A2320 B**
Analysis Date: **10/06/08 14:13** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	650	4.0	600	63.68	**98**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **TITTR_081006A: 12** SampType: **Sample Matrix Spike Duplicate** Sample ID: **H08100027-008AMSD** Method: **A2320 B**
Analysis Date: **10/06/08 14:23** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	650	4.0	600	63.68	**97**	90	110	650.7	**0.5**	20	

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **TITTR_081006A: 15** SampType: **Continuing Calibration Verification Standard** Sample ID: **CCV1_081006A** Method: **A2320 B**
Analysis Date: **10/06/08 14:39** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	1000	4.0	1000		**105**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: 081006A-ALK-W

Date: *15-Oct-08*

Run ID :Run Order: **TITTR_081006A: 22** SampType: **Sample Duplicate** Sample ID: **H08100027-016ADUP** Method: **A2320 B**

Analysis Date: **10/06/08 15:57** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	200	4.0						197	**1**	20	

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **TITTR_081006A: 28** SampType: **Continuing Calibration Verification Standard** Sample ID: **CCV2_081006A** Method: **A2320 B**

Analysis Date: **10/06/08 16:44** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	1000	4.0	1000		**103**	90	110				

Associated samples:

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: 081006A-SLDS-TDS-W

Run ID :Run Order: **SOLIDS_081006A: 1** SampType: **Method Blank** Sample ID: **MBLK1_081006A** Method: **A2540 C**
Analysis Date: **10/06/08 14:33** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Solids, Total Dissolved TDS @ 180 C	ND	1.0									

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **SOLIDS_081006A: 2** SampType: **Laboratory Control Sample** Sample ID: **LCS1_081006A** Method: **A2540 C**
Analysis Date: **10/06/08 14:34** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Solids, Total Dissolved TDS @ 180 C	988	10	1000		**99**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **SOLIDS_081006A: 9** SampType: **Sample Matrix Spike** Sample ID: **H08100068-001AMS** Method: **A2540 C**
Analysis Date: **10/06/08 14:38** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Solids, Total Dissolved TDS @ 180 C	6100	10	2000	4499	**80**	80	120				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **SOLIDS_081006A: 10** SampType: **Sample Matrix Spike Duplicate** Sample ID: **H08100068-001AMSD** Method: **A2540 C**
Analysis Date: **10/06/08 14:38** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Solids, Total Dissolved TDS @ 180 C	6150	10	2000	4499	**83**	80	120	6104	**0.8**	10	

Associated samples: **H08100053-001A; H08100053-002A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: 081007A-COND-PROBE

Run ID :Run Order: **COND_081007A: 1** SampType: **Laboratory Control Sample** Sample ID: **LCS1_081007A** Method: **A2510 B**
Analysis Date: **10/07/08 16:15** Units: **umhos/cm** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Conductivity	1450	1.0	1412		**103**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **COND_081007A: 8** SampType: **Sample Duplicate** Sample ID: **H08100068-001ADUP** Method: **A2510 B**
Analysis Date: **10/07/08 16:50** Units: **umhos/cm** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Conductivity	6590	1.0						6525	**1**	10	

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **COND_081007A: 12** SampType: **Continuing Calibration Verification Standard** Sample ID: **CCV1_081007A** Method: **A2510 B**
Analysis Date: **10/07/08 17:01** Units: **umhos/cm** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Conductivity	745	1.0	718		**104**	90	110				

Associated samples:

Run ID :Run Order: **COND_081007A: 17** SampType: **Sample Duplicate** Sample ID: **H08100095-001BDUP** Method: **A2510 B**
Analysis Date: **10/07/08 17:35** Units: **umhos/cm** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Conductivity	571	1.0						568.6	**0.4**	10	

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **COND_081007A: 21** SampType: **Continuing Calibration Verification Standard** Sample ID: **CCV2_081007A** Method: **A2510 B**
Analysis Date: **10/07/08 17:44** Units: **umhos/cm** **Prep Info:** Prep Date: Prep Method:

Analytes 1	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Conductivity	742	1.0	718		**103**	90	110				

Associated samples:

Qualifiers:
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R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: B_R118881

Run ID :Run Order: **SUB-B118881: 2** SampType: **Continuing Calibration Verification Standard** Sample ID: **ICV** Method: **E200.7**

Analysis Date: **10/08/08 12:15** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2.51	0.10	2.5		**100**	95	105				
Barium	2.51	0.10	2.5		**100**	95	105				
Beryllium	1.25	0.010	1.25		**100**	95	105				
Cadmium	2.54	0.010	2.5		**102**	95	105				
Calcium	25.1	1.0	25		**100**	95	105				
Cobalt	2.48	0.020	2.5		**99**	95	105				
Iron	2.57	0.030	2.5		**103**	95	105				
Magnesium	24.9	1.0	25		**100**	95	105				
Manganese	2.52	0.010	2.5		**101**	95	105				
Nickel	2.53	0.050	2.5		**101**	95	105				
Potassium	25.0	1.0	25		**100**	95	105				
Sodium	25.1	1.0	25		**100**	95	105				
Vanadium	2.54	0.10	2.5		**102**	95	105				
Zinc	2.60	0.010	2.5		**104**	95	105				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 8** SampType: **Initial Calibration Verification Standard** Sample ID: **QCS** Method: **E200.7**

Analysis Date: **10/08/08 12:11** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4.13	0.10	4		**103**	90	110				
Barium	0.818	0.10	0.8		**102**	90	110				
Beryllium	0.402	0.010	0.4		**101**	90	110				
Cadmium	0.403	0.010	0.4		**101**	90	110				
Calcium	40.4	1.0	40		**101**	90	110				
Cobalt	0.793	0.020	0.8		**99**	90	110				
Iron	4.14	0.030	4		**103**	90	110				
Magnesium	40.0	1.0	40		**100**	90	110				
Manganese	3.94	0.010	4		**99**	90	110				
Nickel	0.832	0.050	0.8		**104**	90	110				
Potassium	37.9	1.0	40		**95**	90	110				
Sodium	42.4	1.0	40		**106**	90	110				
Vanadium	0.807	0.10	0.8		**101**	90	110				
Zinc	0.824	0.010	0.8		**103**	90	110				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: B_R118881

Date: *15-Oct-08*

Run ID :Run Order: **SUB-B118881: 8** SampType: **Initial Calibration Verification Standard** Sample ID: **QCS** Method: **E200.7**
Analysis Date: **10/08/08 12:11** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 9** SampType: **Interference Check Sample A** Sample ID: **ICSA** Method: **E200.7**
Analysis Date: **10/08/08 12:27** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	554	0.10	500		**111**	80	120				
Barium	0.000720	0.10				-0.005	0.0005				
Beryllium	-0.000190	0.010				-0.001	0.001				
Cadmium	0.0121	0.010				-0.001	0.001				
Calcium	470	1.0	500		**94**	80	120				
Cobalt	0.000980	0.020				-0.01	0.01				
Iron	194	0.091	200		**97**	80	120				
Magnesium	513	1.0	500		**103**	80	120				
Manganese	0.00171	0.010				-0.01	0.01				
Nickel	-0.00105	0.050				-0.05	0.05				
Potassium	-0.0231	1.0				-1	1				
Sodium	-0.0119	1.0				-1	1				
Vanadium	-0.00350	0.10				-0.01	0.01				
Zinc	-0.0428	0.010				-0.01	0.01				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 10** SampType: **Interference Check Sample AB** Sample ID: **ICSAB** Method: **E200.7**
Analysis Date: **10/08/08 12:31** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	559	0.10	500		**112**	80	120				
Barium	0.521	0.10	0.5		**104**	80	120				
Beryllium	0.484	0.010	0.5		**97**	80	120				
Cadmium	0.983	0.010	1		**98**	80	120				
Calcium	471	1.0	500		**94**	80	120				
Cobalt	0.484	0.020	0.5		**97**	80	120				
Iron	197	0.091	200		**98**	80	120				
Magnesium	519	1.0	500		**104**	80	120				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: B_R118881

Run ID :Run Order: **SUB-B118881: 10** SampType: **Interference Check Sample AB** Sample ID: **ICSAB** Method: **E200.7**
Analysis Date: **10/08/08 12:31** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.496	0.010	0.5		**99**	80	120				
Nickel	0.977	0.050	1		**98**	80	120				
Potassium	11.1	1.0	10		**111**	80	120				
Sodium	10.6	1.0	10		**106**	80	120				
Vanadium	0.497	0.10	0.5		**99**	80	120				
Zinc	0.980	0.010	1		**98**	80	120				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 24** SampType: **Method Blank** Sample ID: **MB-SPDIS081008A** Method: **E200.7**
Analysis Date: **10/08/08 13:04** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.007									
Barium	ND	0.0001									
Beryllium	ND	8E-05									
Cadmium	ND	0.0003									
Calcium	ND	0.009									
Cobalt	ND	0.0010									
Iron	ND	0.002									
Magnesium	ND	0.01									
Manganese	ND	0.0002									
Nickel	ND	0.001									
Potassium	ND	0.02									
Sodium	ND	0.2									
Vanadium	ND	0.001									
Zinc	ND	0.0004									

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 25** SampType: **Laboratory Fortified Blank** Sample ID: **LFB-SPDIS081008A** Method: **E200.7**
Analysis Date: **10/08/08 13:08** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	5.03	0.10	5		**101**	85	115				
Barium	0.999	0.10	1		**100**	85	115				

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: **B_R118881**

Run ID :Run Order: **SUB-B118881: 25** SampType: **Laboratory Fortified Blank** Sample ID: **LFB-SPDIS081008A** Method: **E200.7**

Analysis Date: **10/08/08 13:08** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.500	0.010	0.5		**100**	85	115				
Cadmium	0.507	0.010	0.5		**101**	85	115				
Calcium	51.2	1.0	50		**102**	85	115				
Cobalt	1.02	0.020	1		**102**	85	115				
Iron	5.20	0.030	5		**104**	85	115				
Magnesium	52.3	1.0	50		**105**	85	115				
Manganese	4.95	0.010	5		**99**	85	115				
Nickel	1.06	0.050	1		**106**	85	115				
Potassium	45.5	1.0	50		**91**	85	115				
Sodium	52.9	1.0	50		**106**	85	115				
Vanadium	1.01	0.10	1		**101**	85	115				
Zinc	1.05	0.010	1		**105**	85	115				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 26** SampType: **Sample Matrix Spike** Sample ID: **B08100663-004DMS2** Method: **E200.7**

Analysis Date: **10/08/08 21:48** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	24.78	0.10	25		**99**	70	130				
Barium	5.258	0.10	5	0.06795	**104**	70	130				
Beryllium	2.494	0.0010	2.5		**100**	70	130				
Cadmium	2.438	0.0015	2.5		**98**	70	130				
Calcium	487.2	1.0	250	241.6	**98**	70	130				
Cobalt	4.929	0.010	5	0.00635	**98**	70	130				
Iron	25.36	0.030	25		**101**	70	130				
Magnesium	420.8	1.0	250	171.6	**100**	70	130				
Manganese	27.19	0.010	25	3.05	**97**	70	130				
Nickel	5.176	0.010	5	0.02175	**103**	70	130				
Potassium	257.5	1.0	250	21.89	**94**	70	130				
Sodium	706.6	1.0	250	445	**105**	70	130				
Vanadium	4.934	0.10	5		**99**	70	130				
Zinc	5.191	0.010	5	0.05875	**103**	70	130				

Associated samples: **H08100053-001B; H08100053-002B**

Qualifiers:
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N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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ANALYTICAL QC SUMMARY REPORT

BatchID: B_R118881

Date: *15-Oct-08*

Run ID :Run Order: **SUB-B118881: 27** SampType: **Sample Matrix Spike Duplicate** Sample ID: **B08100663-004DMSD2** Method: **E200.7**

Analysis Date: **10/08/08 21:52** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	25.05	0.10	25		**100**	70	130	24.78	**1.1**	20	
Barium	5.284	0.10	5	0.06795	**104**	70	130	5.258	**0.5**	20	
Beryllium	2.525	0.0010	2.5		**101**	70	130	2.494	**1.2**	20	
Cadmium	2.484	0.0015	2.5		**99**	70	130	2.438	**1.9**	20	
Calcium	499.6	1.0	250	241.6	**103**	70	130	487.2	**2.5**	20	
Cobalt	5.001	0.010	5	0.00635	**100**	70	130	4.929	**1.5**	20	
Iron	25.68	0.030	25		**103**	70	130	25.36	**1.3**	20	
Magnesium	432.6	1.0	250	171.6	**104**	70	130	420.8	**2.8**	20	
Manganese	27.66	0.010	25	3.05	**98**	70	130	27.19	**1.7**	20	
Nickel	5.238	0.010	5	0.02175	**104**	70	130	5.176	**1.2**	20	
Potassium	254.4	1.0	250	21.89	**93**	70	130	257.5	**1.2**	20	
Sodium	727.2	1.0	250	445	**113**	70	130	706.6	**2.9**	20	
Vanadium	5.006	0.10	5		**100**	70	130	4.934	**1.5**	20	
Zinc	5.268	0.010	5	0.05875	**104**	70	130	5.191	**1.5**	20	

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 34** SampType: **Sample Matrix Spike** Sample ID: **B08100619-014CMS2** Method: **E200.7**

Analysis Date: **10/08/08 22:37** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.81	0.10	10	0.02096	**98**	70	130				
Barium	2.10	0.10	2	0.00748	**105**	70	130				
Beryllium	0.982	0.0021	1		**98**	70	130				
Cadmium	0.956	0.0021	1		**96**	70	130				
Calcium	161	1.0	100	72.88	**88**	70	130				
Cobalt	2.01	0.010	2	0.1058	**95**	70	130				
Iron	10.2	0.030	10	0.1629	**100**	70	130				
Magnesium	109	1.0	100	11.4	**97**	70	130				
Manganese	9.40	0.010	10	0.00486	**94**	70	130				
Nickel	2.01	0.010	2		**101**	70	130				
Potassium	103	1.0	100	4.37	**98**	70	130				
Sodium	104	2.1	100	4.68	**100**	70	130				
Vanadium	1.93	0.10	2		**97**	70	130				
Zinc	2.00	0.010	2		**100**	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
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A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: B_R118881

Run ID :Run Order: **SUB-B118881: 34** SampType: **Sample Matrix Spike** Sample ID: **B08100619-014CMS2** Method: **E200.7**

Analysis Date: **10/08/08 22:37** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118881: 35** SampType: **Sample Matrix Spike Duplicate** Sample ID: **B08100619-014CMSD2** Method: **E200.7**

Analysis Date: **10/08/08 22:41** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 14	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.91	0.10	10	0.02096	**99**	70	130	9.806	**1**	20	
Barium	2.11	0.10	2	0.00748	**105**	70	130	2.101	**0.6**	20	
Beryllium	1.01	0.0021	1		**101**	70	130	0.9817	**2.5**	20	
Cadmium	0.981	0.0021	1		**98**	70	130	0.9565	**2.6**	20	
Calcium	166	1.0	100	72.88	**93**	70	130	161.1	**2.9**	20	
Cobalt	2.07	0.010	2	0.1058	**98**	70	130	2.015	**2.8**	20	
Iron	10.4	0.030	10	0.1629	**102**	70	130	10.15	**2.2**	20	
Magnesium	111	1.0	100	11.4	**99**	70	130	108.8	**1.9**	20	
Manganese	9.74	0.010	10	0.00486	**97**	70	130	9.396	**3.6**	20	
Nickel	2.07	0.010	2		**104**	70	130	2.011	**2.9**	20	
Potassium	102	1.0	100	4.37	**98**	70	130	102.7	**0.3**	20	
Sodium	104	2.1	100	4.68	**100**	70	130	104.2	**0**	20	
Vanadium	1.99	0.10	2		**99**	70	130	1.93	**3**	20	
Zinc	2.06	0.010	2		**103**	70	130	2	**3**	20	

Associated samples: **H08100053-001B; H08100053-002B**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: B_R118955

Date: *15-Oct-08*

Run ID :Run Order: **SUB-B118955: 3** SampType: **Initial Calibration Verification Standard** Sample ID: **QCS - ME080514B, ME080514A, ME080225B** Method: **E200.8**

Analysis Date: **10/09/08 11:10** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.051	0.050	0.05		**102**	90	110				
Arsenic	0.050	0.0050	0.05		**99**	90	110				
Cadmium	0.025	0.0010	0.025		**99**	90	110				
Chromium	0.050	0.010	0.05		**100**	90	110				
Copper	0.050	0.010	0.05		**101**	90	110				
Lead	0.050	0.010	0.05		**100**	90	110				
Mercury	0.0019	0.0010	0.002		**97**	90	110				
Selenium	0.051	0.0050	0.05		**101**	90	110				
Silver	0.026	0.0050	0.025		**102**	90	110				
Thallium	0.051	0.10	0.05		**103**	90	110				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118955: 4** SampType: **Method Blank** Sample ID: **LRB** Method: **E200.8**

Analysis Date: **10/09/08 11:49** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	3E-05	1E-05									
Arsenic	ND	4E-05									
Cadmium	1E-05	9E-06									
Chromium	ND	4E-05									
Copper	ND	7E-05									
Lead	ND	8E-06									
Mercury	ND	1E-05									
Selenium	ND	0.0001									
Silver	6E-05	3E-05									
Thallium	1E-05	7E-06									

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118955: 5** SampType: **Laboratory Fortified Blank** Sample ID: **LFB** Method: **E200.8**

Analysis Date: **10/09/08 11:56** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.050	0.050	0.05	0.00003	**99**	85	115				

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; N - Analyte concentration was not sufficiently high to calculate RPD; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

Date: *15-Oct-08*

BatchID: B_R118955

Run ID :Run Order: **SUB-B118955: 5** SampType: **Laboratory Fortified Blank** Sample ID: **LFB** Method: **E200.8**

Analysis Date: **10/09/08 11:56** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0050	0.05		**98**	85	115				
Cadmium	0.050	0.0010	0.05	0.00001	**100**	85	115				
Chromium	0.049	0.010	0.05		**98**	85	115				
Copper	0.050	0.010	0.05		**100**	85	115				
Lead	0.050	0.010	0.05		**101**	85	115				
Mercury	0.00094	0.0010	0.001		**94**	85	115				
Selenium	0.050	0.0050	0.05		**99**	85	115				
Silver	0.019	0.0050	0.02	0.00006	**96**	85	115				
Thallium	0.051	0.10	0.05	0.00001	**101**	85	115				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118955: 11** SampType: **Initial Calibration Verification Standard** Sample ID: **QCS - ME080514B, ME080514A, ME080225B** Method: **E200.8**

Analysis Date: **10/09/08 21:51** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.052	0.050	0.05		**103**	90	110				
Arsenic	0.050	0.0050	0.05		**100**	90	110				
Cadmium	0.026	0.0010	0.025		**102**	90	110				
Chromium	0.051	0.010	0.05		**102**	90	110				
Copper	0.051	0.010	0.05		**102**	90	110				
Lead	0.050	0.010	0.05		**100**	90	110				
Mercury	0.0020	0.0010	0.002		**98**	90	110				
Selenium	0.051	0.0050	0.05		**102**	90	110				
Silver	0.026	0.0050	0.025		**103**	90	110				
Thallium	0.051	0.10	0.05		**102**	90	110				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118955: 24** SampType: **Sample Matrix Spike** Sample ID: **H08100053-001B** Method: **E200.8**

Analysis Date: **10/10/08 04:23** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.04926	0.0050	0.05	0.00031	**98**	70	130				
Arsenic	0.07531	0.0050	0.05	0.02615	**98**	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: B_R118955

Date: *15-Oct-08*

Run ID :Run Order: **SUB-B118955: 24** SampType: **Sample Matrix Spike** Sample ID: **H08100053-001B** Method: **E200.8**

Analysis Date: **10/10/08 04:23** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.04879	0.0010	0.05	0.00011	**97**	70	130				
Chromium	0.05013	0.010	0.05	0.00032	**100**	70	130				
Copper	0.04798	0.010	0.05	0.00046	**95**	70	130				
Lead	0.05047	0.010	0.05	0.00042	**100**	70	130				
Mercury	0.0009900	0.0010	0.001	0.00009	**90**	70	130				
Selenium	0.05111	0.0050	0.05	0.00037	**101**	70	130				
Silver	0.01093	0.0050	0.02		**55**	70	130				S
Thallium	0.05038	0.0050	0.05	0.00002	**101**	70	130				

Associated samples: **H08100053-001B; H08100053-002B**

Run ID :Run Order: **SUB-B118955: 25** SampType: **Sample Matrix Spike Duplicate** Sample ID: **H08100053-001B** Method: **E200.8**

Analysis Date: **10/10/08 04:31** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 10	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.05094	0.0050	0.05	0.00031	**101**	70	130	0.04926	**3.4**	20	
Arsenic	0.07688	0.0050	0.05	0.02615	**101**	70	130	0.07531	**2.1**	20	
Cadmium	0.04872	0.0010	0.05	0.00011	**97**	70	130	0.04879	**0.1**	20	
Chromium	0.05032	0.010	0.05	0.00032	**100**	70	130	0.05013	**0.4**	20	
Copper	0.04789	0.010	0.05	0.00046	**95**	70	130	0.04798	**0.2**	20	
Lead	0.05043	0.010	0.05	0.00042	**100**	70	130	0.05047	**0.1**	20	
Mercury	0.0008850	0.0010	0.001	0.00009	**80**	70	130	0.00099	**0**	20	
Selenium	0.05252	0.0050	0.05	0.00037	**104**	70	130	0.05111	**2.7**	20	
Silver	0.01375	0.0050	0.02		**69**	70	130	0.01093	**23**	20	SR
Thallium	0.05055	0.0050	0.05	0.00002	**101**	70	130	0.05038	**0.3**	20	

Associated samples: **H08100053-001B; H08100053-002B**

Qualifiers: ND - Not Detected at the Reporting Limit
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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: R49026

Date: 15-Oct-08

Run ID :Run Order: **IC101-H_081008A: 12** SampType: **Initial Calibration Verification Standard** Sample ID: **ICV** Method: **E300.0**
Analysis Date: **10/08/08 12:59** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	26	1.0	25		**102**	90	110				
Sulfate	100	1.0	100		**104**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **IC101-H_081008A: 13** SampType: **Laboratory Fortified Blank** Sample ID: **LFB** Method: **E300.0**
Analysis Date: **10/08/08 13:18** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.9	1.0	10		**99**	90	110				
Sulfate	40	1.0	40		**101**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **IC101-H_081008A: 15** SampType: **Laboratory Control Sample** Sample ID: **LCS** Method: **E300.0**
Analysis Date: **10/08/08 14:16** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	92	1.0	87.47		**105**	90	110				
Sulfate	28	1.0	28.53		**99**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **IC101-H_081008A: 27** SampType: **Continuing Calibration Verification Standard** Sample ID: **CCV** Method: **E300.0**
Analysis Date: **10/08/08 18:10** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	26	1.0	25		**104**	90	110				
Sulfate	100	1.0	100		**104**	90	110				

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **IC101-H_081008A: 36** SampType: **Sample Matrix Spike** Sample ID: **H08100053-001A MS** Method: **E300.0**
Analysis Date: **10/08/08 21:24** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	33	1.0	25	5.991	**106**	90	110				
Sulfate	120	1.0	100	7.208	**108**	90	110				

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
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N - Analyte concentration was not sufficiently high to calculate RPD
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Client: Asarco LLC
Work Order: H08100053
Project: 7007 Asarco E. Helena CAMU SUMP Samp

ANALYTICAL QC SUMMARY REPORT

BatchID: R49026

Date: *15-Oct-08*

Run ID :Run Order: **IC101-H_081008A: 36** SampType: **Sample Matrix Spike** Sample ID: **H08100053-001A MS** Method: **E300.0**

Analysis Date: **10/08/08 21:24** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Associated samples: **H08100053-001A; H08100053-002A**

Run ID :Run Order: **IC101-H_081008A: 37** SampType: **Sample Matrix Spike Duplicate** Sample ID: **H08100053-001A MSD** Method: **E300.0**

Analysis Date: **10/08/08 21:43** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analytes 2	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	33	1.0	25	5.991	**106**	90	110	32.6	**0.1**	20	
Sulfate	120	1.0	100	7.208	**109**	90	110	115.6	**0.6**	20	

Associated samples: **H08100053-001A; H08100053-002A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than three times the spike amount

CHAIN OF CUSTODY RECORD

HydrometOs, Inc.

3020 Bozeman Avenue • Helena, Montana 59601 • (406) 443-4150

PROJ. NO.	PROJECT NAME
7007	ASARCO E. Helena CAMU Sump Sampling

SAMPLERS: *(Signature)* Guy Lowenson

DATE	TIME	COMP	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	Commons UF/RAW	Nutrients UF/H_2SO_4	Diss. Metal F/HNO_3	CN UF/NaOH	Total Metals UF/HNO_3	Total Recoverable Metals UF/HNO_3	BTEX	TPH								REMARKS
9/26/08	07:30		X	0809-CAMU-1000	2	X		X								H0810	00	53	-00		
↓	07:45		↓	↓ ↓ 1001	2	X		X											002		

Relinquished *(Signature)*	Date/Time	Received by: *(Signature)*	Lab	P.O. #	Shipped via: Bus, Fed Ex, UPS
Guy Lowenson	10/3/08 15:00	[signature]	temp 6.0 on ice		Other ____ Air Bill # ____
Relinquished (Signature)	Date/Time	Received by: *(Signature)*	Remarks Please see attached sheet. Bill ASARCO Directly		
Relinquished (Signature)	Date/Time	Received for Laboratory by: *(Signature)*	Date/Time	Enclosed: ☐ Parameter sheet w/detection limits ☐ QA/QC standard mixing instructions ☐ Cover letter ☐ Other ____	

HFORM-1-5/99

Return results & electronic copy to:
QA/QC Dept. at address at top of page

Split Samples:
[] Accepted [] Declined ____ Signature

UPDATED MONITORING PROGRAM
(Feb. 2008 Amended)

TABLE C. CAMU GROUNDWATER ANALYTICAL PARAMETER LIST

Parameter	Analytical Method[1]	Practical Quantitation Limit (mg/L)
	Field Parameters	
PH	Field SOP	None
Specific conductance	Field SOP	None
Dissolved oxygen	Field SOP	None
Water temperature	Field SOP	None
Water level	Field SOP	None
	Laboratory Parameters	
Major Cations/Anions and Physical Parameters		
Calcium (Ca)	215.1/200.7	5
Magnesium (Mg)	242.1/200.7	5
Sodium (Na)	273.1/200.7	5
Potassium (K)	258.1/200.7	5
Sulfate (SO4)	300.0	1
Chloride (Cl)	300.0	1
Total alkalinity as $CaCO_3$	310.1	5
Total dissolved solids	160.1	10
Specific Conductance	120.1	None
Metals (Dissolved)		
Aluminum (Al)	200.7/200.8	0.1
Antimony (Sb)	200.7/200.8	0.005
Arsenic (As)	200.7/200.8	0.005
~~Arsenic III/V~~	~~E 1632A M~~	~~0.005~~
Barium (Ba)	200.7/200.8	0.1
Beryllium (Be)	200.7/200.8	0.001
Cadmium (Cd)	200.7/200.8	0.001
Chromium (Cr)	200.7/200.8	0.001
Cobalt (Co)	200.7/200.8	0.01
Copper (Cu)	200.7/200.8	0.004
Iron (Fe)	200.7/200.8	0.02
Lead (Pb)	200.7/200.8	0.005
Manganese (Mn)	200.7/200.8	0.015
Mercury (Hg)	200.8/245.1	0.006
Nickel (Ni)	200.7/200.8	0.01
Selenium (Se)	200.7/200.8	0.005
~~Selenium IV/VI~~	~~SM 3114B M~~	~~0.005~~
Silver (Ag)	200.7/200.8	0.005
Thallium (Tl)	200.7/200.8	0.002
Vanadium (V)	200.7/200.8	0.01
Zinc (Zn)	200.7/200.8	0.02

(1) Field Standard Operating Procedures (SOPs) approved for previous work at the Asarco East Helena Site will be used as guidance for collection of field water quality parameters. Laboratory analytical methods are from EPA's *Methods for Chemical Analysis of Water and Wastes* (1983); supplemental EPA methods (E), or *Standard Methods for the Examination of Water and Wastewater* (SM). M = modified.

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Energy Laboratories Inc
Workorder Receipt Checklist

H08100053

Asarco LLC

Login completed by: Serena K. Dobler

Date and Time Received: 10/3/2008 3:00 PM

Reviewed by: [illegible]

Received by: rlt

Reviewed Date: 10/7/08

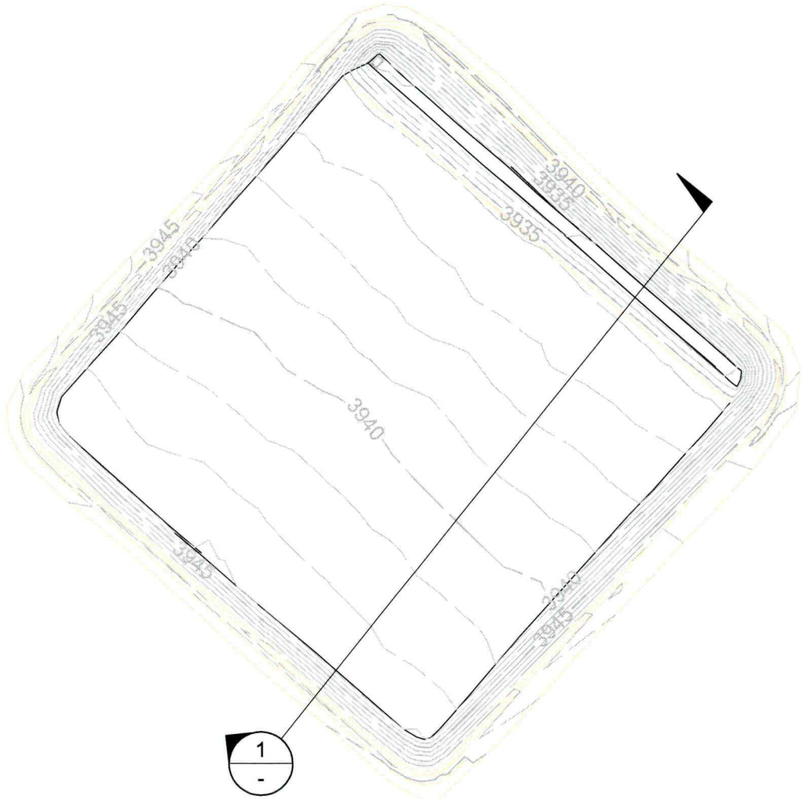
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature:	6.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

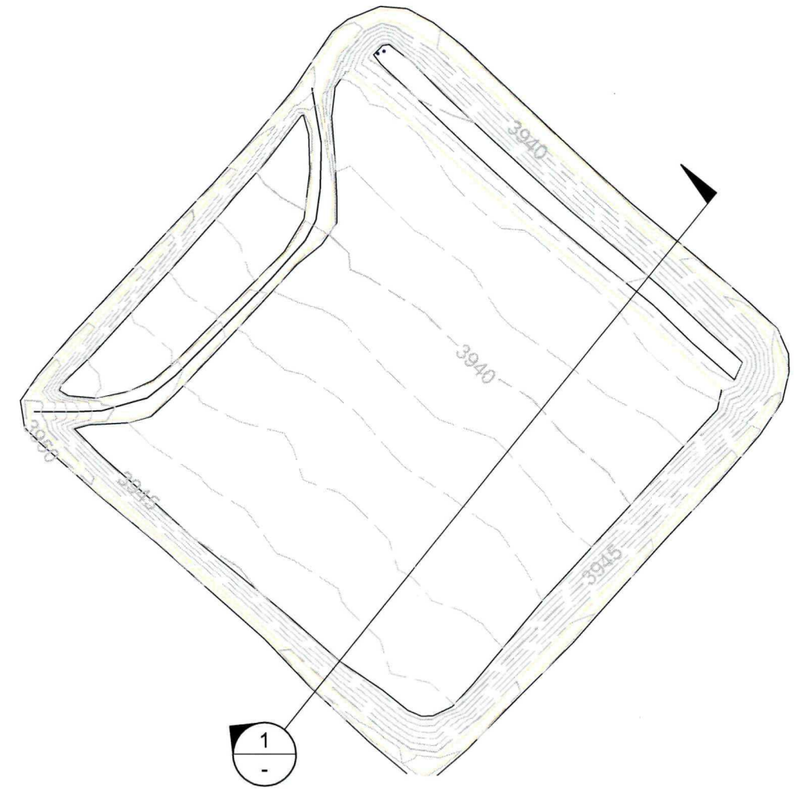
Contact and Corrective Action Comments:

TDS Samples received out of hold. Abb

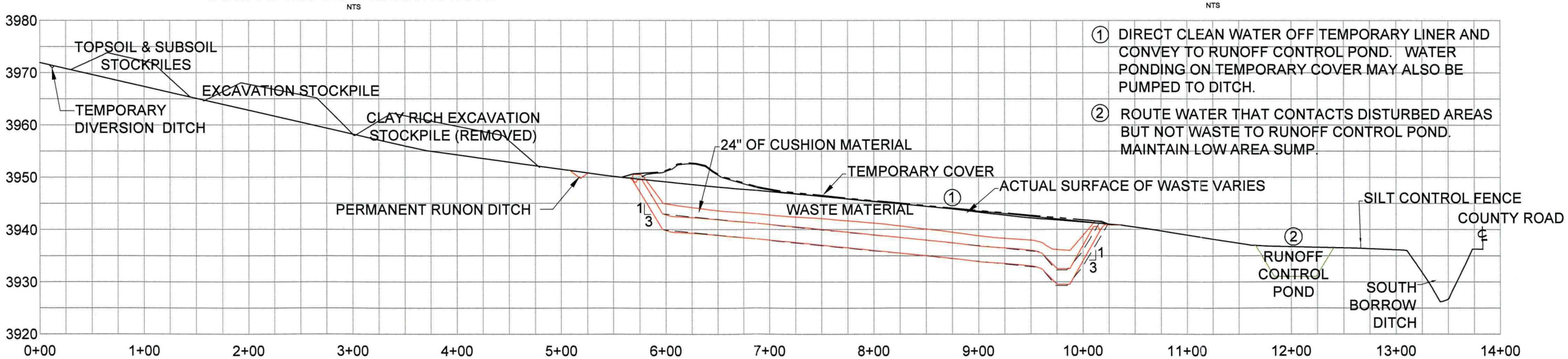
B.7 AS-BUILT DRAWINGS OF COMPACTED CLAY LINER AND CUSHION LAYER



PLAN VIEW
COMPACTED CLAY LINER AS-BUILT
NTS



PLAN VIEW
CUSHION LAYER AS-BUILT
NTS



SECTION 1/- CLOSURE OF 2008 CONSTRUCTION YEAR WASTE MATERIAL PLACEMENT PHASE
SCALE: (H) 1"=50' (V) 1"=10'

– – – – DESIGN
——— AS-BUILT

2008 CONSTRUCTION REPORT FOR ASARCO EAST HELENA CAMU PHASE 2 CELL CONSTUCTION PROJECT	CAMU PHASE 2 CELL COMPACTED CLAY LINER & CUSHION LAYER AS-BUILT	FIGURE B-3

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Hydrometrics, Inc.
Consulting Scientists and Engineers

APPENDIX C

WASTE CHARACTERIZATION REPORT

APPENDIX C

WASTE CHARACTERIZATION REPORT FOR ASARCO EAST HELENA PLANT CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) - PHASE 2 CELL CONSTRUCTION PROJECT

Prepared for:

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January 2009

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APPENDIX C
WASTE CHARACTERIZATION REPORT FOR ASARCO EAST HELENA PLANT CORRECTIVE ACTION MANAGEMENT UNIT (CAMU) - PHASE 2 CELL CONSTRUCTION PROJECT

1.0 INTRODUCTION

During July and September of 2008 hazardous waste materials were hauled from the Asarco East Helena Smelter Facility to a Corrective Action Management Unit (CAMU) constructed adjacent to the Smelter Facility. Representative samples of waste being hauled and placed in the CAMU Phase 2 Cell were collected and analyzed to better characterize the waste. This report provides the sampling methodology, procedures, and results.

1.1 PURPOSE

The general objective of this report is to document waste characterization activities that took place during the 2008 construction season at the Asarco East Helena Smelter, East Helena, Montana. This report documents the waste placement work, the results of waste samples collected, and summarizes waste characterization to date. A photo log is included to help document the waste hauled and placed to date. The follow tasks were conducted to obtain representative samples of waste and to characterize the waste being hauled to the CAMU Phase 2 Cell:

- Description of payload inside haul trucks;
- Photos of truck payload;
- Weight of truck payload;
- Grab samples of wood, dirt, dust, brick, and concrete materials; and
- Laboratory analyses of collected grab samples.

2.0 WASTE HAULING

2.1 GENERAL

Demolition activities at the Asarco East Helena Smelter were conducted in 2006, 2007, and 2008. Waste generated from Phase 1 (pre-2008) demolition was stockpiled in buildings on the Smelter Facility in anticipation of construction of the CAMU Phase 2 Cell. Upon completion of the CAMU Phase 2 Cell in June 2008, stored wastes were transported to the CAMU. Stored wastes included demolition debris (brick, concrete, metal, wood, and soil) and asbestos containing waste. Stored waste was hauled to the CAMU starting on July 7, 2008 with all stored waste being placed in the CAMU by July 29, 2008. In September 2008, additional cleaning and demolition activities were conducted, in which generated waste was hauled directly to the CAMU Phase 2 Cell. Cleaning activities included the generation of specially managed waste such as flue dust, baghouse bags, acid plant catalyst, and non-friable asbestos. Demolition activities generated wastes included brick, concrete, wood, metal, insulation, and soil.

2.1.1 Waste Transport

Stored and newly generated waste was loaded into both side dump and end dump haul trucks. Waste was sized at the loading site to meet CAMU specifications and lightly sprayed with water to minimize dust during hauling. The contents and weight of each haul truck was recorded prior to the haul truck leaving the smelter facility. In addition, a picture of the trucks payload was taken. Truck weights are included in Attachment A and pictures are included in Attachment B. Waste characterization helped to determine the types of waste being placed in the CAMU, to ensure waste had been reduced in size appropriately prior to being loaded, and to ensure that waste had been properly moistened prior to leaving the Smelter site.

2.2 SAMPLE METHODOLOGY

A Sampling and Analysis Plan (SAP), Attachment C of Appendix E of the "Design Analysis Report Asarco East Helena Corrective Action Management Unit (CAMU) Phase 2 Cell"

(Hydrometrics, 2008) provides details for the implementation of sampling work conducted. The SAP presents sample collection locations, frequency, methods, and analytical parameters for the sampling, including quality assurance/quality control (QA/QC) requirements. Detailed Standard Operating Procedures (SOPs) are described in the SAP attachments.

2.2.1 Sampling Frequency and Procedures

Demolition waste being hauled to the CAMU Phase 2 Cell for disposal was sampled from the payload of the haul truck, after the haul truck had been weighed but prior to the haul truck leaving the Smelter facility.

During all stages of cleaning and demolition work at the Smelter facility, 10 work areas have been designated to have waste removed and transported to the CAMU Phase 2 Cell. These work areas are presented in Table 2-1. Work area designations were based on the contractors schedule for demolition, processes that occurred in these areas, and the materials used to construct the buildings. Five work areas, 1, 2, 4, 5, and 7, were sampled and transported to the CAMU Phase 2 Cell during the 2008 construction season. In addition, several samples were collected from waste generated during the pre-cleaning process, prior to the demolition of structures.

A sample was collected from one out of every 20 trucks hauling waste from each of the five work areas. Therefore, at least one sample was obtained from each of the five areas for every 20 haul trucks that transport waste from that area to the CAMU Phase 2 Cell.

Each haul truck payload to be sampled was visually divided up into five areas. A grab sample was collected in accordance with SOPs (Hydrometrics, 2008) at a random location within each of the five areas. If a location within a sampling area could be visually identified to be potentially the worse case for that area, based on the professional judgment of the sampler, the sample was obtained from that location to bias the sample as the worst case. If, based on the sampler's judgment, it was not possible to identify a worst case location, the sample was obtained from a random location. All five samples were combined to form a representative composite sample of the waste material being hauled.

TABLE 2-1. WORK AREAS

Work Area	Buildings Included	Stage of Demolition	Material Volume (cubic yards)	Number of Haul Trucks (assume 15 yards/truck)*	Minimum Number of Samples (1/20 trucks)**
1	Blast Furnace Flue, Monier Flue.	Stage 2	7,900	527	27
2	Acid Plant Cooling Tower, Truck Loading and Spray Dryer Building, Sand Filters, Auto Shop, Acid Plant Shop.	Stage 2	1,350	90	5
3	400' D&L Stack, 200' Acid Stack, 425' Blast Furnace Stack	Stage 2	6,890	460	23
4	Acid Plant, Pump Tank Building, Main Blower Building.	Stage 2	1,000	67	4
5	Blast Furnace Baghouse.	Stage 2	4,120	275	14
6	Ore Unloading Building, Crushing Mill, Sample Mill.	Stage 2	14,100	940	47
7	Materials Stored in Concentrate Storage and Handling Building, Coverall Buildings, Ringling Building and Direct Smelt Building.	Throughout	16,440	1098	55
8	Highline Railroad Remainder, Blast Furnace Office, Power House, Blast Furnace Heat Exchanger, Machine Shop, Direct Smelt Building, Breaking Floor, Locomotive Crane Shed, Blast Furnace Lunchroom, Pump House, Blacksmith Shop, Carpenter Shop, Abandoned Breaking Floor, Sinter Stockpile Building, Charge Building, Cement & Dust Silos.	Alternate A	2,415	161	9
9	Masons Shop, Motor and Paint Shop, Paint Storage Building, Meeting Room, Oil HS, Refractory Storage, Zinc Plant O_2 Building, Zinc Power House, Zinc Pump House, Shop Lunch Room, and Truck Scale.	Alternate B	848	57	3
10 Misc.	Record Storage, Warehouse Annex, Belly Yard Rail, Slag Handling Pad, Warehouse Oil and Oxygen/Acetyl Storage, Warehouse, Environmental Building, Acid Tanks, Coverall Buildings, Truck Scale & High Grade, Railroad ties and timbers, Slag Dump Cleanup, Remediation of Property for American Chemet, Excavation for Plant Cap, Lake Shore Shed, Asarco On-site Sanitary Treatment, Zinc Plant Locomotive Shop, Bath House, Medical Office and Thornock Tank, HDS Water Treatment, Car Wash, Neutralization Building & Acid Sump, Northwestern Energy Sub Station, and Rodeo Tank & Stormwater Sumps, High Lead Welding Shop.	2009-2012	14,305	954	48
		Totals	**69,368**	**4,629**	**236**

Notes:

*Number of haul trucks assumes a 15 cubic yard capacity. Alternative truck haul capacities may be used by the contractor (typically a range of 10 cubic yards to 20 cubic yards).

**The actual number of samples may vary based on the capacity of the haul trucks used and the number of truck loads. The number of samples will be adjusted to the actual number of truckload transported to the CAMU.

Large pieces of brick and concrete were sampled by collecting chip samples according to HM-SOP-37 (Hydrometrics, 2008). Large pieces of wood and timber were sampled according to HM-SOP-47 (Hydrometrics, 2008). Broken debris, dirt, and dust were sampled according to HM-SOP-6 (Hydrometrics, 2008). All five samples were combined into one composite sample, mixed thoroughly, and sent to the laboratory for analysis.

A sampling notebook was maintained, and included the location and work area where waste was being hauled, a description of the materials in the haul truck payload, the sample identification number, and the date and time the sample was taken. A sample log including the above information is included in Attachment C.

2.2.2 Laboratory Procedures

Laboratory analyses were performed for total metals using analytical methods shown in Table 2-2.

2.3 WASTE CHARACTERIZATION AND SAMPLE RESULTS

2.3.1 Waste Characterization

Stored waste from Stage 1 (pre-2008) demolition activities was located in the Ringling Building, Barnum Building, Bailey Building, and Concentrate Handling and Storage Building (CHSB). This waste consisted of a mixture of building materials from the Main Office Building, Sample Laboratory, Speiss/Dross Plant, Blast Furnace Building, Highline Railroad, Sinter Plant, Thawhouse, and a portion of the Acid Plant. Waste consisted of a mixture of brick, concrete, wood, metal, insulation, and soil. A total of 1,312 loads of stored waste were hauled to the CAMU Phase 2 Cell between July 7 and July 29, 2008. This waste, approximately 21,200 tons, accounts for approximately 38 percent of the waste placed in the CAMU to date.

Demolition waste from the Spray Dryer Building, Acid Plant, Blast Furnace Flue, Monier Flue, Cooling Tower, and Blast Furnace Baghouse was hauled to the CAMU Phase 2 Cell.

TABLE 2-2. CAMU BOUND WASTE ANALYTICAL PARAMETER LIST

Parameter	Analytical Method[1]	Practical Quantitation Limit (mg/Kg)
Total Metals — Digestion by EPA Method 3050 (Method 7471 for Mercury)		
Aluminum (Al)	6010B/6020	5
Antimony (Sb)	6010B/6020	5
Arsenic (As)	6010B/6020	5
Barium (Ba)	6010B/6020	5
Beryllium (Be)	6010B/6020	5
Cadmium (Cd)	6010B/6020	1
Chromium (Cr)	6010B/6020	5
Cobalt (Co)	6010B/6020	5
Copper (Cu)	6010B/6020	5
Iron (Fe)	6010B/6020	5
Lead (Pb)	6010B/6020	5
Manganese (Mn)	6010B/6020	5
Mercury (Hg)	7471	1
Nickel (Ni)	6010B/6020	5
Selenium (Se)	6010B/6020	5
Silver (Ag)	6010B/6020	5
Thallium (Tl)	6010B/6020	5
Tin (Sn)	6010B/6020	5
Vanadium (V)	6010B/6020	5
Zinc (Zn)	6010B/6020	5

NOTES: (1) Laboratory analytical methods are ICP and ICP-MS techniques from EPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.*

The Spray Dryer building was a steel building and the majority of it was recycled. The waste generated from its demolition mainly consisted of insulation and scrap metal that could not be recycled. In addition, small amounts of soil/dust debris, concrete, and dust collection bags were also generated. A total of 16 truck loads weighing approximately 92 tons were hauled from the Spray Dryer Building to the CAMU.

The Acid Plant demolition waste was a mixture of steel, brick, concrete, soil, wood, and insulation materials. The majority of the steel from the Acid Plant was recycled. However, smaller pieces that could not be recycled were hauled to the CAMU. Additional building materials from the Acid Plant consisted of brick, concrete, wood, and insulation materials. Excavation of Acid Plant footings was also conducted, in which a large quantity of soil was excavated and hauled to the CAMU. A total of 251 truck loads weighing approximately 3,933 tons were hauled from the Acid Plant to the CAMU.

The Blast Furnace Flue and Monier Flue demolition waste mainly consisted of brick. However, a mixture of wood, metal, concrete, broken brick debris, and soil was also generated. A large quantity of soil was generated towards the end of the Flue demolition to excavate the soil three feet below grade in the Flue footprint. A total of 607 truck loads weighting approximately 11,260 tons were hauled from the Blast Furnace Flue and Monier Flue to the CAMU.

The Blast Furnace Baghouse demolition waste was a mixture of brick, wood, metal, concrete, and soil. Excavation of the baghouse footings was also conducted, in which a large quantity of soil was excavated and hauled to the CAMU. A total of 984 truckloads weighing approximately 17,920 tons were hauled from the Blast Furnace Baghouse to the CAMU.

2.3.2 Sample Results

A total of 164 samples were collected from 3,338 truck hauling waste materials to the CAMU Phase 2 Cell. Waste hauled from work areas 1, 2, 4, 5 and 7 accounted for 3,198 truckloads and 161 samples, making the average sampling interval 1 in 19.86 truckloads. Specially

managed wastes, which included asbestos products, acid plant catalyst, baghouse bags, flue dust, and baghouse floor dust, accounted for 140 of these loads, in which three samples were collected. Specially managed wastes were not originally slated for sampling, however samples were collected from these wastes in order to better characterize them. Not as many samples per truckload were collected from specially managed wastes due to the small load size and consistency of the material being hauled. Table 2-3 shows the ranges and average concentrations for As, Cd, Cu, Hg, Pb, Se and Zn in waste materials. Complete analytical results for all collected samples are provided in Attachment C. Beryllium (Be) was below laboratory detection limits for all waste samples other than the Acid Plant catalyst sample.

TABLE 2-3. OVERALL ANALYTICAL RESULTS FOR CAMU WASTE

	As (mg/Kg)	Cd (mg/Kg)	Cu (mg/Kg)	Hg (mg/Kg)	Pb (mg/Kg)	Se (mg/Kg)	Zn (mg/Kg)
Range	39 - 17,200	8 - 86,900	37 - 130,000	<1 - 2,300	126 - 72,300	<5 - 1,490	144 - 151,000
Average	2,522	3,267	4,196	249	20,547	145	9,668

2.3.2.1 Work Area 1

A total of 29 samples were collected and analyzed from waste generated from Blast Furnace Flue and Monier Flue demolition. Waste was sampled at an average sampling interval of 1 in 20.93 trucks from work area one. Icy conditions during hauling of waste from the Monier Flue did not allow for safe sampling. Therefore, two samples that should have been collected were not. Collection of these two additional samples would have generated an average sampling interval of 1 in 19.58 trucks from work area one. Arsenic concentrations ranged from 271 to 17,200 mg/kg and averaged 3,710 mg/kg. Sample 0809-CAMU-147, collected from the Blast Furnace Flue, consisted of flue dust, soil, and broken brick debris had the highest concentration of Arsenic (17,200 mg/kg) of all the samples collected. Cadmium concentrations ranged from 163 to 86,900 mg/kg and averaged 9,350 mg/kg. Sample 0809-CAMU-150, collected from the Monier Flue, consisted of broken concrete debris had the highest concentrations of Cadmium and Zinc (86,900 and 151,000 mg/kg) of all the samples collected. Copper concentrations ranged from 152 to 22,200 mg/kg and averaged 3,471 mg/kg. Mercury concentrations ranged from 9 to 700 mg/kg and averaged 235 mg/kg. Lead concentrations ranged from 753 to 49,400 mg/kg and averaged 20,223 mg/kg. Selenium

concentrations ranged from 7 to 1,450 mg/kg and averaged 157 mg/kg. Zinc concentrations ranged from 836 to 151,000 mg/kg and averaged 20,055 mg/kg.

2.3.2.2 Work Area 2 and 4

Due to the nature of the waste generated from the Spray Dryer building, mainly clean insulation and scrap metal, no samples were collected from truck payloads hauling this debris. One sample was collected and analyzed from waste generated from Acid Plant Cooling Tower demolition. Waste was sampled at a sampling interval of 1 in 15 trucks from the Cooling Tower. The sample collected from the Cooling Tower waste, Sample 0809-CAMU-149, consisted of a mixture of soil and brick. The arsenic, cadmium, copper, mercury, lead, selenium, and zinc concentrations in the sample were 2,720; 5,130; 1,980; 280, 15,900; 30; and 12,600 mg/kg respectively.

A total of 13 samples were collected and analyzed from waste generated from Acid Plant demolition. Waste was sampled at an average sampling interval of 1 in 19.3 trucks from work area four. Arsenic concentrations ranged from 99 to 3,950 mg/kg and averaged 1,478 mg/kg. Cadmium concentrations ranged from 43 to 2,810 mg/kg and averaged 746 mg/kg. Copper concentrations ranged from 277 to 2,700 mg/kg and averaged 1,082 mg/kg. Mercury concentrations ranged from 5 to 780 mg/kg and averaged 153 mg/kg. Lead concentrations ranged from 702 to 15,000 mg/kg and averaged 6,882 mg/kg. Selenium concentrations ranged from <5 to 45 mg/kg and averaged 21 mg/kg. Zinc concentrations ranged from 424 to 24,800 mg/kg and averaged 7,033 mg/kg.

2.3.2.3 Work Area 5

A total of 48 samples were collected and analyzed from waste generated from Blast Furnace Baghouse demolition. Waste was sampled at an average sampling interval of 1 in 20.5 trucks from work area five. Icy conditions during hauling of waste from the Blast furnace Baghouse did not allow for safe sampling. Therefore, one sample that should have been collected was not. Collection of one additional sample would have generated an average sampling interval of 1 in 20 trucks from work area five. Arsenic concentrations ranged from 262 to 10,400

mg/kg and averaged 2,171 mg/kg. Cadmium concentrations ranged from 197 to 29,800 mg/kg and averaged 3,658 mg/kg. Copper concentrations ranged from 37 to 130,000 mg/kg and averaged 3,464 mg/kg. Sample 0809-CAMU-157, collected from the Blast Furnace Baghouse, consisted of broken concrete, soil, and broken brick debris having the highest concentration of Copper (130,000 mg/kg) and Selenium (1,490 mg/kg) of all the samples collected. Mercury concentrations ranged from 8 to 750 mg/kg and averaged 167 mg/kg. Lead concentrations ranged from 126 to 51,000 mg/kg and averaged 11,332 mg/kg. Selenium concentrations ranged from <5 to 1,490 mg/kg and averaged 68 mg/kg. Zinc concentrations ranged from 348 to 71,000 mg/kg and averaged 7,773 mg/kg.

2.3.2.4 Work Area 7

A total of 70 samples were collected and analyzed from waste stored in the Barnum, Bailey, Ringling, and CSHB. Waste was sampled at an average sampling interval of 1 in 18.7 trucks from work area seven. Arsenic concentrations ranged from 39 to 12,400 mg/kg and averaged 2,375 mg/kg. Cadmium concentrations ranged from 8 to 2,880 mg/kg and averaged 705 mg/kg. Copper concentrations ranged from 86 to 31,300 mg/kg and averaged 5,685 mg/kg. Mercury concentrations ranged from 1 to 2,300 mg/kg and averaged 332 mg/kg. Sample 08079-CAMU-104, collected from the Bailey Building, consisted of soil, wood, and concrete and had the highest concentration of Mercury (2,300 mg/kg) of all the samples collected. Lead concentrations ranged from 301 to 72,300 mg/kg and averaged 29,476 mg/kg. Sample 08079-CAMU-157, collected from the CSHB, consisted of soil, wood, and concrete and had the highest concentration of Lead (72,300 mg/kg) of all the samples collected. Selenium concentrations ranged from <5 to 1,010 mg/kg and averaged 215 mg/kg. Zinc concentrations ranged from 144 to 28,700 mg/kg and averaged 6,743 mg/kg.

2.4 WASTE PLACEMENT

Once haul trucks arrived at the CAMU Phase 2 Cell, they drove into the cell and dumped their load in the location specified by the contractor. Asbestos materials were the only material with a designated location, the southeast corner, and were placed in this location as directed by the contractor and the Hydrometrics field engineer. Waste was lightly misted

within the CAMU cell upon visual identification of fugitive dust emissions. Use of water was kept to a minimum. Waste was placed in two-foot lifts and compacted according to the Project Specifications.

2.5 SPECIAL MANAGED WASTE

Special managed materials including asbestos products, acid plant catalyst, baghouse bags, flue dust, and baghouse floor dust were handled and transported separately to the CAMU Phase 2 Cell.

Asbestos products, which had been collected as part of 2007 cleanup activities and stockpiled inside the Direct Smelt Building, were transported directly to the CAMU by IRS Environmental and placed in a designated location. Proper procedures for pretreatment and packaging these wastes were conducted in the demolition areas prior to the materials being stored or loaded onto haul trucks. All friable asbestos which had been wrapped and contained was carefully placed in the CAMU cell in such a manner that the integrity of the wrapping was not breached. At no time was friable asbestos material exposed to the environment. Galvanized asbestos coated steel panels and other non-friable asbestos waste from 2007 and 2008 cleaning activities were also transported to the CAMU by IRS Environmental and treated as general demolition waste. Asbestos waste, both friable and non-friable was covered with soil or other waste material at the end of each work day to maintain the integrity of the wrapped friable asbestos and minimize its environmental exposure. Asbestos materials were not required to be weighed or sampled as part of the SAP.

Some buildings and structures slated for demolition in 2008 were cleaned in preparation for demolition, and the waste generated was hauled to the CAMU. A catalyst material from the Acid Plant was vacuumed out of the Acid Plant Converter, double wrapped in plastic bags, and transported to the CAMU. Prior to hauling the catalyst to the CAMU, the trucks were weighed. A total of 27 trucks carrying approximately 83 tons of catalyst were transported to the CAMU. One sample (0809-CAMU-100) was collected from one of the catalyst bags placed in the CAMU. The sample was analyzed for the same parameters as all waste hauling

samples, but was also analyzed for pH. The catalyst sample was the only sample that contained Beryllium (7 mg/mg) and had a pH of 1.4. Sample results are included in Attachment C. Baghouse bags and floor dust were collected by IRS environmental and double wrapped in plastic, weighed, and transported to the CAMU cell. A total of 44 trucks carrying approximately 54 tons of baghouse waste were transported to and placed in the CAMU cell. Flue dust from both the Blast Furnace Flue and Monier Flue was vacuumed, weighed, and transported to the CAMU cell. A total of 69 trucks carrying approximately 273 tons of flue dust were transported and placed in the CAMU cell. Two samples (0809-CAMU-111 and 0809-CAMU-124) were collected from trucks hauling flue dust. Sample results are included in Attachment C.

3.0 REFERENCES

Hydrometrics, Inc., June 2008. Design Analysis Report Asarco East Helena Corrective Action Management Unit (CAMU) Phase 2 Cell.

ATTACHMENT A

TRUCK WEIGHT SUMMARY

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/7/2008	11:40	524545	78060	36000	42060	0707-1	1	Ringling Building	
7/7/2008	11:45	520990	80520	35540	44980	0707-2	2	Ringling Building	
7/7/2008	11:55	524547	84440	35000	49440	0707-3	3	Ringling Building	
7/7/2008	12:00	520989	78780	36280	42500	0707-4	4	Ringling Building	
7/7/2008	12:05	520996	79900	37820	42080	0707-5	5	Ringling Building	
7/7/2008	13:40	520990	78160	35540	42620	0707-6	6	Ringling Building	
7/7/2008	13:50	524547	77280	35000	42280	0707-7	7	Ringling Building	
7/7/2008	13:55	520989	82600	36280	46320	0707-8	8	Ringling Building	
7/7/2008	14:00	520996	76900	37820	39080	0707-9	9	Ringling Building	
7/7/2008	14:05	524545	78420	36000	42420	0707-10	10	Ringling Building	
7/7/2008	14:10	520990	75980	35540	40440	0707-11	11	Ringling Building	
7/7/2008	14:15	524547	77800	35000	42800	0707-12	12	Ringling Building	
7/7/2008	14:20	520989	78660	36280	42380	0707-13	13	Ringling Building	
7/7/2008	14:25	520996	75760	37820	37940	0707-14	14	Ringling Building	
7/7/2008	14:30	524545	78580	36000	42580	0707-15	15	Ringling Building	
7/7/2008	14:40	520990	79840	35540	44300	0707-16	16	Ringling Building	
7/7/2008	14:45	524547	79060	35000	44060	0707-17	17	Ringling Building	
7/7/2008	14:55	520989	76740	36280	40460	0707-18	18	Ringling Building	0807-CAMU-100
7/7/2008	15:00	520996	77180	37820	39360	0707-19	19	Ringling Building	
7/7/2008	15:10	524545	81920	36000	45920	0707-20	20	Ringling Building	
7/7/2008	15:15	520990	74500	35540	38960	0707-21	21	Ringling Building	
7/7/2008	15:20	524547	78200	35000	43200	0707-22	22	Ringling Building	
7/7/2008	15:25	520996	81280	37820	43460	0707-23	23	Ringling Building	
7/7/2008	15:40	520989	84180	36280	47900	0707-24	24	Ringling Building	
7/7/2008	15:50	524545	85400	36000	49400	0707-25	25	Ringling Building	
7/7/2008	15:55	520990	74060	35540	38520	0707-26	26	Ringling Building	
7/7/2008	16:00	524547	81200	35000	46200	0707-27	27	Ringling Building	
7/7/2008	16:05	520996	75660	37820	37840	0707-28	28	Ringling Building	
7/8/2008	5:54	520996	76520	37820	38700	0708-1	29	Ringling Building	
7/8/2008	5:59	524545	78880	36000	42880	0708-2	30	Ringling Building	
7/8/2008	6:05	520996	80440	37820	42620	0708-3	31	Ringling Building	
7/8/2008	6:14	524545	86320	36000	50320	0708-4	32	Ringling Building	
7/8/2008	6:22	520996	80200	37820	42380	0708-5	33	Ringling Building	
7/8/2008	6:35	524545	82760	36000	46760	0708-6	34	Ringling Building	
7/8/2008	7:00	520990	72920	35540	37380	0708-7	35	Barnum Building	0807-CAMU-101
7/8/2008	7:04	520996	73360	37820	35540	0708-8	36	Barnum Building	
7/8/2008	7:09	524545	75020	36000	39020	0708-9	37	Barnum Building	
7/8/2008	7:36	520996	71920	37820	34100	0708-10	38	Barnum Building	
7/8/2008	7:43	524545	71480	36000	35480	0708-11	39	Barnum Building	
7/8/2008	7:44	520990	69980	35540	34440	0708-12	40	Bailey Building	
7/8/2008	7:48	520989	69660	36280	33380	0708-13	41	Barnum Building	
7/8/2008	7:50	524547	72720	35000	37720	0708-14	42	Bailey Building	
7/8/2008	7:55	520996	74440	37820	36620	0708-15	43	Barnum Building	
7/8/2008	8:00	524545	74820	36000	38820	0708-16	44	Bailey Building	
7/8/2008	8:01	520990	75680	35540	40140	0708-17	45	Barnum Building	
7/8/2008	8:04	520989	75360	36280	39080	0708-18	46	Barnum Building	
7/8/2008	8:08	524547	76380	35000	41380	0708-19	47	Bailey Building	
7/8/2008	8:10	520996	72080	37820	34260	0708-20	48	Barnum Building	
7/8/2008	8:17	520990	69760	35540	34220	0708-21	49	Barnum Building	
7/8/2008	8:19	524545	72480	36000	36480	0708-22	50	Bailey Building	
7/8/2008	8:21	520989	70720	36280	34440	0708-23	51	Barnum Building	
7/8/2008	8:26	520996	59840	37820	22020	0708-24	52	Barnum Building	
7/8/2008	8:27	524547	73720	35000	38720	0708-25	53	Bailey Building	
7/8/2008	8:33	520990	61820	35540	26280	0708-26	54	Barnum Building	
7/8/2008	8:34	524545	76860	36000	40860	0708-27	55	Bailey Building	
7/8/2008	8:40	520989	59540	36280	23260	0708-28	56	Barnum Building	
7/8/2008	8:41	520996	71540	37820	33720	0708-29	57	Bailey Building	
7/8/2008	8:46	524547	52000	35000	17000	0708-30	58	Barnum Building	0807-CAMU-102
7/8/2008	8:50	524545	81140	36000	45140	0708-31	59	Bailey Building	
7/8/2008	8:54	520990	77160	35540	41620	0708-32	60	Bailey Building	
7/8/2008	8:55	520989	63720	36280	27440	0708-33	61	Barnum Building	
7/8/2008	9:05	520996	56900	37820	19080	0708-34	62	Barnum Building	
7/8/2008	9:07	524545	83660	36000	47660	0708-35	63	Bailey Building	
7/8/2008	9:13	524547	83200	35000	48200	0708-36	64	Barnum Building	
7/8/2008	9:15	520990	79100	35540	43560	0708-37	65	Bailey Building	
7/8/2008	9:18	520989	74200	36280	37920	0708-38	66	Barnum Building	
7/8/2008	9:23	520996	72040	37820	34220	0708-39	67	Bailey Building	
7/8/2008	9:28	524545	65640	36000	29640	0708-40	68	Barnum Building	
7/8/2008	9:29	524547	73400	35000	38400	0708-41	69	Bailey Building	
7/8/2008	9:33	520989	59800	36280	23520	0708-42	70	Barnum Building	
7/8/2008	9:37	520990	75320	35540	39780	0708-43	71	Bailey Building	
7/8/2008	9:40	520996	61160	37820	23340	0708-44	72	Barnum Building	
7/8/2008	9:44	524545	72940	36000	36940	0708-45	73	Bailey Building	
7/8/2008	9:46	524547	64300	35000	29300	0708-46	74	Barnum Building	
7/8/2008	9:50	520989	72060	36280	35780	0708-47	75	Bailey Building	
7/8/2008	9:52	520990	79000	35540	43460	0708-48	76	Barnum Building	
7/8/2008	9:58	520996	84600	37820	46780	0708-49	77	Bailey Building	0807-CAMU-103
7/8/2008	9:59	524545	73260	36000	37260	0708-50	78	Barnum Building	
7/8/2008	10:02	524547	71500	35000	36500	0708-51	79	Bailey Building	
7/8/2008	10:03	520989	79100	36280	42820	0708-52	80	Barnum Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/8/2008	10:08	520990	72820	35540	37280	0708-53	81	Bailey Building	
7/8/2008	10:10	524545	75140	36000	39140	0708-54	82	Barnum Building	
7/8/2008	10:19	520996	71760	37820	33940	0708-55	83	Barnum Building	
7/8/2008	10:21	524547	85240	35000	50240	0708-56	84	Bailey Building	
7/8/2008	10:24	520989	69440	36280	33160	0708-57	85	Barnum Building	
7/8/2008	10:30	524545	63140	36000	27140	0708-58	86	Bailey Building	
7/8/2008	10:31	520990	75240	35540	39700	0708-59	87	Barnum Building	
7/8/2008	10:37	520996	61820	37820	24000	0708-60	88	Barnum Building	
7/8/2008	10:43	524547	88040	35000	53040	0708-61	89	Bailey Building	
7/8/2008	10:45	520989	71380	36280	35100	0708-62	90	Barnum Building	
7/8/2008	10:49	524545	86980	36000	50980	0708-63	91	Bailey Building	
7/8/2008	10:53	520990	59060	35540	23520	0708-64	92	Barnum Building	
7/8/2008	10:55	520996	73280	37820	35460	0708-65	93	Bailey Building	
7/8/2008	12:17	524547	81060	35000	46060	0708-66	94	Bailey Building	
7/8/2008	12:20	520989	70240	36280	33960	0708-67	95	Barnum Building	
7/8/2008	12:25	520996	73220	37820	35400	0708-68	96	Bailey Building	0807-CAMU-104
7/8/2008	12:26	524545	78520	36000	42520	0708-69	97	Barnum Building	
7/8/2008	12:37	524547	78680	35000	43680	0708-70	98	Barnum Building	
7/8/2008	12:38	520990	64680	35540	29140	0708-71	99	Bailey Building	
7/8/2008	12:41	520989	72760	36280	36480	0708-72	100	Barnum Building	
7/8/2008	12:44	524545	76460	36000	40460	0708-73	101	Bailey Building	
7/8/2008	12:50	520996	80080	37820	42260	0708-74	102	Barnum Building	
7/8/2008	12:55	524547	84080	35000	49080	0708-75	103	Bailey Building	
7/8/2008	12:57	520990	77980	35540	42440	0708-76	104	Barnum Building	
7/8/2008	13:01	520989	80320	36280	44040	0708-77	105	Bailey Building	
7/8/2008	13:03	524545	74040	36000	38040	0708-78	106	Barnum Building	
7/8/2008	13:09	524547	63920	35000	28920	0708-79	107	Barnum Building	
7/8/2008	13:12	520996	88980	37820	51160	0708-80	108	Bailey Building	
7/8/2008	13:16	520990	75300	35540	39760	0708-81	109	Barnum Building	
7/8/2008	13:20	520989	95480	36280	59200	0708-82	110	Bailey Building	
7/8/2008	13:22	524545	64040	36000	28040	0708-83	111	Barnum Building	
7/8/2008	13:27	520996	67300	37820	29480	0708-84	112	Barnum Building	
7/8/2008	13:30	524547	84520	35000	49520	0708-85	113	Bailey Building	
7/8/2008	13:38	520990	83040	35540	47500	0708-86	114	Bailey Building	
7/8/2008	13:44	520989	60540	36280	24260	0708-87	115	Barnum Building	
7/8/2008	13:46	524545	73000	36000	37000	0708-88	116	Bailey Building	
7/8/2008	13:51	520996	69700	37820	31880	0708-89	117	Bailey Building	0807-CAMU-105
7/8/2008	13:53	524547	66180	35000	31180	0708-90	118	Barnum Building	
7/8/2008	13:58	520989	82460	36280	46180	0708-91	119	Barnum Building	
7/8/2008	14:04	520990	84320	35540	48780	0708-92	120	Bailey Building	
7/8/2008	14:06	524545	79540	36000	43540	0708-93	121	Barnum Building	
7/8/2008	14:11	524547	83320	35000	48320	0708-94	122	Bailey Building	
7/8/2008	14:12	520996	67200	37820	29380	0708-95	123	Barnum Building	
7/8/2008	14:19	520990	77000	35540	41460	0708-96	124	Barnum Building	
7/8/2008	14:25	524545	68720	36000	32720	0708-97	125	Barnum Building	
7/8/2008	14:26	520989	90580	36280	54300	0708-98	126	Bailey Building	
7/8/2008	14:31	520996	67180	37820	29360	0708-99	127	Barnum Building	
7/8/2008	14:37	520990	71480	35540	35940	0708-100	128	Barnum Building	
7/8/2008	14:39	524547	83380	35000	48380	0708-101	129	Bailey Building	
7/8/2008	14:47	520989	84260	36280	47980	0708-102	130	Bailey Building	
7/8/2008	14:52	524545	78560	36000	42560	0708-103	131	Barnum Building	
7/8/2008	14:53	520996	75660	37820	37840	0708-104	132	Bailey Building	
7/8/2008	15:00	520990	84500	35540	48960	0708-105	133	Barnum Building	
7/8/2008	15:04	524547	78480	35000	43480	0708-106	134	Bailey Building	
7/9/2008	6:09	520989	71280	36280	35000	0709-1	135	Barnum Building	
7/9/2008	6:14	520996	57800	37820	19980	0709-2	136	Barnum Building	
7/9/2008	6:20	524545	60920	36000	24920	0709-3	137	Barnum Building	0807-CAMU-106
7/9/2008	6:22	524547	73080	35000	38080	0709-4	138	Barnum Building	
7/9/2008	6:24	520990	58680	35540	23140	0709-5	139	Bailey Building	
7/9/2008	6:31	520996	66240	37820	28420	0709-6	140	Barnum Building	
7/9/2008	6:32	520989	84120	36280	47840	0709-7	141	Bailey Building	
7/9/2008	6:44	524545	75840	36000	39840	0709-8	142	Barnum Building	
7/9/2008	6:48	524547	76240	35000	41240	0709-9	143	Bailey Building	
7/9/2008	6:52	520990	63000	35540	27460	0709-10	144	Barnum Building	
7/9/2008	6:56	520996	76440	37820	38620	0709-11	145	Bailey Building	
7/9/2008	6:59	520989	61460	36280	25180	0709-12	146	Barnum Building	
7/9/2008	7:03	524545	79080	36000	43080	0709-13	147	Bailey Building	
7/9/2008	7:07	524547	62440	35000	27440	0709-14	148	Barnum Building	
7/9/2008	7:21	520996	75000	37820	37180	0709-15	149	Bailey Building	
7/9/2008	7:23	520990	87080	35540	51540	0709-16	150	Barnum Building	
7/9/2008	7:31	524545	88000	36000	52000	0709-17	151	Barnum Building	
7/9/2008	7:34	520989	88440	36280	52160	0709-18	152	Bailey Building	
7/9/2008	7:40	520990	86620	35540	51080	0709-19	153	Bailey Building	
7/9/2008	7:42	524547	63220	35000	28220	0709-20	154	Barnum Building	
7/9/2008	7:51	520996	65220	37820	27400	0709-21	155	Barnum Building	
7/9/2008	7:53	524545	86420	36000	50420	0709-22	156	Bailey Building	
7/9/2008	7:57	520989	65329	36280	29049	0709-23	157	Barnum Building	
7/9/2008	7:59	520990	80360	35540	44820	0709-24	158	Bailey Building	0807-CAMU-107
7/9/2008	8:06	524547	58900	35000	23900	0709-25	159	Barnum Building	
7/9/2008	8:11	520989	64240	36280	27960	0709-26	160	Barnum Building	

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TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/9/2008	8:16	520996	76900	37820	39080	0709-27	161	Bailey Building	
7/9/2008	8:23	520990	68660	35540	33120	0709-28	162	Barnum Building	
7/9/2008	8:24	524545	87220	36000	51220	0709-29	163	Bailey Building	
7/9/2008	8:30	524547	68260	35000	33260	0709-30	164	Barnum Building	
7/9/2008	8:32	520989	86160	36280	49880	0709-31	165	Bailey Building	
7/9/2008	8:36	520996	70460	37820	32640	0709-32	166	Barnum Building	
7/9/2008	8:40	520990	80820	35540	45280	0709-33	167	Bailey Building	
7/9/2008	8:47	524545	72800	36000	36800	0709-34	168	Barnum Building	
7/9/2008	8:53	524547	75220	35000	40220	0709-35	169	Bailey Building	
7/9/2008	8:59	520996	79440	37820	41620	0709-36	170	Barnum Building	
7/9/2008	9:00	520989	86140	36280	49860	0709-37	171	Bailey Building	
7/9/2008	9:06	524545	79980	36000	43980	0709-38	172	Barnum Building	
7/9/2008	9:07	520990	89000	35540	53460	0709-39	173	Bailey Building	
7/9/2008	9:13	520996	80900	37820	43080	0709-40	174	Bailey Building	
7/9/2008	9:15	524547	78200	35000	43200	0709-41	175	Barnum Building	0807-CAMU-108
7/9/2008	9:28	524545	90660	36000	54660	0709-42	176	Bailey Building	
7/9/2008	9:29	520989	85500	36280	49220	0709-43	177	Barnum Building	
7/9/2008	9:36	520990	79380	35540	43840	0709-44	178	Barnum Building	
7/9/2008	9:38	524547	89280	35000	54280	0709-45	179	Bailey Building	
7/9/2008	9:52	520989	77340	36280	41060	0709-46	180	Barnum Building	
7/9/2008	9:54	520990	88620	35540	53080	0709-47	181	Bailey Building	
7/9/2008	10:01	524547	93060	35000	58060	0709-48	182	Bailey Building	
7/9/2008	10:07	520989	81760	36280	45480	0709-49	183	Barnum Building	
7/9/2008	10:12	520990	84440	35540	48900	0709-50	184	Bailey Building	
7/9/2008	10:21	524547	90240	35000	55240	0709-51	185	Barnum Building	
7/9/2008	10:22	524545	83720	36000	47720	0709-52	186	Bailey Building	
7/9/2008	10:26	520989	86380	36280	50100	0709-53	187	Barnum Building	
7/9/2008	10:37	520990	89740	35540	54200	0709-54	188	Bailey Building	
7/9/2008	10:42	520989	76520	36280	40240	0709-55	189	Barnum Building	
7/9/2008	10:45	524545	83520	36000	47520	0709-56	190	Bailey Building	
7/9/2008	10:54	520990	77340	35540	41800	0709-57	191	Barnum Building	
7/9/2008	12:15	524547	74700	35000	39700	0709-58	192	Barnum Building	
7/9/2008	12:27	520989	71900	36280	35620	0709-59	193	Barnum Building	
7/9/2008	12:28	520996	79380	37820	41560	0709-60	194	Bailey Building	
7/9/2008	12:31	524545	70360	36000	34360	0709-61	195	Barnum Building	
7/9/2008	12:35	520990	83620	35540	48080	0709-62	196	Bailey Building	0807-CAMU-109
7/9/2008	12:37	524547	60380	35000	25380	0709-63	197	Barnum Building	
7/9/2008	12:42	520996	73440	37820	35620	0709-64	198	Bailey Building	
7/9/2008	12:43	520989	89620	36280	53340	0709-65	199	Barnum Building	
7/9/2008	12:51	524545	85660	36000	49660	0709-66	200	Bailey Building	
7/9/2008	12:53	524547	74060	35000	39060	0709-67	201	Barnum Building	
7/9/2008	12:58	520996	81520	37820	43700	0709-68	202	Barnum Building	
7/9/2008	13:02	520990	84020	35540	48480	0709-69	203	Bailey Building	
7/9/2008	13:04	520989	79460	36280	43180	0709-70	204	Barnum Building	
7/9/2008	13:10	524547	73820	35000	38820	0709-71	205	Barnum Building	
7/9/2008	13:15	524545	84380	36000	48380	0709-72	206	Bailey Building	
7/9/2008	13:16	520996	69260	37820	31440	0709-73	207	Barnum Building	
7/9/2008	13:21	520989	62400	36280	26120	0709-74	208	Barnum Building	
7/9/2008	13:22	520990	85600	35540	50060	0709-75	209	Bailey Building	
7/9/2008	13:26	524547	59760	35000	24760	0709-76	210	Barnum Building	
7/9/2008	13:30	524545	68080	36000	32080	0709-77	211	Barnum Building	0807-CAMU-110
7/9/2008	13:37	520989	61940	36280	25660	0709-78	212	Bailey Building	
7/9/2008	13:43	520990	63940	35540	28400	0709-79	213	Barnum Building	
7/9/2008	13:49	524547	61460	35000	26460	0709-80	214	Barnum Building	
7/9/2008	13:50	520996	79660	37820	41840	0709-81	215	Bailey Building	
7/9/2008	13:56	524545	77080	36000	41080	0709-82	216	Bailey Building	
7/9/2008	14:02	520989	68260	36280	31980	0709-83	217	Barnum Building	
7/9/2008	14:03	520990	91060	35540	55520	0709-84	218	Bailey Building	
7/9/2008	14:07	524547	66400	35000	31400	0709-85	219	Barnum Building	
7/9/2008	14:10	520996	83340	37820	45520	0709-86	220	Bailey Building	
7/9/2008	14:16	524545	75740	36000	39740	0709-87	221	Barnum Building	
7/9/2008	14:20	520989	86440	36280	50160	0709-88	222	Bailey Building	
7/9/2008	14:22	520990	78800	35540	43260	0709-89	223	Barnum Building	
7/9/2008	14:26	520996	75300	37820	37480	0709-90	224	Barnum Building	
7/9/2008	14:28	524547	91960	35000	56960	0709-91	225	Bailey Building	
7/9/2008	14:31	524545	74460	36000	38460	0709-92	226	Barnum Building	
7/9/2008	14:38	520990	61240	35540	25700	0709-93	227	Barnum Building	
7/9/2008	14:39	520989	84920	36280	48640	0709-94	228	Bailey Building	
7/9/2008	14:44	520996	68600	37820	30780	0709-95	229	Barnum Building	
7/9/2008	14:46	524547	88700	35000	53700	0709-96	230	Bailey Building	
7/9/2008	14:50	524545	78360	36000	42360	0709-97	231	Barnum Building	
7/9/2008	14:55	520990	85780	35540	50240	0709-98	232	Bailey Building	
7/9/2008	14:57	520989	70460	36280	34180	0709-99	233	Barnum Building	
7/9/2008	15:00	520996	87080	37820	49260	0709-100	234	Bailey Building	
7/9/2008	15:07	524547	74520	35000	39520	0709-101	235	Barnum Building	
7/9/2008	15:09	524545	70640	36000	34640	0709-102	236	Bailey Building	0807-CAMU-111
7/9/2008	15:15	520990	82700	35540	47160	0709-103	237	Bailey Building	
7/9/2008	15:17	520989	77680	36280	41400	0709-104	238	Barnum Building	
7/10/2008	5:46	520996	72820	37820	35000	0710-1	239	Bailey Building	
7/10/2008	5:52	520989	71600	36280	35320	0710-2	240	Barnum Building	

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TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/10/2008	5:59	524545	67580	36000	31580	0710-3	241	Barnum Building	
7/10/2008	6:04	524547	70860	35000	35860	0710-4	242	Barnum Building	
7/10/2008	6:12	520996	70520	37820	32700	0710-5	243	Barnum Building	
7/10/2008	6:13	520990	81060	35540	45520	0710-6	244	Bailey Building	
7/10/2008	6:20	520989	77880	36280	41600	0710-7	245	Barnum Building	
7/10/2008	6:21	524545	84640	36000	48640	0710-8	246	Bailey Building	
7/10/2008	6:28	520996	77120	37820	39300	0710-9	247	Barnum Building	
7/10/2008	6:34	520989	72660	36280	36380	0710-10	248	Barnum Building	
7/10/2008	6:38	524547	84340	35000	49340	0710-11	249	Bailey Building	
7/10/2008	6:43	524545	82520	36000	46520	0710-12	250	Barnum Building	
7/10/2008	6:49	520996	83120	37820	45300	0710-13	251	Barnum Building	
7/10/2008	6:55	520989	77600	36280	41320	0710-14	252	Barnum Building	
7/10/2008	6:58	520990	77980	35540	42440	0710-15	253	Bailey Building	
7/10/2008	7:00	524547	79040	35000	44040	0710-16	254	Barnum Building	
7/10/2008	7:06	524545	78220	36000	42220	0710-17	255	Bailey Building	
7/10/2008	7:10	520996	71280	37820	33460	0710-18	256	Barnum Building	0807-CAMU-112
7/10/2008	7:12	520989	68460	36280	32180	0710-19	257	Barnum Building	
7/10/2008	7:22	524547	71500	35000	36500	0710-20	258	Barnum Building	
7/10/2008	7:28	524545	71040	36000	35040	0710-21	259	Barnum Building	
7/10/2008	7:34	520990	68580	35540	33040	0710-22	260	Barnum Building	
7/10/2008	7:40	520989	63940	36280	27660	0710-23	261	Barnum Building	
7/10/2008	7:51	524547	82800	35000	47800	0710-24	262	Bailey Building	
7/10/2008	7:54	520996	63520	37820	25700	0710-25	263	Barnum Building	
7/10/2008	7:58	520990	80900	35540	45360	0710-26	264	Bailey Building	
7/10/2008	8:00	524545	73820	36000	37820	0710-27	265	Barnum Building	
7/10/2008	8:05	520989	89460	36280	53180	0710-28	266	Bailey Building	
7/10/2008	8:10	520996	77600	37820	39780	0710-29	267	Barnum Building	
7/10/2008	8:13	524547	79300	35000	44300	0710-30	268	Bailey Building	
7/10/2008	8:18	524545	63220	36000	27220	0710-31	269	Barnum Building	
7/10/2008	8:23	520989	63160	36280	26880	0710-32	270	Barnum Building	
7/10/2008	8:25	520990	73640	35540	38100	0710-33	271	Bailey Building	0807-CAMU-113
7/10/2008	8:29	520996	60040	37820	22220	0710-34	272	Barnum Building	
7/10/2008	8:36	524547	59820	35000	24820	0710-35	273	Barnum Building	
7/10/2008	8:42	524545	66260	36000	30260	0710-36	274	Barnum Building	
7/10/2008	8:47	520989	61660	36280	25380	0710-37	275	Barnum Building	
7/10/2008	8:52	520996	71000	37820	33180	0710-38	276	Barnum Building	
7/10/2008	9:01	524547	70140	35000	35140	0710-39	277	Barnum Building	
7/10/2008	9:07	520990	69820	35540	34280	0710-40	278	Barnum Building	
7/10/2008	9:12	524545	58120	36000	22120	0710-41	279	Barnum Building	
7/10/2008	9:18	520989	72880	36280	36600	0710-42	280	Barnum Building	
7/10/2008	9:25	520996	65200	37820	27380	0710-43	281	Barnum Building	
7/10/2008	9:31	524547	75600	35000	40600	0710-44	282	Barnum Building	
7/10/2008	9:39	520990	66440	35540	30900	0710-45	283	Barnum Building	
7/10/2008	9:45	524545	61120	36000	25120	0710-46	284	Barnum Building	
7/10/2008	9:53	520989	71520	36280	35240	0710-47	285	Barnum Building	
7/10/2008	10:03	520996	64740	37820	26920	0710-48	286	Barnum Building	
7/10/2008	10:11	524547	68580	35000	33580	0710-49	287	Barnum Building	
7/10/2008	10:20	520990	77520	35540	41980	0710-50	288	Barnum Building	
7/10/2008	10:29	524545	79000	36000	43000	0710-51	289	Barnum Building	
7/10/2008	10:37	520989	69100	36280	32820	0710-52	290	Barnum Building	
7/10/2008	10:44	520996	62020	37820	24200	0710-53	291	Barnum Building	
7/10/2008	10:54	524547	69480	35000	34480	0710-54	292	Barnum Building	0807-CAMU-114
7/10/2008	12:12	520996	71560	37820	33740	0710-55	293	Barnum Building	
7/10/2008	12:13	524545	75220	36000	39220	0710-56	294	Barnum Building	
7/10/2008	12:21	520989	71740	36280	35460	0710-57	295	Barnum Building	
7/10/2008	12:28	524547	65040	35000	30040	0710-58	296	Barnum Building	
7/10/2008	12:33	520990	68460	35540	32920	0710-59	297	Barnum Building	
7/10/2008	12:43	520996	69840	37820	32020	0710-60	298	Barnum Building	
7/10/2008	12:45	524545	66900	36000	30900	0710-61	299	Barnum Building	
7/10/2008	12:53	520989	69760	36280	33480	0710-62	300	Barnum Building	
7/10/2008	12:58	520990	67860	35540	32320	0710-63	301	Barnum Building	
7/10/2008	13:04	520996	67280	37820	29460	0710-64	302	Barnum Building	
7/10/2008	13:10	524545	68280	36000	32280	0710-65	303	Barnum Building	
7/10/2008	13:15	520989	70540	36280	34260	0710-66	304	Barnum Building	
7/10/2008	13:32	520990	79080	35540	43540	0710-67	305	Barnum Building	0807-CAMU-115
7/10/2008	13:37	524547	66640	35000	31640	0710-68	306	Barnum Building	
7/10/2008	13:44	520996	57600	37820	19780	0710-69	307	Barnum Building	
7/10/2008	13:50	524545	57280	36000	21280	0710-70	308	Barnum Building	
7/10/2008	13:57	520989	72660	36280	36380	0710-71	309	Barnum Building	
7/11/2008	5:46	524545	70860	36000	34860	0711-1	310	Barnum Building	
7/11/2008	5:51	520990	66900	35540	31360	0711-2	311	Barnum Building	
7/11/2008	5:57	520989	69020	36280	32740	0711-3	312	Barnum Building	
7/11/2008	6:03	510336	45040	26520	18520	0711-4	313	Barnum Building	
7/11/2008	6:05	510335	44560	26120	18440	0711-5	314	Barnum Building	
7/11/2008	6:08	510090	39900	27220	12680	0711-6	315	Barnum Building	
7/11/2008	6:15	524545	63440	36000	27440	0711-7	316	Barnum Building	0807-CAMU-116
7/11/2008	6:23	520990	60220	35540	24680	0711-8	317	Barnum Building	
7/11/2008	6:28	520989	66120	36280	29840	0711-9	318	Barnum Building	
7/11/2008	6:31	510336	45460	26520	18940	0711-10	319	Barnum Building	
7/11/2008	6:33	510335	42640	26120	16520	0711-11	320	Barnum Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/11/2008	6:36	510090	43260	27220	16040	0711-12	321	Barnum Building	
7/11/2008	6:42	524545	62580	36000	26580	0711-13	322	Barnum Building	
7/11/2008	6:48	520990	57380	35540	21840	0711-14	323	Barnum Building	
7/11/2008	6:53	520989	60840	36280	24560	0711-15	324	Barnum Building	
7/11/2008	6:57	510336	44100	26520	17580	0711-16	325	Barnum Building	
7/11/2008	7:00	510335	41800	26120	15680	0711-17	326	Barnum Building	
7/11/2008	7:02	510090	44860	27220	17640	0711-18	327	Barnum Building	
7/11/2008	7:08	524545	67240	36000	31240	0711-19	328	Barnum Building	
7/11/2008	7:12	520990	60520	35540	24980	0711-20	329	Barnum Building	
7/11/2008	7:17	520989	61280	36280	25000	0711-21	330	Barnum Building	
7/11/2008	7:34	510336	40780	26520	14260	0711-22	331	Barnum Building	
7/11/2008	7:37	510335	41120	26120	15000	0711-23	332	Barnum Building	
7/11/2008	7:40	510090	39100	27220	11880	0711-24	333	Barnum Building	
7/11/2008	7:44	524545	57380	36000	21380	0711-25	334	Barnum Building	0807-CAMU-117
7/11/2008	7:48	520990	60120	35540	24580	0711-26	335	Barnum Building	
7/11/2008	7:54	520989	62980	36280	26700	0711-27	336	Barnum Building	
7/11/2008	7:57	510336	38880	26520	12360	0711-28	337	Barnum Building	
7/11/2008	8:00	510335	38480	26120	12360	0711-29	338	Barnum Building	
7/11/2008	8:02	510090	40720	27220	13500	0711-30	339	Barnum Building	
7/11/2008	8:07	520990	60020	35540	24480	0711-31	340	Barnum Building	
7/11/2008	8:12	524545	69660	36000	33660	0711-32	341	Barnum Building	
7/11/2008	8:17	520989	75320	36280	39040	0711-33	342	Barnum Building	
7/11/2008	8:20	510336	38960	26520	12440	0711-34	343	Barnum Building	
7/11/2008	8:23	510335	39640	26120	13520	0711-35	344	Barnum Building	
7/11/2008	8:26	510090	42760	27220	15540	0711-36	345	Barnum Building	
7/11/2008	8:32	520990	59780	35540	24240	0711-37	346	Barnum Building	
7/11/2008	9:00	524545	77120	36000	41120	0711-38	347	Barnum Building	
7/11/2008	9:10	520989	64960	36280	28680	0711-39	348	Barnum Building	
7/11/2008	9:13	510336	48340	26520	21820	0711-40	349	Barnum Building	
7/11/2008	9:15	510335	48060	26120	21940	0711-41	350	Barnum Building	
7/11/2008	9:17	510090	52260	27220	25040	0711-42	351	Barnum Building	
7/11/2008	9:23	520990	61220	35540	25680	0711-43	352	Barnum Building	0807-CAMU-118
7/11/2008	9:26	510336	49400	26520	22880	0711-44	353	Barnum Building	
7/11/2008	9:30	510335	43100	26120	16980	0711-45	354	Barnum Building	
7/11/2008	9:33	510090	45380	27220	18160	0711-46	355	Barnum Building	
7/11/2008	9:40	510336	39060	26520	12540	0711-47	356	Barnum Building	
7/11/2008	9:44	520990	56840	35540	21300	0711-48	357	Barnum Building	
7/11/2008	9:47	510335	36140	26120	10020	0711-49	358	Barnum Building	
7/11/2008	9:50	510090	44360	27220	17140	0711-50	359	Barnum Building	
7/11/2008	9:53	520989	43300	36280	7020	0711-51	360	Concentrate Storage and Handling Building	
7/11/2008	10:00	510336	41820	26520	15300	0711-52	361	Barnum Building	
7/11/2008	10:04	520990	62120	35540	26580	0711-53	362	Barnum Building	
7/11/2008	10:06	524545	40520	36000	4520	0711-54	363	Concentrate Storage and Handling Building	
7/11/2008	10:08	510335	41080	26120	14960	0711-55	364	Barnum Building	
7/11/2008	10:12	510090	44960	27220	17740	0711-56	365	Barnum Building	
7/11/2008	10:13	510336	40000	26520	13480	0711-57	366	Barnum Building	
7/11/2008	10:19	520989	41100	36280	4820	0711-58	367	Concentrate Storage and Handling Building	
7/11/2008	10:20	520990	69960	35540	34420	0711-59	368	Barnum Building	0807-CAMU-119
7/11/2008	10:24	510335	46480	26120	20360	0711-60	369	Barnum Building	
7/11/2008	10:28	510090	42520	27220	15300	0711-61	370	Barnum Building	
7/11/2008	10:30	510336	40760	26520	14240	0711-62	371	Barnum Building	
7/11/2008	10:35	520989	64320	36280	28040	0711-63	372	Barnum Building	
7/11/2008	10:38	510335	48340	26120	22220	0711-64	373	Barnum Building	
7/11/2008	10:42	524545	36820	36000	820	0711-65	374	Concentrate Storage and Handling Building	
7/11/2008	10:44	520990	67240	35540	31700	0711-66	375	Barnum Building	
7/11/2008	10:47	510090	49200	27220	21980	0711-67	376	Barnum Building	
7/11/2008	10:48	510336	47360	26520	20840	0711-68	377	Barnum Building	
7/11/2008	10:53	520989	79520	36280	43240	0711-69	378	Barnum Building	
7/11/2008	12:12	524545	76360	36000	40360	0711-70	379	Barnum Building	
7/11/2008	12:13	510335	48940	26120	22820	0711-71	380	Barnum Building	
7/11/2008	12:17	520989	69680	36280	33400	0711-72	381	Barnum Building	
7/11/2008	12:20	510336	43600	26520	17080	0711-73	382	Barnum Building	
7/11/2008	12:21	510090	47380	27220	20160	0711-74	383	Barnum Building	
7/11/2008	12:26	524545	70100	36000	34100	0711-75	384	Barnum Building	
7/11/2008	12:29	510335	46040	26120	19920	0711-76	385	Barnum Building	
7/11/2008	12:35	520989	73860	36280	37580	0711-77	386	Barnum Building	0807-CAMU-120
7/11/2008	12:38	510336	44180	26520	17660	0711-78	387	Barnum Building	
7/11/2008	12:39	510090	44840	27220	17620	0711-79	388	Barnum Building	
7/11/2008	12:42	524545	61000	36000	25000	0711-80	389	Barnum Building	
7/11/2008	12:45	510335	38900	26120	12780	0711-81	390	Barnum Building	
7/11/2008	13:02	510336	62540	26520	36020	0711-82	391	Concentrate Storage and Handling Building	
7/11/2008	13:08	510090	69160	27220	41940	0711-83	392	Concentrate Storage and Handling Building	
7/11/2008	13:13	510335	63320	26120	37200	0711-84	393	Concentrate Storage and Handling Building	
7/11/2008	13:16	510336	63440	26520	36920	0711-85	394	Concentrate Storage and Handling Building	
7/11/2008	13:22	510090	71720	27220	44500	0711-86	395	Concentrate Storage and Handling Building	
7/11/2008	13:29	510335	63060	26120	36940	0711-87	396	Concentrate Storage and Handling Building	
7/11/2008	13:33	510336	60240	26520	33720	0711-88	397	Concentrate Storage and Handling Building	
7/11/2008	13:40	510090	66900	27220	39680	0711-89	398	Concentrate Storage and Handling Building	
7/11/2008	13:44	510335	65560	26120	39440	0711-90	399	Concentrate Storage and Handling Building	
7/11/2008	13:46	510336	64860	26520	38340	0711-91	400	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/11/2008	13:54	510090	65760	27220	38540	0711-92	401	Concentrate Storage and Handling Building	
7/11/2008	13:58	510335	55620	26120	29500	0711-93	402	Concentrate Storage and Handling Building	
7/11/2008	14:17	510336	61360	26520	34840	0711-94	403	Concentrate Storage and Handling Building	
7/11/2008	14:25	510090	71040	27220	43820	0711-95	404	Concentrate Storage and Handling Building	0807-CAMU-121
7/11/2008	14:26	510335	60420	26120	34300	0711-96	405	Concentrate Storage and Handling Building	
7/11/2008	14:32	510336	64900	26520	38380	0711-97	406	Concentrate Storage and Handling Building	
7/11/2008	14:46	510336	64000	26520	37480	0711-98	407	Concentrate Storage and Handling Building	
7/11/2008	14:50	510335	63300	26120	37180	0711-99	408	Concentrate Storage and Handling Building	
7/11/2008	14:53	510090	68660	27220	41440	0711-100	409	Concentrate Storage and Handling Building	
7/11/2008	15:00	510336	65400	26520	38880	0711-101	410	Concentrate Storage and Handling Building	
7/11/2008	15:04	510335	62440	26120	36320	0711-102	411	Concentrate Storage and Handling Building	
7/11/2008	15:12	510090	64460	27220	37240	0711-103	412	Concentrate Storage and Handling Building	
7/12/2008	5:44	524545	60100	36000	24100	0712-1	413	Barnum Building	
7/12/2008	5:45	510336	56640	26520	30120	0712-2	414	Concentrate Storage and Handling Building	
7/12/2008	5:48	520989	53860	36280	17580	0712-3	415	Barnum Building	
7/12/2008	5:53	510335	59780	26120	33660	0712-4	416	Concentrate Storage and Handling Building	
7/12/2008	5:57	524545	59780	36000	23780	0712-5	417	Barnum Building	
7/12/2008	6:00	510336	58500	26520	31980	0712-6	418	Concentrate Storage and Handling Building	
7/12/2008	6:02	520989	55920	36280	19640	0712-7	419	Barnum Building	
7/12/2008	6:08	510335	61560	26120	35440	0712-8	420	Concentrate Storage and Handling Building	
7/12/2008	6:09	524545	55180	36000	19180	0712-9	421	Barnum Building	
7/12/2008	6:15	510336	61460	26520	34940	0712-10	422	Concentrate Storage and Handling Building	
7/12/2008	6:16	520989	57820	36280	21540	0712-11	423	Barnum Building	
7/12/2008	6:23	524545	61960	36000	25960	0712-12	424	Barnum Building	
7/12/2008	6:27	510335	54540	26120	28420	0712-13	425	Concentrate Storage and Handling Building	
7/12/2008	6:28	520989	63500	36280	27220	0712-14	426	Barnum Building	0807-CAMU-122
7/12/2008	6:35	524545	65180	36000	29180	0712-15	427	Barnum Building	
7/12/2008	6:41	510335	52280	26120	26160	0712-16	428	Concentrate Storage and Handling Building	
7/12/2008	6:45	520990	63740	35540	28200	0712-17	429	Barnum Building	
7/12/2008	6:52	524545	59000	36000	23000	0712-18	430	Barnum Building	
7/12/2008	6:53	510336	55580	26520	29060	0712-19	431	Concentrate Storage and Handling Building	
7/12/2008	6:57	510335	57020	26120	30900	0712-20	432	Concentrate Storage and Handling Building	
7/12/2008	7:03	520990	51180	35540	15640	0712-21	433	Barnum Building	
7/12/2008	7:08	524545	53700	36000	17700	0712-22	434	Barnum Building	
7/12/2008	7:10	510336	60580	26520	34060	0712-23	435	Concentrate Storage and Handling Building	
7/12/2008	7:13	510335	63740	26120	37620	0712-24	436	Concentrate Storage and Handling Building	
7/12/2008	7:23	510336	59340	26520	32820	0712-25	437	Concentrate Storage and Handling Building	
7/12/2008	7:27	520990	56580	35540	21040	0712-26	438	Barnum Building	
7/12/2008	7:28	510335	60980	26120	34860	0712-27	439	Concentrate Storage and Handling Building	
7/12/2008	7:33	524545	57380	36000	21380	0712-28	440	Barnum Building	
7/12/2008	7:41	520990	53820	35540	18280	0712-29	441	Barnum Building	
7/12/2008	7:43	510336	62200	26520	35680	0712-30	442	Concentrate Storage and Handling Building	
7/12/2008	7:46	524545	56520	36000	20520	0712-31	443	Barnum Building	
7/12/2008	7:48	510335	59340	26120	33220	0712-32	444	Concentrate Storage and Handling Building	0807-CAMU-123
7/12/2008	7:55	520990	52460	35540	16920	0712-33	445	Barnum Building	
7/12/2008	7:59	510336	58440	26520	31920	0712-34	446	Concentrate Storage and Handling Building	
7/12/2008	8:02	524545	59360	36000	23360	0712-35	447	Barnum Building	
7/12/2008	8:05	510335	60280	26120	34160	0712-36	448	Concentrate Storage and Handling Building	
7/12/2008	8:08	520990	54780	35540	19240	0712-37	449	Barnum Building	
7/12/2008	8:18	510336	61500	26520	34980	0712-38	450	Concentrate Storage and Handling Building	
7/12/2008	8:20	524545	58600	36000	22600	0712-39	451	Barnum Building	
7/12/2008	8:21	510335	66240	26120	40120	0712-40	452	Concentrate Storage and Handling Building	
7/12/2008	8:34	510336	58600	26520	32080	0712-41	453	Concentrate Storage and Handling Building	
7/12/2008	8:38	510335	54260	26120	28140	0712-42	454	Concentrate Storage and Handling Building	
7/12/2008	8:53	510335	63700	26120	37580	0712-43	455	Concentrate Storage and Handling Building	
7/12/2008	9:01	510090	65560	27220	38340	0712-44	456	Concentrate Storage and Handling Building	
7/12/2008	9:10	510335	58740	26120	32620	0712-45	457	Concentrate Storage and Handling Building	
7/12/2008	9:20	510090	72880	27220	45660	0712-46	458	Concentrate Storage and Handling Building	
7/12/2008	9:22	520990	49920	35540	14380	0712-47	459	Barnum Building	
7/12/2008	9:25	510335	65360	26120	39240	0712-48	460	Concentrate Storage and Handling Building	
7/12/2008	9:28	524545	53480	36000	17480	0712-49	461	Barnum Building	
7/12/2008	9:36	520990	53860	35540	18320	0712-50	462	Barnum Building	
7/12/2008	9:42	510090	73580	27220	46360	0712-51	463	Concentrate Storage and Handling Building	0807-CAMU-124
7/12/2008	9:43	524545	55060	36000	19060	0712-52	464	Barnum Building	
7/12/2008	9:48	510335	58980	26120	32860	0712-53	465	Concentrate Storage and Handling Building	
7/12/2008	9:50	520990	56160	35540	20620	0712-54	466	Barnum Building	
7/12/2008	10:03	524545	61900	36000	25900	0712-55	467	Barnum Building	
7/12/2008	10:07	510090	69300	27220	42080	0712-56	468	Concentrate Storage and Handling Building	
7/12/2008	10:08	520990	62860	35540	27320	0712-57	469	Barnum Building	
7/12/2008	10:11	510335	64680	26120	38560	0712-58	470	Concentrate Storage and Handling Building	
7/12/2008	10:20	524545	57300	36000	21300	0712-59	471	Barnum Building	
7/12/2008	10:23	510090	71300	27220	44080	0712-60	472	Concentrate Storage and Handling Building	
7/12/2008	10:24	520990	56560	35540	21020	0712-61	473	Barnum Building	
7/12/2008	10:27	510335	61380	26120	35260	0712-62	474	Concentrate Storage and Handling Building	
7/12/2008	10:36	524545	55860	36000	19860	0712-63	475	Barnum Building	
7/12/2008	10:40	510090	76500	27220	49280	0712-64	476	Concentrate Storage and Handling Building	
7/12/2008	10:42	520990	52480	35540	16940	0712-65	477	Barnum Building	
7/12/2008	10:44	510335	68720	26120	42600	0712-66	478	Concentrate Storage and Handling Building	
7/12/2008	10:56	520990	52380	35540	16840	0712-67	479	Barnum Building	
7/12/2008	12:13	510090	64360	27220	37140	0712-68	480	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/12/2008	12:14	524545	53260	36000	17260	0712-69	481	Barnum Building	
7/12/2008	12:15	510335	63120	26120	37000	0712-70	482	Concentrate Storage and Handling Building	
7/12/2008	12:26	520989	54540	36280	18260	0712-71	483	Barnum Building	0807-CAMU-125
7/12/2008	12:32	524545	51520	36000	15520	0712-72	484	Barnum Building	
7/12/2008	12:37	510336	66240	26520	39720	0712-73	485	Concentrate Storage and Handling Building	
7/12/2008	12:40	510335	62180	26120	36060	0712-74	486	Concentrate Storage and Handling Building	
7/12/2008	12:48	524545	51880	36000	15880	0712-75	487	Barnum Building	
7/12/2008	12:54	520989	49980	36280	13700	0712-76	488	Barnum Building	
7/12/2008	12:55	510336	65260	26520	38740	0712-77	489	Concentrate Storage and Handling Building	
7/12/2008	12:57	510335	66000	26120	39880	0712-78	490	Concentrate Storage and Handling Building	
7/12/2008	13:07	520989	53600	36280	17320	0712-79	491	Barnum Building	
7/12/2008	13:13	510335	66800	26120	40680	0712-80	492	Concentrate Storage and Handling Building	
7/12/2008	13:14	524545	51120	36000	15120	0712-81	493	Barnum Building	
7/12/2008	13:16	510336	60900	26520	34380	0712-82	494	Concentrate Storage and Handling Building	
7/12/2008	13:27	520989	57000	36280	20720	0712-83	495	Barnum Building	
7/12/2008	13:30	510335	65240	26120	39120	0712-84	496	Concentrate Storage and Handling Building	
7/12/2008	13:31	524545	59040	36000	23040	0712-85	497	Barnum Building	
7/12/2008	13:34	510336	69360	26520	42840	0712-86	498	Concentrate Storage and Handling Building	
7/12/2008	13:46	520989	55960	36280	19680	0712-87	499	Barnum Building	
7/12/2008	13:48	510335	68780	26120	42660	0712-88	500	Concentrate Storage and Handling Building	0807-CAMU-126
7/12/2008	13:52	510336	67580	26520	41060	0712-89	501	Concentrate Storage and Handling Building	
7/12/2008	13:53	524545	52780	36000	16780	0712-90	502	Barnum Building	
7/12/2008	14:03	520989	57200	36280	20920	0712-91	503	Barnum Building	
7/12/2008	14:08	524545	49200	36000	13200	0712-92	504	Barnum Building	
7/12/2008	14:10	510336	66640	26520	40120	0712-93	505	Concentrate Storage and Handling Building	
7/12/2008	14:14	510335	63980	26120	37860	0712-94	506	Concentrate Storage and Handling Building	
7/12/2008	14:17	520989	54800	36280	18520	0712-95	507	Barnum Building	
7/12/2008	14:30	524545	49720	36000	13720	0712-96	508	Barnum Building	
7/12/2008	14:33	510336	63900	26520	37380	0712-97	509	Concentrate Storage and Handling Building	
7/12/2008	14:36	520989	53180	36280	16900	0712-98	510	Barnum Building	
7/12/2008	14:37	510335	65860	26120	39740	0712-99	511	Concentrate Storage and Handling Building	
7/12/2008	14:50	524545	47240	36000	11240	0712-100	512	Barnum Building	
7/12/2008	14:52	510336	68280	26520	41760	0712-101	513	Concentrate Storage and Handling Building	
7/12/2008	14:55	520989	53840	36280	17560	0712-102	514	Barnum Building	
7/12/2008	14:57	510335	64720	26120	38600	0712-103	515	Concentrate Storage and Handling Building	
7/12/2008	15:10	510336	61840	26520	35320	0712-104	516	Concentrate Storage and Handling Building	
7/12/2008	15:12	520989	56160	36280	19880	0712-105	517	Barnum Building	
7/14/2008	5:59	520990	57840	35540	22300	0714-1	518	Barnum Building	
7/14/2008	6:01	510336	65940	26520	39420	0714-2	519	Concentrate Storage and Handling Building	
7/14/2008	6:05	510335	60100	26120	33980	0714-3	520	Concentrate Storage and Handling Building	0807-CAMU-127
7/14/2008	6:10	510090	72260	27220	45040	0714-4	521	Concentrate Storage and Handling Building	
7/14/2008	6:17	524545	58740	36000	22740	0714-5	522	Barnum Building	
7/14/2008	6:20	510336	64240	26520	37720	0714-6	523	Concentrate Storage and Handling Building	
7/14/2008	6:23	520990	57400	35540	21860	0714-7	524	Barnum Building	
7/14/2008	6:27	510335	60440	26120	34320	0714-8	525	Concentrate Storage and Handling Building	
7/14/2008	6:30	510090	66600	27220	39380	0714-9	526	Concentrate Storage and Handling Building	
7/14/2008	6:33	524545	57000	36000	21000	0714-10	527	Barnum Building	
7/14/2008	6:35	510336	64400	26520	37880	0714-11	528	Concentrate Storage and Handling Building	
7/14/2008	6:39	520990	56640	35540	21100	0714-12	529	Barnum Building	
7/14/2008	6:41	510335	59460	26120	33340	0714-13	530	Concentrate Storage and Handling Building	
7/14/2008	6:44	510090	76080	27220	48860	0714-14	531	Concentrate Storage and Handling Building	
7/14/2008	6:50	524545	58940	36000	22940	0714-15	532	Barnum Building	
7/14/2008	6:52	510336	64480	26520	37960	0714-16	533	Concentrate Storage and Handling Building	
7/14/2008	6:56	520990	58240	35540	22700	0714-17	534	Barnum Building	
7/14/2008	6:57	510335	57060	26120	30940	0714-18	535	Concentrate Storage and Handling Building	
7/14/2008	7:01	510090	73420	27220	46200	0714-19	536	Concentrate Storage and Handling Building	
7/14/2008	7:07	524545	58300	36000	22300	0714-20	537	Barnum Building	0807-CAMU-128
7/14/2008	7:13	520990	58580	35540	23040	0714-21	538	Barnum Building	
7/14/2008	7:15	510336	57880	26520	31360	0714-22	539	Concentrate Storage and Handling Building	
7/14/2008	7:19	510335	66060	26120	39940	0714-23	540	Concentrate Storage and Handling Building	
7/14/2008	7:22	510090	76900	27220	49680	0714-24	541	Concentrate Storage and Handling Building	
7/14/2008	7:29	520989	59440	36280	23160	0714-25	542	Barnum Building	
7/14/2008	7:32	510336	67380	26520	40860	0714-26	543	Concentrate Storage and Handling Building	
7/14/2008	7:36	510335	65700	26120	39580	0714-27	544	Concentrate Storage and Handling Building	
7/14/2008	7:37	520990	62020	35540	26480	0714-28	545	Barnum Building	
7/14/2008	7:43	510090	80740	27220	53520	0714-29	546	Concentrate Storage and Handling Building	
7/14/2008	7:47	524545	63660	36000	27660	0714-30	547	Barnum Building	
7/14/2008	7:48	510336	68560	26520	42040	0714-31	548	Concentrate Storage and Handling Building	
7/14/2008	7:51	510335	68340	26120	42220	0714-32	549	Concentrate Storage and Handling Building	
7/14/2008	7:56	510090	75160	27220	47940	0714-33	550	Concentrate Storage and Handling Building	
7/14/2008	8:07	510336	68740	26520	42220	0714-34	551	Concentrate Storage and Handling Building	
7/14/2008	8:11	510090	71440	27220	44220	0714-35	552	Concentrate Storage and Handling Building	
7/14/2008	8:20	520989	63260	36280	26980	0714-36	553	Bailey Building	0807-CAMU-129
7/14/2008	8:29	510336	67000	26520	40480	0714-37	554	Concentrate Storage and Handling Building	
7/14/2008	8:30	520990	56820	35540	21280	0714-38	555	Bailey Building	
7/14/2008	8:33	510336	73840	26520	47320	0714-39	556	Concentrate Storage and Handling Building	
7/14/2008	8:40	524545	57180	36000	21180	0714-40	557	Bailey Building	
7/14/2008	8:47	510336	60400	26520	33880	0714-41	558	Concentrate Storage and Handling Building	
7/14/2008	8:49	520989	61300	36280	25020	0714-42	559	Bailey Building	
7/14/2008	8:52	510090	62740	27220	35520	0714-43	560	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/14/2008	8:57	510335	64240	26120	38120	0714-44	561	Concentrate Storage and Handling Building	
7/14/2008	9:01	520990	77080	35540	41540	0714-45	562	Bailey Building	
7/14/2008	9:06	510336	63120	26520	36600	0714-46	563	Concentrate Storage and Handling Building	
7/14/2008	9:08	510090	69380	27220	42160	0714-47	564	Concentrate Storage and Handling Building	
7/14/2008	9:10	524545	73380	36000	37380	0714-48	565	Bailey Building	
7/14/2008	9:16	520989	69960	36280	33680	0714-49	566	Bailey Building	
7/14/2008	9:21	510336	61900	26520	35380	0714-50	567	Concentrate Storage and Handling Building	
7/14/2008	9:24	520990	59520	35540	23980	0714-51	568	Bailey Building	
7/14/2008	9:27	510336	63180	26520	36660	0714-52	569	Concentrate Storage and Handling Building	
7/14/2008	9:31	510090	71960	27220	44740	0714-53	570	Concentrate Storage and Handling Building	
7/14/2008	9:32	524545	59020	36000	23020	0714-54	571	Bailey Building	
7/14/2008	9:36	510335	72300	26120	46180	0714-55	572	Concentrate Storage and Handling Building	0807-CAMU-130
7/14/2008	9:41	520989	60840	36280	24560	0714-56	573	Bailey Building	
7/14/2008	9:45	510336	67260	26520	40740	0714-57	574	Concentrate Storage and Handling Building	
7/14/2008	9:48	510090	75240	27220	48020	0714-58	575	Concentrate Storage and Handling Building	
7/14/2008	9:51	520990	75900	35540	40360	0714-59	576	Bailey Building	
7/14/2008	9:58	510335	67000	26120	40880	0714-60	577	Concentrate Storage and Handling Building	
7/14/2008	9:59	524545	72000	36000	36000	0714-61	578	Bailey Building	
7/14/2008	10:00	510336	67080	26520	40560	0714-62	579	Concentrate Storage and Handling Building	
7/14/2008	10:05	510090	72640	27220	45420	0714-63	580	Concentrate Storage and Handling Building	
7/14/2008	10:06	520989	85820	36280	49540	0714-64	581	Bailey Building	
7/14/2008	10:10	520990	72120	35540	36580	0714-65	582	Bailey Building	
7/14/2008	10:19	510335	64300	26120	38180	0714-66	583	Concentrate Storage and Handling Building	
7/14/2008	10:21	524545	77000	36000	41000	0714-67	584	Bailey Building	
7/14/2008	10:23	510336	70980	26520	44460	0714-68	585	Concentrate Storage and Handling Building	
7/14/2008	10:27	510090	80520	27220	53300	0714-69	586	Concentrate Storage and Handling Building	
7/14/2008	10:28	520989	55260	36280	18980	0714-70	587	Bailey Building	
7/14/2008	10:39	510336	72520	26520	46000	0714-71	588	Concentrate Storage and Handling Building	
7/14/2008	10:42	510335	72340	26120	46220	0714-72	589	Concentrate Storage and Handling Building	
7/14/2008	10:44	520989	72000	36280	35720	0714-73	590	Bailey Building	0807-CAMU-131
7/14/2008	10:45	510090	74840	27220	47620	0714-74	591	Concentrate Storage and Handling Building	
7/14/2008	10:53	524545	69900	36000	33900	0714-75	592	Bailey Building	
7/14/2008	12:12	524545	72260	36000	36260	0714-76	593	Bailey Building	
7/14/2008	12:17	510335	61940	26120	35820	0714-77	594	Concentrate Storage and Handling Building	
7/14/2008	12:22	520989	64760	36280	28480	0714-78	595	Bailey Building	
7/14/2008	12:29	510090	77160	27220	49940	0714-79	596	Concentrate Storage and Handling Building	
7/14/2008	12:30	520990	63500	35540	27960	0714-80	597	Bailey Building	
7/14/2008	12:33	510335	69180	26120	43060	0714-81	598	Concentrate Storage and Handling Building	
7/14/2008	12:40	524545	68400	36000	32400	0714-82	599	Bailey Building	
7/14/2008	12:41	510336	64500	26520	37980	0714-83	600	Concentrate Storage and Handling Building	
7/14/2008	12:46	510090	75080	27220	47860	0714-84	601	Concentrate Storage and Handling Building	
7/14/2008	12:47	520989	71200	36280	34920	0714-85	602	Bailey Building	
7/14/2008	12:51	510335	69740	26120	43620	0714-86	603	Concentrate Storage and Handling Building	
7/14/2008	12:55	520990	63240	35540	27700	0714-87	604	Bailey Building	
7/14/2008	12:56	510336	64140	26520	37620	0714-88	605	Concentrate Storage and Handling Building	
7/14/2008	13:01	510090	77200	27220	49980	0714-89	606	Concentrate Storage and Handling Building	
7/14/2008	13:03	524545	61520	36000	25520	0714-90	607	Bailey Building	
7/15/2008	5:46	524545	69280	36000	33280	0715-01	608	Bailey Building	
7/15/2008	5:54	510090	65300	27220	38080	0715-02	609	Concentrate Storage and Handling Building	0807-CAMU-132
7/15/2008	5:57	510335	60400	26120	34280	0715-03	610	Concentrate Storage and Handling Building	
7/15/2008	6:01	510336	66580	26520	40060	0715-04	611	Concentrate Storage and Handling Building	
7/15/2008	6:03	520989	66780	36280	30500	0715-05	612	Bailey Building	
7/15/2008	6:11	510090	72340	27220	45120	0715-06	613	Concentrate Storage and Handling Building	
7/15/2008	6:14	510335	65860	26120	39740	0715-07	614	Concentrate Storage and Handling Building	
7/15/2008	6:16	524545	63940	36000	27940	0715-08	615	Bailey Building	
7/15/2008	6:20	510336	68620	26520	42100	0715-09	616	Concentrate Storage and Handling Building	
7/15/2008	6:22	520989	66600	36280	30320	0715-10	617	Bailey Building	
7/15/2008	6:26	510090	74360	27220	47140	0715-11	618	Concentrate Storage and Handling Building	
7/15/2008	6:30	510335	71360	26120	45240	0715-12	619	Concentrate Storage and Handling Building	
7/15/2008	6:34	524545	64060	36000	28060	0715-13	620	Bailey Building	
7/15/2008	6:37	510336	64860	26520	38340	0715-14	621	Concentrate Storage and Handling Building	
7/15/2008	6:41	520989	61880	36280	25600	0715-15	622	Bailey Building	
7/15/2008	6:49	510335	60400	26120	34280	0715-16	623	Concentrate Storage and Handling Building	
7/15/2008	6:52	510090	73240	27220	46020	0715-17	624	Concentrate Storage and Handling Building	
7/15/2008	6:55	510336	64020	26520	37500	0715-18	625	Concentrate Storage and Handling Building	
7/15/2008	6:58	524545	57740	36000	21740	0715-19	626	Bailey Building	
7/15/2008	7:03	520989	59960	36280	23680	0715-20	627	Bailey Building	
7/15/2008	7:05	510335	62920	26120	36800	0715-21	628	Concentrate Storage and Handling Building	
7/15/2008	7:10	510090	73900	27220	46680	0715-22	629	Concentrate Storage and Handling Building	
7/15/2008	7:13	510336	71540	26520	45020	0715-23	630	Concentrate Storage and Handling Building	
7/15/2008	7:19	524545	60260	36000	24260	0715-24	631	Bailey Building	0807-CAMU-133
7/15/2008	7:21	510335	64940	26120	38820	0715-25	632	Concentrate Storage and Handling Building	
7/15/2008	7:26	520989	71300	36280	35020	0715-26	633	Bailey Building	
7/15/2008	7:27	510090	74180	27220	46960	0715-27	634	Concentrate Storage and Handling Building	
7/15/2008	7:32	510091	72420	27360	45060	0715-28	635	Concentrate Storage and Handling Building	
7/15/2008	7:34	510336	65900	26520	39380	0715-29	636	Concentrate Storage and Handling Building	
7/15/2008	7:40	510335	65880	26120	39760	0715-30	637	Concentrate Storage and Handling Building	
7/15/2008	7:42	520989	69240	36280	32960	0715-31	638	Bailey Building	
7/15/2008	7:44	510090	72180	27220	44960	0715-32	639	Concentrate Storage and Handling Building	
7/15/2008	7:48	524545	78660	36000	42660	0715-33	640	Bailey Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/15/2008	7:49	510091	77460	27360	50100	0715-34	641	Concentrate Storage and Handling Building	
7/15/2008	7:51	510336	66060	26520	39540	0715-35	642	Concentrate Storage and Handling Building	
7/15/2008	7:57	510335	66640	26120	40520	0715-36	643	Concentrate Storage and Handling Building	
7/15/2008	8:01	510090	77440	27220	50220	0715-37	644	Concentrate Storage and Handling Building	
7/15/2008	8:05	520989	79120	36280	42840	0715-38	645	Bailey Building	
7/15/2008	8:08	510091	76120	27360	48760	0715-39	646	Concentrate Storage and Handling Building	
7/15/2008	8:10	510336	59180	26520	32660	0715-40	647	Concentrate Storage and Handling Building	
7/15/2008	8:12	524545	79260	36000	43260	0715-41	648	Bailey Building	
7/15/2008	8:15	510335	64760	26120	38640	0715-42	649	Concentrate Storage and Handling Building	
7/15/2008	8:19	510090	71040	27220	43820	0715-43	650	Concentrate Storage and Handling Building	
7/15/2008	8:22	510091	78660	27360	51300	0715-44	651	Concentrate Storage and Handling Building	0807-CAMU-134
7/15/2008	8:25	520989	79360	36280	43080	0715-45	652	Bailey Building	
7/15/2008	8:26	510336	68980	26520	42460	0715-46	653	Concentrate Storage and Handling Building	
7/15/2008	8:31	510335	69960	26120	43840	0715-47	654	Concentrate Storage and Handling Building	
7/15/2008	8:33	524545	75480	36000	39480	0715-48	655	Bailey Building	
7/15/2008	8:36	510090	69480	27220	42260	0715-49	656	Concentrate Storage and Handling Building	
7/15/2008	8:42	510091	72600	27360	45240	0715-50	657	Concentrate Storage and Handling Building	
7/15/2008	8:45	510336	65760	26520	39240	0715-51	658	Concentrate Storage and Handling Building	
7/15/2008	8:46	520989	86300	36280	50020	0715-52	659	Bailey Building	
7/15/2008	8:49	510335	68180	26120	42060	0715-53	660	Concentrate Storage and Handling Building	
7/15/2008	8:52	510090	74420	27220	47200	0715-54	661	Concentrate Storage and Handling Building	
7/15/2008	8:56	524545	64480	36000	28480	0715-55	662	Bailey Building	
7/15/2008	9:02	510091	72220	27360	44860	0715-56	663	Concentrate Storage and Handling Building	
7/15/2008	9:04	510336	61280	26520	34760	0715-57	664	Concentrate Storage and Handling Building	
7/15/2008	9:07	510335	65980	26120	39860	0715-58	665	Concentrate Storage and Handling Building	
7/15/2008	9:10	510090	77780	27220	50560	0715-59	666	Concentrate Storage and Handling Building	
7/15/2008	9:17	510091	77480	27360	50120	0715-60	667	Concentrate Storage and Handling Building	
7/15/2008	9:18	520989	63900	36280	27620	0715-61	668	Bailey Building	
7/15/2008	9:19	510336	68120	26520	41600	0715-62	669	Concentrate Storage and Handling Building	0807-CAMU-135
7/15/2008	9:25	510335	69320	26120	43200	0715-63	670	Concentrate Storage and Handling Building	
7/15/2008	9:26	524545	68260	36000	32260	0715-64	671	Bailey Building	
7/15/2008	9:29	510090	72840	27220	45620	0715-65	672	Concentrate Storage and Handling Building	
7/15/2008	9:33	510091	73220	27360	45860	0715-66	673	Concentrate Storage and Handling Building	
7/15/2008	9:34	520989	62480	36280	26200	0715-67	674	Bailey Building	
7/15/2008	9:37	510336	62320	26520	35800	0715-68	675	Concentrate Storage and Handling Building	
7/15/2008	9:40	510335	63820	26120	37700	0715-69	676	Concentrate Storage and Handling Building	
7/15/2008	9:43	524545	57820	36000	21820	0715-70	677	Bailey Building	
7/15/2008	9:44	510090	76800	27220	49580	0715-71	678	Concentrate Storage and Handling Building	
7/15/2008	9:47	510091	70720	27360	43360	0715-72	679	Concentrate Storage and Handling Building	
7/15/2008	9:49	520989	65880	36280	29600	0715-73	680	Bailey Building	
7/15/2008	9:57	510336	56500	26520	29980	0715-74	681	Concentrate Storage and Handling Building	
7/15/2008	10:01	524545	75560	36000	39560	0715-75	682	Bailey Building	
7/15/2008	10:02	510335	62760	26120	36640	0715-76	683	Concentrate Storage and Handling Building	
7/15/2008	10:04	510090	70360	27220	43140	0715-77	684	Concentrate Storage and Handling Building	
7/15/2008	10:08	510091	69020	27360	41660	0715-78	685	Concentrate Storage and Handling Building	
7/15/2008	10:10	520989	81640	36280	45360	0715-79	686	Bailey Building	
7/15/2008	10:24	510336	57560	26520	31040	0715-80	687	Concentrate Storage and Handling Building	
7/15/2008	10:26	524545	63500	36000	27500	0715-81	688	Bailey Building	0807-CAMU-136
7/15/2008	10:27	510335	59120	26120	33000	0715-82	689	Concentrate Storage and Handling Building	
7/15/2008	10:30	510090	65060	27220	37840	0715-83	690	Concentrate Storage and Handling Building	
7/15/2008	10:31	520989	61800	36280	25520	0715-84	691	Bailey Building	
7/15/2008	10:35	510091	68020	27360	40660	0715-85	692	Concentrate Storage and Handling Building	
7/15/2008	10:45	520989	69540	36280	33260	0715-86	693	Bailey Building	
7/15/2008	10:46	510336	55300	26520	28780	0715-87	694	Concentrate Storage and Handling Building	
7/15/2008	10:50	510335	61920	26120	35800	0715-88	695	Concentrate Storage and Handling Building	
7/15/2008	10:51	524545	64940	36000	28940	0715-89	696	Bailey Building	
7/15/2008	10:53	510090	69920	27220	42700	0715-90	697	Concentrate Storage and Handling Building	
7/15/2008	10:57	510091	72640	27360	45280	0715-91	698	Concentrate Storage and Handling Building	
7/15/2008	12:05	524545	64460	36000	28460	0715-92	699	Bailey Building	
7/15/2008	12:14	520989	72720	36280	36440	0715-93	700	Bailey Building	
7/15/2008	12:22	510091	38040	27360	10680	0715-94	701	Concentrate Storage and Handling Building	
7/15/2008	12:25	524545	68920	36000	32920	0715-95	702	Bailey Building	
7/15/2008	12:30	510336	47760	26520	21240	0715-96	703	Concentrate Storage and Handling Building	
7/15/2008	12:32	520989	71400	36280	35120	0715-97	704	Bailey Building	
7/15/2008	12:34	510335	43920	26120	17800	0715-98	705	Concentrate Storage and Handling Building	
7/15/2008	12:38	510090	51480	27220	24260	0715-99	706	Concentrate Storage and Handling Building	
7/15/2008	12:42	510091	60020	27360	32660	0715-100	707	Concentrate Storage and Handling Building	0807-CAMU-137
7/15/2008	12:43	524545	73780	36000	37780	0715-101	708	Bailey Building	
7/15/2008	12:48	510336	47560	26520	21040	0715-102	709	Concentrate Storage and Handling Building	
7/15/2008	12:53	520989	72900	36280	36620	0715-103	710	Bailey Building	
7/15/2008	12:54	510335	50320	26120	24200	0715-104	711	Concentrate Storage and Handling Building	
7/15/2008	13:02	524545	73820	36000	37820	0715-105	712	Bailey Building	
7/15/2008	13:06	510090	65520	27220	38300	0715-106	713	Concentrate Storage and Handling Building	
7/15/2008	13:10	510091	65520	27360	38160	0715-107	714	Concentrate Storage and Handling Building	
7/15/2008	13:11	520989	67340	36280	31060	0715-108	715	Bailey Building	
7/15/2008	13:13	510336	57020	26520	30500	0715-109	716	Concentrate Storage and Handling Building	
7/15/2008	13:18	510335	59980	26120	33860	0715-110	717	Concentrate Storage and Handling Building	
7/15/2008	13:21	510090	60580	27220	33360	0715-111	718	Concentrate Storage and Handling Building	
7/15/2008	13:30	524545	79220	36000	43220	0715-112	719	Bailey Building	
7/15/2008	13:31	510091	60460	27360	33100	0715-113	720	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/15/2008	13:33	510336	60400	26520	33880	0715-114	721	Concentrate Storage and Handling Building	
7/15/2008	13:37	510335	54200	26120	28080	0715-115	722	Concentrate Storage and Handling Building	
7/15/2008	13:42	510090	72540	27220	45320	0715-116	723	Concentrate Storage and Handling Building	
7/15/2008	13:44	510091	64840	27360	37480	0715-117	724	Concentrate Storage and Handling Building	
7/15/2008	13:48	510336	61560	26520	35040	0715-118	725	Concentrate Storage and Handling Building	0807-CAMU-138
7/15/2008	13:59	510335	68200	26120	42080	0715-119	726	Concentrate Storage and Handling Building	
7/15/2008	14:02	510090	69740	27220	42520	0715-120	727	Concentrate Storage and Handling Building	
7/15/2008	14:12	510091	61240	27360	33880	0715-121	728	Concentrate Storage and Handling Building	
7/15/2008	14:15	510336	53680	26520	27160	0715-122	729	Concentrate Storage and Handling Building	
7/15/2008	14:19	510335	62500	26120	36380	0715-123	730	Concentrate Storage and Handling Building	
7/15/2008	14:23	510090	67700	27220	40480	0715-124	731	Concentrate Storage and Handling Building	
7/15/2008	14:28	510091	64240	27360	36880	0715-125	732	Concentrate Storage and Handling Building	
7/15/2008	14:30	510336	68200	26520	41680	0715-126	733	Concentrate Storage and Handling Building	
7/15/2008	14:36	510335	55400	26120	29280	0715-127	734	Concentrate Storage and Handling Building	
7/15/2008	14:41	510090	65040	27220	37820	0715-128	735	Concentrate Storage and Handling Building	
7/15/2008	14:47	510091	73940	27360	46580	0715-129	736	Concentrate Storage and Handling Building	
7/15/2008	14:50	510336	63760	26520	37240	0715-130	737	Concentrate Storage and Handling Building	
7/15/2008	14:55	510335	59840	26120	33720	0715-131	738	Concentrate Storage and Handling Building	
7/15/2008	15:00	510090	67200	27220	39980	0715-132	739	Concentrate Storage and Handling Building	
7/15/2008	15:04	510091	60080	27360	32720	0715-133	740	Concentrate Storage and Handling Building	
7/15/2008	15:06	510336	60100	26520	33580	0715-134	741	Concentrate Storage and Handling Building	
7/15/2008	15:08	510335	55520	26120	29400	0715-135	742	Concentrate Storage and Handling Building	0807-CAMU-139
7/15/2008	15:11	510090	63520	27220	36300	0715-136	743	Concentrate Storage and Handling Building	
7/15/2008	15:16	510091	69400	27360	42040	0715-137	744	Concentrate Storage and Handling Building	
7/15/2008	15:23	510336	55440	26520	28920	0715-138	745	Concentrate Storage and Handling Building	
7/15/2008	15:26	510090	57080	27220	29860	0715-139	746	Concentrate Storage and Handling Building	
7/15/2008	15:31	510335	56880	26120	30760	0715-140	747	Concentrate Storage and Handling Building	
7/15/2008	15:34	510091	46520	27360	19160	0715-141	748	Concentrate Storage and Handling Building	
7/16/2008	5:55	510090	50820	27220	23600	0716-1	749	Concentrate Storage and Handling Building	
7/16/2008	6:00	510336	48520	26520	22000	0716-2	750	Concentrate Storage and Handling Building	
7/16/2008	6:04	510091	61640	27360	34280	0716-3	751	Concentrate Storage and Handling Building	
7/16/2008	6:08	510092	27360	27360	0	0716-4	752	Concentrate Storage and Handling Building	
7/16/2008	6:09	510335	58000	26120	31880	0716-5	753	Concentrate Storage and Handling Building	
7/16/2008	6:19	510336	53540	26520	27020	0716-6	754	Concentrate Storage and Handling Building	
7/16/2008	6:19	510090	29540	27220	2320	0716-7	755	Concentrate Storage and Handling Building	
7/16/2008	6:24	510091	58640	27360	31280	0716-8	756	Concentrate Storage and Handling Building	
7/16/2008	6:27	510092	30460	27360	3100	0716-9	757	Concentrate Storage and Handling Building	
7/16/2008	6:39	510090	33980	27220	6760	0716-10	758	Concentrate Storage and Handling Building	
7/16/2008	6:40	510335	41660	26120	15540	0716-11	759	Concentrate Storage and Handling Building	
7/16/2008	6:46	510336	56540	26520	30020	0716-12	760	Concentrate Storage and Handling Building	
7/16/2008	6:51	510092	30680	27360	3320	0716-13	761	Concentrate Storage and Handling Building	
7/16/2008	6:59	510091	56620	27360	29260	0716-14	762	Concentrate Storage and Handling Building	0807-CAMU-140
7/16/2008	7:00	510090	30120	27220	2900	0716-15	763	Concentrate Storage and Handling Building	
7/16/2008	7:03	510335	45480	26120	19360	0716-16	764	Concentrate Storage and Handling Building	
7/16/2008	7:19	510336	47780	26520	21260	0176-17	765	Concentrate Storage and Handling Building	
7/16/2008	7:21	510090	39580	27220	12360	0716-18	766	Concentrate Storage and Handling Building	
7/16/2008	7:25	510091	56240	27360	28880	0716-19	767	Concentrate Storage and Handling Building	
7/16/2008	7:32	510335	53440	26120	27320	0716-20	768	Concentrate Storage and Handling Building	
7/16/2008	7:38	510090	61960	27220	34740	0716-21	769	Concentrate Storage and Handling Building	
7/16/2008	7:43	510336	62080	26520	35560	0716-22	770	Concentrate Storage and Handling Building	
7/16/2008	7:47	510091	58480	27360	31120	0716-23	771	Concentrate Storage and Handling Building	
7/16/2008	7:55	510335	48560	26120	22440	0716-24	772	Concentrate Storage and Handling Building	
7/16/2008	7:57	510090	66960	27220	39740	0716-25	773	Concentrate Storage and Handling Building	
7/16/2008	8:02	510336	45780	26520	19260	0716-26	774	Concentrate Storage and Handling Building	
7/16/2008	8:04	510091	29380	27360	2020	0716-27	775	Concentrate Storage and Handling Building	
7/16/2008	8:10	510092	28640	27360	1280	0716-28	776	Concentrate Storage and Handling Building	
7/16/2008	8:15	510335	56620	26120	30500	0716-29	777	Concentrate Storage and Handling Building	
7/16/2008	8:19	510090	61040	27220	33820	0716-30	778	Concentrate Storage and Handling Building	
7/16/2008	8:19	510091	29740	27360	2380	0716-31	779	Concentrate Storage and Handling Building	
7/16/2008	8:25	510336	60980	26520	34460	0716-32	780	Concentrate Storage and Handling Building	
7/16/2008	8:29	510092	30780	27360	3420	0716-33	781	Concentrate Storage and Handling Building	
7/16/2008	8:38	510336	28020	26520	1500	0716-34	782	Concentrate Storage and Handling Building	
7/16/2008	8:39	510090	56560	27220	29340	0716-35	783	Concentrate Storage and Handling Building	0807-CAMU-141
7/16/2008	8:41	510091	60820	27360	33460	0716-36	784	Concentrate Storage and Handling Building	
7/16/2008	8:49	510335	51700	26120	25580	0716-37	785	Concentrate Storage and Handling Building	
7/16/2008	8:51	510336	28560	26520	2040	0716-38	786	Concentrate Storage and Handling Building	
7/16/2008	8:53	510092	65580	27360	38220	0716-39	787	Concentrate Storage and Handling Building	
7/16/2008	9:00	510091	57160	27360	29800	0716-40	788	Concentrate Storage and Handling Building	
7/16/2008	9:02	510335	27540	26120	1420	0716-41	789	Concentrate Storage and Handling Building	
7/16/2008	9:16	510335	27000	26120	880	0716-42	790	Concentrate Storage and Handling Building	
7/16/2008	9:21	510091	68700	27360	41340	0716-43	791	Concentrate Storage and Handling Building	
7/16/2008	9:33	510092	72940	27360	45580	0716-44	792	Concentrate Storage and Handling Building	
7/16/2008	9:35	510335	27640	26120	1520	0716-45	793	Concentrate Storage and Handling Building	
7/16/2008	9:42	510091	60280	27360	32920	0716-46	794	Concentrate Storage and Handling Building	
7/16/2008	9:45	510090	63360	27220	36140	0716-47	795	Concentrate Storage and Handling Building	
7/16/2008	9:48	510335	27100	26120	980	0716-48	796	Concentrate Storage and Handling Building	
7/16/2008	9:54	510092	64460	27360	37100	0716-49	797	Concentrate Storage and Handling Building	
7/16/2008	10:04	510335	28200	26120	2080	0716-50	798	Concentrate Storage and Handling Building	
7/16/2008	10:11	510091	53200	27360	25840	0716-51	799	Concentrate Storage and Handling Building	
7/16/2008	10:16	510092	66560	27360	39200	0716-52	800	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/16/2008	10:19	510335	27340	26120	1220	0716-53	801	Concentrate Storage and Handling Building	
7/16/2008	10:20	510090	63420	27220	36200	0716-54	802	Concentrate Storage and Handling Building	0807-CAMU-142
7/16/2008	10:33	510335	27580	26120	1460	0716-55	803	Concentrate Storage and Handling Building	
7/16/2008	10:36	510336	60660	26520	34140	0716-56	804	Concentrate Storage and Handling Building	
7/16/2008	10:41	510091	66920	27360	39560	0716-57	805	Concentrate Storage and Handling Building	
7/16/2008	10:45	510092	64560	27360	37200	0716-58	806	Concentrate Storage and Handling Building	
7/16/2008	10:48	510090	65140	27220	37920	0716-59	807	Concentrate Storage and Handling Building	
7/16/2008	10:53	510336	64740	26520	38220	0716-60	808	Concentrate Storage and Handling Building	
7/16/2008	10:56	510335	56240	26120	30120	0716-61	809	Concentrate Storage and Handling Building	
7/16/2008	11:00	510091	66960	27360	39600	0716-62	810	Concentrate Storage and Handling Building	
7/16/2008	12:03	510092	57560	27360	30200	0716-63	811	Concentrate Storage and Handling Building	
7/16/2008	12:09	510336	28180	26520	1660	0716-64	812	Concentrate Storage and Handling Building	
7/16/2008	12:16	510335	52740	26120	26620	0716-65	813	Concentrate Storage and Handling Building	
7/16/2008	12:19	510091	63980	27360	36620	0716-66	814	Concentrate Storage and Handling Building	
7/16/2008	12:24	510092	59300	27360	31940	0716-67	815	Concentrate Storage and Handling Building	
7/16/2008	12:27	510336	59080	26520	32560	0716-68	816	Concentrate Storage and Handling Building	
7/16/2008	12:31	510335	58240	26120	32120	0716-69	817	Concentrate Storage and Handling Building	
7/16/2008	12:37	510091	55500	27360	28140	0716-70	818	Concentrate Storage and Handling Building	
7/16/2008	12:41	510092	59000	27360	31640	0716-71	819	Concentrate Storage and Handling Building	
7/16/2008	12:47	510335	51220	26120	25100	0716-72	820	Concentrate Storage and Handling Building	
7/16/2008	12:49	510336	52140	26520	25620	0716-73	821	Concentrate Storage and Handling Building	0807-CAMU-143
7/16/2008	12:57	510091	54880	27360	27520	0716-74	822	Concentrate Storage and Handling Building	
7/16/2008	13:00	510092	59100	27360	31740	0716-75	823	Concentrate Storage and Handling Building	
7/16/2008	13:04	510090	59920	27220	32700	0716-76	824	Concentrate Storage and Handling Building	
7/16/2008	13:07	510335	56420	26120	30300	0716-77	825	Concentrate Storage and Handling Building	
7/16/2008	13:10	510336	63580	26520	37060	0716-78	826	Concentrate Storage and Handling Building	
7/16/2008	13:15	510091	62300	27360	34940	0716-79	827	Concentrate Storage and Handling Building	
7/16/2008	13:21	510092	63180	27360	35820	0716-80	828	Concentrate Storage and Handling Building	
7/16/2008	13:26	510090	56960	27220	29740	0716-81	829	Concentrate Storage and Handling Building	
7/16/2008	13:30	510335	49960	26120	23840	0716-82	830	Concentrate Storage and Handling Building	
7/16/2008	13:33	510336	53900	26520	27380	0716-83	831	Concentrate Storage and Handling Building	
7/16/2008	13:36	510091	63820	27360	36460	0716-84	832	Concentrate Storage and Handling Building	
7/16/2008	13:41	510092	55900	27360	28540	0716-85	833	Concentrate Storage and Handling Building	
7/16/2008	13:44	510090	52340	27220	25120	0716-86	834	Concentrate Storage and Handling Building	
7/16/2008	13:49	510335	54660	26120	28540	0716-87	835	Concentrate Storage and Handling Building	
7/16/2008	13:51	510336	52080	26520	25560	0716-88	836	Concentrate Storage and Handling Building	
7/16/2008	13:55	510091	63780	27360	36420	0716-89	837	Concentrate Storage and Handling Building	
7/16/2008	13:59	510092	64580	27360	37220	0716-90	838	Concentrate Storage and Handling Building	
7/16/2008	14:27	510090	58640	27220	31420	0716-91	839	Concentrate Storage and Handling Building	0807-CAMU-144
7/16/2008	14:30	510336	47180	26520	20660	0716-92	840	Concentrate Storage and Handling Building	
7/16/2008	14:40	510335	46920	26120	20800	0716-93	841	Concentrate Storage and Handling Building	
7/16/2008	14:44	510091	55880	27360	28520	0716-94	842	Concentrate Storage and Handling Building	
7/16/2008	14:46	510092	63640	27360	36280	0716-95	843	Concentrate Storage and Handling Building	
7/16/2008	15:11	510090	55300	27220	28080	0716-96	844	Concentrate Storage and Handling Building	
7/16/2008	15:17	510336	54920	26520	28400	0716-97	845	Concentrate Storage and Handling Building	
7/17/2008	7:41	510090	57760	27220	30540	0717-1	846	Concentrate Storage and Handling Building	
7/17/2008	7:44	510336	36960	26520	10440	0717-2	847	Concentrate Storage and Handling Building	
7/17/2008	7:48	510091	62140	27360	34780	0717-3	848	Concentrate Storage and Handling Building	
7/17/2008	7:49	510090	57300	27220	30080	0717-4	849	Concentrate Storage and Handling Building	
7/17/2008	8:03	510092	58000	27360	30640	0717-5	850	Concentrate Storage and Handling Building	
7/17/2008	8:05	510335	56760	26120	30640	0717-6	851	Concentrate Storage and Handling Building	
7/17/2008	8:06	510336	37980	26520	11460	0717-7	852	Concentrate Storage and Handling Building	
7/17/2008	8:13	510091	48580	27360	21220	0717-8	853	Concentrate Storage and Handling Building	
7/17/2008	8:20	510090	53040	27220	25820	0717-9	854	Concentrate Storage and Handling Building	
7/17/2008	8:26	510092	64900	27360	37540	0717-10	855	Concentrate Storage and Handling Building	
7/17/2008	8:30	510335	55040	26120	28920	0717-11	856	Concentrate Storage and Handling Building	0807-CAMU-145
7/17/2008	8:33	510091	57760	27360	30400	0717-12	857	Concentrate Storage and Handling Building	
7/17/2008	8:35	510336	53960	26520	27440	0717-13	858	Concentrate Storage and Handling Building	
7/17/2008	8:42	510092	60780	27360	33420	0717-14	859	Concentrate Storage and Handling Building	
7/17/2008	8:43	510090	64920	27220	37700	0717-15	860	Concentrate Storage and Handling Building	
7/17/2008	8:49	510335	50460	26120	24340	0717-16	861	Concentrate Storage and Handling Building	
7/17/2008	8:50	510091	62540	27360	35180	0717-17	862	Concentrate Storage and Handling Building	
7/17/2008	8:52	510336	56720	26520	30200	0717-18	863	Concentrate Storage and Handling Building	
7/17/2008	8:58	510090	62200	27220	34980	0717-19	864	Concentrate Storage and Handling Building	
7/17/2008	8:59	510092	72460	27360	45100	0717-20	865	Concentrate Storage and Handling Building	
7/17/2008	9:09	510091	65320	27360	37960	0717-21	866	Concentrate Storage and Handling Building	
7/17/2008	9:14	510090	62740	27220	35520	0717-22	867	Concentrate Storage and Handling Building	
7/17/2008	9:16	510335	53120	26120	27000	0717-23	868	Concentrate Storage and Handling Building	
7/17/2008	9:20	510336	48940	26520	22420	0717-24	869	Concentrate Storage and Handling Building	
7/17/2008	9:21	510092	54240	27360	26880	0717-25	870	Concentrate Storage and Handling Building	
7/17/2008	9:25	510091	51720	27360	24360	0717-26	871	Concentrate Storage and Handling Building	
7/17/2008	9:32	510090	65860	27220	38640	0717-27	872	Concentrate Storage and Handling Building	
7/17/2008	9:34	510335	56400	26120	30280	0717-28	873	Concentrate Storage and Handling Building	
7/17/2008	9:37	510336	47900	26520	21380	0717-29	874	Concentrate Storage and Handling Building	
7/17/2008	9:41	510091	62980	27360	35620	0717-30	875	Concentrate Storage and Handling Building	
7/17/2008	9:43	510092	43040	27360	15680	0717-31	876	Concentrate Storage and Handling Building	
7/17/2008	9:48	510090	62260	27220	35040	0717-32	877	Concentrate Storage and Handling Building	0807-CAMU-146
7/17/2008	9:52	510335	53680	26120	27560	0717-33	878	Concentrate Storage and Handling Building	
7/17/2008	9:56	510336	58640	26520	32120	0717-34	879	Concentrate Storage and Handling Building	
7/17/2008	9:58	510091	59460	27360	32100	0717-35	880	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/17/2008	10:00	510092	52060	27360	24700	0717-36	881	Concentrate Storage and Handling Building	
7/17/2008	10:03	510090	62860	27220	35640	0717-37	882	Concentrate Storage and Handling Building	
7/17/2008	10:08	510335	59460	26120	33340	0717-38	883	Concentrate Storage and Handling Building	
7/17/2008	10:10	510336	63240	26520	36720	0717-39	884	Concentrate Storage and Handling Building	
7/17/2008	10:14	510091	66480	27360	39120	0717-40	885	Concentrate Storage and Handling Building	
7/17/2008	10:17	510090	67160	27220	39940	0717-41	886	Concentrate Storage and Handling Building	
7/17/2008	10:18	510092	63940	27360	36580	0717-42	887	Concentrate Storage and Handling Building	
7/17/2008	10:24	510335	61280	26120	35160	0717-43	888	Concentrate Storage and Handling Building	
7/17/2008	10:25	510336	60420	26520	33900	0717-44	889	Concentrate Storage and Handling Building	
7/17/2008	10:30	510091	63440	27360	36080	0717-45	890	Concentrate Storage and Handling Building	
7/17/2008	10:31	510090	57920	27220	30700	0717-46	891	Concentrate Storage and Handling Building	
7/17/2008	10:36	510092	51320	27360	23960	0717-47	892	Concentrate Storage and Handling Building	
7/17/2008	10:38	510335	51600	26120	25480	0717-48	893	Concentrate Storage and Handling Building	
7/17/2008	10:42	510336	46580	26520	20060	0717-49	894	Concentrate Storage and Handling Building	
7/17/2008	10:47	510091	58520	27360	31160	0717-50	895	Concentrate Storage and Handling Building	0807-CAMU-147
7/17/2008	10:48	510090	48760	27220	21540	0717-51	896	Concentrate Storage and Handling Building	
7/17/2008	10:55	510335	58260	26120	32140	0717-52	897	Concentrate Storage and Handling Building	
7/17/2008	12:15	510092	66080	27360	38720	0717-53	898	Concentrate Storage and Handling Building	
7/17/2008	12:16	510336	62400	26520	35880	0717-54	899	Concentrate Storage and Handling Building	
7/17/2008	12:18	510091	67400	27360	40040	0717-55	900	Concentrate Storage and Handling Building	
7/17/2008	12:22	510090	68500	27220	41280	0717-56	901	Concentrate Storage and Handling Building	
7/17/2008	12:26	510335	61580	26120	35460	0717-57	902	Concentrate Storage and Handling Building	
7/17/2008	12:30	510092	69280	27360	41920	0717-58	903	Concentrate Storage and Handling Building	
7/17/2008	12:35	510336	66240	26520	39720	0717-59	904	Concentrate Storage and Handling Building	
7/17/2008	12:38	510091	72560	27360	45200	0717-60	905	Concentrate Storage and Handling Building	
7/17/2008	12:42	510090	72680	27220	45460	0717-61	906	Concentrate Storage and Handling Building	
7/17/2008	12:47	510335	65140	26120	39020	0717-62	907	Concentrate Storage and Handling Building	
7/17/2008	12:51	510092	71840	27360	44480	0717-63	908	Concentrate Storage and Handling Building	
7/17/2008	12:54	510336	61440	26520	34920	0717-64	909	Concentrate Storage and Handling Building	
7/17/2008	13:00	510091	70860	27360	43500	0717-65	910	Concentrate Storage and Handling Building	
7/17/2008	13:05	510090	69100	27220	41880	0717-66	911	Concentrate Storage and Handling Building	
7/17/2008	13:08	510335	67040	26120	40920	0717-67	912	Concentrate Storage and Handling Building	
7/17/2008	13:11	510092	77620	27360	50260	0717-68	913	Concentrate Storage and Handling Building	
7/17/2008	13:13	510336	64580	26520	38060	0717-69	914	Concentrate Storage and Handling Building	0807-CAMU-148
7/17/2008	13:17	510091	79380	27360	52020	0717-70	915	Concentrate Storage and Handling Building	
7/17/2008	13:25	510090	69460	27220	42240	0717-71	916	Concentrate Storage and Handling Building	
7/17/2008	13:26	510335	59360	26120	33240	0717-72	917	Concentrate Storage and Handling Building	
7/17/2008	13:29	510092	66820	27360	39460	0717-73	918	Concentrate Storage and Handling Building	
7/17/2008	13:33	510091	72840	27360	45480	0717-74	919	Concentrate Storage and Handling Building	
7/17/2008	13:36	510090	71140	27220	43920	0717-75	920	Concentrate Storage and Handling Building	
7/17/2008	13:45	510336	67340	26520	40820	0717-76	921	Concentrate Storage and Handling Building	
7/17/2008	13:47	510335	61400	26120	35280	0717-77	922	Concentrate Storage and Handling Building	
7/17/2008	13:49	510092	75520	27360	48160	0717-78	923	Concentrate Storage and Handling Building	
7/17/2008	13:51	510091	72960	27360	45600	0717-79	924	Concentrate Storage and Handling Building	
7/17/2008	13:54	510090	72680	27220	45460	0717-80	925	Concentrate Storage and Handling Building	
7/17/2008	14:00	510336	68300	26520	41780	0717-81	926	Concentrate Storage and Handling Building	
7/17/2008	14:04	510335	67800	26120	41680	0717-82	927	Concentrate Storage and Handling Building	
7/17/2008	14:07	510092	72000	27360	44640	0717-83	928	Concentrate Storage and Handling Building	
7/17/2008	14:10	510091	73100	27360	45740	0717-84	929	Concentrate Storage and Handling Building	
7/17/2008	14:15	510090	78220	27220	51000	0717-85	930	Concentrate Storage and Handling Building	
7/17/2008	14:30	510336	62720	26520	36200	0717-86	931	Concentrate Storage and Handling Building	
7/17/2008	14:34	510335	65980	26120	39860	0717-87	932	Concentrate Storage and Handling Building	
7/17/2008	14:38	510092	66220	27360	38860	0717-88	933	Concentrate Storage and Handling Building	0807-CAMU-149
7/17/2008	14:41	510091	70440	27360	43080	0717-89	934	Concentrate Storage and Handling Building	
7/17/2008	14:48	510090	72940	27220	45720	0717-90	935	Concentrate Storage and Handling Building	
7/17/2008	14:50	510336	71480	26520	44960	0717-91	936	Concentrate Storage and Handling Building	
7/17/2008	14:53	510335	64980	26120	38860	0717-92	937	Concentrate Storage and Handling Building	
7/17/2008	15:05	510092	72080	27360	44720	0717-93	938	Concentrate Storage and Handling Building	
7/17/2008	15:07	510091	78000	27360	50640	0717-94	939	Concentrate Storage and Handling Building	
7/17/2008	15:12	510092	75300	27360	47940	0717-95	940	Concentrate Storage and Handling Building	
7/17/2008	15:15	510336	64680	26520	38160	0717-96	941	Concentrate Storage and Handling Building	
7/17/2008	15:18	510335	70840	26120	44720	0717-97	942	Concentrate Storage and Handling Building	
7/18/2008	5:57	510336	57620	26520	31100	0718-1	943	Concentrate Storage and Handling Building	
7/18/2008	6:01	510335	49460	26120	23340	0718-2	944	Concentrate Storage and Handling Building	
7/18/2008	6:06	510092	53160	27360	25800	0718-3	945	Concentrate Storage and Handling Building	
7/18/2008	6:10	510091	58860	27360	31500	0718-4	946	Concentrate Storage and Handling Building	
7/18/2008	6:16	510090	57660	27220	30440	0718-5	947	Concentrate Storage and Handling Building	
7/18/2008	6:18	510335	48540	26120	22420	0718-6	948	Concentrate Storage and Handling Building	
7/18/2008	6:20	510336	52340	26520	25820	0718-7	949	Concentrate Storage and Handling Building	
7/18/2008	6:24	510092	49980	27360	22620	0718-8	950	Concentrate Storage and Handling Building	
7/18/2008	6:29	510091	58160	27360	30800	0718-9	951	Concentrate Storage and Handling Building	
7/18/2008	6:34	510090	55500	27220	28280	0718-10	952	Concentrate Storage and Handling Building	
7/18/2008	6:37	510336	46040	26520	19520	0718-11	953	Concentrate Storage and Handling Building	0807-CAMU-150
7/18/2008	6:42	510335	53540	26120	27420	0718-12	954	Concentrate Storage and Handling Building	
7/18/2008	6:46	510092	51680	27360	24320	0718-13	955	Concentrate Storage and Handling Building	
7/18/2008	6:50	510091	55780	27360	28420	0718-14	956	Concentrate Storage and Handling Building	
7/18/2008	6:55	510090	59240	27220	32020	0718-15	957	Concentrate Storage and Handling Building	
7/18/2008	6:59	510336	50180	26520	23660	0718-16	958	Concentrate Storage and Handling Building	
7/18/2008	7:04	510335	54920	26120	28800	0718-17	959	Concentrate Storage and Handling Building	
7/18/2008	7:07	510092	57500	27360	30140	0718-18	960	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/18/2008	7:11	510091	59540	27360	32180	0718-19	961	Concentrate Storage and Handling Building	
7/18/2008	7:16	510090	62140	27220	34920	0718-20	962	Concentrate Storage and Handling Building	
7/18/2008	7:21	510336	54540	26520	28020	0718-21	963	Concentrate Storage and Handling Building	
7/18/2008	7:27	510335	49100	26120	22980	0718-22	964	Concentrate Storage and Handling Building	
7/18/2008	7:32	510092	60340	27360	32980	0718-23	965	Concentrate Storage and Handling Building	
7/18/2008	7:36	510091	65240	27360	37880	0718-24	966	Concentrate Storage and Handling Building	
7/18/2008	7:41	510090	53780	27220	26560	0718-25	967	Concentrate Storage and Handling Building	
7/18/2008	7:50	510092	45380	27360	18020	0718-26	968	Concentrate Storage and Handling Building	
7/18/2008	7:53	510336	44200	26520	17680	0718-27	969	Concentrate Storage and Handling Building	
7/18/2008	7:58	510335	38160	26120	12040	0718-28	970	Concentrate Storage and Handling Building	0807-CAMU-151
7/18/2008	8:00	510091	47820	27360	20460	0718-29	971	Concentrate Storage and Handling Building	
7/18/2008	8:01	510090	65840	27220	38620	0718-30	972	Concentrate Storage and Handling Building	
7/18/2008	8:10	510092	38600	27360	11240	0718-31	973	Concentrate Storage and Handling Building	
7/18/2008	8:12	510336	64240	26520	37720	0718-32	974	Concentrate Storage and Handling Building	
7/18/2008	8:16	510091	70340	27360	42980	0718-33	975	Concentrate Storage and Handling Building	
7/18/2008	8:22	510090	57140	27220	29920	0718-34	976	Concentrate Storage and Handling Building	
7/18/2008	8:25	510335	37860	26120	11740	0718-35	977	Concentrate Storage and Handling Building	
7/18/2008	8:44	510335	54920	26120	28800	0718-36	978	Concentrate Storage and Handling Building	
7/18/2008	8:47	510336	59540	26520	33020	0718-37	979	Concentrate Storage and Handling Building	
7/18/2008	8:52	510092	70320	27360	42960	0718-38	980	Concentrate Storage and Handling Building	
7/18/2008	8:56	510091	64520	27360	37160	0718-39	981	Concentrate Storage and Handling Building	
7/18/2008	9:01	510090	61620	27220	34400	0718-40	982	Concentrate Storage and Handling Building	
7/18/2008	9:06	510335	61560	26120	35440	0718-41	983	Concentrate Storage and Handling Building	
7/18/2008	9:14	510336	67740	26520	41220	0718-42	984	Concentrate Storage and Handling Building	
7/18/2008	9:18	510092	69000	27360	41640	0718-43	985	Concentrate Storage and Handling Building	
7/18/2008	9:25	510091	59100	27360	31740	0718-44	986	Concentrate Storage and Handling Building	
7/18/2008	9:30	510090	60700	27220	33480	0718-45	987	Concentrate Storage and Handling Building	
7/18/2008	9:40	510335	56100	26120	29980	0718-46	988	Concentrate Storage and Handling Building	
7/18/2008	9:44	510336	60800	26520	34280	0718-47	989	Concentrate Storage and Handling Building	
7/18/2008	9:46	510090	38880	27220	11660	0718-48	990	Concentrate Storage and Handling Building	0807-CAMU-152
7/18/2008	9:51	510092	44700	27360	17340	0718-49	991	Concentrate Storage and Handling Building	
7/18/2008	9:55	510091	41980	27360	14620	0718-50	992	Concentrate Storage and Handling Building	
7/18/2008	10:04	510090	42840	27220	15620	0718-51	993	Concentrate Storage and Handling Building	
7/18/2008	10:05	510335	64980	26120	38860	0718-52	994	Concentrate Storage and Handling Building	
7/18/2008	10:08	510336	59960	26520	33440	0718-53	995	Concentrate Storage and Handling Building	
7/18/2008	10:11	510092	40320	27360	12960	0718-54	996	Concentrate Storage and Handling Building	
7/18/2008	10:15	510091	44260	27360	16900	0718-55	997	Concentrate Storage and Handling Building	
7/18/2008	10:21	510090	43420	27220	16200	0718-56	998	Concentrate Storage and Handling Building	
7/18/2008	10:25	510335	67660	26120	41540	0718-57	999	Concentrate Storage and Handling Building	
7/18/2008	10:28	510092	43440	27360	16080	0718-58	1000	Concentrate Storage and Handling Building	
7/18/2008	10:29	510336	60660	26520	34140	0718-59	1001	Concentrate Storage and Handling Building	
7/18/2008	10:36	510091	45000	27360	17640	0718-60	1002	Concentrate Storage and Handling Building	
7/18/2008	10:40	510335	68860	26120	42740	0718-61	1003	Concentrate Storage and Handling Building	
7/18/2008	10:43	510090	42780	27220	15560	0718-62	1004	Concentrate Storage and Handling Building	
7/18/2008	10:45	510336	67420	26520	40900	0718-63	1005	Concentrate Storage and Handling Building	
7/18/2008	10:50	510092	42660	27360	15300	0718-64	1006	Concentrate Storage and Handling Building	
7/18/2008	10:54	510335	69160	26120	43040	0718-65	1007	Concentrate Storage and Handling Building	
7/18/2008	12:11	510092	45000	27360	17640	0718-66	1008	Concentrate Storage and Handling Building	
7/18/2008	12:18	510335	53300	26120	27180	0718-67	1009	Concentrate Storage and Handling Building	0807-CAMU-153
7/18/2008	12:20	510091	43960	27360	16600	0718-68	1010	Concentrate Storage and Handling Building	
7/18/2008	12:23	510336	56040	26520	29520	0718-69	1011	Concentrate Storage and Handling Building	
7/18/2008	12:29	510090	47500	27220	20280	0718-70	1012	Concentrate Storage and Handling Building	
7/18/2008	12:35	510092	44020	27360	16660	0718-71	1013	Concentrate Storage and Handling Building	
7/18/2008	12:36	510335	58400	26120	32280	0718-72	1014	Concentrate Storage and Handling Building	
7/18/2008	12:39	510091	41120	27360	13760	0718-73	1015	Concentrate Storage and Handling Building	
7/18/2008	12:42	510336	58140	26520	31620	0718-74	1016	Concentrate Storage and Handling Building	
7/18/2008	12:44	510090	37480	27220	10260	0718-75	1017	Concentrate Storage and Handling Building	
7/18/2008	12:51	510092	47720	27360	20360	0718-76	1018	Concentrate Storage and Handling Building	
7/18/2008	12:53	510335	65720	26120	39600	0718-77	1019	Concentrate Storage and Handling Building	
7/18/2008	12:59	510336	71480	26520	44960	0718-78	1020	Concentrate Storage and Handling Building	
7/18/2008	13:01	510091	46720	27360	19360	0718-79	1021	Concentrate Storage and Handling Building	
7/18/2008	13:06	510090	48000	27220	20780	0718-80	1022	Concentrate Storage and Handling Building	
7/18/2008	13:10	510335	65460	26120	39340	0718-81	1023	Concentrate Storage and Handling Building	
7/18/2008	13:16	510336	61420	26520	34900	0718-82	1024	Concentrate Storage and Handling Building	
7/18/2008	13:19	510092	47040	27360	19680	0718-83	1025	Concentrate Storage and Handling Building	
7/18/2008	13:25	510091	45620	27360	18260	0718-84	1026	Concentrate Storage and Handling Building	
7/18/2008	13:26	510335	61940	26120	35820	0718-85	1027	Concentrate Storage and Handling Building	
7/18/2008	13:31	510090	46080	27220	18860	0718-86	1028	Concentrate Storage and Handling Building	0807-CAMU-154
7/18/2008	13:32	510336	64060	26520	37540	0718-87	1029	Concentrate Storage and Handling Building	
7/18/2008	13:37	510092	45940	27360	18580	0718-88	1030	Concentrate Storage and Handling Building	
7/18/2008	13:41	510335	65120	26120	39000	0718-89	1031	Concentrate Storage and Handling Building	
7/18/2008	13:43	510091	46480	27360	19120	0718-90	1032	Concentrate Storage and Handling Building	
7/18/2008	13:47	510336	64320	26520	37800	0718-91	1033	Concentrate Storage and Handling Building	
7/18/2008	13:52	510090	46680	27220	19460	0718-92	1034	Concentrate Storage and Handling Building	
7/18/2008	13:56	510335	63240	26120	37120	0718-93	1035	Concentrate Storage and Handling Building	
7/18/2008	13:58	510092	49420	27360	22060	0718-94	1036	Concentrate Storage and Handling Building	
7/18/2008	14:03	510336	62220	26520	35700	0718-95	1037	Concentrate Storage and Handling Building	
7/18/2008	14:05	510091	46480	27360	19120	0718-96	1038	Concentrate Storage and Handling Building	
7/18/2008	14:10	510090	48020	27220	20800	0718-97	1039	Concentrate Storage and Handling Building	
7/18/2008	14:13	510335	59000	26120	32880	0718-98	1040	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/18/2008	14:17	510336	65540	26520	39020	0718-99	1041	Concentrate Storage and Handling Building	
7/18/2008	14:23	510092	42940	27360	15580	0718-100	1042	Concentrate Storage and Handling Building	
7/18/2008	14:28	510335	60360	26120	34240	0718-101	1043	Concentrate Storage and Handling Building	
7/18/2008	14:30	510091	46000	27360	18640	0718-102	1044	Concentrate Storage and Handling Building	
7/18/2008	14:35	510336	63380	26520	36860	0718-103	1045	Concentrate Storage and Handling Building	
7/18/2008	14:40	510090	44980	27220	17760	0718-104	1046	Concentrate Storage and Handling Building	
7/18/2008	14:43	510335	64000	26120	37880	0718-105	1047	Concentrate Storage and Handling Building	0807-CAMU-155
7/18/2008	14:44	510092	39740	27360	12380	0718-106	1048	Concentrate Storage and Handling Building	
7/18/2008	14:50	510336	61540	26520	35020	0718-107	1049	Concentrate Storage and Handling Building	
7/18/2008	14:52	510091	46700	27360	19340	0718-108	1050	Concentrate Storage and Handling Building	
7/18/2008	14:59	510090	47920	27220	20700	0718-109	1051	Concentrate Storage and Handling Building	
7/18/2008	15:01	510335	65400	26120	39280	0718-110	1052	Concentrate Storage and Handling Building	
7/18/2008	15:05	510336	67940	26520	41420	0718-111	1053	Concentrate Storage and Handling Building	
7/19/2008	5:42	510092	65600	27360	38240	0719-1	1054	Concentrate Storage and Handling Building	
7/19/2008	5:44	510091	65100	27360	37740	0719-2	1055	Concentrate Storage and Handling Building	
7/19/2008	5:46	510335	42620	26120	16500	0719-3	1056	Concentrate Storage and Handling Building	
7/19/2008	5:47	510336	56080	26520	29560	0719-4	1057	Concentrate Storage and Handling Building	
7/19/2008	5:53	510090	48840	27220	21620	0719-5	1058	Concentrate Storage and Handling Building	
7/19/2008	5:55	510092	56580	27360	29220	0719-6	1059	Concentrate Storage and Handling Building	
7/19/2008	6:01	510091	66140	27360	38780	0719-7	1060	Concentrate Storage and Handling Building	
7/19/2008	6:04	510336	58940	26520	32420	0719-8	1061	Concentrate Storage and Handling Building	
7/19/2008	6:10	510090	64180	27220	36960	0719-9	1062	Concentrate Storage and Handling Building	
7/19/2008	6:11	510335	48840	26120	22720	0719-10	1063	Concentrate Storage and Handling Building	
7/19/2008	6:15	510092	59100	27360	31740	0719-11	1064	Concentrate Storage and Handling Building	
7/19/2008	6:20	510336	47000	26520	20480	0719-12	1065	Concentrate Storage and Handling Building	0807-CAMU-156
7/19/2008	6:21	510091	63240	27360	35880	0719-13	1066	Concentrate Storage and Handling Building	
7/19/2008	6:26	510090	59660	27220	32440	0719-14	1067	Concentrate Storage and Handling Building	
7/19/2008	6:43	510091	50700	27360	23340	0719-15	1068	Concentrate Storage and Handling Building	
7/19/2008	6:48	510092	53260	27360	25900	0719-16	1069	Concentrate Storage and Handling Building	
7/19/2008	6:56	510090	64360	27220	37140	0719-17	1070	Concentrate Storage and Handling Building	
7/19/2008	7:02	510336	38320	26520	11800	0719-18	1071	Concentrate Storage and Handling Building	
7/19/2008	7:03	510335	53760	26120	27640	0719-19	1072	Concentrate Storage and Handling Building	
7/19/2008	7:09	510091	58900	27360	31540	0719-20	1073	Concentrate Storage and Handling Building	
7/19/2008	7:15	510336	39720	26520	13200	0719-21	1074	Concentrate Storage and Handling Building	
7/19/2008	7:16	510092	56420	27360	29060	0719-22	1075	Concentrate Storage and Handling Building	
7/19/2008	7:25	510090	58620	27220	31400	0719-23	1076	Concentrate Storage and Handling Building	
7/19/2008	7:29	510336	40500	26520	13980	0719-24	1077	Bailey Building	
7/19/2008	7:37	510090	49220	27220	22000	0719-25	1078	Bailey Building	
7/19/2008	7:41	510336	44300	26520	17780	0719-26	1079	Bailey Building	
7/19/2008	7:45	510335	57120	26120	31000	0719-27	1080	Concentrate Storage and Handling Building	
7/19/2008	7:47	510091	58360	27360	31000	0719-28	1081	Concentrate Storage and Handling Building	
7/19/2008	7:48	510090	51600	27220	24380	0719-29	1082	Bailey Building	
7/19/2008	7:51	510092	58500	27360	31140	0719-30	1083	Concentrate Storage and Handling Building	
7/19/2008	7:57	510336	41760	26520	15240	0719-31	1084	Concentrate Storage and Handling Building	0807-CAMU-157
7/19/2008	7:58	510335	55140	26120	29020	0719-32	1085	Concentrate Storage and Handling Building	
7/19/2008	8:02	510091	61860	27360	34500	0719-33	1086	Concentrate Storage and Handling Building	
7/19/2008	8:04	510092	50220	27360	22860	0719-34	1087	Bailey Building	
7/19/2008	8:13	510335	55340	26120	29220	0719-35	1088	Concentrate Storage and Handling Building	
7/19/2008	8:14	510090	44660	27220	17440	0719-36	1089	Bailey Building	
7/19/2008	8:15	510336	44820	26520	18300	0719-37	1090	Bailey Building	
7/19/2008	8:16	510091	56700	27360	29340	0719-38	1091	Concentrate Storage and Handling Building	
7/19/2008	8:18	510092	39260	27360	11900	0719-39	1092	Bailey Building	
7/19/2008	8:25	510090	33800	27220	6580	0719-40	1093	Bailey Building	
7/19/2008	8:29	510336	39440	26520	12920	0719-41	1094	Bailey Building	
7/19/2008	8:30	510335	52200	26120	26080	0719-42	1095	Concentrate Storage and Handling Building	
7/19/2008	8:34	510091	60860	27360	33500	0719-43	1096	Concentrate Storage and Handling Building	
7/19/2008	8:39	510092	38560	27360	11200	0719-44	1097	Bailey Building	
7/19/2008	8:41	510090	59280	27220	32060	0719-45	1098	Concentrate Storage and Handling Building	
7/19/2008	8:42	510336	45020	26520	18500	0719-46	1099	Bailey Building	
7/19/2008	8:46	510335	53420	26120	27300	0719-47	1100	Concentrate Storage and Handling Building	
7/19/2008	8:50	510091	54080	27360	26720	0719-48	1101	Concentrate Storage and Handling Building	
7/19/2008	8:54	510090	63940	27220	36720	0719-49	1102	Concentrate Storage and Handling Building	0807-CAMU-158
7/19/2008	8:55	510092	42700	27360	15340	0719-50	1103	Concentrate Storage and Handling Building	
7/19/2008	8:57	510336	47220	26520	20700	0719-51	1104	Bailey Building	
7/19/2008	9:00	510335	48060	26120	21940	0719-52	1105	Concentrate Storage and Handling Building	
7/19/2008	9:04	510091	58980	27360	31620	0719-53	1106	Concentrate Storage and Handling Building	
7/19/2008	9:07	510092	44260	27360	16900	0719-54	1107	Bailey Building	
7/19/2008	9:10	510336	43940	26520	17420	0719-55	1108	Bailey Building	
7/19/2008	9:12	510090	62920	27220	35700	0719-56	1109	Concentrate Storage and Handling Building	
7/19/2008	9:19	510335	56160	26120	30040	0719-57	1110	Concentrate Storage and Handling Building	
7/19/2008	9:21	510092	41760	27360	14400	0719-58	1111	Bailey Building	
7/19/2008	9:24	510091	60460	27360	33100	0719-59	1112	Concentrate Storage and Handling Building	
7/19/2008	9:25	510336	38920	26520	12400	0719-60	1113	Bailey Building	
7/19/2008	9:36	510092	42900	27360	15540	0719-61	1114	Concentrate Storage and Handling Building	
7/19/2008	9:39	510090	52800	27220	25580	0719-62	1115	Concentrate Storage and Handling Building	
7/19/2008	9:40	510336	41560	26520	15040	0719-63	1116	Bailey Building	
7/19/2008	9:44	510335	52180	26120	26060	0719-64	1117	Concentrate Storage and Handling Building	
7/19/2008	9:49	510092	40920	27360	13560	0719-65	1118	Concentrate Storage and Handling Building	
7/19/2008	9:55	510336	38800	26520	12280	0719-66	1119	Bailey Building	
7/19/2008	10:02	510091	60680	27360	33320	0719-67	1120	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/19/2008	10:04	510092	35940	27360	8580	0719-68	1121	Bailey Building	
7/19/2008	10:07	510090	62100	27220	34880	0719-69	1122	Concentrate Storage and Handling Building	0807-CAMU-159
7/19/2008	10:10	510336	35800	26520	9280	0719-70	1123	Bailey Building	
7/19/2008	10:17	510335	59800	26120	33680	0719-71	1124	Concentrate Storage and Handling Building	
7/19/2008	10:20	510092	35240	27360	7880	0719-72	1125	Bailey Building	
7/19/2008	10:25	510336	33780	26520	7260	0719-73	1126	Bailey Building	
7/19/2008	10:28	510091	60100	27360	32740	0719-74	1127	Concentrate Storage and Handling Building	
7/19/2008	10:32	510090	60880	27220	33660	0719-75	1128	Concentrate Storage and Handling Building	
7/19/2008	10:35	510092	35940	27360	8580	0719-76	1129	Bailey Building	
7/19/2008	10:41	510336	34040	26520	7520	0719-77	1130	Bailey Building	
7/19/2008	10:48	510335	53340	26120	27220	0719-78	1131	Concentrate Storage and Handling Building	
7/19/2008	10:50	510091	56360	27360	29000	0719-79	1132	Concentrate Storage and Handling Building	
7/19/2008	10:52	510092	33640	27360	6280	0719-80	1133	Bailey Building	
7/19/2008	10:54	510090	54220	27220	27000	0719-81	1134	Concentrate Storage and Handling Building	
7/19/2008	12:05	510336	30680	26520	4160	0719-82	1135	Concentrate Storage and Handling Building	
7/19/2008	12:10	510335	48140	26120	22020	0719-83	1136	Concentrate Storage and Handling Building	
7/19/2008	12:12	510092	33280	27360	5920	0719-84	1137	Bailey Building	
7/19/2008	12:15	510091	56380	27360	29020	0719-85	1138	Concentrate Storage and Handling Building	
7/19/2008	12:19	510090	55920	27220	28700	0719-86	1139	Concentrate Storage and Handling Building	
7/19/2008	12:22	510336	46300	26520	19780	0719-87	1140	Bailey Building	0807-CAMU-160
7/19/2008	12:33	510091	54440	27360	27080	0719-88	1141	Concentrate Storage and Handling Building	
7/19/2008	12:43	510335	51900	26120	25780	0719-89	1142	Concentrate Storage and Handling Building	
7/19/2008	12:47	510090	46020	27220	18800	0719-90	1143	Concentrate Storage and Handling Building	
7/19/2008	12:50	510336	52660	26520	26140	0719-91	1144	Bailey Building	
7/19/2008	12:51	510091	51500	27360	24140	0719-92	1145	Concentrate Storage and Handling Building	
7/19/2008	12:57	510092	55000	27360	27640	0719-93	1146	Concentrate Storage and Handling Building	
7/19/2008	12:58	510335	59080	26120	32960	0719-94	1147	Bailey Building	
7/19/2008	13:01	510090	56700	27220	29480	0719-95	1148	Concentrate Storage and Handling Building	
7/19/2008	13:03	510336	51940	26520	25420	0719-96	1149	Bailey Building	
7/19/2008	13:07	510091	50280	27360	22920	0719-97	1150	Concentrate Storage and Handling Building	
7/19/2008	13:11	510092	62560	27360	35200	0719-98	1151	Bailey Building	
7/19/2008	13:15	510335	53460	26120	27340	0719-99	1152	Concentrate Storage and Handling Building	
7/19/2008	13:21	510090	62540	27220	35320	0719-100	1153	Concentrate Storage and Handling Building	
7/19/2008	13:26	510091	58420	27360	31060	0719-101	1154	Concentrate Storage and Handling Building	
7/19/2008	13:27	510336	56020	26520	29500	0719-102	1155	Bailey Building	
7/19/2008	13:30	510092	56600	27360	29240	0719-103	1156	Concentrate Storage and Handling Building	
7/19/2008	13:35	510335	58300	26120	32180	0719-104	1157	Concentrate Storage and Handling Building	
7/19/2008	13:38	510090	58920	27220	31700	0719-105	1158	Bailey Building	
7/19/2008	13:41	510091	58200	27360	30840	0719-106	1159	Concentrate Storage and Handling Building	
7/19/2008	13:47	510336	53080	26520	26560	0719-107	1160	Concentrate Storage and Handling Building	0807-CAMU-161
7/19/2008	13:51	510092	57420	27360	30060	0719-108	1161	Concentrate Storage and Handling Building	
7/19/2008	13:59	510090	57240	27220	30020	0719-109	1162	Concentrate Storage and Handling Building	
7/19/2008	14:02	510335	42760	26120	16640	0719-110	1163	Concentrate Storage and Handling Building	
7/19/2008	14:05	510091	62560	27360	35200	0719-111	1164	Concentrate Storage and Handling Building	
7/19/2008	14:08	510092	66660	27360	39300	0719-112	1165	Concentrate Storage and Handling Building	
7/19/2008	14:11	510336	50200	26520	23680	0719-113	1166	Concentrate Storage and Handling Building	
7/19/2008	14:13	510090	68980	27220	41760	0719-114	1167	Concentrate Storage and Handling Building	
7/19/2008	14:15	510335	58580	26120	32460	0719-115	1168	Concentrate Storage and Handling Building	
7/19/2008	14:21	510092	69900	27360	42540	0719-116	1169	Concentrate Storage and Handling Building	
7/19/2008	14:22	510091	57640	27360	30280	0719-117	1170	Concentrate Storage and Handling Building	
7/19/2008	14:24	510336	61760	26520	35240	0719-118	1171	Concentrate Storage and Handling Building	
7/19/2008	14:27	510090	68460	27220	41240	0719-119	1172	Concentrate Storage and Handling Building	
7/19/2008	14:30	510335	60580	26120	34460	0719-120	1173	Concentrate Storage and Handling Building	
7/19/2008	14:33	510091	67620	27360	40260	0719-121	1174	Concentrate Storage and Handling Building	
7/19/2008	14:36	510336	62480	26520	35960	0719-122	1175	Concentrate Storage and Handling Building	
7/19/2008	14:39	510090	69040	27220	41820	0719-123	1176	Concentrate Storage and Handling Building	
7/19/2008	14:42	510335	60840	26120	34720	0719-124	1177	Concentrate Storage and Handling Building	
7/19/2008	14:46	510091	71220	27360	43860	0719-125	1178	Concentrate Storage and Handling Building	0807-CAMU-162
7/19/2008	14:49	510336	63680	26520	37160	0719-126	1179	Concentrate Storage and Handling Building	
7/19/2008	14:50	510092	64520	27360	37160	0719-127	1180	Concentrate Storage and Handling Building	
7/19/2008	14:53	510090	66880	27220	39660	0719-128	1181	Concentrate Storage and Handling Building	
7/19/2008	14:55	510335	57520	26120	31400	0719-129	1182	Concentrate Storage and Handling Building	
7/19/2008	15:06	510091	59640	27360	32280	0719-130	1183	Concentrate Storage and Handling Building	
7/19/2008	15:08	510336	63340	26520	36820	0719-131	1184	Concentrate Storage and Handling Building	
7/19/2008	15:09	510090	63120	27220	35900	0719-132	1185	Concentrate Storage and Handling Building	
7/19/2008	15:11	510335	55640	26120	29520	0719-133	1186	Concentrate Storage and Handling Building	
7/19/2008	15:13	510092	55080	27360	27720	0719-134	1187	Concentrate Storage and Handling Building	
7/19/2008	15:23	510091	66020	27360	38660	0719-135	1188	Concentrate Storage and Handling Building	
7/19/2008	15:32	510336	58740	26520	32220	0719-136	1189	Concentrate Storage and Handling Building	
7/19/2008	15:36	510092	41360	27360	14000	0719-137	1190	Concentrate Storage and Handling Building	
7/21/2008	6:05	510092	61660	27360	34300	0721-1	1191	Concentrate Storage and Handling Building	
7/21/2008	6:07	510336	64380	26520	37860	0721-2	1192	Concentrate Storage and Handling Building	
7/21/2008	6:10	510091	62840	27360	35480	0721-3	1193	Concentrate Storage and Handling Building	
7/21/2008	6:13	510090	68780	27220	41560	0721-4	1194	Concentrate Storage and Handling Building	
7/21/2008	6:16	510335	69040	26120	42920	0721-5	1195	Concentrate Storage and Handling Building	
7/21/2008	6:19	510092	66600	27360	39240	0721-6	1196	Concentrate Storage and Handling Building	
7/21/2008	6:22	510336	55740	26520	29220	0721-7	1197	Concentrate Storage and Handling Building	
7/21/2008	6:24	510091	66920	27360	39560	0721-8	1198	Concentrate Storage and Handling Building	0807-CAMU-163
7/21/2008	6:27	510090	69180	27220	41960	0721-9	1199	Concentrate Storage and Handling Building	
7/21/2008	6:29	510335	57160	26120	31040	0721-10	1200	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/21/2008	6:32	510092	72480	27360	45120	0721-11	1201	Concentrate Storage and Handling Building	
7/21/2008	6:35	510336	57700	26520	31180	0721-12	1202	Concentrate Storage and Handling Building	
7/21/2008	6:40	510091	70480	27360	43120	0721-13	1203	Concentrate Storage and Handling Building	
7/21/2008	6:42	510090	70680	27220	43460	0721-14	1204	Concentrate Storage and Handling Building	
7/21/2008	6:45	510335	68320	26120	42200	0721-15	1205	Concentrate Storage and Handling Building	
7/21/2008	6:49	510092	72280	27360	44920	0721-16	1206	Concentrate Storage and Handling Building	
7/21/2008	6:52	510336	67360	26520	40840	0721-17	1207	Concentrate Storage and Handling Building	
7/21/2008	6:55	510091	70500	27360	43140	0721-18	1208	Concentrate Storage and Handling Building	
7/21/2008	6:55	510090	70380	27220	43160	0721-19	1209	Concentrate Storage and Handling Building	
7/21/2008	7:02	510335	57680	26120	31560	0721-20	1210	Concentrate Storage and Handling Building	
7/21/2008	7:07	510092	70120	27360	42760	0721-21	1211	Concentrate Storage and Handling Building	
7/21/2008	7:08	510336	58500	26520	31980	0721-22	1212	Concentrate Storage and Handling Building	
7/21/2008	7:12	510091	67540	27360	40180	0721-23	1213	Concentrate Storage and Handling Building	
7/21/2008	7:15	510335	63820	26120	37700	0721-24	1214	Concentrate Storage and Handling Building	
7/21/2008	7:19	510090	64200	27220	36980	0721-25	1215	Concentrate Storage and Handling Building	
7/21/2008	7:21	510092	69600	27360	42240	0721-26	1216	Concentrate Storage and Handling Building	
7/21/2008	7:24	510336	52200	26520	25680	0721-27	1217	Concentrate Storage and Handling Building	
7/21/2008	7:27	510091	70800	27360	43440	0721-28	1218	Concentrate Storage and Handling Building	0807-CAMU-164
7/21/2008	7:32	510090	81980	27220	54760	0721-29	1219	Concentrate Storage and Handling Building	
7/21/2008	7:35	510092	73100	27360	45740	0721-30	1220	Concentrate Storage and Handling Building	
7/21/2008	7:38	510336	65700	26520	39180	0721-31	1221	Concentrate Storage and Handling Building	
7/21/2008	7:40	510335	37680	26120	11560	0721-32	1222	Concentrate Storage and Handling Building	
7/21/2008	7:43	510091	69020	27360	41660	0721-33	1223	Concentrate Storage and Handling Building	
7/21/2008	7:47	510090	73800	27220	46580	0721-34	1224	Concentrate Storage and Handling Building	
7/21/2008	7:50	510092	68500	27360	41140	0721-35	1225	Concentrate Storage and Handling Building	
7/21/2008	7:54	510336	61580	26520	35060	0721-36	1226	Concentrate Storage and Handling Building	
7/21/2008	7:57	510091	69200	27360	41840	0721-37	1227	Concentrate Storage and Handling Building	
7/21/2008	8:01	510335	42440	26120	16320	0721-38	1228	Concentrate Storage and Handling Building	
7/21/2008	8:02	510090	71860	27220	44640	0721-39	1229	Concentrate Storage and Handling Building	
7/21/2008	8:14	510336	49080	26520	22560	0721-40	1230	Concentrate Storage and Handling Building	
7/21/2008	8:17	510091	62320	27360	34960	0721-41	1231	Concentrate Storage and Handling Building	
7/21/2008	8:18	510335	35600	26120	9480	0721-42	1232	Concentrate Storage and Handling Building	
7/21/2008	8:20	510090	61960	27220	34740	0721-43	1233	Concentrate Storage and Handling Building	
7/21/2008	8:23	510092	66100	27360	38740	0721-44	1234	Concentrate Storage and Handling Building	
7/21/2008	8:26	510336	61220	26520	34700	0721-45	1235	Concentrate Storage and Handling Building	
7/21/2008	8:30	510091	57760	27360	30400	0721-46	1236	Concentrate Storage and Handling Building	
7/21/2008	8:33	510090	63620	27220	36400	0721-47	1237	Concentrate Storage and Handling Building	0807-CAMU-165
7/21/2008	8:34	510335	37720	26120	11600	0721-48	1238	Concentrate Storage and Handling Building	
7/21/2008	8:36	510092	73100	27360	45740	0721-49	1239	Concentrate Storage and Handling Building	
7/21/2008	8:42	510336	65600	26520	39080	0721-50	1240	Concentrate Storage and Handling Building	
7/21/2008	8:45	510091	62440	27360	35080	0721-51	1241	Concentrate Storage and Handling Building	
7/21/2008	8:52	510335	37740	26120	11620	0721-52	1242	Concentrate Storage and Handling Building	
7/21/2008	8:53	510090	63220	27220	36000	0721-53	1243	Concentrate Storage and Handling Building	
7/21/2008	8:57	510092	71520	27360	44160	0721-54	1244	Concentrate Storage and Handling Building	
7/21/2008	9:00	510336	62840	26520	36320	0721-55	1245	Concentrate Storage and Handling Building	
7/21/2008	9:03	510091	57400	27360	30040	0721-56	1246	Concentrate Storage and Handling Building	
7/21/2008	9:07	510090	70700	27220	43480	0721-57	1247	Concentrate Storage and Handling Building	
7/21/2008	9:10	510092	65380	27360	38020	0721-58	1248	Concentrate Storage and Handling Building	
7/21/2008	9:14	510335	45480	26120	19360	0721-59	1249	Concentrate Storage and Handling Building	
7/21/2008	9:17	510091	65020	27360	37660	0721-60	1250	Concentrate Storage and Handling Building	
7/21/2008	9:18	510336	64860	26520	38340	0721-61	1251	Concentrate Storage and Handling Building	
7/21/2008	9:25	510092	57160	27360	29800	0721-62	1252	Concentrate Storage and Handling Building	
7/21/2008	9:28	510090	58560	27220	31340	0721-63	1253	Concentrate Storage and Handling Building	
7/21/2008	9:31	510091	59280	27360	31920	0721-64	1254	Concentrate Storage and Handling Building	
7/21/2008	9:39	510092	66480	27360	39120	0721-65	1255	Concentrate Storage and Handling Building	
7/21/2008	9:41	510335	50140	26120	24020	0721-66	1256	Concentrate Storage and Handling Building	0807-CAMU-166
7/21/2008	9:44	510091	64840	27360	37480	0721-67	1257	Concentrate Storage and Handling Building	
7/21/2008	9:47	510336	65500	26520	38980	0721-68	1258	Concentrate Storage and Handling Building	
7/21/2008	9:51	510090	69000	27220	41780	0721-69	1259	Concentrate Storage and Handling Building	
7/21/2008	9:55	510092	70360	27360	43000	0721-70	1260	Concentrate Storage and Handling Building	
7/21/2008	9:58	510091	66000	27360	38640	0721-71	1261	Concentrate Storage and Handling Building	
7/21/2008	10:10	510090	67640	27220	40420	0721-72	1262	Concentrate Storage and Handling Building	
7/21/2008	10:12	510335	50500	26120	24380	0721-73	1263	Concentrate Storage and Handling Building	
7/21/2008	10:13	510336	64240	26520	37720	0721-74	1264	Concentrate Storage and Handling Building	
7/21/2008	10:16	510092	51900	27360	24540	0721-75	1265	Concentrate Storage and Handling Building	
7/21/2008	10:21	510091	62640	27360	35280	0721-76	1266	Concentrate Storage and Handling Building	
7/21/2008	10:25	510090	73020	27220	45800	0721-77	1267	Concentrate Storage and Handling Building	
7/21/2008	10:33	510336	60600	26520	34080	0721-78	1268	Concentrate Storage and Handling Building	
7/21/2008	10:36	510335	60200	26120	34080	0721-79	1269	Concentrate Storage and Handling Building	
7/21/2008	10:39	510092	70600	27360	43240	0721-80	1270	Concentrate Storage and Handling Building	
7/21/2008	10:42	510091	64140	27360	36780	0721-81	1271	Concentrate Storage and Handling Building	
7/21/2008	10:45	510090	67120	27220	39900	0721-82	1272	Concentrate Storage and Handling Building	
7/21/2008	10:45	510090	67120	27220	39900	0721-82	1273	Concentrate Storage and Handling Building	
7/21/2008	10:47	510336	62480	26520	35960	0721-83	1274	Concentrate Storage and Handling Building	
7/21/2008	10:51	510335	64320	26120	38200	0721-84	1275	Concentrate Storage and Handling Building	
7/21/2008	12:15	510335	55700	26120	29580	0721-85	1276	Concentrate Storage and Handling Building	0807-CAMU-167
7/21/2008	12:18	510336	57540	26520	31020	0721-86	1277	Concentrate Storage and Handling Building	
7/21/2008	12:27	510090	65960	27220	38740	0721-87	1278	Concentrate Storage and Handling Building	
7/21/2008	12:28	510091	60740	27360	33380	0721-88	1279	Concentrate Storage and Handling Building	
7/21/2008	12:29	510092	63680	27360	36320	0721-89	1280	Concentrate Storage and Handling Building	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
7/21/2008	12:47	510335	60860	26120	34740	0721-90	1281	Concentrate Storage and Handling Building	
7/21/2008	13:07	510335	72600	26120	46480	0721-91	1282	Concentrate Storage and Handling Building	
7/21/2008	13:29	510335	52740	26120	26620	0721-92	1283	Concentrate Storage and Handling Building	
7/21/2008	13:54	510335	58660	26120	32540	0721-93	1284	Concentrate Storage and Handling Building	
7/21/2008	14:34	510335	33360	26120	7240	0721-94	1285	Concentrate Storage and Handling Building	
7/22/2008	7:36	524547	40020	35000	5020	0722-1	1286	Concentrate Storage and Handling Building	
7/22/2008	8:00	524547	43800	35000	8800	0722-2	1287	Concentrate Storage and Handling Building	
7/22/2008	8:15	524547	39420	35000	4420	0722-3	1288	Concentrate Storage and Handling Building	
7/22/2008	8:35	524547	41880	35000	6880	0722-4	1289	Concentrate Storage and Handling Building	
7/22/2008	8:53	524547	41920	35000	6920	0722-5	1290	Concentrate Storage and Handling Building	
7/22/2008	9:10	524547	42420	35000	7420	0722-6	1291	Concentrate Storage and Handling Building	
7/22/2008	9:27	524547	42540	35000	7540	0722-7	1292	Concentrate Storage and Handling Building	
7/22/2008	9:48	524547	41860	35000	6860	0722-8	1293	Concentrate Storage and Handling Building	
7/22/2008	10:02	524547	38380	35000	3380	0722-9	1294	Concentrate Storage and Handling Building	
7/22/2008	10:20	524547	40660	35000	5660	0722-10	1295	Concentrate Storage and Handling Building	
7/22/2008	10:44	524547	45040	35000	10040	0722-11	1296	Concentrate Storage and Handling Building	
7/22/2008	11:09	524547	57900	35000	22900	0722-12	1297	Concentrate Storage and Handling Building	
7/22/2008	13:23	524547	88460	35000	53460	0722-13	1298	Concentrate Storage and Handling Building	0807-CAMU-168
7/22/2008	13:55	524547	73160	35000	38160	0722-14	1299	Concentrate Storage and Handling Building	
7/23/2008	8:04	510335	48040	26120	21920	0723-01	1300	Concentrate Storage and Handling Building	
7/23/2008	10:22	510335	39880	26120	13760	0723-02	1301	Concentrate Storage and Handling Building	
7/23/2008	13:35	510335	49940	26120	23820	0723-03	1302	Concentrate Storage and Handling Building	0807-CAMU-169
7/23/2008	14:26	510335	43620	26120	17500	0723-04	1303	Ringling Building	
7/23/2008	14:54	510335	42420	26120	16300	0723-05	1304	Ringling Building	
7/23/2008	15:20	510335	37840	26120	11720	0723-06	1305	Bailey Building	
7/29/2008	14:04	510335	57060	26120	30940	0723-01	1306	Concentrate Storage and Handling Building	
7/29/2008	14:44	510335	58700	26120	32580	0723-02	1307	Concentrate Storage and Handling Building	
7/29/2008	15:11	510335	64100	26120	37980	0723-03	1308	Concentrate Storage and Handling Building	
7/29/2008	15:41	510335	60120	26120	34000	0723-04	1309	Concentrate Storage and Handling Building	
7/29/2008	16:48	510335	41720	26120	15600	0723-05	1310	Bailey Building	
8/27/2008	14:03	1	16820	13740	3080	0827-1	1311	Baghouse Bags	
8/27/2008	15:26	1	17120	13740	3380	0827-2	1312	Baghouse Bags	
8/27/2008	16:31	1	17040	13740	3300	0827-3	1313	Baghouse Bags	
8/27/2008	12:13	1	17380	13740	3640	0827-4	1314	Baghouse Bags	
8/28/2008	13:43	1	17480	13740	3740	0828-1	1315	Baghouse Bags	
8/28/2008	14:58	1	18000	13740	4260	0828-2	1316	Baghouse Bags	
8/29/2008	7:48	1	18520	13740	4780	0829-1	1317	Baghouse Bags	
8/29/2008	9:57	1	17660	13740	3920	0829-2	1318	Baghouse Bags	
9/3/2008	7:13	2	16660	12700	3960	0903-1	1319	Acid Plant Catalyst	
9/3/2008	7:43	1	16960	13740	3220	0903-2	1320	Baghouse Bags	
9/3/2008	8:07	1	18340	13740	4600	0903-3	1321	Baghouse Bags	
9/3/2008	10:14	2	16820	12700	4120	0903-4	1322	Acid Plant Catalyst	
9/3/2008	10:33	1	16940	13740	3200	0903-5	1323	Baghouse Bags	
9/3/2008	13:58	2	17960	12700	5260	0903-6	1324	Acid Plant Catalyst	
9/3/2008	16:10	1	17060	13740	3320	0903-7	1325	Baghouse Bags	
9/3/2008	16:39	2	16740	12700	4040	0903-8	1326	Acid Plant Catalyst	
9/4/2008	9:57	2	19580	12700	6880	0904-1	1327	Acid Plant Catalyst	
9/4/2008	10:15	1	16860	13740	3120	0904-2	1328	Baghouse Bags	
9/4/2008	14:36	2	19120	12700	6420	0904-3	1329	Acid Plant Catalyst	
9/4/2008	16:41	2	18300	12700	5600	0904-4	1330	Acid Plant Catalyst	
9/5/2008	6:55	1	17040	13740	3300	0905-1	1331	Baghouse Bags	
9/5/2008	8:26	2	18320	12700	5620	0905-2	1332	Acid Plant Catalyst	
9/5/2008	10:58	2	20100	12700	7400	0905-3	1333	Acid Plant Catalyst	
9/5/2008	11:34	1	16700	13740	2960	0905-4	1334	Baghouse Bags	
9/5/2008	12:36	2	17620	12700	4920	0905-5	1335	Acid Plant Catalyst	
9/6/2008	10:52	2	19520	12700	6820	0906-1	1336	Acid Plant Catalyst	
9/6/2008	14:06	2	18960	12700	6260	0906-2	1337	Acid Plant Catalyst	
9/6/2008	16:25	2	19240	12700	6540	0906-3	1338	Acid Plant Catalyst	
9/8/2008	14:03	3	24060	21960	2100	0908-1	1339	Baghouse Floor Debris	
9/8/2008	15:26	3	24660	21960	2700	0908-2	1340	Baghouse Floor Debris	
9/8/2008	16:31	3	24140	21960	2180	0908-3	1341	Baghouse Floor Debris	
9/9/2008	8:12	2	18840	12700	6140	0909-1	1342	Acid Plant Catalyst	
9/9/2008	9:15	2	18640	12700	5940	0909-2	1343	Acid Plant Catalyst	
9/9/2008	10:17	2	18780	12700	6080	0909-3	1344	Acid Plant Catalyst	
9/9/2008	11:21	2	19260	12700	6560	0909-4	1345	Acid Plant Catalyst	
9/9/2008	12:13	3	23720	21960	1760	0909-5	1346	Baghouse Floor Debris	
9/9/2008	13:43	3	23940	21960	1980	0909-6	1347	Baghouse Floor Debris	
9/9/2008	14:15	2	19340	12700	6640	0909-7	1348	Acid Plant Catalyst	
9/9/2008	14:58	3	23040	21960	1080	0909-8	1349	Baghouse Floor Debris	
9/9/2008	15:34	2	20420	12700	7720	0909-9	1350	Acid Plant Catalyst	
9/10/2008	7:40	2	20020	12700	7320	0910-1	1351	Acid Plant Catalyst	
9/10/2008	7:48	3	23620	21960	1660	0910-2	1352	Baghouse Floor Debris	
9/10/2008	8:41	2	20080	12700	7380	0910-3	1353	Acid Plant Catalyst	
9/10/2008	9:44	2	19900	12700	7200	0910-4	1354	Acid Plant Catalyst	
9/10/2008	9:57	3	24320	21960	2360	0910-5	1355	Baghouse Floor Debris	
9/10/2008	10:49	2	20120	12700	7420	0910-6	1356	Acid Plant Catalyst	
9/10/2008	13:30	510091	44160	27360	16800	0910-7	1357	Concentrate Storage and Handling Building	
9/10/2008	13:44	2	19960	12700	7260	0910-8	1358	Acid Plant Catalyst	
9/10/2008	14:15	510091	48680	27360	21320	0910-9	1359	Concentrate Storage and Handling Building	
9/10/2008	14:49	2	19920	12700	7220	0910-10	1360	Acid Plant Catalyst	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/10/2008	16:08	2	20300	12700	7600	0910-11	1361	Acid Plant Catalyst	
9/11/2008	8:07	3	24400	21960	2440	0911-1	1362	Baghouse Floor Debris	
9/11/2008	10:23	2	15000	12700	2300	0911-2	1363	Acid Plant Catalyst	
9/15/2008		3	23560	21960	1600	0915-1	1364	Baghouse Floor Debris	
9/15/2008		3	23360	21960	1400	0915-2	1365	Baghouse Floor Debris	
9/15/2008		3	23160	21960	1200	0915-3	1366	Baghouse Floor Debris	
9/15/2008		3	22860	21960	900	0915-4	1367	Baghouse Floor Debris	
9/16/2008	7:42	510091	47240	27360	19880	0916-1	1368	Spray Dryer	
9/16/2008	8:20	510091	41680	27360	14320	0916-2	1369	Spray Dryer	
9/16/2008	8:25	510091	39960	27360	12600	0916-3	1370	Spray Dryer	
9/16/2008	8:47	510091	37960	27360	10600	0916-4	1371	Spray Dryer	
9/16/2008	9:00	510091	35480	27360	8120	0916-5	1372	Spray Dryer	
9/16/2008	9:15	510091	32820	27360	5460	0916-6	1373	Spray Dryer	
9/16/2008	9:25	510091	39960	27360	12600	0916-7	1374	Spray Dryer	
9/16/2008	9:40	510091	37840	27360	10480	0916-8	1375	Spray Dryer	
9/16/2008	9:55	510091	33140	27360	5780	0916-9	1376	Spray Dryer	
9/16/2008	10:08	2	19840	12700	7140	0916-10	1377	Baghouse Floor Debris	
9/16/2008	10:10	510091	34400	27360	7040	0916-11	1378	Spray Dryer	
9/16/2008	10:23	510091	39240	27360	11880	0916-12	1379	Spray Dryer	
9/16/2008	10:33	3	23540	21960	1580	0916-13	1380	Baghouse Floor Debris	
9/16/2008	10:38	510091	34740	27360	7380	0916-14	1381	Spray Dryer	
9/16/2008	10:52	510091	36820	27360	9460	0916-15	1382	Spray Dryer	
9/16/2008	11:08	510091	40280	27360	12920	0916-16	1383	Spray Dryer	
9/16/2008	11:38	510091	49120	27360	21760	0916-17	1384	Spray Dryer	
9/16/2008	11:43	510091	40780	27360	13420	0916-18	1385	Spray Dryer	
9/16/2008	14:52	3	22960	21960	1000	0916-19	1386	Baghouse Floor Debris	
9/16/2008	16:25	3	22460	21960	500	0916-20	1387	Baghouse Floor Debris	
9/16/2008	16:35	2	17400	12700	4700	0916-21	1388	Baghouse Floor Debris	
9/17/2008	13:17	2	22860	12700	10160	0917-1	1389	Flue Dust	
9/17/2008	15:52	2	22860	12700	10160	0917-2	1390	Flue Dust	
9/17/2008	16:19	3	25160	21960	3200	0917-3	1391	Flue Dust	
9/17/2008	16:46	2	24340	12700	11640	0917-4	1392	Flue Dust	
9/18/2008	3:31	3	26240	21960	4280	0918-1	1393	Flue Dust	
9/18/2008	7:09	3	28780	21960	6820	0918-2	1394	Flue Dust	
9/18/2008	7:46	2	23640	12700	10940	0918-3	1395	Flue Dust	
9/18/2008	8:10	2	26040	12700	13340	0918-4	1396	Flue Dust	
9/18/2008	8:39	2	23620	12700	10920	0918-5	1397	Flue Dust	
9/18/2008		2	27480	12700	14780	0918-6	1398	Flue Dust	
9/18/2008		3	25560	21960	3600	0918-7	1399	Flue Dust	
9/18/2008		2	28620	12700	15920	0918-8	1400	Flue Dust	
9/18/2008		2	28900	12700	16200	0918-9	1401	Flue Dust	
9/18/2008		2	29040	12700	16340	0918-10	1402	Flue Dust	
9/18/2008		2	28860	12700	16160	0918-11	1403	Flue Dust	
9/19/2008		2	26700	12700	14000	0919-1	1404	Flue Dust	
9/19/2008		3	26780	21960	4820	0919-2	1405	Flue Dust	
9/19/2008		2	26800	12700	14100	0919-3	1406	Flue Dust	
9/19/2008		2	28540	12700	15840	0919-4	1407	Flue Dust	
9/19/2008		2	25940	12700	13240	0919-5	1408	Flue Dust	
9/19/2008		2	27320	12700	14620	0919-6	1409	Flue Dust	
9/19/2008		3	26260	21960	4300	0919-7	1410	Flue Dust	
9/19/2008	8:20	2	27920	12700	15220	0919-8	1411	Flue Dust	
9/19/2008	8:32	510090	39600	27220	12380	0919-9	1412	Acid Plant	
9/19/2008	8:36	510092	43240	27360	15880	0919-10	1413	Acid Plant	
9/19/2008	8:45	510090	43640	27220	16420	0919-11	1414	Acid Plant	
9/19/2008	8:46	2	33040	12700	20340	0919-12	1415	Flue Dust	
9/19/2008	8:54	510092	42060	27360	14700	0919-13	1416	Acid Plant	0809-CAMU-101
9/19/2008	8:57	510335	37680	26120	11560	0919-14	1417	Acid Plant	
9/19/2008	9:01	510090	40680	27220	13460	0919-15	1418	Acid Plant	
9/19/2008	9:12	510092	40480	27360	13120	0919-16	1419	Acid Plant	
9/19/2008	9:15	510335	34440	26120	8320	0919-17	1420	Acid Plant	
9/19/2008	9:19	510090	40240	27220	13020	0919-18	1421	Acid Plant	
9/19/2008	9:20	2	27000	12700	14300	0919-19	1422	Flue Dust	
9/19/2008	9:26	510092	41620	27360	14260	0919-20	1423	Acid Plant	
9/19/2008	9:29	510335	36200	26120	10080	0919-21	1424	Acid Plant	
9/19/2008	9:35	510090	39460	27220	12240	0919-22	1425	Acid Plant	
9/19/2008	9:44	2	30860	12700	18160	0919-23	1426	Flue Dust	
9/19/2008	9:48	510092	30920	27360	3560	0919-24	1427	Acid Plant	
9/19/2008	9:57	510335	28460	26120	2340	0919-25	1428	Acid Plant	
9/19/2008	10:01	510090	31360	27220	4140	0919-26	1429	Acid Plant	
9/19/2008	10:07	510092	31540	27360	4180	0919-27	1430	Acid Plant	
9/19/2008	10:08	2	29040	12700	16340	0919-28	1431	Flue Dust	
9/19/2008	10:11	510335	28420	26120	2300	0919-29	1432	Acid Plant	
9/19/2008	10:18	510090	39620	27220	12400	0919-30	1433	Acid Plant	
9/19/2008	10:46	510092	44820	27360	17460	0919-31	1434	Acid Plant	
9/19/2008	10:47	510335	39200	26120	13080	0919-32	1435	Acid Plant	
9/19/2008	10:48	510090	41880	27220	14660	0919-33	1436	Acid Plant	
9/19/2008	11:04	510092	40660	27360	13300	0919-34	1437	Acid Plant	
9/19/2008	11:08	510335	35240	26120	9120	0919-35	1438	Acid Plant	0809-CAMU-102
9/19/2008	11:12	510090	40300	27220	13080	0919-36	1439	Acid Plant	
9/19/2008	11:21	510092	40500	27360	13140	0919-37	1440	Acid Plant	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/19/2008	11:31	510335	39960	26120	13840	0919-38	1441	Acid Plant	
9/19/2008	11:36	510090	41160	27220	13940	0919-39	1442	Acid Plant	
9/19/2008	11:42	510092	39760	27360	12400	0919-40	1443	Acid Plant	no pic
9/19/2008	11:50	510090	35140	27220	7920	0919-41	1444	Acid Plant	no pic
9/19/2008	12:01	510092	40000	27360	12640	0919-42	1445	Acid Plant	
9/19/2008	13:22	510090	36960	27220	9740	0919-43	1446	Acid Plant	
9/19/2008	13:26	510092	43600	27360	16240	0919-44	1447	Acid Plant	
9/19/2008	13:39	510090	43060	27220	15840	0919-45	1448	Acid Plant	
9/19/2008	13:42	510092	40120	27360	12760	0919-46	1449	Acid Plant	
9/19/2008	13:53	510335	44860	26120	18740	0919-47	1450	Acid Plant	
9/19/2008	14:00	510092	48120	27360	20760	0919-48	1451	Acid Plant	
9/19/2008	14:01	510335	42480	26120	16360	0919-49	1452	Acid Plant	
9/19/2008	14:10	510090	45740	27220	18520	0919-50	1453	Acid Plant	
9/19/2008	14:14	510092	49340	27360	21980	0919-51	1454	Acid Plant	0809-CAMU-103
9/19/2008	14:18	510335	45960	26120	19840	0919-52	1455	Acid Plant	
9/19/2008	14:25	510090	45120	27220	17900	0919-53	1456	Acid Plant	no pic
9/19/2008	14:32	510092	48320	27360	20960	0919-54	1457	Acid Plant	
9/19/2008	14:35	510335	41300	26120	15180	0919-55	1458	Acid Plant	
9/19/2008	14:43	510090	50100	27220	22880	0919-56	1459	Acid Plant	
9/19/2008	14:50	510092	45160	27360	17800	0919-57	1460	Acid Plant	no pic
9/19/2008	14:55	510335	39700	26120	13580	0919-58	1461	Acid Plant	no pic
9/19/2008	15:21	510090	49820	27220	22600	0919-59	1462	Acid Plant	
9/19/2008	15:25	510092	48260	27360	20900	0919-60	1463	Acid Plant	
9/19/2008	15:29	510335	47790	26120	21670	0919-61	1464	Acid Plant	
9/19/2008	15:38	510090	51620	27220	24400	0919-62	1465	Acid Plant	
9/19/2008	15:43	510092	48380	27360	21020	0919-63	1466	Acid Plant	
9/19/2008	15:49	510335	36500	26120	10380	0919-64	1467	Acid Plant	
9/19/2008	15:59	510090	54300	27220	27080	0919-65	1468	Acid Plant	no pic
9/19/2008	16:12	510092	41140	27360	13780	0919-66	1469	Acid Plant	
9/19/2008	16:20	510335	38973	26120	12853	0919-67	1470	Acid Plant	
9/20/2008	8:34	510092	46840	27360	19480	0920-1	1471	Baghouse	
9/20/2008	8:43	510090	49940	27220	22720	0920-2	1472	Baghouse	
9/20/2008	8:48	510092	47080	27360	19720	0920-3	1473	Baghouse	
9/20/2008	8:56	510090	50600	27220	23380	0920-4	1474	Baghouse	
9/20/2008	9:00	510092	50880	27360	23520	0920-5	1475	Baghouse	
9/20/2008	9:10	510090	47240	27220	20020	0920-6	1476	Baghouse	
9/20/2008	9:15	510092	48060	27360	20700	0920-7	1477	Baghouse	0809-CAMU-104
9/20/2008	9:21	510335	46800	26120	20680	0920-8	1478	Baghouse	
9/20/2008	9:25	510090	44660	27220	17440	0920-9	1479	Baghouse	
9/20/2008	9:30	510092	50560	27360	23200	0920-10	1480	Baghouse	
9/20/2008	9:34	510335	50680	26120	24560	0920-11	1481	Baghouse	
9/20/2008	9:41	510090	49780	27220	22560	0920-12	1482	Baghouse	
9/20/2008	9:46	510092	46080	27360	18720	0920-13	1483	Baghouse	
9/20/2008	9:48	510335	44400	26120	18280	0920-14	1484	Baghouse	
9/20/2008	10:00	510092	49320	27360	21960	0920-15	1485	Baghouse	
9/20/2008	10:04	510335	43140	26120	17020	0920-16	1486	Baghouse	
9/20/2008	10:13	510090	50400	27220	23180	0920-17	1487	Baghouse	
9/20/2008	10:16	510092	48440	27360	21080	0920-18	1488	Baghouse	
9/20/2008	10:23	510335	48580	26120	22460	0920-19	1489	Baghouse	
9/20/2008	10:27	510090	49780	27220	22560	0920-20	1490	Baghouse	
9/20/2008	10:35	510092	44500	27360	17140	0920-21	1491	Baghouse	
9/20/2008	10:39	510335	42280	26120	16160	0920-22	1492	Baghouse	
9/20/2008	10:45	510090	48040	27220	20820	0920-23	1493	Baghouse	
9/20/2008	10:53	510092	47600	27360	20240	0920-24	1494	Baghouse	
9/20/2008	11:14	510090	44500	27220	17280	0920-25	1495	Baghouse	
9/20/2008	11:24	510092	45520	27360	18160	0920-26	1496	Baghouse	
9/20/2008	11:40	510090	50140	27220	22920	0920-27	1497	Baghouse	0809-CAMU-105
9/20/2008	11:48	510335	36740	26120	10620	0920-28	1498	Baghouse	
9/20/2008	11:56	510092	42880	27360	15520	0920-29	1499	Baghouse	
9/20/2008	13:09	510090	40620	27220	13400	0920-30	1500	Baghouse	
9/20/2008	13:19	510092	44860	27360	17500	0920-31	1501	Baghouse	
9/20/2008	13:33	510335	40240	26120	14120	0920-32	1502	Baghouse	
9/20/2008	13:40	510090	44320	27220	17100	0920-33	1503	Baghouse	
9/20/2008	13:47	510092	46860	27360	19500	0920-34	1504	Baghouse	
9/20/2008	13:56	510335	44520	26120	18400	0920-35	1505	Baghouse	
9/20/2008	14:03	510090	44320	27220	17100	0920-36	1506	Baghouse	
9/20/2008	14:07	510092	42920	27360	15560	0920-37	1507	Baghouse	
9/20/2008	14:12	510335	42420	26120	16300	0920-38	1508	Baghouse	
9/20/2008	14:18	510090	46220	27220	19000	0920-39	1509	Baghouse	
9/20/2008	14:23	510092	43580	27360	16220	0920-40	1510	Baghouse	
9/20/2008	14:27	510335	45080	26120	18960	0920-41	1511	Baghouse	
9/20/2008	14:32	510090	49600	27220	22380	0920-42	1512	Baghouse	
9/20/2008	14:37	510092	51700	27360	24340	0920-43	1513	Baghouse	
9/20/2008	14:41	510335	43100	26120	16980	0920-44	1514	Baghouse	
9/20/2008	14:44	510090	46460	27220	19240	0920-45	1515	Baghouse	
9/20/2008	14:51	510092	55880	27360	28520	0920-46	1516	Baghouse	
9/20/2008	14:56	510335	49320	26120	23200	0920-47	1517	Baghouse	0809-CAMU-106
9/20/2008	14:59	510090	44320	27220	17100	0920-48	1518	Baghouse	
9/20/2008	15:03	510092	48540	27360	21180	0920-49	1519	Baghouse	
9/22/2008	8:32	510090	50940	27220	23720	0922-1	1520	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/22/2008	8:35	510092	48940	27360	21580	0922-2	1521	Baghouse	
9/22/2008	8:36	510335	50200	26120	24080	0922-3	1522	Baghouse	
9/22/2008	8:38	3	23220	21960	1260	0922-4	1523	Flue Dust	
9/22/2008	8:48	510090	50880	27220	23660	0922-5	1524	Baghouse	
9/22/2008	8:49	510092	53380	27360	26020	0922-6	1525	Baghouse	
9/22/2008	8:57	510335	49540	26120	23420	0922-7	1526	Baghouse	
9/22/2008	9:01	510090	52540	27220	25320	0922-8	1527	Baghouse	
9/22/2008	9:03	510092	56700	27360	29340	0922-9	1528	Baghouse	
9/22/2008	9:08	510335	54980	26120	28860	0922-10	1529	Baghouse	
9/22/2008	9:11	510090	54560	27220	27340	0922-11	1530	Baghouse	
9/22/2008	9:15	510092	54700	27360	27340	0922-12	1531	Baghouse	
9/22/2008	9:19	510335	45500	26120	19380	0922-13	1532	Baghouse	
9/22/2008	9:23	510090	50020	27220	22800	0922-14	1533	Baghouse	
9/22/2008	9:25	510092	51820	27360	24460	0922-15	1534	Baghouse	0809-CAMU-107
9/22/2008	9:33	510335	49940	26120	23820	0922-16	1535	Baghouse	
9/22/2008	9:35	510090	50760	27220	23540	0922-17	1536	Baghouse	
9/22/2008	9:40	510092	52760	27360	25400	0922-18	1537	Baghouse	
9/22/2008	9:44	510335	51580	26120	25460	0922-19	1538	Baghouse	
9/22/2008	9:45	510090	51840	27220	24620	0922-20	1539	Baghouse	
9/22/2008	9:51	510092	54560	27360	27200	0922-21	1540	Baghouse	
9/22/2008	9:53	510335	55780	26120	29660	0922-22	1541	Baghouse	
9/22/2008	9:57	510090	53320	27220	26100	0922-23	1542	Baghouse	
9/22/2008	10:00	510092	55240	27360	27880	0922-24	1543	Baghouse	
9/22/2008	10:04	510090	50780	27220	23560	0922-25	1544	Baghouse	
9/22/2008	10:08	510092	55100	27360	27740	0922-26	1545	Baghouse	
9/22/2008	10:11	510092	53660	27360	26300	0922-27	1546	Baghouse	
9/22/2008	10:15	510335	50620	26120	24500	0922-28	1547	Baghouse	
9/22/2008	10:19	3	23480	21960	1520	0922-29	1548	Flue Dust	
9/22/2008	10:22	510092	52680	27360	25320	0922-30	1549	Baghouse	
9/22/2008	10:24	510090	53480	27220	26260	0922-31	1550	Baghouse	
9/22/2008	10:26	510335	46900	26120	20780	0922-32	1551	Baghouse	0809-CAMU-108
9/22/2008	10:33	510092	56820	27360	29460	0922-33	1552	Baghouse	
9/22/2008	10:36	510090	55080	27220	27860	0922-34	1553	Baghouse	
9/22/2008	10:40	510335	47220	26120	21100	0922-35	1554	Baghouse	
9/22/2008	10:44	510092	54040	27360	26680	0922-36	1555	Baghouse	
9/22/2008	10:47	510090	50960	27220	23740	0922-37	1556	Baghouse	
9/22/2008	10:55	510335	50740	26120	24620	0922-38	1557	Baghouse	
9/22/2008	10:56	510092	53720	27360	26360	0922-39	1558	Baghouse	
9/22/2008	11:03	510090	51360	27220	24140	0922-40	1559	Baghouse	
9/22/2008	11:06	510335	45960	26120	19840	0922-41	1560	Baghouse	
9/22/2008	11:07	510092	53660	27360	26300	0922-42	1561	Baghouse	
9/22/2008	11:14	510090	53840	27220	26620	0922-43	1562	Baghouse	
9/22/2008	11:17	510335	50220	26120	24100	0922-44	1563	Baghouse	
9/22/2008	11:20	510092	50680	27360	23320	0922-45	1564	Baghouse	
9/22/2008	11:26	510090	49640	27220	22420	0922-46	1565	Baghouse	
9/22/2008	11:27	510335	51380	26120	25260	0922-47	1566	Baghouse	
9/22/2008	11:30	510092	53540	27360	26180	0922-48	1567	Baghouse	
9/22/2008	11:36	510090	51940	27220	24720	0922-49	1568	Baghouse	
9/22/2008	11:40	510335	48000	26120	21880	0922-50	1569	Baghouse	
9/22/2008	11:42	510092	53160	27360	25800	0922-51	1570	Baghouse	
9/22/2008	11:47	510090	55480	27220	28260	0922-52	1571	Baghouse	
9/22/2008	11:51	510335	54280	26120	28160	0922-53	1572	Baghouse	0809-CAMU-109
9/22/2008	11:53	510092	48940	27360	21580	0922-54	1573	Baghouse	
9/22/2008	13:17	510090	53240	27220	26020	0922-55	1574	Baghouse	
9/22/2008	13:19	510335	51580	26120	25460	0922-56	1575	Baghouse	
9/22/2008	13:21	510090	51160	27220	23940	0922-57	1576	Baghouse	
9/22/2008	13:27	510092	53060	27360	25700	0922-58	1577	Baghouse	
9/22/2008	13:30	510335	49040	26120	22920	0922-59	1578	Baghouse	
9/22/2008	13:36	510090	55300	27220	28080	0922-60	1579	Baghouse	
9/22/2008	13:39	510092	64540	27360	37180	0922-61	1580	Baghouse	
9/22/2008	13:41	510335	57720	26120	31600	0922-62	1581	Baghouse	
9/22/2008	13:46	510090	61500	27220	34280	0922-63	1582	Baghouse	
9/22/2008	13:49	510092	64060	27360	36700	0922-64	1583	Baghouse	
9/22/2008	13:52	510335	51034	26120	24914	0922-65	1584	Baghouse	
9/22/2008	13:57	510090	55520	27220	28300	0922-66	1585	Baghouse	
9/22/2008	13:59	510092	55000	27360	27640	0922-67	1586	Baghouse	
9/22/2008	14:04	510335	49840	26120	23720	0922-68	1587	Baghouse	
9/22/2008	14:08	510090	51760	27220	24540	0922-69	1588	Baghouse	
9/22/2008	14:10	510092	51980	27360	24620	0922-70	1589	Baghouse	
9/22/2008	14:16	510335	50760	26120	24640	0922-71	1590	Baghouse	
9/22/2008	14:19	510090	51520	27220	24300	0922-72	1591	Baghouse	
9/22/2008	14:21	510092	51740	27360	24380	0922-73	1592	Baghouse	0809-CAMU-110
9/22/2008	14:27	510335	52940	26120	26820	0922-74	1593	Baghouse	
9/22/2008	14:28	2	28200	12700	15500	0922-75	1594	Flue Dust	
9/22/2008	14:28	3	25740	21960	3780	0922-76	1595	Flue Dust	
9/22/2008	14:31	510090	51740	27220	24520	0922-77	1596	Baghouse	
9/22/2008	14:35	510092	53460	27360	26100	0922-78	1597	Baghouse	
9/22/2008	14:38	510335	50720	26120	24600	0922-79	1598	Baghouse	
9/22/2008	14:42	510090	52220	27220	25000	0922-80	1599	Baghouse	
9/22/2008	14:46	510092	52820	27360	25460	0922-81	1600	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/22/2008	14:49	510335	50980	26120	24860	0922-82	1601	Baghouse	
9/22/2008	14:54	510090	50680	27220	23460	0922-83	1602	Baghouse	
9/22/2008	14:58	510092	55120	27360	27760	0922-84	1603	Baghouse	
9/22/2008	15:00	510335	47980	26120	21860	0922-85	1604	Baghouse	
9/22/2008	15:01	2	22680	12700	9980	0922-86	1605	Flue Dust	
9/22/2008	15:04	510090	52500	27220	25280	0922-87	1606	Baghouse	
9/22/2008	15:07	510092	55380	27360	28020	0922-88	1607	Baghouse	
9/22/2008	15:12	510335	52680	26120	26560	0922-89	1608	Baghouse	
9/22/2008	15:17	510090	55280	27220	28060	0922-90	1609	Baghouse	
9/22/2008	15:20	510092	54260	27360	26900	0922-91	1610	Baghouse	
9/22/2008	15:42	2	23480	12700	10780	0922-92	1611	Flue Dust	0809-CAMU-111
9/23/2008	8:26	3	25160	21960	3200	0923-01	1612	Flue Dust	
9/23/2008	8:28	510090	53920	27220	26700	0923-02	1613	Baghouse	
9/23/2008	8:31	510335	50760	26120	24640	0923-03	1614	Baghouse	
9/23/2008	8:33	510092	51720	27360	24360	0923-04	1615	Baghouse	
9/23/2008	8:40	510090	51980	27220	24760	0923-05	1616	Baghouse	
9/23/2008	8:42	510335	50100	26120	23980	0923-06	1617	Baghouse	
9/23/2008	8:44	510092	52240	27360	24880	0923-07	1618	Baghouse	
9/23/2008	8:53	510090	52640	27220	25420	0923-08	1619	Baghouse	
9/23/2008	8:54	510335	49860	26120	23740	0923-09	1620	Baghouse	
9/23/2008	8:56	510092	52880	27360	25520	0923-10	1621	Baghouse	
9/23/2008	9:06	510090	56000	27220	28780	0923-11	1622	Baghouse	
9/23/2008	9:08	510335	54640	26120	28520	0923-12	1623	Baghouse	
9/23/2008	9:11	510092	53720	27360	26360	0923-13	1624	Baghouse	0809-CAMU-112
9/23/2008	9:23	510335	52240	26120	26120	0923-14	1625	Baghouse	
9/23/2008	9:25	510092	55240	27360	27880	0923-15	1626	Baghouse	
9/23/2008	9:36	510335	52460	26120	26340	0923-16	1627	Baghouse	
9/23/2008	9:38	510092	53860	27360	26500	0923-17	1628	Baghouse	
9/23/2008	9:47	510335	46000	26120	19880	0923-18	1629	Baghouse	
9/23/2008	9:49	510092	56860	27360	29500	0923-19	1630	Baghouse	
9/23/2008	9:52	510090	54820	27220	27600	0923-20	1631	Baghouse	
9/23/2008	9:59	510335	52600	26120	26480	0923-21	1632	Baghouse	
9/23/2008	10:01	510092	57540	27360	30180	0923-22	1633	Baghouse	
9/23/2008	10:04	510090	56440	27220	29220	0923-23	1634	Baghouse	
9/23/2008	10:11	510335	53420	26120	27300	0923-24	1635	Baghouse	
9/23/2008	10:13	510092	58620	27360	31260	0923-25	1636	Baghouse	
9/23/2008	10:14	510090	57220	27220	30000	0923-26	1637	Baghouse	
9/23/2008	10:21	510335	49320	26120	23200	0923-27	1638	Baghouse	
9/23/2008	10:24	510092	57680	27360	30320	0923-28	1639	Baghouse	
9/23/2008	10:26	510090	55840	27220	28620	0923-29	1640	Baghouse	
9/23/2008	10:34	510335	56800	26120	30680	0923-30	1641	Baghouse	
9/23/2008	10:36	510092	54460	27360	27100	0923-31	1642	Baghouse	
9/23/2008	10:37	510090	55340	27220	28120	0923-32	1643	Baghouse	0809-CAMU-113
9/23/2008	10:45	510335	54660	26120	28540	0923-33	1644	Baghouse	
9/23/2008	10:46	510092	54760	27360	27400	0923-34	1645	Baghouse	
9/23/2008	10:53	510090	56800	27220	29580	0923-35	1646	Baghouse	
9/23/2008	10:56	510335	54200	26120	28080	0923-36	1647	Baghouse	
9/23/2008	11:04	510092	57540	27360	30180	0923-37	1648	Baghouse	
9/23/2008	11:06	510090	56340	27220	29120	0923-38	1649	Baghouse	
9/23/2008	11:12	510335	57340	26120	31220	0923-39	1650	Baghouse	
9/23/2008	11:16	510092	55900	27360	28540	0923-40	1651	Baghouse	
9/23/2008	11:18	510090	57200	27220	29980	0923-41	1652	Baghouse	
9/23/2008	11:23	510335	53320	26120	27200	0923-42	1653	Baghouse	
9/23/2008	11:26	510092	53720	27360	26360	0923-43	1654	Baghouse	
9/23/2008	11:29	510090	50340	27220	23120	0923-44	1655	Baghouse	
9/23/2008	11:33	510335	51520	26120	25400	0923-45	1656	Baghouse	
9/23/2008	11:37	510092	55960	27360	28600	0923-46	1657	Baghouse	
9/23/2008	11:45	510090	52760	27220	25540	0923-47	1658	Baghouse	
9/23/2008	11:46	510335	52880	26120	26760	0923-48	1659	Baghouse	
9/23/2008	11:52	510092	54060	27360	26700	0923-49	1660	Baghouse	
9/23/2008	11:55	510090	57160	27220	29940	0923-50	1661	Baghouse	
9/23/2008	13:20	510092	54880	27360	27520	0923-51	1662	Baghouse	
9/23/2008	13:23	510335	53700	26120	27580	0923-52	1663	Baghouse	
9/23/2008	13:26	510090	52340	27220	25120	0923-53	1664	Baghouse	
9/23/2008	13:32	510092	47620	27360	20260	0923-54	1665	Baghouse	
9/23/2008	13:36	510335	52640	26120	26520	0923-55	1666	Baghouse	
9/23/2008	13:38	510090	55240	27220	28020	0923-56	1667	Baghouse	
9/23/2008	13:45	510092	52420	27360	25060	0923-57	1668	Baghouse	0809-CAMU-114
9/23/2008	13:48	510335	53900	26120	27780	0923-58	1669	Baghouse	
9/23/2008	13:50	510090	50780	27220	23560	0923-59	1670	Baghouse	
9/23/2008	13:57	3	25740	21960	3780	0923-60	1671	Flue Dust	
9/23/2008	14:01	510092	54960	27360	27600	0923-61	1672	Baghouse	
9/23/2008	14:03	510335	53480	26120	27360	0923-62	1673	Baghouse	
9/23/2008	14:05	510090	48940	27220	21720	0923-63	1674	Baghouse	
9/23/2008	14:11	510092	50460	27360	23100	0923-64	1675	Baghouse	
9/23/2008	14:12	3	24680	21960	2720	0923-65	1676	Flue Dust	
9/23/2008	14:14	510335	49560	26120	23440	0923-66	1677	Baghouse	
9/23/2008	14:18	510090	49280	27220	22060	0923-67	1678	Baghouse	
9/23/2008	14:24	510092	54560	27360	27200	0923-68	1679	Baghouse	
9/23/2008	14:26	510335	48600	26120	22480	0923-69	1680	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/23/2008	14:32	510090	53000	27220	25780	0923-70	1681	Baghouse	
9/23/2008	14:34	510092	45380	27360	18020	0923-71	1682	Baghouse	
9/23/2008	14:39	510335	51000	26120	24880	0923-72	1683	Baghouse	
9/23/2008	14:43	510090	55180	27220	27960	0923-73	1684	Baghouse	
9/23/2008	14:47	510092	53380	27360	26020	0923-74	1685	Baghouse	
9/23/2008	14:53	510335	51480	26120	25360	0923-75	1686	Baghouse	
9/23/2008	14:58	510092	54120	27360	26760	0923-76	1687	Baghouse	
9/23/2008	15:04	510335	48748	26120	22628	0923-77	1688	Baghouse	
9/23/2008	15:06	510090	50260	27220	23040	0923-78	1689	Baghouse	
9/23/2008	15:11	510092	46360	27360	19000	0923-79	1690	Baghouse	
9/23/2008	15:16	510335	47900	26120	21780	0923-80	1691	Baghouse	
9/23/2008	15:18	510090	47300	27220	20080	0923-81	1692	Baghouse	0809-CAMU-115
9/23/2008	15:24	510092	50840	27360	23480	0923-82	1693	Baghouse	
9/23/2008	15:29	510335	51040	26120	24920	0923-83	1694	Baghouse	
9/23/2008	15:35	510090	50540	27220	23320	0923-84	1695	Baghouse	
9/23/2008	15:36	510092	48300	27360	20940	0923-85	1696	Baghouse	
9/23/2008	15:42	510335	45320	26120	19200	0923-86	1697	Baghouse	
9/23/2008	15:47	510090	52640	27220	25420	0923-87	1698	Baghouse	
9/23/2008	15:53	510092	53460	27360	26100	0923-88	1699	Baghouse	
9/23/2008	15:55	510335	46800	26120	20680	0923-89	1700	Baghouse	
9/23/2008	16:09	510090	52540	27220	25320	0923-90	1701	Baghouse	
9/23/2008	16:14	510092	51360	27360	24000	0923-91	1702	Baghouse	
9/23/2008	16:16	510335	40340	26120	14220	0923-92	1703	Baghouse	
9/23/2008	16:32	510092	54000	27360	26640	0923-93	1704	Baghouse	
9/23/2008	16:35	510335	49160	26120	23040	0923-94	1705	Baghouse	
9/24/2008	7:59	3	25980	21960	4020	0924-1	1706	Flue Dust	
9/24/2008	8:00	510092	53040	27360	25680	0924-2	1707	Baghouse	
9/24/2008	8:03	510090	56180	27220	28960	0924-3	1708	Baghouse	
9/24/2008	8:09	510335	54460	26120	28340	0924-4	1709	Baghouse	
9/24/2008	8:19	3	26360	21960	4400	0924-5	1710	Flue Dust	
9/24/2008	8:23	510092	51820	27360	24460	0924-6	1711	Baghouse	0809-CAMU-116
9/24/2008	8:28	510090	41260	27220	14040	0924-7	1712	Baghouse	
9/24/2008	8:40	510335	41260	26120	15140	0924-8	1713	Baghouse	
9/24/2008	8:44	510092	50560	27360	23200	0924-9	1714	Baghouse	
9/24/2008	8:47	510090	51880	27220	24660	0924-10	1715	Baghouse	
9/24/2008	8:56	510335	47320	26120	21200	0924-11	1716	Baghouse	
9/24/2008	8:57	510092	55700	27360	28340	0924-12	1717	Baghouse	
9/24/2008	9:00	510090	56140	27220	28920	0924-13	1718	Baghouse	
9/24/2008	9:07	510335	52120	26120	26000	0924-14	1719	Baghouse	
9/24/2008	9:09	510092	56360	27360	29000	0924-15	1720	Baghouse	
9/24/2008	9:13	510090	58300	27220	31080	0924-16	1721	Baghouse	
9/24/2008	9:20	510335	52500	26120	26380	0924-17	1722	Baghouse	
9/24/2008	9:23	510092	56120	27360	28760	0924-18	1723	Baghouse	
9/24/2008	9:29	510090	52120	27220	24900	0924-19	1724	Baghouse	
9/24/2008	9:35	510335	53100	26120	26980	0924-20	1725	Baghouse	
9/24/2008	9:37	510092	56580	27360	29220	0924-21	1726	Baghouse	
9/24/2008	9:41	510090	50980	27220	23760	0924-22	1727	Baghouse	
9/24/2008	9:47	510335	50380	26120	24260	0924-23	1728	Baghouse	
9/24/2008	9:50	510092	53360	27360	26000	0924-24	1729	Baghouse	
9/24/2008	9:55	510090	50040	27220	22820	0924-25	1730	Baghouse	0809-CAMU-117
9/24/2008	10:03	510335	52260	26120	26140	0924-26	1731	Baghouse	
9/24/2008	10:05	510092	52760	27360	25400	0924-27	1732	Baghouse	
9/24/2008	10:10	510090	56080	27220	28860	0924-28	1733	Baghouse	
9/24/2008	10:16	510335	53960	26120	27840	0924-29	1734	Baghouse	
9/24/2008	10:18	510092	54440	27360	27080	0924-30	1735	Baghouse	
9/24/2008	10:23	510090	60020	27220	32800	0924-31	1736	Baghouse	
9/24/2008	10:29	510335	58560	26120	32440	0924-32	1737	Baghouse	
9/24/2008	10:31	510092	53560	27360	26200	0924-33	1738	Baghouse	
9/24/2008	10:35	510090	50980	27220	23760	0924-34	1739	Baghouse	
9/24/2008	10:41	510335	51020	26120	24900	0924-35	1740	Baghouse	
9/24/2008	10:44	510092	54400	27360	27040	0924-36	1741	Baghouse	
9/24/2008	10:57	510092	57200	27360	29840	0924-37	1742	Baghouse	
9/24/2008	11:00	510335	51340	26120	25220	0924-38	1743	Baghouse	
9/24/2008	11:03	510090	56360	27220	29140	0924-39	1744	Baghouse	
9/24/2008	11:26	510092	54020	27360	26660	0924-40	1745	Baghouse	
9/24/2008	11:29	510335	54760	26120	28640	0924-41	1746	Baghouse	
9/24/2008	11:32	510090	50980	27220	23760	0924-42	1747	Baghouse	
9/24/2008	11:46	510092	55320	27360	27960	0924-43	1748	Baghouse	
9/24/2008	11:49	510335	54580	26120	28460	0924-44	1749	Baghouse	
9/24/2008	11:51	510090	53880	27220	26660	0924-45	1750	Baghouse	0809-CAMU-118
9/24/2008	13:15	510092	56160	27360	28800	0924-46	1751	Baghouse	
9/24/2008	13:18	510335	49200	26120	23080	0924-47	1752	Baghouse	
9/24/2008	13:21	2	23220	12700	10520	0924-48	1753	Flue Dust	
9/24/2008	13:22	3	25960	21960	4000	0924-49	1754	Flue Dust	
9/24/2008	13:23	510090	52440	27220	25220	0924-50	1755	Baghouse	
9/24/2008	13:27	510092	54020	27360	26660	0924-51	1756	Baghouse	
9/24/2008	13:33	510335	52540	26120	26420	0924-52	1757	Baghouse	
9/24/2008	13:35	510090	53380	27220	26160	0924-53	1758	Baghouse	
9/24/2008	13:39	510092	51940	27360	24580	0924-54	1759	Baghouse	
9/24/2008	13:45	510335	51200	26120	25080	0924-55	1760	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/24/2008	13:47	510090	52800	27220	25580	0924-56	1761	Baghouse	
9/24/2008	13:50	510092	50720	27360	23360	0924-57	1762	Baghouse	
9/24/2008	13:56	510335	52340	26120	26220	0924-58	1763	Baghouse	
9/24/2008	13:57	2	24880	12700	12180	0924-59	1764	Flue Dust	
9/24/2008	13:59	510090	52180	27220	24960	0924-60	1765	Baghouse	
9/24/2008	14:01	510092	50380	27360	23020	0924-61	1766	Baghouse	
9/24/2008	14:08	510335	50100	26120	23980	0924-62	1767	Baghouse	
9/24/2008	14:13	510090	51180	27220	23960	0924-63	1768	Baghouse	
9/24/2008	14:16	510092	53040	27360	25680	0924-64	1769	Baghouse	
9/24/2008	14:22	510335	52000	26120	25880	0924-65	1770	Baghouse	
9/24/2008	14:27	510090	53220	27220	26000	0924-66	1771	Baghouse	0809-CAMU-119
9/24/2008	14:31	510092	51080	27360	23720	0924-67	1772	Baghouse	
9/24/2008	14:34	510335	51940	26120	25820	0924-68	1773	Baghouse	
9/24/2008	14:35	2	22700	12700	10000	0924-69	1774	Flue Dust	
9/24/2008	14:43	510092	48800	27360	21440	0924-70	1775	Baghouse	
9/24/2008	14:44	3	23940	21960	1980	0924-71	1776	Flue Dust	
9/24/2008	14:49	510090	51660	27220	24440	0924-72	1777	Baghouse	
9/24/2008	14:52	510335	52400	26120	26280	0924-73	1778	Baghouse	
9/24/2008	14:54	510092	53840	27360	26480	0924-74	1779	Baghouse	
9/24/2008	15:03	510090	59260	27220	32040	0924-75	1780	Baghouse	
9/24/2008	15:04	510335	51020	26120	24900	0924-76	1781	Baghouse	
9/24/2008	15:07	510092	51840	27360	24480	0924-77	1782	Baghouse	
9/24/2008	15:11	2	23420	12700	10720	0924-78	1783	Flue Dust	
9/24/2008	15:37	3	23020	21960	1060	0924-79	1784	Flue Dust	
9/24/2008	15:45	2	22700	12700	10000	0924-80	1785	Flue Dust	
9/24/2008	16:19	2	28100	12700	15400	0924-81	1786	Flue Dust	
9/25/2008	7:40	3	24380	21960	2420	0925-1	1787	Flue Dust	
9/25/2008	7:59	510335	49540	26120	23420	0925-2	1788	Baghouse	
9/25/2008	8:00	510092	50260	27360	22900	0925-3	1789	Baghouse	
9/25/2008	8:03	510090	50920	27220	23700	0925-4	1790	Baghouse	0809-CAMU-120
9/25/2008	8:16	510335	51580	26120	25460	0925-5	1791	Baghouse	
9/25/2008	8:18	510092	51620	27360	24260	0925-6	1792	Baghouse	
9/25/2008	8:20	510090	52660	27220	25440	0925-7	1793	Baghouse	
9/25/2008	8:28	510335	49740	26120	23620	0925-8	1794	Baghouse	
9/25/2008	8:30	510092	50040	27360	22680	0925-9	1795	Baghouse	
9/25/2008	8:33	510090	51460	27220	24240	0925-10	1796	Baghouse	
9/25/2008	8:40	510335	52220	26120	26100	0925-11	1797	Baghouse	
9/25/2008	8:44	510092	51700	27360	24340	0925-12	1798	Baghouse	
9/25/2008	8:48	510090	48640	27220	21420	0925-13	1799	Baghouse	
9/25/2008	8:53	510335	51400	26120	25280	0925-14	1800	Baghouse	
9/25/2008	8:56	510092	48820	27360	21460	0925-15	1801	Baghouse	
9/25/2008	9:01	510090	48740	27220	21520	0925-16	1802	Baghouse	
9/25/2008	9:03	3	25780	21960	3820	0925-17	1803	Flue Dust	
9/25/2008	9:06	510335	51480	26120	25360	0925-18	1804	Baghouse	
9/25/2008	9:08	510092	53520	27360	26160	0925-19	1805	Baghouse	
9/25/2008	9:13	510090	50920	27220	23700	0925-20	1806	Baghouse	
9/25/2008	9:18	510335	50700	26120	24580	0925-21	1807	Baghouse	
9/25/2008	9:21	510092	53900	27360	26540	0925-22	1808	Baghouse	
9/25/2008	9:25	510090	52460	27220	25240	0925-23	1809	Baghouse	
9/25/2008	9:29	3	25380	21960	3420	0925-24	1810	Flue Dust	
9/25/2008	9:30	510335	52840	26120	26720	0925-25	1811	Baghouse	0809-CAMU-121
9/25/2008	9:34	510092	52020	27360	24660	0925-26	1812	Baghouse	
9/25/2008	9:40	510090	52180	27220	24960	0925-27	1813	Baghouse	
9/25/2008	9:45	510335	49120	26120	23000	0925-28	1814	Baghouse	
9/25/2008	9:48	510092	49320	27360	21960	0925-29	1815	Baghouse	
9/25/2008	9:52	510090	49100	27220	21880	0925-30	1816	Baghouse	
9/25/2008	9:57	510335	46640	26120	20520	0925-31	1817	Baghouse	
9/25/2008	10:00	510092	46220	27360	18860	0925-32	1818	Baghouse	
9/25/2008	10:14	510090	49100	27220	21880	0925-33	1819	Baghouse	
9/25/2008	10:17	510335	50020	26120	23900	0925-34	1820	Baghouse	
9/25/2008	10:19	510092	48960	27360	21600	0925-35	1821	Baghouse	
9/25/2008	10:22	3	23900	21960	1940	0925-36	1822	Flue Dust	
9/25/2008	10:27	510090	50660	27220	23440	0925-37	1823	Baghouse	
9/25/2008	10:33	510335	49100	26120	22980	0925-38	1824	Baghouse	
9/25/2008	10:37	510092	48700	27360	21340	0925-39	1825	Baghouse	
9/25/2008	10:43	510090	57920	27220	30700	0925-40	1826	Baghouse	
9/25/2008	10:46	510335	48480	26120	22360	0925-41	1827	Baghouse	
9/25/2008	10:51	3	23460	21960	1500	0925-42	1828	Flue Dust	
9/25/2008	10:55	510092	49020	27360	21660	0925-43	1829	Baghouse	
9/25/2008	10:57	510090	49780	27220	22560	0925-44	1830	Baghouse	
9/25/2008	11:00	510335	48060	26120	21940	0925-45	1831	Baghouse	0809-CAMU-122
9/25/2008	11:06	510092	48480	27360	21120	0925-46	1832	Baghouse	
9/25/2008	11:09	510090	48500	27220	21280	0925-47	1833	Baghouse	
9/25/2008	11:15	510335	46920	26120	20800	0925-48	1834	Baghouse	
9/25/2008	11:24	510092	53720	27360	26360	0925-49	1835	Baghouse	
9/25/2008	11:29	510090	53760	27220	26540	0925-50	1836	Baghouse	
9/25/2008	11:32	510335	53180	26120	27060	0925-51	1837	Baghouse	
9/25/2008	11:36	510092	55480	27360	28120	0925-52	1838	Baghouse	
9/25/2008	11:42	510090	56180	27220	28960	0925-53	1839	Baghouse	
9/25/2008	11:46	510335	52360	26120	26240	0925-54	1840	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/25/2008	11:47	510092	49620	27360	22260	0925-55	1841	Baghouse	
9/25/2008	12:57	3	25920	21960	3960	0925-56	1842	Flue Dust	
9/25/2008	13:15	3	26220	21960	4260	0925-57	1843	Flue Dust	
9/25/2008	13:18	510092	52440	27360	25080	0925-58	1844	Baghouse	
9/25/2008	13:21	510090	52660	27220	25440	0925-59	1845	Baghouse	
9/25/2008	13:22	510335	52820	26120	26700	0925-60	1846	Baghouse	
9/25/2008	13:29	510092	52860	27360	25500	0925-61	1847	Baghouse	
9/25/2008	13:33	510090	51880	27220	24660	0925-62	1848	Baghouse	
9/25/2008	13:38	510335	50500	26120	24380	0925-63	1849	Baghouse	
9/25/2008	13:40	3	25940	21960	3980	0925-64	1850	Flue Dust	
9/25/2008	13:45	510092	51720	27360	24360	0925-65	1851	Baghouse	0809-CAMU-123
9/25/2008	13:48	510090	45080	27220	17860	0925-66	1852	Baghouse	
9/25/2008	13:50	510335	47740	26120	21620	0925-67	1853	Baghouse	
9/25/2008	14:04	3	23620	21960	1660	0925-68	1854	Flue Dust	
9/25/2008	14:10	510092	37700	27360	10340	0925-69	1855	Baghouse	
9/25/2008	14:16	510090	44040	27220	16820	0925-70	1856	Baghouse	
9/25/2008	14:17	510335	37840	26120	11720	0925-71	1857	Baghouse	
9/25/2008	14:22	3	27180	21960	5220	0925-72	1858	Flue Dust	0809-CAMU-124
9/25/2008	14:25	510092	42880	27360	15520	0925-73	1859	Baghouse	
9/25/2008	14:29	510090	47540	27220	20320	0925-74	1860	Baghouse	
9/25/2008	14:32	510335	39680	26120	13560	0925-75	1861	Baghouse	
9/25/2008	14:37	510092	43580	27360	16220	0925-76	1862	Baghouse	
9/25/2008	14:45	510090	37000	27220	9780	0925-77	1863	Baghouse	
9/25/2008	14:51	510092	38480	27360	11120	0925-78	1864	Baghouse	
9/25/2008	14:52	3	26160	21960	4200	0925-79	1865	Flue Dust	
9/25/2008	15:05	510090	51500	27220	24280	0925-80	1866	Blast Furnace Flue	
9/25/2008	15:07	510092	51060	27360	23700	0925-81	1867	Blast Furnace Flue	
9/25/2008	15:13	510335	56840	26120	30720	0925-82	1868	Blast Furnace Flue	
9/25/2008	15:19	510090	52260	27220	25040	0925-83	1869	Blast Furnace Flue	
9/25/2008	15:21	3	26500	21960	4540	0925-84	1870	Flue Dust	
9/25/2008	15:22	510092	55160	27360	27800	0925-85	1871	Blast Furnace Flue	
9/25/2008	15:33	510335	53280	26120	27160	0925-86	1872	Blast Furnace Flue	
9/25/2008	15:34	510090	53000	27220	25780	0925-87	1873	Blast Furnace Flue	
9/25/2008	15:42	510092	58320	27360	30960	0925-88	1874	Blast Furnace Flue	
9/25/2008	15:46	3	27240	21960	5280	0925-89	1875	Flue Dust	
9/25/2008	15:50	510335	56280	26120	30160	0925-90	1876	Blast Furnace Flue	0809-CAMU-125
9/25/2008	16:00	510090	59400	27220	32180	0925-91	1877	Blast Furnace Flue	
9/25/2008	16:05	510092	63840	27360	36480	0925-92	1878	Blast Furnace Flue	
9/25/2008	16:11	510335	59560	26120	33440	0925-93	1879	Blast Furnace Flue	
9/25/2008	16:13	510090	49640	27220	22420	0925-94	1880	Blast Furnace Flue	
9/25/2008	16:23	510335	54680	26120	28560	0925-95	1881	Blast Furnace Flue	
9/25/2008	16:27	510090	56280	27220	29060	0925-96	1882	Blast Furnace Flue	
9/25/2008	16:37	510335	42880	26120	16760	0925-97	1883	Blast Furnace Flue	
9/25/2008	16:46	510090	46180	27220	18960	0925-98	1884	Blast Furnace Flue	
9/26/2008	7:00	3	26500	21960	4540	0926-1	1885	Flue Dust	
9/26/2008	7:40	3	24500	21960	2540	0926-2	1886	Flue Dust	
9/26/2008	7:59	3	25840	21960	3880	0926-3	1887	Flue Dust	
9/26/2008	8:14	3	26360	21960	4400	0926-4	1888	Flue Dust	
9/26/2008	8:27	510335	59080	26120	32960	0926-5	1889	Acid Plant	
9/26/2008	8:30	510090	62420	27220	35200	0926-6	1890	Acid Plant	
9/26/2008	8:34	520990	88460	35540	52920	0926-7	1891	Blast Furnace Flue	
9/26/2008	8:40	524547	78280	35000	43280	0926-8	1892	Blast Furnace Flue	
9/26/2008	8:42	3	25780	21960	3820	0926-9	1893	Flue Dust	
9/26/2008	8:43	510335	57380	26120	31260	0926-10	1894	Acid Plant	0809-CAMU-126
9/26/2008	8:48	510090	58620	27220	31400	0926-11	1895	Acid Plant	
9/26/2008	8:52	520990	76920	35540	41380	0926-12	1896	Blast Furnace Flue	
9/26/2008	8:58	524547	85340	35000	50340	0926-13	1897	Blast Furnace Flue	
9/26/2008	8:59	3	25040	21960	3080	0926-14	1898	Flue Dust	
9/26/2008	9:00	510335	59300	26120	33180	0926-15	1899	Acid Plant	
9/26/2008	9:03	510090	56880	27220	29660	0926-16	1900	Acid Plant	
9/26/2008	9:08	520990	82580	35540	47040	0926-17	1901	Baghouse	
9/26/2008	9:14	510335	57200	26120	31080	0926-18	1902	Acid Plant	
9/26/2008	9:16	524547	85320	35000	50320	0926-19	1903	Baghouse	
9/26/2008	9:17	510090	64300	27220	37080	0926-20	1904	Acid Plant	
9/26/2008	9:22	520990	77340	35540	41800	0926-21	1905	Baghouse	
9/26/2008	9:26	510335	53560	26120	27440	0926-22	1906	Acid Plant	
9/26/2008	9:31	510090	61840	27220	34620	0926-23	1907	Acid Plant	
9/26/2008	9:36	524547	76860	35000	41860	0926-24	1908	Baghouse	
9/26/2008	9:39	510335	64180	26120	38060	0926-25	1909	Acid Plant	
9/26/2008	9:42	520990	78960	35540	43420	0926-26	1910	Baghouse	
9/26/2008	9:44	510090	58880	27220	31660	0926-27	1911	Baghouse	
9/26/2008	9:48	3	25620	21960	3660	0926-28	1912	Flue Dust	
9/26/2008	9:54	524547	71460	35000	36460	0926-29	1913	Baghouse	
9/26/2008	9:56	510335	57820	26120	31700	0926-30	1914	Acid Plant	
9/26/2008	9:59	510090	58800	27220	31580	0926-31	1915	Acid Plant	
9/26/2008	10:02	520990	78780	35540	43240	0926-32	1916	Baghouse	
9/26/2008	10:08	3	26160	21960	4200	0926-33	1917	Flue Dust	
9/26/2008	10:14	524547	76600	35000	41600	0926-34	1918	Baghouse	0809-CAMU-127
9/26/2008	10:17	510335	42860	26120	16740	0926-35	1919	Acid Plant	
9/26/2008	10:21	510090	43940	27220	16720	0926-36	1920	Acid Plant	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/26/2008	10:26	520990	79620	35540	44080	0926-37	1921	Baghouse	
9/26/2008	10:35	3	24060	21960	2100	0926-38	1922	Flue Dust	
9/26/2008	10:36	524547	79380	35000	44380	0926-39	1923	Baghouse	
9/26/2008	10:41	510090	50640	27220	23420	0926-40	1924	Acid Plant	
9/26/2008	10:48	520990	81600	35540	46060	0926-41	1925	Baghouse	
9/26/2008	11:00	524547	61780	35000	26780	0926-42	1926	Baghouse	
9/26/2008	11:07	510090	47960	27220	20740	0926-43	1927	Acid Plant	
9/26/2008	11:21	520990	79440	35540	43900	0926-44	1928	Baghouse	
9/26/2008	11:31	524547	92740	35000	57740	0926-45	1929	Baghouse	
9/26/2008	11:39	510335	42640	26120	16520	0926-46	1930	Baghouse	
9/26/2008	11:43	510090	43860	27220	16640	0926-47	1931	Baghouse	
9/26/2008	11:48	520990	78900	35540	43360	0926-48	1932	Baghouse	
9/26/2008	13:08	524547	83800	35000	48800	0926-49	1933	Baghouse	
9/26/2008	13:24	520990	84760	35540	49220	0926-50	1934	Blast Furnace Flue	
9/26/2008	13:29	524547	78180	35000	43180	0926-51	1935	Blast Furnace Flue	
9/26/2008	13:40	520990	80320	35540	44780	0926-52	1936	Blast Furnace Flue	
9/26/2008	13:49	524547	81960	35000	46960	0926-53	1937	Blast Furnace Flue	
9/26/2008	13:59	520990	84640	35540	49100	0926-54	1938	Blast Furnace Flue	0809-CAMU-128
9/26/2008	14:09	524547	70840	35000	35840	0926-55	1939	Blast Furnace Flue	
9/26/2008	14:17	510090	52840	27220	25620	0926-56	1940	Blast Furnace Flue	
9/26/2008	14:20	510335	53020	26120	26900	0926-57	1941	Blast Furnace Flue	
9/26/2008	14:31	520990	87580	35540	52040	0926-58	1942	Blast Furnace Flue	
9/26/2008	14:41	524547	75140	35000	40140	0926-59	1943	Blast Furnace Flue	
9/26/2008	14:50	510090	58880	27220	31660	0926-60	1944	Blast Furnace Flue	
9/26/2008	14:55	510335	59300	26120	33180	0926-61	1945	Acid Plant	
9/26/2008	15:04	524547	54100	35000	19100	0926-62	1946	Acid Plant	
9/26/2008	15:12	520990	82020	35540	46480	0926-63	1947	Acid Plant	
9/26/2008	15:15	510090	52880	27220	25660	0926-64	1948	Acid Plant	
9/26/2008	15:17	510335	53100	26120	26980	0926-65	1949	Blast Furnace Flue	
9/26/2008	15:28	524547	82980	35000	47980	0926-66	1950	Blast Furnace Flue	
9/26/2008	15:29	510335	42400	26120	16280	0926-67	1951	Blast Furnace Flue	
9/26/2008	16:24	520990	81800	35540	46260	0926-68	1952	Blast Furnace Flue	
9/26/2008	16:28	524547	74380	35000	39380	0926-69	1953	Blast Furnace Flue	
9/26/2008	16:31	510335	45820	26120	19700	0926-70	1954	Blast Furnace Flue	
9/26/2008	16:39	520990	74340	35540	38800	0926-71	1955	Blast Furnace Flue	
9/26/2008	16:44	524547	78240	35000	43240	0926-72	1956	Blast Furnace Flue	
9/26/2008	16:46	510335	48060	26120	21940	0926-73	1957	Blast Furnace Flue	
9/27/2008	8:15	520990	73940	35540	38400	0927-1	1958	Blast Furnace Flue	
9/27/2008	8:23	524547	78140	35000	43140	0927-2	1959	Blast Furnace Flue	
9/27/2008	8:33	520990	76700	35540	41160	0927-3	1960	Blast Furnace Flue	0809-CAMU-129
9/27/2008	8:43	524547	76620	35000	41620	0927-4	1961	Blast Furnace Flue	
9/27/2008	8:50	520990	77680	35540	42140	0927-5	1962	Blast Furnace Flue	
9/27/2008	9:01	524547	77120	35000	42120	0927-6	1963	Blast Furnace Flue	
9/27/2008	9:08	524545	77860	36000	41860	0927-7	1964	Blast Furnace Flue	
9/27/2008	9:19	520990	78080	35540	42540	0927-8	1965	Blast Furnace Flue	
9/27/2008	9:43	524547	75180	35000	40180	0927-9	1966	Blast Furnace Flue	
9/27/2008	9:54	520990	77480	35540	41940	0927-10	1967	Blast Furnace Flue	
9/27/2008	9:59	524545	75580	36000	39580	0927-11	1968	Blast Furnace Flue	
9/27/2008	10:12	524547	80100	35000	45100	0927-12	1969	Blast Furnace Flue	
9/27/2008	10:21	520990	79880	35540	44340	0927-13	1970	Blast Furnace Flue	
9/27/2008	10:40	524545	85540	36000	49540	0927-14	1971	Blast Furnace Flue	
9/27/2008	10:47	524547	82200	35000	47200	0927-15	1972	Blast Furnace Flue	
9/27/2008	10:57	520990	79300	35540	43760	0927-16	1973	Blast Furnace Flue	
9/27/2008	11:24	524545	78780	36000	42780	0927-17	1974	Blast Furnace Flue	
9/27/2008	11:30	524547	79140	35000	44140	0927-18	1975	Blast Furnace Flue	
9/27/2008	11:33	520990	79960	35540	44420	0927-19	1976	Blast Furnace Flue	
9/27/2008	11:42	524545	79500	36000	43500	0927-20	1977	Blast Furnace Flue	
9/27/2008	11:56	524547	80020	35000	45020	0927-21	1978	Blast Furnace Flue	
9/27/2008	12:00	520990	76740	35540	41200	0927-22	1979	Blast Furnace Flue	
9/27/2008	12:11	524545	81220	36000	45220	0927-23	1980	Blast Furnace Flue	0809-CAMU-130
9/27/2008	12:21	524547	79620	35000	44620	0927-24	1981	Blast Furnace Flue	
9/27/2008	12:24	520990	79040	35540	43500	0927-25	1982	Blast Furnace Flue	
9/27/2008	12:31	524545	78760	36000	42760	0927-26	1983	Blast Furnace Flue	
9/27/2008	12:51	524547	76960	35000	41960	0927-27	1984	Blast Furnace Flue	
9/27/2008	12:55	520990	74920	35540	39380	0927-28	1985	Blast Furnace Flue	
9/29/2008	8:21	520990	70560	35540	35020	0929-1	1986	Baghouse	
9/29/2008	8:28	524547	77840	35000	42840	0929-2	1987	Baghouse	
9/29/2008	8:36	524545	80660	36000	44660	0929-3	1988	Baghouse	
9/29/2008	8:42	520990	77700	35540	42160	0929-4	1989	Baghouse	
9/29/2008	8:48	524547	72740	35000	37740	0929-5	1990	Baghouse	
9/29/2008	8:54	524545	69280	36000	33280	0929-6	1991	Baghouse	
9/29/2008	8:59	520990	78700	35540	43160	0929-7	1992	Baghouse	
9/29/2008	9:06	524547	80180	35000	45180	0929-8	1993	Baghouse	
9/29/2008	9:16	524545	78780	36000	42780	0929-9	1994	Baghouse	
9/29/2008	9:23	520990	80260	35540	44720	0929-10	1995	Baghouse	
9/29/2008	9:27	524547	76780	35000	41780	0929-11	1996	Baghouse	
9/29/2008	9:33	524545	80360	36000	44360	0929-12	1997	Baghouse	
9/29/2008	9:40	520990	78940	35540	43400	0929-13	1998	Baghouse	
9/29/2008	9:46	524547	78340	35000	43340	0929-14	1999	Baghouse	
9/29/2008	9:53	524545	75600	36000	39600	0929-15	2000	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/29/2008	9:57	520990	86420	35540	50880	0929-16	2001	Baghouse	0809-CAMU-131
9/29/2008	10:03	524547	84760	35000	49760	0929-17	2002	Baghouse	
9/29/2008	10:09	524545	86900	36000	50900	0929-18	2003	Baghouse	
9/29/2008	10:14	520990	84840	35540	49300	0929-19	2004	Baghouse	
9/29/2008	10:26	524547	87260	35000	52260	0929-20	2005	Baghouse	
9/29/2008	10:31	524545	82940	36000	46940	0929-21	2006	Baghouse	
9/29/2008	10:37	520990	82980	35540	47440	0929-22	2007	Baghouse	
9/29/2008	10:44	524547	76220	35000	41220	0929-23	2008	Baghouse	
9/29/2008	10:49	524545	81180	36000	45180	0929-24	2009	Baghouse	
9/29/2008	10:57	520990	66800	35540	31260	0929-25	2010	Baghouse	
9/29/2008	11:10	524547	85180	35000	50180	0929-26	2011	Baghouse	
9/29/2008	11:15	524545	85160	36000	49160	0929-27	2012	Baghouse	
9/29/2008	11:21	520990	76700	35540	41160	0929-28	2013	Baghouse	
9/29/2008	11:27	524547	75960	35000	40960	0929-29	2014	Baghouse	
9/29/2008	11:35	524545	80260	36000	44260	0929-30	2015	Baghouse	
9/29/2008	11:42	520990	78060	35540	42520	0929-31	2016	Baghouse	
9/29/2008	11:49	524547	88800	35000	53800	0929-32	2017	Baghouse	
9/29/2008	11:58	524545	82280	36000	46280	0929-33	2018	Baghouse	
9/29/2008	13:17	520990	80080	35540	44540	0929-34	2019	Baghouse	
9/29/2008	13:22	524547	82340	35000	47340	0929-35	2020	Baghouse	
9/29/2008	13:26	524545	82400	36000	46400	0929-36	2021	Baghouse	0809-CAMU-132
9/29/2008	13:35	520990	83620	35540	48080	0929-37	2022	Baghouse	
9/29/2008	13:37	4	12780	11580	1200	0929-38	2023	Baghouse Socks	
9/29/2008	13:41	524547	82540	35000	47540	0929-39	2024	Baghouse	
9/29/2008	13:46	524545	87680	36000	51680	0929-40	2025	Baghouse	
9/29/2008	13:51	520990	86840	35540	51300	0929-41	2026	Baghouse	
9/29/2008	13:59	524547	83140	35000	48140	0929-42	2027	Baghouse	
9/29/2008	14:06	524545	88500	36000	52500	0929-43	2028	Baghouse	
9/29/2008	14:10	520990	82440	35540	46900	0929-44	2029	Baghouse	
9/29/2008	14:23	524547	84300	35000	49300	0929-45	2030	Baghouse	
9/29/2008	14:28	524545	84700	36000	48700	0929-46	2031	Baghouse	
9/29/2008	14:34	520990	83480	35540	47940	0929-47	2032	Baghouse	
9/29/2008	14:37	4	12740	11580	1160	0929-48	2033	Baghouse Socks	
9/29/2008	14:45	524547	82500	35000	47500	0929-49	2034	Baghouse	
9/29/2008	14:51	524545	83160	36000	47160	0929-50	2035	Baghouse	
9/29/2008	14:56	520990	81780	35540	46240	0929-51	2036	Baghouse	
9/29/2008	15:06	524547	84580	35000	49580	0929-52	2037	Baghouse	
9/29/2008	15:12	524545	86860	36000	50860	0929-53	2038	Baghouse	
9/29/2008	15:16	520990	83460	35540	47920	0929-54	2039	Baghouse	
9/29/2008	15:30	524547	88340	35000	53340	0929-55	2040	Baghouse	
9/29/2008	15:38	524545	95180	36000	59180	0929-56	2041	Baghouse	
9/29/2008	15:43	4	12660	11580	1080	0929-57	2042	Baghouse Socks	
9/29/2008	15:46	520990	81900	35540	46360	0929-58	2043	Baghouse	0809-CAMU-133
9/29/2008	15:55	524547	84040	35000	49040	0929-59	2044	Baghouse	
9/29/2008	16:02	524545	88940	36000	52940	0929-60	2045	Baghouse	
9/29/2008	16:10	520990	81760	35540	46220	0929-61	2046	Baghouse	
9/29/2008	16:28	524547	87540	35000	52540	0929-62	2047	Baghouse	
9/29/2008	16:37	524545	86300	36000	50300	0929-63	2048	Baghouse	
9/29/2008	16:45	520990	77820	35540	42280	0929-64	2049	Baghouse	
9/30/2008	7:45	4	12840	11580	1260	0930-1	2050	Baghouse Socks	
9/30/2008	8:10	520990	71300	35540	35760	0930-2	2051	Baghouse	
9/30/2008	8:16	524547	69180	35000	34180	0930-3	2052	Baghouse	
9/30/2008	8:27	524545	87460	36000	51460	0930-4	2053	Baghouse	
9/30/2008	8:34	520990	82220	35540	46680	0930-5	2054	Baghouse	
9/30/2008	8:43	524547	86500	35000	51500	0930-6	2055	Baghouse	
9/30/2008	8:50	524545	84020	36000	48020	0930-7	2056	Baghouse	
9/30/2008	9:00	520990	81720	35540	46180	0930-8	2057	Baghouse	
9/30/2008	9:08	524547	78580	35000	43580	0930-9	2058	Baghouse	
9/30/2008	9:13	4	12680	11580	1100	0930-10	2059	Baghouse Socks	
9/30/2008	9:16	524545	67720	36000	31720	0930-11	2060	Baghouse	
9/30/2008	9:23	520990	83420	35540	47880	0930-12	2061	Baghouse	
9/30/2008	9:30	524547	82780	35000	47780	0930-13	2062	Baghouse	
9/30/2008	9:36	524545	83160	36000	47160	0930-14	2063	Baghouse	0809-CAMU-134
9/30/2008	9:45	520990	83660	35540	48120	0930-15	2064	Baghouse	
9/30/2008	9:53	524547	81300	35000	46300	0930-16	2065	Baghouse	
9/30/2008	10:05	524545	85800	36000	49800	0930-17	2066	Baghouse	
9/30/2008	10:07	4	12760	11580	1180	0930-18	2067	Baghouse Socks	
9/30/2008	10:09	520990	70220	35540	34680	0930-19	2068	Baghouse	
9/30/2008	10:17	524547	83940	35000	48940	0930-20	2069	Baghouse	
9/30/2008	11:14	524545	102960	36000	66960	0930-21	2070	Acid Plant	
9/30/2008	11:19	4	12800	11580	1220	0930-22	2071	Baghouse Socks	
9/30/2008	11:20	520990	108260	35540	72720	0930-23	2072	Acid Plant	
9/30/2008	11:31	524547	71240	35000	36240	0930-24	2073	Acid Plant	
9/30/2008	11:47	524545	79160	36000	43160	0930-25	2074	Acid Plant	
9/30/2008	11:52	520990	75600	35540	40060	0930-26	2075	Acid Plant	
9/30/2008	13:27	524545	83160	36000	47160	0930-27	2076	Acid Plant	
9/30/2008	13:50	524545	95260	36000	59260	0930-28	2077	Acid Plant	
9/30/2008	14:09	524545	101540	36000	65540	0930-29	2078	Acid Plant	
9/30/2008	14:28	524545	71920	36000	35920	0930-30	2079	Acid Plant	
9/30/2008	14:31	4	12780	11580	1200	0930-31	2080	Baghouse Socks	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
9/30/2008	14:51	524545	84340	36000	48340	0930-32	2081	Acid Plant	
9/30/2008	15:13	524545	84020	36000	48020	0930-33	2082	Acid Plant	
9/30/2008	15:37	524545	88000	36000	52000	0930-34	2083	Acid Plant	
9/30/2008	15:55	3	24040	21960	2080	0930-35	2084	Baghouse Socks	
9/30/2008	16:00	524545	86260	36000	50260	0930-36	2085	Acid Plant	
9/30/2008	16:06	3	24320	21960	2360	0930-37	2086	Baghouse Socks	
9/30/2008	16:20	524545	78000	36000	42000	0930-38	2087	Blast Furnace Flue	
9/30/2008	16:40	524545	92620	36000	56620	0930-39	2088	Blast Furnace Flue	0809-CAMU-135
10/1/2008	7:47	524545	92060	36000	56060	1001-1	2089	Blast Furnace Flue	
10/1/2008	7:50	510090	51520	27220	24300	1001-2	2090	Blast Furnace Flue	
10/1/2008	7:54	510335	51120	26120	25000	1001-3	2091	Blast Furnace Flue	
10/1/2008	8:10	524545	79020	36000	43020	1001-4	2092	Blast Furnace Flue	
10/1/2008	8:12	510335	49280	26120	23160	1001-5	2093	Blast Furnace Flue	
10/1/2008	8:17	510090	50200	27220	22980	1001-6	2094	Blast Furnace Flue	
10/1/2008	8:25	510335	50900	26120	24780	1001-7	2095	Blast Furnace Flue	
10/1/2008	8:29	524545	40380	36000	4380	1001-8	2096	Blast Furnace Flue	
10/1/2008	8:31	510090	55200	27220	27980	1001-9	2097	Blast Furnace Flue	
10/1/2008	8:40	510335	50640	26120	24520	1001-10	2098	Blast Furnace Flue	
10/1/2008	8:44	510090	55840	27220	28620	1001-11	2099	Blast Furnace Flue	
10/1/2008	8:50	524545	82080	36000	46080	1001-12	2100	Blast Furnace Flue	
10/1/2008	8:56	510335	48200	26120	22080	1001-13	2101	Blast Furnace Flue	
10/1/2008	8:58	510090	53920	27220	26700	1001-14	2102	Blast Furnace Flue	
10/1/2008	8:59	2	14040	12700	1340	1001-15	2103	Baghouse Socks	
10/1/2008	9:07	524545	87600	36000	51600	1001-16	2104	Blast Furnace Flue	
10/1/2008	9:10	510335	50540	26120	24420	1001-17	2105	Blast Furnace Flue	
10/1/2008	9:12	510090	51240	27220	24020	1001-18	2106	Blast Furnace Flue	
10/1/2008	9:28	524545	85680	36000	49680	1001-19	2107	Blast Furnace Flue	
10/1/2008	9:29	510335	49860	26120	23740	1001-20	2108	Blast Furnace Flue	
10/1/2008	9:32	510090	50700	27220	23480	1001-21	2109	Blast Furnace Flue	0809-CAMU-136
10/1/2008	9:43	524545	80540	36000	44540	1001-22	2110	Blast Furnace Flue	
10/1/2008	9:46	510335	47880	26120	21760	1001-23	2111	Blast Furnace Flue	
10/1/2008	9:49	510090	49300	27220	22080	1001-24	2112	Blast Furnace Flue	
10/1/2008	9:58	510335	43140	26120	17020	1001-25	2113	Blast Furnace Flue	
10/1/2008	9:59	524545	41760	36000	5760	1001-26	2114	Blast Furnace Flue	
10/1/2008	10:03	510090	46420	27220	19200	1001-27	2115	Blast Furnace Flue	
10/1/2008	10:10	510335	49280	26120	23160	1001-28	2116	Blast Furnace Flue	
10/1/2008	10:14	524545	42980	36000	6980	1001-29	2117	Blast Furnace Flue	
10/1/2008	10:15	510090	52860	27220	25640	1001-30	2118	Blast Furnace Flue	
10/1/2008	10:22	510335	48980	26120	22860	1001-31	2119	Blast Furnace Flue	
10/1/2008	10:28	510090	47540	27220	20320	1001-32	2120	Blast Furnace Flue	
10/1/2008	10:30	524545	44800	36000	8800	1001-33	2121	Blast Furnace Flue	
10/1/2008	10:35	510335	45980	26120	19860	1001-34	2122	Blast Furnace Flue	
10/1/2008	10:40	510090	49980	27220	22760	1001-35	2123	Blast Furnace Flue	
10/1/2008	10:45	524545	45200	36000	9200	1001-36	2124	Blast Furnace Flue	
10/1/2008	10:48	510335	48420	26120	22300	1001-37	2125	Blast Furnace Flue	
10/1/2008	10:51	510090	47600	27220	20380	1001-38	2126	Blast Furnace Flue	
10/1/2008	11:02	510090	52940	27220	25720	1001-39	2127	Blast Furnace Flue	
10/1/2008	11:07	510335	49880	26120	23760	1001-40	2128	Blast Furnace Flue	
10/1/2008	11:08	524545	45100	36000	9100	1001-41	2129	Blast Furnace Flue	
10/1/2008	11:17	510090	57380	27220	30160	1001-42	2130	Blast Furnace Flue	0809-CAMU-137
10/1/2008	11:25	510335	56320	26120	30200	1001-43	2131	Blast Furnace Flue	
10/1/2008	11:30	524545	46100	36000	10100	1001-44	2132	Blast Furnace Flue	
10/1/2008	11:37	510090	47360	27220	20140	1001-45	2133	Blast Furnace Flue	
10/1/2008	11:44	510335	50640	26120	24520	1001-46	2134	Blast Furnace Flue	
10/1/2008	11:48	524545	44620	36000	8620	1001-47	2135	Blast Furnace Flue	
10/1/2008	11:50	510090	48380	27220	21160	1001-48	2136	Blast Furnace Flue	
10/1/2008	13:15	510335	51280	26120	25160	1001-49	2137	Blast Furnace Flue	
10/1/2008	13:18	510090	51620	27220	24400	1001-50	2138	Blast Furnace Flue	
10/1/2008	13:30	510090	50380	27220	23160	1001-51	2139	Blast Furnace Flue	
10/1/2008	13:32	510335	47240	26120	21120	1001-52	2140	Blast Furnace Flue	
10/1/2008	13:38	524545	47440	36000	11440	1001-53	2141	Blast Furnace Flue	
10/1/2008	13:41	510090	50980	27220	23760	1001-54	2142	Blast Furnace Flue	
10/1/2008	13:44	510335	49160	26120	23040	1001-55	2143	Blast Furnace Flue	
10/1/2008	13:53	510090	51420	27220	24200	1001-56	2144	Blast Furnace Flue	
10/1/2008	13:57	510335	49140	26120	23020	1001-57	2145	Blast Furnace Flue	
10/1/2008	14:00	524545	45760	36000	9760	1001-58	2146	Blast Furnace Flue	
10/1/2008	14:06	510090	49960	27220	22740	1001-59	2147	Blast Furnace Flue	
10/1/2008	14:11	510335	50180	26120	24060	1001-60	2148	Blast Furnace Flue	
10/1/2008	14:17	524545	47280	36000	11280	1001-61	2149	Blast Furnace Flue	
10/1/2008	14:19	510090	53880	27220	26660	1001-62	2150	Blast Furnace Flue	0809-CAMU-138
10/1/2008	14:27	510335	52760	26120	26640	1001-63	2151	Blast Furnace Flue	
10/1/2008	14:38	524545	49280	36000	13280	1001-64	2152	Blast Furnace Flue	
10/1/2008	14:43	510335	33220	26120	7100	1001-65	2153	Blast Furnace Flue	
10/1/2008	15:01	510335	58360	26120	32240	1001-66	2154	Blast Furnace Flue	
10/1/2008	15:03	524545	53260	36000	17260	1001-67	2155	Blast Furnace Flue	
10/1/2008	15:13	510335	37720	26120	11600	1001-68	2156	Blast Furnace Flue	
10/1/2008	15:21	524545	67780	36000	31780	1001-69	2157	Blast Furnace Flue	
10/1/2008	15:26	510335	54080	26120	27960	1001-70	2158	Blast Furnace Flue	
10/1/2008	15:40	524545	83480	36000	47480	1001-71	2159	Blast Furnace Flue	
10/1/2008	15:41	510335	46420	26120	20300	1001-72	2160	Blast Furnace Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/1/2008	15:44	510090	50460	27220	23240	1001-73	2161	Blast Furnace Flue	
10/1/2008	15:52	510335	44120	26120	18000	1001-74	2162	Blast Furnace Flue	
10/1/2008	16:03	524545	61520	36000	25520	1001-75	2163	Blast Furnace Flue	
10/1/2008	16:04	510090	43420	27220	16200	1001-76	2164	Blast Furnace Flue	
10/1/2008	16:24	510090	50140	27220	22920	1001-77	2165	Blast Furnace Flue	
10/1/2008	16:36	524545	76120	36000	40120	1001-78	2166	Blast Furnace Flue	
10/1/2008	16:39	510335	48800	26120	22680	1001-79	2167	Blast Furnace Flue	
10/1/2008	16:43	510090	48120	27220	20900	1001-80	2168	Blast Furnace Flue	
10/1/2008	16:54	524545	77540	36000	41540	1001-81	2169	Blast Furnace Flue	
10/2/2008	8:06	520990	82860	35540	47320	1002-1	2170	Blast Furnace Flue	
10/2/2008	8:13	524545	74200	36000	38200	1002-2	2171	Blast Furnace Flue	0809-CAMU-139
10/2/2008	8:14	510335	46420	26120	20300	1002-3	2172	Blast Furnace Flue	
10/2/2008	8:30	520990	83060	35540	47520	1002-4	2173	Blast Furnace Flue	
10/2/2008	9:20	510335	52020	26120	25900	1002-5	2174	Blast Furnace Flue	
10/2/2008	9:32	524545	75500	36000	39500	1002-6	2175	Blast Furnace Flue	
10/2/2008	9:34	520990	77860	35540	42320	1002-7	2176	Blast Furnace Flue	
10/2/2008	9:38	510335	54060	26120	27940	1002-8	2177	Blast Furnace Flue	
10/2/2008	9:51	524545	85300	36000	49300	1002-9	2178	Blast Furnace Flue	
10/2/2008	10:00	520990	85080	35540	49540	1002-10	2179	Blast Furnace Flue	
10/2/2008	10:03	510335	53660	26120	27540	1002-11	2180	Blast Furnace Flue	
10/2/2008	10:07	524545	82260	36000	46260	1002-12	2181	Blast Furnace Flue	
10/2/2008	10:14	520990	82420	35540	46880	1002-13	2182	Blast Furnace Flue	
10/2/2008	10:17	510335	50300	26120	24180	1002-14	2183	Blast Furnace Flue	
10/2/2008	10:23	524545	83280	36000	47280	1002-15	2184	Blast Furnace Flue	
10/2/2008	10:32	520990	84380	35540	48840	1002-16	2185	Blast Furnace Flue	
10/2/2008	10:36	510335	48020	26120	21900	1002-17	2186	Blast Furnace Flue	
10/2/2008	10:45	524545	82300	36000	46300	1002-18	2187	Blast Furnace Flue	
10/2/2008	10:49	520990	80060	35540	44520	1002-19	2188	Blast Furnace Flue	
10/2/2008	11:00	524545	82220	36000	46220	1002-20	2189	Blast Furnace Flue	
10/2/2008	11:05	520990	82060	35540	46520	1002-21	2190	Blast Furnace Flue	0809-CAMU-140
10/2/2008	11:18	524545	85100	36000	49100	1002-22	2191	Blast Furnace Flue	
10/2/2008	11:27	520990	79100	35540	43560	1002-23	2192	Blast Furnace Flue	
10/2/2008	11:36	524545	87380	36000	51380	1002-24	2193	Blast Furnace Flue	
10/2/2008	11:43	520990	85820	35540	50280	1002-25	2194	Blast Furnace Flue	
10/2/2008	11:52	524545	79940	36000	43940	1002-26	2195	Blast Furnace Flue	
10/2/2008	13:14	510335	47980	26120	21860	1002-27	2196	Blast Furnace Flue	
10/2/2008	13:19	520990	82660	35540	47120	1002-28	2197	Blast Furnace Flue	
10/2/2008	13:30	524545	91500	36000	55500	1002-29	2198	Blast Furnace Flue	
10/2/2008	11:33	510335	52700	26120	26580	1002-30	2199	Blast Furnace Flue	
10/2/2008	13:44	520990	81620	35540	46080	1002-31	2200	Blast Furnace Flue	
10/2/2008	13:50	524545	90440	36000	54440	1002-32	2201	Blast Furnace Flue	
10/2/2008	13:52	510335	49620	26120	23500	1002-33	2202	Blast Furnace Flue	
10/2/2008	13:59	520990	87640	35540	52100	1002-34	2203	Blast Furnace Flue	
10/2/2008	14:06	524545	89560	36000	53560	1002-35	2204	Blast Furnace Flue	
10/2/2008	14:10	510335	59080	26120	32960	1002-36	2205	Blast Furnace Flue	
10/2/2008	14:15	520990	81000	35540	45460	1002-37	2206	Blast Furnace Flue	
10/2/2008	14:21	524545	83760	36000	47760	1002-38	2207	Blast Furnace Flue	
10/2/2008	14:24	510335	50160	26120	24040	1002-39	2208	Blast Furnace Flue	
10/2/2008	14:32	520990	83720	35540	48180	1002-40	2209	Blast Furnace Flue	
10/2/2008	14:37	524545	83100	36000	47100	1002-41	2210	Blast Furnace Flue	
10/2/2008	14:40	510335	43440	26120	17320	1002-42	2211	Blast Furnace Flue	
10/2/2008	14:47	520990	80880	35540	45340	1002-43	2212	Blast Furnace Flue	0809-CAMU-141
10/2/2008	14:54	510335	50480	26120	24360	1002-44	2213	Blast Furnace Flue	
10/2/2008	14:58	524545	80380	36000	44380	1002-45	2214	Blast Furnace Flue	
10/2/2008	15:09	520990	72900	35540	37360	1002-46	2215	Blast Furnace Flue	
10/2/2008	15:11	510335	47220	26120	21100	1002-47	2216	Blast Furnace Flue	
10/2/2008	15:19	524545	75080	36000	39080	1002-48	2217	Blast Furnace Flue	
10/2/2008	15:25	520990	81500	35540	45960	1002-49	2218	Blast Furnace Flue	
10/2/2008	15:28	510335	48420	26120	22300	1002-50	2219	Blast Furnace Flue	
10/2/2008	15:35	524545	82000	36000	46000	1002-51	2220	Blast Furnace Flue	
10/2/2008	15:43	520990	79800	35540	44260	1002-52	2221	Blast Furnace Flue	
10/2/2008	15:46	510335	49960	26120	23840	1002-53	2222	Blast Furnace Flue	
10/2/2008	15:52	524545	80620	36000	44620	1002-54	2223	Blast Furnace Flue	
10/2/2008	16:04	520990	78500	35540	42960	1002-55	2224	Blast Furnace Flue	
10/2/2008	16:06	510335	51180	26120	25060	1002-56	2225	Blast Furnace Flue	
10/2/2008	16:13	524545	79020	36000	43020	1002-57	2226	Blast Furnace Flue	
10/2/2008	16:19	520990	79720	35540	44180	1002-58	2227	Blast Furnace Flue	
10/2/2008	16:22	510335	48540	26120	22420	1002-59	2228	Blast Furnace Flue	
10/2/2008	16:42	524545	77120	36000	41120	1002-60	2229	Blast Furnace Flue	
10/2/2008	16:48	520990	74080	35540	38540	1002-61	2230	Blast Furnace Flue	
10/2/2008	16:50	510335	50480	26120	24360	1002-62	2231	Blast Furnace Flue	
10/3/2008	8:05	520990	78100	35540	42560	1003-1	2232	Blast Furnace Flue	0809-CAMU-142
10/3/2008	8:25	510335	53520	26120	27400	1003-2	2233	Blast Furnace Flue	
10/3/2008	8:30	520990	82180	35540	46640	1003-3	2234	Blast Furnace Flue	
10/3/2008	8:47	520990	85320	35540	49780	1003-4	2235	Blast Furnace Flue	
10/3/2008	8:49	510335	51940	26120	25820	1003-5	2236	Blast Furnace Flue	
10/3/2008	9:03	520990	81800	35540	46260	1003-6	2237	Blast Furnace Flue	
10/3/2008	9:05	510335	51940	26120	25820	1003-7	2238	Blast Furnace Flue	
10/3/2008	9:20	520990	86780	35540	51240	1003-8	2239	Blast Furnace Flue	
10/3/2008	9:24	510335	49960	26120	23840	1003-9	2240	Blast Furnace Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/3/2008	9:33	524545	84580	36000	48580	1003-10	2241	Blast Furnace Flue	
10/3/2008	9:37	520990	81180	35540	45640	1003-11	2242	Blast Furnace Flue	
10/3/2008	9:40	510335	54600	26120	28480	1003-12	2243	Blast Furnace Flue	
10/3/2008	9:51	524545	88380	36000	52380	1003-13	2244	Blast Furnace Flue	
10/3/2008	9:58	520990	83620	35540	48080	1003-14	2245	Blast Furnace Flue	
10/3/2008	10:02	510335	53300	26120	27180	1003-15	2246	Blast Furnace Flue	
10/3/2008	10:10	524545	75100	36000	39100	1003-16	2247	Blast Furnace Flue	
10/3/2008	10:19	520990	86940	35540	51400	1003-17	2248	Blast Furnace Flue	
10/3/2008	10:22	510335	48080	26120	21960	1003-18	2249	Blast Furnace Flue	
10/3/2008	10:33	524545	86220	36000	50220	1003-19	2250	Blast Furnace Flue	
10/3/2008	10:38	520990	86220	35540	50680	1003-20	2251	Blast Furnace Flue	
10/3/2008	10:41	510335	47820	26120	21700	1003-21	2252	Blast Furnace Flue	0809-CAMU-143
10/3/2008	10:58	524545	78340	36000	42340	1003-22	2253	Blast Furnace Flue	
10/3/2008	11:02	520990	85440	35540	49900	1003-23	2254	Blast Furnace Flue	
10/3/2008	11:05	510335	49780	26120	23660	1003-24	2255	Blast Furnace Flue	
10/3/2008	11:17	524545	83220	36000	47220	1003-25	2256	Blast Furnace Flue	
10/3/2008	11:20	520990	83420	35540	47880	1003-26	2257	Blast Furnace Flue	
10/3/2008	11:23	510335	53000	26120	26880	1003-27	2258	Blast Furnace Flue	
10/3/2008	11:36	524545	84200	36000	48200	1003-28	2259	Blast Furnace Flue	
10/3/2008	11:40	520990	84980	35540	49440	1003-29	2260	Blast Furnace Flue	
10/3/2008	11:53	524545	84840	36000	48840	1003-30	2261	Blast Furnace Flue	
10/3/2008	11:56	520990	81460	35540	45920	1003-31	2262	Blast Furnace Flue	
10/3/2008	13:20	524545	84440	36000	48440	1003-32	2263	Blast Furnace Flue	
10/3/2008	13:23	520990	87700	35540	52160	1003-33	2264	Blast Furnace Flue	
10/3/2008	13:29	524547	83420	35000	48420	1003-34	2265	Blast Furnace Flue	
10/3/2008	13:39	524545	90400	36000	54400	1003-35	2266	Blast Furnace Flue	
10/3/2008	13:54	524545	87880	36000	51880	1003-36	2267	Blast Furnace Flue	
10/3/2008	13:59	524547	82840	35000	47840	1003-37	2268	Blast Furnace Flue	
10/3/2008	14:00	510335	50680	26120	24560	1003-38	2269	Blast Furnace Flue	
10/3/2008	14:13	524545	84340	36000	48340	1003-39	2270	Blast Furnace Flue	
10/3/2008	14:17	524547	80760	35000	45760	1003-40	2271	Blast Furnace Flue	
10/3/2008	14:21	510335	56040	26120	29920	1003-41	2272	Blast Furnace Flue	0809-CAMU-144
10/3/2008	14:31	524545	86140	36000	50140	1003-42	2273	Blast Furnace Flue	
10/3/2008	14:37	524547	84500	35000	49500	1003-43	2274	Blast Furnace Flue	
10/3/2008	14:48	524545	88660	36000	52660	1003-44	2275	Blast Furnace Flue	
10/3/2008	14:50	510335	52500	26120	26380	1003-45	2276	Blast Furnace Flue	
10/3/2008	14:55	524547	83960	35000	48960	1003-46	2277	Blast Furnace Flue	
10/3/2008	15:07	524545	84660	36000	48660	1003-47	2278	Blast Furnace Flue	
10/3/2008	15:09	510335	52000	26120	25880	1003-48	2279	Blast Furnace Flue	
10/3/2008	15:14	524547	86260	35000	51260	1003-49	2280	Blast Furnace Flue	
10/3/2008	15:25	524545	79180	36000	43180	1003-50	2281	Blast Furnace Flue	
10/3/2008	15:35	524547	87400	35000	52400	1003-51	2282	Blast Furnace Flue	
10/3/2008	15:39	510335	51060	26120	24940	1003-52	2283	Blast Furnace Flue	
10/3/2008	15:47	524545	79200	36000	43200	1003-53	2284	Blast Furnace Flue	
10/3/2008	15:59	524547	88920	35000	53920	1003-54	2285	Blast Furnace Flue	
10/3/2008	16:05	524545	81140	36000	45140	1003-55	2286	Blast Furnace Flue	
10/3/2008	16:07	510335	49120	26120	23000	1003-56	2287	Blast Furnace Flue	
10/3/2008	16:21	524547	87220	35000	52220	1003-57	2288	Blast Furnace Flue	
10/3/2008	16:26	524545	88120	36000	52120	1003-58	2289	Blast Furnace Flue	
10/3/2008	16:29	510335	54760	26120	28640	1003-59	2290	Blast Furnace Flue	
10/3/2008	16:38	524547	79200	35000	44200	1003-60	2291	Blast Furnace Flue	
10/3/2008	16:48	524545	83320	36000	47320	1003-61	2292	Blast Furnace Flue	0809-CAMU-145
10/3/2008	16:49	510335	52140	26120	26020	1003-62	2293	Blast Furnace Flue	
10/3/2008	16:55	524547	84800	35000	49800	1003-63	2294	Blast Furnace Flue	
10/4/2008	8:20	524547	82080	35000	47080	1004-01	2295	Blast Furnace Flue	
10/4/2008	8:25	524545	910120	36000	874120	1004-02	2296	Blast Furnace Flue	
10/4/2008	8:27	510335	51600	26120	25480	1004-03	2297	Blast Furnace Flue	
10/4/2008	8:41	524547	81480	35000	46480	1004-04	2298	Blast Furnace Flue	
10/4/2008	8:54	524545	90580	36000	54580	1004-05	2299	Blast Furnace Flue	
10/4/2008	9:02	510335	51360	26120	25240	1004-06	2300	Blast Furnace Flue	
10/4/2008	9:12	524547	80000	35000	45000	1004-07	2301	Blast Furnace Flue	
10/4/2008	9:18	524545	83440	36000	47440	1004-08	2302	Blast Furnace Flue	
10/4/2008	9:22	510335	50200	26120	24080	1004-09	2303	Blast Furnace Flue	
10/4/2008	9:30	524547	80040	35000	45040	1004-10	2304	Blast Furnace Flue	
10/4/2008	9:37	524545	79280	36000	43280	1004-11	2305	Blast Furnace Flue	
10/4/2008	9:41	510335	49760	26120	23640	1004-12	2306	Blast Furnace Flue	
10/4/2008	9:47	524547	76340	35000	41340	1004-13	2307	Blast Furnace Flue	
10/4/2008	9:59	524545	85400	36000	49400	1004-14	2308	Blast Furnace Flue	
10/4/2008	10:02	510335	51960	26120	25840	1004-15	2309	Blast Furnace Flue	
10/4/2008	10:08	524547	80000	35000	45000	1004-16	2310	Blast Furnace Flue	
10/4/2008	10:17	524545	79420	36000	43420	1004-17	2311	Blast Furnace Flue	
10/4/2008	10:19	510335	49440	26120	23320	1004-18	2312	Blast Furnace Flue	0809-CAMU-146
10/4/2008	10:25	524547	80120	35000	45120	1004-19	2313	Blast Furnace Flue	
10/4/2008	10:36	524545	82640	36000	46640	1004-20	2314	Blast Furnace Flue	
10/4/2008	10:39	510335	50800	26120	24680	1004-21	2315	Blast Furnace Flue	
10/4/2008	10:43	524547	81440	35000	46440	1004-22	2316	Blast Furnace Flue	
10/4/2008	10:58	524545	73560	36000	37560	1004-23	2317	Blast Furnace Flue	
10/4/2008	11:00	510335	47340	26120	21220	1004-24	2318	Blast Furnace Flue	
10/4/2008	11:04	524547	78400	35000	43400	1004-25	2319	Blast Furnace Flue	
10/4/2008	11:17	524545	73960	36000	37960	1004-26	2320	Blast Furnace Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/4/2008	11:19	510335	51180	26120	25060	1004-27	2321	Blast Furnace Flue	
10/4/2008	11:25	524547	79700	35000	44700	1004-28	2322	Blast Furnace Flue	
10/4/2008	11:35	524545	78600	36000	42600	1004-29	2323	Blast Furnace Flue	
10/4/2008	11:37	510335	46820	26120	20700	1004-30	2324	Blast Furnace Flue	
10/4/2008	11:52	524547	78760	35000	43760	1004-31	2325	Blast Furnace Flue	
10/4/2008	11:56	524545	90960	36000	54960	1004-32	2326	Blast Furnace Flue	
10/4/2008	12:00	510335	53740	26120	27620	1004-33	2327	Blast Furnace Flue	
10/6/2008	8:25	524547	77840	35000	42840	1006-01	2328	Blast Furnace Flue	
10/6/2008	8:30	524545	75260	36000	39260	1006-02	2329	Blast Furnace Flue	
10/6/2008	8:34	510335	45700	26120	19580	1006-03	2330	Blast Furnace Flue	
10/6/2008	8:52	524547	78100	35000	43100	1006-04	2331	Blast Furnace Flue	
10/6/2008	8:55	510335	51340	26120	25220	1006-05	2332	Blast Furnace Flue	0809-CAMU-147
10/6/2008	9:00	524545	80820	36000	44820	1006-06	2333	Blast Furnace Flue	
10/6/2008	9:10	524547	77700	35000	42700	1006-07	2334	Blast Furnace Flue	
10/6/2008	9:16	524545	70780	36000	34780	1006-08	2335	Blast Furnace Flue	
10/6/2008	9:25	510335	51360	26120	25240	1006-09	2336	Blast Furnace Flue	
10/6/2008	9:31	524547	80700	35000	45700	1006-10	2337	Blast Furnace Flue	
10/6/2008	9:37	524545	73700	36000	37700	1006-11	2338	Blast Furnace Flue	
10/6/2008	9:41	510335	49020	26120	22900	1006-12	2339	Blast Furnace Flue	
10/6/2008	9:47	524547	77260	35000	42260	1006-13	2340	Blast Furnace Flue	
10/6/2008	9:53	524545	81120	36000	45120	1006-14	2341	Blast Furnace Flue	
10/6/2008	9:55	510335	48980	26120	22860	1006-15	2342	Blast Furnace Flue	
10/6/2008	10:05	524547	77900	35000	42900	1006-16	2343	Blast Furnace Flue	
10/6/2008	10:09	524545	78560	36000	42560	1006-17	2344	Blast Furnace Flue	
10/6/2008	10:13	510335	47340	26120	21220	1006-18	2345	Blast Furnace Flue	
10/6/2008	10:20	524547	77400	35000	42400	1006-19	2346	Blast Furnace Flue	
10/6/2008	10:32	524545	75720	36000	39720	1006-20	2347	Blast Furnace Flue	
10/6/2008	10:34	510335	46100	26120	19980	1006-21	2348	Blast Furnace Flue	
10/6/2008	10:39	524547	74600	35000	39600	1006-22	2349	Blast Furnace Flue	
10/6/2008	10:45	524545	69300	36000	33300	1006-23	2350	Blast Furnace Flue	
10/6/2008	10:48	510335	47280	26120	21160	1006-24	2351	Blast Furnace Flue	
10/6/2008	10:55	524547	81440	35000	46440	1006-25	2352	Blast Furnace Flue	0809-CAMU-148
10/6/2008	11:03	524545	74020	36000	38020	1006-26	2353	Blast Furnace Flue	
10/6/2008	11:04	510335	47280	26120	21160	1006-27	2354	Blast Furnace Flue	
10/6/2008	11:25	524547	77060	35000	42060	1006-28	2355	Blast Furnace Flue	
10/6/2008	11:29	524545	71560	36000	35560	1006-29	2356	Blast Furnace Flue	
10/6/2008	0:00	510335	46480	26120	20360	1006-30	2357	Blast Furnace Flue	
10/6/2008	11:46	524547	66160	35000	31160	1006-31	2358	Blast Furnace Flue	
10/6/2008	11:53	524545	73280	36000	37280	1006-32	2359	Blast Furnace Flue	
10/6/2008	13:23	510335	44720	26120	18600	1006-33	2360	Blast Furnace Flue	
10/6/2008	13:37	524545	80980	36000	44980	1006-34	2361	Blast Furnace Flue	
10/6/2008	13:44	524547	64140	35000	29140	1006-35	2362	Blast Furnace Flue	
10/6/2008	13:46	510335	48840	26120	22720	1006-36	2363	Blast Furnace Flue	
10/6/2008	13:58	524545	81060	36000	45060	1006-37	2364	Blast Furnace Flue	
10/6/2008	14:10	524547	64880	35000	29880	1006-38	2365	Cooling Tower	
10/6/2008	14:20	524545	62580	36000	26580	1006-39	2366	Cooling Tower	
10/6/2008	15:05	524547	65240	35000	30240	1006-40	2367	Cooling Tower	
10/6/2008	15:15	524545	61880	36000	25880	1006-41	2368	Cooling Tower	
10/6/2008	15:22	524547	73400	35000	38400	1006-42	2369	Cooling Tower	
10/6/2008	15:33	524545	67520	36000	31520	1006-43	2370	Cooling Tower	
10/6/2008	15:48	524547	78900	35000	43900	1006-44	2371	Cooling Tower	
10/6/2008	15:52	524545	77860	36000	41860	1006-45	2372	Cooling Tower	
10/6/2008	16:03	524547	79620	35000	44620	1006-46	2373	Cooling Tower	0809-CAMU-149
10/6/2008	16:21	524545	83240	36000	47240	1006-47	2374	Cooling Tower	
10/6/2008	16:22	510335	47460	26120	21340	1006-48	2375	Cooling Tower	
10/6/2008	16:33	524547	79340	35000	44340	1006-49	2376	Cooling Tower	
10/6/2008	16:42	524545	78100	36000	42100	1006-50	2377	Cooling Tower	
10/6/2008	16:45	510335	52380	26120	26260	1006-51	2378	Cooling Tower	
10/6/2008	16:54	524547	78280	35000	43280	1006-52	2379	Cooling Tower	
10/8/2008	8:30	524547	54080	35000	19080	1008-01	2380	Monier Flue	
10/8/2008	8:38	524545	58600	36000	22600	1008-02	2381	Monier Flue	
10/8/2008	8:43	510335	38360	26120	12240	1008-03	2382	Monier Flue	
10/8/2008	9:03	524547	57380	35000	22380	1008-04	2383	Monier Flue	
10/8/2008	9:14	524545	61020	36000	25020	1008-05	2384	Monier Flue	
10/8/2008	9:22	510335	35160	26120	9040	1008-06	2385	Monier Flue	
10/8/2008	9:49	524547	69940	35000	34940	1008-07	2386	Monier Flue	
10/8/2008	9:54	510335	45620	26120	19500	1008-08	2387	Monier Flue	
10/8/2008	10:08	524545	67140	36000	31140	1008-09	2388	Monier Flue	
10/8/2008	10:19	524547	80440	35000	45440	1008-10	2389	Monier Flue	
10/8/2008	10:22	510335	42320	26120	16200	1008-11	2390	Monier Flue	
10/8/2008	10:29	524545	62680	36000	26680	1008-12	2391	Monier Flue	
10/8/2008	10:37	524547	71440	35000	36440	1008-13	2392	Monier Flue	
10/8/2008	10:42	510335	39660	26120	13540	1008-14	2393	Monier Flue	0809-CAMU-150
10/8/2008	10:57	524545	74980	36000	38980	1008-15	2394	Monier Flue	
10/8/2008	11:12	510335	39600	26120	13480	1008-16	2395	Monier Flue	
10/8/2008	11:35	524547	73700	35000	38700	1008-17	2396	Monier Flue	
10/8/2008	11:39	510335	41000	26120	14880	1008-18	2397	Monier Flue	
10/8/2008	11:42	524545	78700	36000	42700	1008-19	2398	Monier Flue	
10/8/2008	11:53	524547	80520	35000	45520	1008-20	2399	Monier Flue	
10/8/2008	13:30	524547	64120	35000	29120	1008-21	2400	Monier Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/8/2008	13:40	524545	72080	36000	36080	1008-22	2401	Monier Flue	
10/8/2008	13:46	510335	47260	26120	21140	1008-23	2402	Monier Flue	
10/8/2008	13:47	524547	60000	35000	25000	1008-24	2403	Monier Flue	
10/8/2008	13:51	524545	62400	36000	26400	1008-25	2404	Monier Flue	
10/8/2008	14:11	524547	54480	35000	19480	1008-26	2405	Monier Flue	
10/8/2008	14:12	510335	52380	26120	26260	1008-27	2406	Monier Flue	
10/8/2008	14:14	524545	56400	36000	20400	1008-28	2407	Monier Flue	
10/8/2008	14:22	510335	52700	26120	26580	1008-29	2408	Monier Flue	
10/8/2008	14:27	524547	74880	35000	39880	1008-30	2409	Monier Flue	
10/8/2008	14:33	524545	84940	36000	48940	1008-31	2410	Monier Flue	
10/8/2008	14:36	510335	52160	26120	26040	1008-32	2411	Monier Flue	
10/8/2008	14:41	524547	62580	35000	27580	1008-33	2412	Monier Flue	
10/8/2008	14:49	524545	87480	36000	51480	1008-34	2413	Monier Flue	0809-CAMU-151
10/8/2008	14:54	510335	51300	26120	25180	1008-35	2414	Monier Flue	
10/8/2008	14:56	524547	60400	35000	25400	1008-36	2415	Monier Flue	
10/8/2008	15:06	510335	53200	26120	27080	1008-37	2416	Monier Flue	
10/8/2008	15:11	524545	83620	36000	47620	1008-38	2417	Monier Flue	
10/8/2008	15:12	524547	65900	35000	30900	1008-39	2418	Monier Flue	
10/8/2008	15:19	510335	55160	26120	29040	1008-40	2419	Monier Flue	
10/8/2008	15:27	524545	65460	36000	29460	1008-41	2420	Monier Flue	
10/8/2008	15:31	524547	81360	35000	46360	1008-42	2421	Monier Flue	
10/8/2008	15:34	510335	51500	26120	25380	1008-43	2422	Monier Flue	
10/8/2008	15:43	524545	62320	36000	26320	1008-44	2423	Monier Flue	
10/8/2008	15:47	524547	87140	35000	52140	1008-45	2424	Monier Flue	
10/8/2008	15:50	510335	53120	26120	27000	1008-46	2425	Monier Flue	
10/8/2008	15:58	524545	62460	36000	26460	1008-47	2426	Monier Flue	
10/8/2008	16:04	524547	88600	35000	53600	1008-48	2427	Monier Flue	
10/8/2008	16:08	510335	48960	26120	22840	1008-49	2428	Monier Flue	
10/8/2008	16:15	524545	60960	36000	24960	1008-50	2429	Monier Flue	
10/8/2008	16:18	524547	79880	35000	44880	1008-51	2430	Monier Flue	
10/8/2008	16:20	510335	53920	26120	27800	1008-52	2431	Monier Flue	
10/8/2008	16:30	524547	83060	35000	48060	1008-53	2432	Monier Flue	
10/8/2008	16:34	524545	67780	36000	31780	1008-54	2433	Monier Flue	
10/8/2008	16:36	510335	53180	26120	27060	1008-55	2434	Monier Flue	0809-CAMU-152
10/8/2008	16:45	524547	75620	35000	40620	1008-56	2435	Monier Flue	
10/8/2008	16:50	524545	88060	36000	52060	1008-57	2436	Monier Flue	
10/9/2008	8:40	524545	64200	36000	28200	1009-01	2437	Monier Flue	
10/9/2008	8:56	524545	92360	36000	56360	1009-02	2438	Monier Flue	
10/9/2008	9:11	524545	74160	36000	38160	1009-03	2439	Monier Flue	
10/9/2008	9:14	510335	50340	26120	24220	1009-04	2440	Monier Flue	
10/9/2008	9:26	524545	82080	36000	46080	1009-05	2441	Monier Flue	
10/9/2008	9:28	510335	50040	26120	23920	1009-06	2442	Monier Flue	
10/9/2008	9:30	524547	83440	35000	48440	1009-07	2443	Monier Flue	
10/9/2008	9:43	524545	90780	36000	54780	1009-08	2444	Monier Flue	
10/9/2008	9:47	510335	55280	26120	29160	1009-09	2445	Monier Flue	
10/9/2008	9:51	524547	86360	35000	51360	1009-10	2446	Monier Flue	
10/9/2008	9:59	524545	92040	36000	56040	1009-11	2447	Monier Flue	
10/9/2008	10:03	510335	56200	26120	30080	1009-12	2448	Monier Flue	
10/9/2008	10:08	524547	85960	35000	50960	1009-13	2449	Monier Flue	
10/9/2008	10:18	524545	90860	36000	54860	1009-14	2450	Monier Flue	
10/9/2008	10:21	510335	48280	26120	22160	1009-15	2451	Monier Flue	
10/9/2008	10:30	524547	85580	35000	50580	1009-16	2452	Monier Flue	
10/9/2008	10:37	524545	82220	36000	46220	1009-17	2453	Monier Flue	
10/9/2008	10:44	510335	54300	26120	28180	1009-18	2454	Monier Flue	
10/9/2008	10:53	524547	85760	35000	50760	1009-19	2455	Monier Flue	
10/9/2008	11:00	524545	83020	36000	47020	1009-20	2456	Monier Flue	
10/9/2008	11:09	510335	59480	26120	33360	1009-21	2457	Monier Flue	0809-CAMU-153
10/9/2008	11:20	524547	77740	35000	42740	1009-22	2458	Monier Flue	
10/9/2008	11:28	524545	73980	36000	37980	1009-23	2459	Monier Flue	
10/9/2008	11:33	510335	45700	26120	19580	1009-24	2460	Monier Flue	
10/9/2008	11:38	524547	61860	35000	26860	1009-25	2461	Monier Flue	
10/9/2008	11:47	524545	68640	36000	32640	1009-26	2462	Monier Flue	
10/9/2008	11:53	510335	47920	26120	21800	1009-27	2463	Monier Flue	
10/9/2008	13:26	524547	86020	35000	51020	1009-28	2464	Monier Flue	
10/9/2008	13:32	524545	72500	36000	36500	1009-29	2465	Monier Flue	
10/9/2008	13:33	510335	47580	26120	21460	1009-30	2466	Monier Flue	
10/9/2008	13:51	524547	72240	35000	37240	1009-31	2467	Monier Flue	
10/9/2008	14:09	524545	90140	36000	54140	1009-32	2468	Monier Flue	
10/9/2008	14:13	510335	46080	26120	19960	1009-33	2469	Monier Flue	
10/9/2008	14:25	524547	94120	35000	59120	1009-34	2470	Monier Flue	
10/9/2008	14:30	524545	79900	36000	43900	1009-35	2471	Monier Flue	
10/9/2008	14:33	510335	51220	26120	25100	1009-36	2472	Monier Flue	
10/9/2008	14:51	524545	74280	36000	38280	1009-37	2473	Monier Flue	
10/9/2008	14:53	524547	86700	35000	51700	1009-38	2474	Monier Flue	
10/9/2008	14:54	510335	49980	26120	23860	1009-39	2475	Monier Flue	
10/9/2008	15:08	524547	92560	35000	57560	1009-40	2476	Monier Flue	
10/10/2008	8:11	524547	86680	35000	51680	1010-01	2477	Monier Flue	
10/10/2008	8:13	510335	56540	26120	30420	1010-02	2478	Monier Flue	0809-CAMU-154
10/10/2008	8:33	524547	84280	35000	49280	1010-03	2479	Monier Flue	
10/10/2008	8:38	510335	53600	26120	27480	1010-04	2480	Monier Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/10/2008	8:48	524547	89580	35000	54580	1010-05	2481	Monier Flue	
10/10/2008	8:50	510335	52560	26120	26440	1010-06	2482	Monier Flue	
10/10/2008	9:06	524547	85760	35000	50760	1010-07	2483	Monier Flue	
10/10/2008	9:07	510335	55240	26120	29120	1010-08	2484	Monier Flue	
10/10/2008	9:21	524547	90780	35000	55780	1010-09	2485	Monier Flue	
10/10/2008	9:31	510335	56780	26120	30660	1010-10	2486	Monier Flue	
10/10/2008	9:40	524547	89420	35000	54420	1010-11	2487	Monier Flue	
10/10/2008	9:45	524545	86600	36000	50600	1010-12	2488	Monier Flue	
10/10/2008	9:46	510335	49660	26120	23540	1010-13	2489	Monier Flue	
10/10/2008	9:56	524547	89800	35000	54800	1010-14	2490	Monier Flue	
10/10/2008	9:59	510335	56900	26120	30780	1010-15	2491	Monier Flue	
10/10/2008	10:10	524547	88560	35000	53560	1010-16	2492	Monier Flue	
10/10/2008	10:12	510335	53080	26120	26960	1010-17	2493	Monier Flue	
10/10/2008	10:25	524547	75960	35000	40960	1010-18	2494	Monier Flue	
10/10/2008	10:28	510335	50560	26120	24440	1010-19	2495	Monier Flue	
10/10/2008	10:46	524547	80140	35000	45140	1010-20	2496	Monier Flue	
10/10/2008	10:47	510335	47460	26120	21340	1010-21	2497	Monier Flue	
10/10/2008	10:58	524547	92420	35000	57420	1010-22	2498	Monier Flue	0809-CAMU-155
10/10/2008	11:00	510335	51040	26120	24920	1010-23	2499	Monier Flue	
10/10/2008	11:12	510335	57340	26120	31220	1010-24	2500	Monier Flue	
10/10/2008	11:18	524547	83120	35000	48120	1010-25	2501	Monier Flue	
10/10/2008	11:28	510335	41580	26120	15460	1010-26	2502	Monier Flue	
10/10/2008	11:39	524547	72660	35000	37660	1010-27	2503	Monier Flue	
10/10/2008	11:41	510335	52360	26120	26240	1010-28	2504	Monier Flue	
10/10/2008	13:34	524547	51140	35000	16140	1010-29	2505	Monier Flue	
10/11/2008	8:11	524547	89860	35000	54860	1011-01	2506	Monier Flue	
10/11/2008	8:16	524545	83760	36000	47760	1011-02	2507	Monier Flue	
10/11/2008	8:18	510335	50500	26120	24380	1011-03	2508	Monier Flue	
10/11/2008	8:30:00	524547	90180	35000	55180	1011-04	2509	Monier Flue	
10/11/2008	8:35	524545	81840	36000	45840	1011-05	2510	Monier Flue	
10/11/2008	8:37	510335	49300	26120	23180	1011-06	2511	Monier Flue	
10/11/2008	8:48	524547	88920	35000	53920	1011-07	2512	Monier Flue	
10/11/2008	8:52	524545	90080	36000	54080	1011-08	2513	Monier Flue	
10/11/2008	8:53	510335	49000	26120	22880	1011-09	2514	Monier Flue	
10/11/2008	9:02	524547	76000	35000	41000	1011-10	2515	Monier Flue	
10/11/2008	9:07	524545	80400	36000	44400	1011-11	2516	Monier Flue	
10/11/2008	9:09	510335	53680	26120	27560	1011-12	2517	Monier Flue	
10/11/2008	9:27	510335	51560	26120	25440	1011-13	2518	Monier Flue	
10/11/2008	9:30	524545	81160	36000	45160	1011-14	2519	Monier Flue	0809-CAMU-156
10/11/2008	9:41	510335	54520	26120	28400	1011-15	2520	Monier Flue	
10/11/2008	9:49	524545	85880	36000	49880	1011-16	2521	Monier Flue	
10/11/2008	10:04	524545	76580	36000	40580	1011-17	2522	Monier Flue	
10/11/2008	10:05	510335	48680	26120	22560	1011-18	2523	Monier Flue	
10/11/2008	10:18	524547	81640	35000	46640	1011-19	2524	Monier Flue	
10/11/2008	10:22	510335	57580	26120	31460	1011-20	2525	Monier Flue	
10/11/2008	10:29	524545	87200	36000	51200	1011-21	2526	Monier Flue	
10/11/2008	10:32	524547	85960	35000	50960	1011-22	2527	Monier Flue	
10/11/2008	10:37	510335	55500	26120	29380	1011-23	2528	Monier Flue	
10/11/2008	10:42	524545	90020	36000	54020	1011-24	2529	Monier Flue	
10/11/2008	10:46	524547	82420	35000	47420	1011-25	2530	Monier Flue	
10/11/2008	10:51	510335	47940	26120	21820	1011-26	2531	Monier Flue	
10/11/2008	10:57	524545	82420	36000	46420	1011-27	2532	Monier Flue	
10/11/2008	11:00	524547	85260	35000	50260	1011-28	2533	Monier Flue	
10/11/2008	11:03	510335	51640	26120	25520	1011-29	2534	Monier Flue	
10/11/2008	11:10	524545	82860	36000	46860	1011-30	2535	Monier Flue	
10/11/2008	11:14	524547	88920	35000	53920	1011-31	2536	Monier Flue	
10/11/2008	11:17	510335	50840	26120	24720	1011-32	2537	Monier Flue	
10/11/2008	11:25	524545	83600	36000	47600	1011-33	2538	Monier Flue	
10/11/2008	11:28	524547	85280	35000	50280	1011-34	2539	Monier Flue	
10/11/2008	11:32	510335	61460	26120	35340	1011-35	2540	Monier Flue	
10/11/2008	11:45	524545	87820	36000	51820	1011-36	2541	Monier Flue	
10/11/2008	11:50	524547	91920	35000	56920	1011-37	2542	Monier Flue	
10/11/2008	11:52	510335	57640	26120	31520	1011-38	2543	Monier Flue	
10/11/2008	12:01	524545	90120	36000	54120	1011-39	2544	Monier Flue	
10/11/2008	12:06	524547	86420	35000	51420	1011-40	2545	Monier Flue	
10/11/2008	12:10	510335	54560	26120	28440	1011-41	2546	Monier Flue	
10/13/2008	8:10	524547	86500	35000	51500	1013-1	2547	Baghouse	
10/13/2008	8:16	524545	81520	36000	45520	1013-2	2548	Baghouse	
10/13/2008	8:19	510335	50580	26120	24460	1013-3	2549	Baghouse	
10/13/2008	8:26	524547	83540	35000	48540	1013-4	2550	Baghouse	
10/13/2008	8:31	524545	84320	36000	48320	1013-5	2551	Baghouse	
10/13/2008	8:35	510335	49680	26120	23560	1013-6	2552	Baghouse	
10/13/2008	8:40	524547	80220	35000	45220	1013-7	2553	Baghouse	
10/13/2008	8:46	524545	79020	36000	43020	1013-8	2554	Baghouse	
10/13/2008	8:49	510335	49980	26120	23860	1013-9	2555	Baghouse	
10/13/2008	8:55	524547	81220	35000	46220	1013-10	2556	Baghouse	
10/13/2008	9:01	524545	86400	36000	50400	1013-11	2557	Baghouse	
10/13/2008	9:04	510335	54000	26120	27880	1013-12	2558	Baghouse	
10/13/2008	9:09	524547	84980	35000	49980	1013-13	2559	Baghouse	
10/13/2008	10:06	510335	49760	26120	23640	1013-14	2560	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/13/2008	10:14	524545	52880	36000	16880	1013-15	2561	Baghouse	
10/13/2008	10:17	524547	71380	35000	36380	1013-16	2562	Baghouse	
10/13/2008	10:24	510335	52460	26120	26340	1013-17	2563	Baghouse	
10/13/2008	10:31	524545	72960	36000	36960	1013-18	2564	Baghouse	
10/13/2008	10:37	524547	92820	35000	57820	1013-19	2565	Baghouse	
10/13/2008	10:39	510335	57940	26120	31820	1013-20	2566	Baghouse	
10/13/2008	10:49	524545	101240	36000	65240	1013-21	2567	Baghouse	
10/13/2008	10:53	524547	100240	35000	65240	1013-22	2568	Baghouse	
10/13/2008	10:57	510335	62920	26120	36800	1013-23	2569	Baghouse	
10/13/2008	11:04	524545	92520	36000	56520	1013-24	2570	Baghouse	
10/13/2008	11:08	524547	95880	35000	60880	1013-25	2571	Baghouse	
10/13/2008	11:11	510335	49620	26120	23500	1013-26	2572	Baghouse	
10/13/2008	11:20	524545	93460	36000	57460	1013-27	2573	Baghouse	
10/13/2008	11:23	524547	89200	35000	54200	1013-28	2574	Baghouse	
10/13/2008	11:28	510335	60220	26120	34100	1013-29	2575	Baghouse	
10/13/2008	11:35	524545	83180	36000	47180	1013-30	2576	Baghouse	
10/13/2008	11:38	524547	93280	35000	58280	1013-31	2577	Baghouse	
10/13/2008	11:41	510335	56060	26120	29940	1013-32	2578	Baghouse	
10/13/2008	11:47	524545	89980	36000	53980	1013-33	2579	Baghouse	
10/13/2008	11:50	524547	92380	35000	57380	1013-34	2580	Baghouse	
10/13/2008	11:52	510335	56360	26120	30240	1013-35	2581	Baghouse	
10/13/2008	13:11	524545	85220	36000	49220	1013-36	2582	Baghouse	
10/13/2008	13:14	524547	89800	35000	54800	1013-37	2583	Baghouse	
10/13/2008	13:17	510335	53720	26120	27600	1013-38	2584	Baghouse	0809-CAMU-157
10/13/2008	13:24	524545	87800	36000	51800	1013-39	2585	Baghouse	
10/13/2008	13:28	524547	89240	35000	54240	1013-40	2586	Baghouse	
10/13/2008	13:32	510335	58840	26120	32720	1013-41	2587	Baghouse	
10/13/2008	13:40	524545	91960	36000	55960	1013-42	2588	Baghouse	
10/13/2008	13:43	524547	87900	35000	52900	1013-43	2589	Baghouse	
10/13/2008	13:45	510335	55420	26120	29300	1013-44	2590	Baghouse	
10/13/2008	13:52	524545	77180	36000	41180	1013-45	2591	Baghouse	
10/13/2008	14:00	524547	71520	35000	36520	1013-46	2592	Baghouse	
10/13/2008	14:03	510335	50880	26120	24760	1013-47	2593	Baghouse	
10/13/2008	14:09	524545	83300	36000	47300	1013-48	2594	Baghouse	
10/13/2008	14:14	524547	86980	35000	51980	1013-49	2595	Baghouse	
10/13/2008	14:17	510335	55240	26120	29120	1013-50	2596	Baghouse	
10/13/2008	14:22	524545	81900	36000	45900	1013-51	2597	Baghouse	
10/13/2008	14:28	524547	82420	35000	47420	1013-52	2598	Baghouse	
10/13/2008	14:30	510335	54920	26120	28800	1013-53	2599	Baghouse	
10/13/2008	14:37	524545	94400	36000	58400	1013-54	2600	Baghouse	
10/13/2008	14:42	524547	93000	35000	58000	1013-55	2601	Baghouse	
10/13/2008	14:45	510335	62240	26120	36120	1013-56	2602	Baghouse	
10/13/2008	14:49	524545	96020	36000	60020	1013-57	2603	Baghouse	
10/13/2008	14:55	524547	100440	35000	65440	1013-58	2604	Baghouse	
10/13/2008	14:59	510335	61320	26120	35200	1013-59	2605	Baghouse	0809-CAMU-158
10/13/2008	15:05	524545	99680	36000	63680	1013-60	2606	Baghouse	
10/13/2008	15:09	524547	92320	35000	57320	1013-61	2607	Baghouse	
10/13/2008	15:14	510335	63320	26120	37200	1013-62	2608	Baghouse	
10/13/2008	15:17	524545	90600	36000	54600	1013-63	2609	Baghouse	
10/13/2008	15:24	524547	89060	35000	54060	1013-64	2610	Baghouse	
10/13/2008	15:27	510335	59160	26120	33040	1013-65	2611	Baghouse	
10/13/2008	15:38	524547	90280	35000	55280	1013-66	2612	Baghouse	
10/13/2008	15:42	510335	60400	26120	34280	1013-67	2613	Baghouse	
10/13/2008	15:50	524547	96660	35000	61660	1013-68	2614	Baghouse	
10/13/2008	15:55	510335	59180	26120	33060	1013-69	2615	Baghouse	
10/13/2008	16:03	524547	97160	35000	62160	1013-70	2616	Baghouse	
10/13/2008	16:06	510335	63200	26120	37080	1013-71	2617	Baghouse	
10/13/2008	16:19	524547	91540	35000	56540	1013-72	2618	Baghouse	
10/13/2008	16:21	510335	59660	26120	33540	1013-73	2619	Baghouse	
10/13/2008	16:34	524547	88280	35000	53280	1013-74	2620	Baghouse	
10/13/2008	16:39	524545	103220	36000	67220	1013-75	2621	Baghouse	
10/13/2008	16:43	510335	61480	26120	35360	1013-76	2622	Baghouse	
10/13/2008	16:47	524547	93420	35000	58420	1013-77	2623	Baghouse	
10/14/2008	8:11	524547	51760	35000	16760	1014-1	2624	Acid Plant	
10/14/2008	8:14	510335	56120	26120	30000	1014-2	2625	Acid Plant	0809-CAMU-159
10/14/2008	8:18	524545	88400	36000	52400	1014-3	2626	Acid Plant	
10/14/2008	8:25	524547	78300	35000	43300	1014-4	2627	Acid Plant	
10/14/2008	8:28	510332	65020	27440	37580	1014-5	2628	Acid Plant	
10/14/2008	8:31	510335	54400	26120	28280	1014-6	2629	Acid Plant	
10/14/2008	8:35	524545	81420	36000	45420	1014-7	2630	Acid Plant	
10/14/2008	8:44	524547	82660	35000	47660	1014-8	2631	Acid Plant	
10/14/2008	8:47	510335	50980	26120	24860	1014-9	2632	Acid Plant	
10/14/2008	8:51	510332	62640	27440	35200	1014-10	2633	Acid Plant	
10/14/2008	8:56	524545	90000	36000	54000	1014-11	2634	Acid Plant	
10/14/2008	9:02	524547	86520	35000	51520	1014-12	2635	Acid Plant	
10/14/2008	9:04	510335	56860	26120	30740	1014-13	2636	Acid Plant	
10/14/2008	9:11	510332	59060	27440	31620	1014-14	2637	Acid Plant	
10/14/2008	9:13	524545	80780	36000	44780	1014-15	2638	Acid Plant	
10/14/2008	9:19	524547	82060	35000	47060	1014-16	2639	Acid Plant	
10/14/2008	9:27	510335	43440	26120	17320	1014-17	2640	Acid Plant	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/14/2008	9:32	510332	48960	27440	21520	1014-18	2641	Acid Plant	
10/14/2008	9:38	524545	97940	36000	61940	1014-19	2642	Acid Plant	
10/14/2008	9:43	524547	89180	35000	54180	1014-20	2643	Acid Plant	
10/14/2008	9:52	510332	71100	27440	43660	1014-21	2644	Acid Plant	
10/14/2008	9:53	510335	60360	26120	34240	1014-22	2645	Acid Plant	0809-CAMU-160
10/14/2008	10:00	524545	88300	36000	52300	1014-23	2646	Acid Plant	
10/14/2008	10:06	524547	90760	35000	55760	1014-24	2647	Acid Plant	
10/14/2008	10:07	510332	62260	27440	34820	1014-25	2648	Acid Plant	
10/14/2008	10:10	510335	52040	26120	25920	1014-26	2649	Acid Plant	
10/14/2008	10:16	524545	79780	36000	43780	1014-27	2650	Acid Plant	
10/14/2008	10:21	524547	78180	35000	43180	1014-28	2651	Acid Plant	
10/14/2008	10:27	510335	55480	26120	29360	1014-29	2652	Acid Plant	
10/14/2008	10:30	510332	62000	27440	34560	1014-30	2653	Acid Plant	
10/14/2008	10:36	524545	49220	36000	13220	1014-31	2654	Acid Plant	
10/14/2008	10:37	524547	85620	35000	50620	1014-32	2655	Acid Plant	
10/14/2008	10:40	510335	55120	26120	29000	1014-33	2656	Acid Plant	
10/14/2008	10:44	510332	66800	27440	39360	1014-34	2657	Acid Plant	
10/14/2008	10:56	524545	78660	36000	42660	1014-35	2658	Acid Plant	
10/14/2008	10:57	524547	45520	35000	10520	1014-36	2659	Acid Plant	
10/14/2008	10:58	510335	47220	26120	21100	1014-37	2660	Acid Plant	
10/14/2008	11:01	510332	58820	27440	31380	1014-38	2661	Acid Plant	
10/14/2008	11:11	524545	48520	36000	12520	1014-39	2662	Acid Plant	
10/14/2008	11:12	524547	80400	35000	45400	1014-40	2663	Acid Plant	
10/14/2008	11:14	510335	52200	26120	26080	1014-41	2664	Acid Plant	
10/14/2008	11:19	510332	50920	27440	23480	1014-42	2665	Acid Plant	0809-CAMU-161
10/14/2008	11:27	524547	83700	35000	48700	1014-43	2666	Acid Plant	
10/14/2008	11:29	524545	54880	36000	18880	1014-44	2667	Acid Plant	
10/14/2008	11:31	510335	50860	26120	24740	1014-45	2668	Acid Plant	
10/14/2008	11:35	510332	58520	27440	31080	1014-46	2669	Acid Plant	
10/14/2008	11:42	524547	50240	35000	15240	1014-47	2670	Acid Plant	
10/14/2008	11:46	524545	85000	36000	49000	1014-48	2671	Acid Plant	
10/14/2008	11:49	510332	60340	27440	32900	1014-49	2672	Acid Plant	
10/14/2008	11:54	524545	45700	36000	9700	1014-50	2673	Acid Plant	
10/14/2008	13:11	510335	55740	26120	29620	1014-51	2674	Acid Plant	
10/14/2008	13:14	510332	58620	27440	31180	1014-52	2675	Acid Plant	
10/14/2008	13:16	524545	51500	36000	15500	1014-53	2676	Acid Plant	
10/14/2008	13:20	524547	80760	35000	45760	1014-54	2677	Acid Plant	
10/14/2008	13:24	510335	48600	26120	22480	1014-55	2678	Acid Plant	
10/14/2008	13:28	510332	57680	27440	30240	1014-56	2679	Acid Plant	
10/14/2008	13:32	524545	54860	36000	18860	1014-57	2680	Acid Plant	
10/14/2008	13:35	524547	83840	35000	48840	1014-58	2681	Acid Plant	
10/14/2008	13:38	510335	51160	26120	25040	1014-59	2682	Acid Plant	
10/14/2008	13:43	510332	57280	27440	29840	1014-60	2683	Acid Plant	
10/14/2008	13:48	524545	54720	36000	18720	1014-61	2684	Acid Plant	
10/14/2008	13:49	524547	87660	35000	52660	1014-62	2685	Acid Plant	0809-CAMU-162
10/14/2008	13:57	510332	58680	27440	31240	1014-63	2686	Acid Plant	
10/14/2008	13:58	510335	52860	26120	26740	1014-64	2687	Acid Plant	
10/14/2008	14:05	524545	51580	36000	15580	1014-65	2688	Acid Plant	
10/14/2008	14:08	524547	83060	35000	48060	1014-66	2689	Acid Plant	
10/14/2008	14:12	510332	63960	27440	36520	1014-67	2690	Acid Plant	
10/14/2008	14:14	510335	61140	26120	35020	1014-68	2691	Acid Plant	
10/14/2008	14:21	524545	97180	36000	61180	1014-69	2692	Acid Plant	
10/14/2008	14:27	524547	91720	35000	56720	1014-70	2693	Acid Plant	
10/14/2008	14:28	510332	62480	27440	35040	1014-71	2694	Acid Plant	
10/14/2008	14:31	510335	56700	26120	30580	1014-72	2695	Acid Plant	
10/14/2008	14:37	524545	92720	36000	56720	1014-73	2696	Acid Plant	
10/14/2008	14:42	524547	88320	35000	53320	1014-74	2697	Acid Plant	
10/14/2008	14:46	510332	55520	27440	28080	1014-75	2698	Acid Plant	
10/14/2008	14:49	510335	53520	26120	27400	1014-76	2699	Acid Plant	
10/14/2008	14:59	524545	82820	36000	46820	1014-77	2700	Acid Plant	
10/14/2008	15:10	524547	80620	35000	45620	1014-78	2701	Acid Plant	
10/14/2008	15:12	510332	56220	27440	28780	1014-79	2702	Acid Plant	
10/14/2008	15:15	510335	49560	26120	23440	1014-80	2703	Acid Plant	
10/14/2008	15:23	524545	87940	36000	51940	1014-81	2704	Acid Plant	
10/14/2008	15:28	524547	84560	35000	49560	1014-82	2705	Acid Plant	0809-CAMU-163
10/14/2008	15:30	510332	55520	27440	28080	1014-83	2706	Acid Plant	
10/14/2008	15:33	510335	58680	26120	32560	1014-84	2707	Acid Plant	
10/14/2008	15:41	524545	90740	36000	54740	1014-85	2708	Acid Plant	
10/14/2008	15:46	524547	87100	35000	52100	1014-86	2709	Acid Plant	
10/14/2008	15:49	510332	69060	27440	41620	1014-87	2710	Acid Plant	
10/14/2008	15:52	510335	63020	26120	36900	1014-88	2711	Acid Plant	
10/14/2008	15:57	524545	85200	36000	49200	1014-89	2712	Acid Plant	
10/14/2008	16:01	524547	96340	35000	61340	1014-90	2713	Acid Plant	
10/14/2008	16:06	510332	63000	27440	35560	1014-91	2714	Acid Plant	
10/14/2008	16:18	510335	51760	26120	25640	1014-92	2715	Acid Plant	
10/14/2008	16:21	510332	57600	27440	30160	1014-93	2716	Acid Plant	
10/14/2008	16:23	524547	45580	35000	10580	1014-94	2717	Acid Plant	
10/14/2008	16:31	510335	65360	26120	39240	1014-95	2718	Acid Plant	
10/14/2008	16:33	510332	60480	27440	33040	1014-96	2719	Acid Plant	
10/14/2008	16:35	524545	48460	36000	12460	1014-97	2720	Acid Plant	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/14/2008	16:44	524547	43880	35000	8880	1014-98	2721	Acid Plant	
10/14/2008	16:45	510335	64300	26120	38180	1014-99	2722	Acid Plant	
10/14/2008	16:46	510332	69340	27440	41900	1014-100	2723	Acid Plant	
10/14/2008	16:55	510335	61520	26120	35400	1014-101	2724	Acid Plant	0809-CAMU-164
10/14/2008	16:58	510332	68480	27440	41040	1014-102	2725	Acid Plant	
10/14/2008	16:59	524545	43000	36000	7000	1014-103	2726	Acid Plant	
10/14/2008	17:00	524547	57640	35000	22640	1014-104	2727	Acid Plant	
10/15/2008	8:13	510335	49720	26120	23600	1015-1	2728	Acid Plant	
10/15/2008	8:15	510332	60180	27440	32740	1015-2	2729	Acid Plant	
10/15/2008	8:17	524545	43260	36000	7260	1015-3	2730	Acid Plant	
10/15/2008	8:29	524547	44160	35000	9160	1015-4	2731	Acid Plant	
10/15/2008	8:30	510332	64700	27440	37260	1015-5	2732	Acid Plant	
10/15/2008	8:31	510335	56080	26120	29960	1015-6	2733	Acid Plant	
10/15/2008	8:40	524545	42800	36000	6800	1015-7	2734	Acid Plant	
10/15/2008	8:53	510332	59180	27440	31740	1015-8	2735	Acid Plant	
10/15/2008	8:57	510335	48360	26120	22240	1015-9	2736	Acid Plant	
10/15/2008	8:58	524545	86320	36000	50320	1015-10	2737	Acid Plant	
10/15/2008	9:01	524547	49220	35000	14220	1015-11	2738	Acid Plant	
10/15/2008	9:12	510332	64940	27440	37500	1015-12	2739	Acid Plant	
10/15/2008	9:13	524545	88440	36000	52440	1015-13	2740	Acid Plant	
10/15/2008	9:19	524547	46280	35000	11280	1015-14	2741	Acid Plant	
10/15/2008	9:20	510335	42000	26120	15880	1015-15	2742	Acid Plant	
10/15/2008	9:26	524545	98020	36000	62020	1015-16	2743	Acid Plant	
10/15/2008	9:34	524547	97520	35000	62520	1015-17	2744	Acid Plant	
10/15/2008	9:37	510332	57400	27440	29960	1015-18	2745	Acid Plant	0809-CAMU-165
10/15/2008	9:39	524545	102720	36000	66720	1015-19	2746	Acid Plant	
10/15/2008	9:40	510335	50700	26120	24580	1015-20	2747	Acid Plant	
10/15/2008	9:48	524547	94940	35000	59940	1015-21	2748	Acid Plant	
10/15/2008	9:51	524545	100920	36000	64920	1015-22	2749	Acid Plant	
10/15/2008	9:54	510332	80760	27440	53320	1015-23	2750	Acid Plant	
10/15/2008	9:55	510335	62880	26120	36760	1015-24	2751	Acid Plant	
10/15/2008	10:01	524547	92920	35000	57920	1015-25	2752	Acid Plant	
10/15/2008	10:06	524545	99300	36000	63300	1015-26	2753	Acid Plant	
10/15/2008	10:08	510332	70020	27440	42580	1015-27	2754	Acid Plant	
10/15/2008	10:13	510335	53580	26120	27460	1015-28	2755	Acid Plant	
10/15/2008	10:21	524547	90980	35000	55980	1015-29	2756	Acid Plant	
10/15/2008	10:23	524545	57220	36000	21220	1015-30	2757	Baghouse	
10/15/2008	10:27	510332	65280	27440	37840	1015-31	2758	Acid Plant	
10/15/2008	10:29	510335	55180	26120	29060	1015-32	2759	Acid Plant	
10/15/2008	10:40	524547	44980	35000	9980	1015-33	2760	Baghouse	
10/15/2008	10:46	510335	56800	26120	30680	1015-34	2761	Acid Plant	
10/15/2008	10:49	524545	81500	36000	45500	1015-35	2762	Baghouse	
10/15/2008	10:56	510332	63160	27440	35720	1015-36	2763	Acid Plant	
10/15/2008	10:58	524547	57440	35000	22440	1015-37	2764	Baghouse	
10/15/2008	11:02	510335	55040	26120	28920	1015-38	2765	Acid Plant	0809-CAMU-166
10/15/2008	11:05	524545	83420	36000	47420	1015-39	2766	Baghouse	
10/15/2008	11:14	510332	64140	27440	36700	1015-40	2767	Acid Plant	
10/15/2008	11:16	524547	83660	35000	48660	1015-41	2768	Baghouse	
10/15/2008	11:24	510335	57920	26120	31800	1015-42	2769	Acid Plant	
10/15/2008	11:25	524545	89760	36000	53760	1015-43	2770	Baghouse	
10/15/2008	11:32	510332	42720	27440	15280	1015-44	2771	Baghouse	
10/15/2008	11:33	524547	81520	35000	46520	1015-45	2772	Baghouse	
10/15/2008	11:36	510335	48700	26120	22580	1015-46	2773	Baghouse	
10/15/2008	11:41	524545	89000	36000	53000	1015-47	2774	Baghouse	
10/15/2008	13:02	510332	60380	27440	32940	1015-48	2775	Acid Plant	
10/15/2008	13:03	510335	47720	26120	21600	1015-49	2776	Baghouse	
10/15/2008	13:23	524547	70940	35000	35940	1015-50	2777	Baghouse	
10/15/2008	13:29	524545	74380	36000	38380	1015-51	2778	Acid Plant	
10/15/2008	13:34	510335	62940	26120	36820	1015-52	2779	Acid Plant	
10/15/2008	13:51	524545	75500	36000	39500	1015-53	2780	Baghouse	
10/15/2008	13:54	510335	47940	26120	21820	1015-54	2781	Baghouse	
10/15/2008	14:08	524545	65720	36000	29720	1015-55	2782	Baghouse	
10/15/2008	14:09	510335	50260	26120	24140	1015-56	2783	Baghouse	
10/15/2008	14:23	510332	51220	27440	23780	1015-57	2784	Baghouse	
10/15/2008	14:27	524547	69120	35000	34120	1015-58	2785	Baghouse	0809-CAMU-167
10/15/2008	14:29	510335	43320	26120	17200	1015-59	2786	Acid Plant	
10/15/2008	14:34	524545	52600	36000	16600	1015-60	2787	Baghouse	
10/15/2008	14:37	510332	64120	27440	36680	1015-61	2788	Acid Plant	
10/15/2008	14:42	510335	50480	26120	24360	1015-62	2789	Acid Plant	
10/15/2008	14:51	524545	81340	36000	45340	1015-63	2790	Baghouse	
10/15/2008	14:54	510332	55920	27440	28480	1015-64	2791	Acid Plant	
10/15/2008	14:57	510335	52040	26120	25920	1015-65	2792	Baghouse	
10/15/2008	15:11	510332	56640	27440	29200	1015-66	2793	Acid Plant	
10/15/2008	15:12	524545	78940	36000	42940	1015-67	2794	Baghouse	
10/15/2008	15:20	510335	50560	26120	24440	1015-68	2795	Baghouse	
10/15/2008	15:27	510332	63420	27440	35980	1015-69	2796	Baghouse	
10/15/2008	15:29	524545	84080	36000	48080	1015-70	2797	Baghouse	
10/15/2008	15:31	510335	53060	26120	26940	1015-71	2798	Baghouse	
10/15/2008	15:33	524547	85020	35000	50020	1015-72	2799	Baghouse	
10/15/2008	15:42	510332	64480	27440	37040	1015-73	2800	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/15/2008	15:45	510335	52240	26120	26120	1015-74	2801	Baghouse	
10/15/2008	15:48	524545	87300	36000	51300	1015-75	2802	Baghouse	
10/15/2008	15:51	524547	54240	35000	19240	1015-76	2803	Baghouse	
10/15/2008	16:04	524545	89540	36000	53540	1015-77	2804	Baghouse	
10/15/2008	16:06	510332	58920	27440	31480	1015-78	2805	Baghouse	0809-CAMU-168
10/15/2008	16:08	524547	85300	35000	50300	1015-79	2806	Baghouse	
10/15/2008	16:12	510335	59200	26120	33080	1015-80	2807	Baghouse	
10/15/2008	16:19	524545	88780	36000	52780	1015-81	2808	Baghouse	
10/15/2008	16:24	510332	52460	27440	25020	1015-82	2809	Acid Plant	
10/15/2008	16:26	524547	86400	35000	51400	1015-83	2810	Baghouse	
10/15/2008	16:27	510335	53160	26120	27040	1015-84	2811	Acid Plant	
10/15/2008	16:36	524545	91940	36000	55940	1015-85	2812	Baghouse	
10/15/2008	16:40	510332	50700	27440	23260	1015-86	2813	Acid Plant	
10/15/2008	16:41	524547	87960	35000	52960	1015-87	2814	Baghouse	
10/15/2008	16:44	510335	50960	26120	24840	1015-88	2815	Acid Plant	
10/15/2008	16:51	524545	93220	36000	57220	1015-89	2816	Baghouse	
10/15/2008	16:54	510332	57640	27440	30200	1015-90	2817	Acid Plant	
10/15/2008	16:56	524547	84340	35000	49340	1015-91	2818	Baghouse	
10/16/2008	8:27	524547	85440	35000	50440	1016-1	2819	Baghouse	
10/16/2008	8:32	524545	85720	36000	49720	1016-2	2820	Baghouse	
10/16/2008	8:35	510335	51700	26120	25580	1016-3	2821	Baghouse	
10/16/2008	8:47	524547	92340	35000	57340	1016-4	2822	Baghouse	
10/16/2008	8:56	524545	96280	36000	60280	1016-5	2823	Baghouse	
10/16/2008	8:58	510335	53060	26120	26940	1016-6	2824	Baghouse	
10/16/2008	9:04	524547	97260	35000	62260	1016-7	2825	Baghouse	0809-CAMU-169
10/16/2008	9:13	524545	96660	36000	60660	1016-8	2826	Baghouse	
10/16/2008	9:15	510335	54780	26120	28660	1016-9	2827	Baghouse	
10/16/2008	9:26	524547	47260	35000	12260	1016-10	2828	Baghouse	
10/16/2008	9:29	510335	56280	26120	30160	1016-11	2829	Baghouse	
10/16/2008	9:40	524545	98900	36000	62900	1016-12	2830	Baghouse	
10/16/2008	9:44	524547	92420	35000	57420	1016-13	2831	Baghouse	
10/16/2008	9:47	510335	51860	26120	25740	1016-14	2832	Baghouse	
10/16/2008	10:00	524545	86860	36000	50860	1016-15	2833	Baghouse	
10/16/2008	10:05	524547	85500	35000	50500	1016-16	2834	Baghouse	
10/16/2008	10:10	510335	58140	26120	32020	1016-17	2835	Baghouse	
10/16/2008	10:15	524545	89680	36000	53680	1016-18	2836	Baghouse	
10/16/2008	10:21	524547	97160	35000	62160	1016-19	2837	Baghouse	
10/16/2008	10:24	510335	60060	26120	33940	1016-20	2838	Baghouse	
10/16/2008	10:34	524545	96280	36000	60280	1016-21	2839	Baghouse	
10/16/2008	10:37	510335	61140	26120	35020	1016-22	2840	Baghouse	
10/16/2008	10:42	524547	91660	35000	56660	1016-23	2841	Baghouse	
10/16/2008	10:49	524545	91960	36000	55960	1016-24	2842	Baghouse	
10/16/2008	10:53	510335	60120	26120	34000	1016-25	2843	Baghouse	
10/16/2008	11:03	524547	102580	35000	67580	1016-26	2844	Baghouse	
10/16/2008	11:07	510335	56820	26120	30700	1016-27	2845	Baghouse	0809-CAMU-170
10/16/2008	11:09	524545	90060	36000	54060	1016-28	2846	Baghouse	
10/16/2008	11:21	524547	90120	35000	55120	1016-29	2847	Baghouse	
10/16/2008	11:25	524545	89920	36000	53920	1016-30	2848	Baghouse	
10/16/2008	11:27	510335	53440	26120	27320	1016-31	2849	Baghouse	
10/16/2008	11:38	524547	93420	35000	58420	1016-32	2850	Baghouse	
10/16/2008	11:42	524545	95600	36000	59600	1016-33	2851	Baghouse	
10/16/2008	11:44	510335	53400	26120	27280	1016-34	2852	Baghouse	
10/16/2008	13:03	524547	93100	35000	58100	1016-35	2853	Baghouse	
10/16/2008	13:08	524545	93360	36000	57360	1016-36	2854	Baghouse	
10/16/2008	13:13	510335	44960	26120	18840	1016-37	2855	Baghouse	
10/16/2008	13:23	524547	59580	35000	24580	1016-38	2856	Baghouse	
10/16/2008	13:30	524545	95460	36000	59460	1016-39	2857	Baghouse	
10/16/2008	13:31	510335	54380	26120	28260	1016-40	2858	Baghouse	
10/16/2008	13:37	524547	94420	35000	59420	1016-41	2859	Baghouse	
10/16/2008	13:43	510335	55360	26120	29240	1016-42	2860	Baghouse	
10/16/2008	13:47	524545	96540	36000	60540	1016-43	2861	Baghouse	
10/16/2008	13:56	524547	90200	35000	55200	1016-44	2862	Baghouse	
10/16/2008	13:58	510335	56940	26120	30820	1016-45	2863	Baghouse	
10/16/2008	14:04	524545	95140	36000	59140	1016-46	2864	Baghouse	
10/16/2008	14:10	524547	94160	35000	59160	1016-47	2865	Baghouse	0809-CAMU-171
10/16/2008	14:12	510335	57740	26120	31620	1016-48	2866	Baghouse	
10/16/2008	14:19	524545	103240	36000	67240	1016-49	2867	Baghouse	
10/16/2008	14:24	510335	54040	26120	27920	1016-50	2868	Baghouse	
10/16/2008	14:28	524547	96480	35000	61480	1016-51	2869	Baghouse	
10/16/2008	14:39	510335	55480	26120	29360	1016-52	2870	Baghouse	
10/16/2008	14:44	524547	95120	35000	60120	1016-53	2871	Baghouse	
10/16/2008	14:51	510335	56380	26120	30260	1016-54	2872	Baghouse	
10/16/2008	14:58	510332	59940	27440	32500	1016-55	2873	Baghouse	
10/16/2008	15:04	524547	97660	35000	62660	1016-56	2874	Baghouse	
10/16/2008	15:07	510335	57220	26120	31100	1016-57	2875	Baghouse	
10/16/2008	15:16	510332	58480	27440	31040	1016-58	2876	Baghouse	
10/16/2008	15:22	510335	59860	26120	33740	1016-59	2877	Baghouse	
10/16/2008	15:25	524547	93780	35000	58780	1016-60	2878	Baghouse	
10/16/2008	15:35	510335	67600	26120	41480	1016-61	2879	Baghouse	
10/16/2008	15:40	524547	102700	35000	67700	1016-62	2880	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/16/2008	15:43	510332	70680	27440	43240	1016-63	2881	Baghouse	
10/16/2008	15:48	510335	65060	26120	38940	1016-64	2882	Baghouse	
10/16/2008	15:54	524547	99480	35000	64480	1016-65	2883	Baghouse	
10/16/2008	16:01	510335	57940	26120	31820	1016-66	2884	Baghouse	0809-CAMU-172
10/16/2008	16:02	510332	51400	27440	23960	1016-67	2885	Baghouse	
10/16/2008	16:07	524547	91380	35000	56380	1016-68	2886	Baghouse	
10/16/2008	16:16	510335	55560	26120	29440	1016-69	2887	Baghouse	
10/16/2008	16:22	510332	39900	27440	12460	1016-70	2888	Baghouse	
10/16/2008	16:28	524547	91520	35000	56520	1016-71	2889	Baghouse	
10/16/2008	16:29	510335	49340	26120	23220	1016-72	2890	Baghouse	
10/16/2008	16:36	510332	62200	27440	34760	1016-73	2891	Baghouse	
10/16/2008	16:42	524547	94940	35000	59940	1016-74	2892	Baghouse	
10/16/2008	16:44	510335	53740	26120	27620	1016-75	2893	Baghouse	
10/16/2008	16:52	510332	63620	27440	36180	1016-76	2894	Baghouse	
10/17/2008	8:05	524547	90060	35000	55060	1017-1	2895	Baghouse	
10/17/2008	8:08	510335	56960	26120	30840	1017-2	2896	Baghouse	
10/17/2008	8:09	524545	94900	36000	58900	1017-3	2897	Baghouse	
10/17/2008	8:11	510332	57240	27440	29800	1017-4	2898	Baghouse	
10/17/2008	8:20	524547	96480	35000	61480	1017-5	2899	Baghouse	
10/17/2008	8:25	510332	63460	27440	36020	1017-6	2900	Baghouse	
10/17/2008	8:27	524545	96100	36000	60100	1017-7	2901	Baghouse	
10/17/2008	8:33	510335	56300	26120	30180	1017-8	2902	Baghouse	
10/17/2008	8:36	524547	94060	35000	59060	1017-9	2903	Baghouse	
10/17/2008	8:39	510332	56540	27440	29100	1017-10	2904	Baghouse	
10/17/2008	8:43	524545	101140	36000	65140	1017-11	2905	Baghouse	
10/17/2008	8:46	510335	53280	26120	27160	1017-12	2906	Baghouse	0809-CAMU-173
10/17/2008	8:52	524547	84960	35000	49960	1017-13	2907	Baghouse	
10/17/2008	8:54	510332	58540	27440	31100	1017-14	2908	Baghouse	
10/17/2008	9:01	524545	60820	36000	24820	1017-15	2909	Baghouse	
10/17/2008	9:06	524547	87500	35000	52500	1017-16	2910	Baghouse	
10/17/2008	9:08	510335	54880	26120	28760	1017-17	2911	Baghouse	
10/17/2008	9:10	510332	56960	27440	29520	1017-18	2912	Baghouse	
10/17/2008	9:18	524545	86780	36000	50780	1017-19	2913	Baghouse	
10/17/2008	9:29	524547	78440	35000	43440	1017-20	2914	Baghouse	
10/17/2008	9:31	510335	52580	26120	26460	1017-21	2915	Baghouse	
10/17/2008	9:33	510332	56700	27440	29260	1017-22	2916	Baghouse	
10/17/2008	9:37	524545	76180	36000	40180	1017-23	2917	Baghouse	
10/17/2008	9:47	524547	72900	35000	37900	1017-24	2918	Baghouse	
10/17/2008	9:49	510335	52640	26120	26520	1017-25	2919	Baghouse	
10/17/2008	9:51	510332	56300	27440	28860	1017-26	2920	Baghouse	
10/17/2008	9:55	524545	100340	36000	64340	1017-27	2921	Baghouse	
10/17/2008	10:03	524547	93180	35000	58180	1017-28	2922	Baghouse	
10/17/2008	10:06	510332	67920	27440	40480	1017-29	2923	Baghouse	
10/17/2008	10:07	510335	50520	26120	24400	1017-30	2924	Baghouse	
10/17/2008	10:12	524545	88760	36000	52760	1017-31	2925	Baghouse	0809-CAMU-174
10/17/2008	10:19	524547	103040	35000	68040	1017-32	2926	Baghouse	
10/17/2008	10:20	510332	57020	27440	29580	1017-33	2927	Baghouse	
10/17/2008	10:21	510335	53400	26120	27280	1017-34	2928	Baghouse	
10/17/2008	10:32	524545	101800	36000	65800	1017-35	2929	Baghouse	
10/17/2008	10:35	510332	62880	27440	35440	1017-36	2930	Baghouse	
10/17/2008	10:38	524547	89400	35000	54400	1017-37	2931	Baghouse	
10/17/2008	10:40	510335	54220	26120	28100	1017-38	2932	Baghouse	
10/17/2008	10:45	524545	78680	36000	42680	1017-39	2933	Baghouse	
10/17/2008	10:48	510332	66140	27440	38700	1017-40	2934	Baghouse	
10/17/2008	10:53	510335	48080	26120	21960	1017-41	2935	Baghouse	
10/17/2008	10:59	524547	75200	35000	40200	1017-42	2936	Baghouse	
10/17/2008	11:01	524545	91320	36000	55320	1017-43	2937	Baghouse	
10/17/2008	11:04	510332	62260	27440	34820	1017-44	2938	Baghouse	
10/17/2008	11:05	510335	56000	26120	29880	1017-45	2939	Baghouse	
10/17/2008	11:14	524547	91580	35000	56580	1017-46	2940	Baghouse	
10/17/2008	11:17	524545	75760	36000	39760	1017-47	2941	Baghouse	
10/17/2008	11:18	510335	64740	26120	38620	1017-48	2942	Baghouse	
10/17/2008	11:20	510332	70820	27440	43380	1017-49	2943	Baghouse	
10/17/2008	11:32	524547	97280	35000	62280	1017-50	2944	Baghouse	
10/17/2008	11:33	510332	63300	27440	35860	1017-51	2945	Baghouse	
10/17/2008	11:40	510335	66960	26120	40840	1017-52	2946	Baghouse	0809-CAMU-175
10/17/2008	11:43	524545	81220	36000	45220	1017-53	2947	Baghouse	
10/17/2008	11:44	510332	67320	27440	39880	1017-54	2948	Baghouse	
10/17/2008	11:49	524547	100260	35000	65260	1017-55	2949	Baghouse	
10/17/2008	13:13	510332	64040	27440	36600	1017-56	2950	Baghouse	
10/17/2008	13:14	510335	58100	26120	31980	1017-57	2951	Baghouse	
10/17/2008	13:16	524547	100880	35000	65880	1017-58	2952	Baghouse	
10/17/2008	13:18	524545	85760	36000	49760	1017-59	2953	Baghouse	
10/17/2008	13:24	510332	61580	27440	34140	1017-60	2954	Baghouse	
10/17/2008	13:26	510335	53960	26120	27840	1017-61	2955	Baghouse	
10/17/2008	13:32	524547	89980	35000	54980	1017-62	2956	Baghouse	
10/17/2008	13:36	524545	91480	36000	55480	1017-63	2957	Baghouse	
10/17/2008	13:39	510332	57540	27440	30100	1017-64	2958	Baghouse	
10/17/2008	13:48	510335	51620	26120	25500	1017-65	2959	Baghouse	
10/17/2008	13:53	524547	92580	35000	57580	1017-66	2960	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/17/2008	13:58	510332	66680	27440	39240	1017-67	2961	Baghouse	
10/17/2008	14:07	524545	89080	36000	53080	1017-68	2962	Baghouse	
10/17/2008	14:09	510335	53820	26120	27700	1017-69	2963	Baghouse	
10/17/2008	14:13	510332	61720	27440	34280	1017-70	2964	Baghouse	
10/17/2008	14:17	524547	95020	35000	60020	1017-71	2965	Baghouse	0809-CAMU-176
10/17/2008	14:24	510335	55860	26120	29740	1017-72	2966	Baghouse	
10/17/2008	14:30	524545	84660	36000	48660	1017-73	2967	Baghouse	
10/17/2008	14:33	510332	62660	27440	35220	1017-74	2968	Baghouse	
10/17/2008	14:36	524547	81440	35000	46440	1017-75	2969	Baghouse	
10/17/2008	14:38	510335	55920	26120	29800	1017-76	2970	Baghouse	
10/17/2008	14:46	524545	88060	36000	52060	1017-77	2971	Baghouse	
10/17/2008	14:48	510332	55580	27440	28140	1017-78	2972	Baghouse	
10/17/2008	14:52	524547	79180	35000	44180	1017-79	2973	Baghouse	
10/17/2008	14:56	510335	55380	26120	29260	1017-80	2974	Baghouse	
10/17/2008	15:02	524545	88840	36000	52840	1017-81	2975	Baghouse	
10/17/2008	15:04	510332	63400	27440	35960	1017-82	2976	Baghouse	
10/17/2008	15:14	524547	82840	35000	47840	1017-83	2977	Baghouse	
10/17/2008	15:15	510335	45080	26120	18960	1017-84	2978	Baghouse	
10/17/2008	15:18	524547	83580	35000	48580	1017-85	2979	Baghouse	
10/17/2008	15:21	510332	63480	27440	36040	1017-86	2980	Baghouse	
10/17/2008	15:33	524547	86500	35000	51500	1017-87	2981	Baghouse	
10/17/2008	15:36	524545	95180	36000	59180	1017-88	2982	Baghouse	
10/17/2008	15:40	510332	65700	27440	38260	1017-89	2983	Baghouse	
10/17/2008	15:48	524547	67420	35000	32420	1017-90	2984	Baghouse	0809-CAMU-177
10/17/2008	15:53	510332	68880	27440	41440	1017-91	2985	Baghouse	
10/17/2008	16:04	524545	94440	36000	58440	1017-92	2986	Baghouse	
10/17/2008	16:06	524547	102800	35000	67800	1017-93	2987	Baghouse	
10/17/2008	16:09	510332	69400	27440	41960	1017-94	2988	Baghouse	
10/17/2008	16:12	510335	57980	26120	31860	1017-95	2989	Baghouse	
10/17/2008	16:16	524545	105860	36000	69860	1017-96	2990	Baghouse	
10/17/2008	16:24	524547	92860	35000	57860	1017-97	2991	Baghouse	
10/17/2008	16:25	510332	59440	27440	32000	1017-98	2992	Baghouse	
10/17/2008	16:27	510335	60540	26120	34420	1017-99	2993	Baghouse	
10/17/2008	16:31	524545	84180	36000	48180	1017-100	2994	Baghouse	
10/17/2008	16:37	524547	89120	35000	54120	1017-101	2995	Baghouse	
10/17/2008	16:38	510332	57300	27440	29860	1017-102	2996	Baghouse	
10/17/2008	16:41	510335	57420	26120	31300	1017-103	2997	Baghouse	
10/17/2008	16:47	524545	92920	36000	56920	1017-104	2998	Baghouse	
10/17/2008	16:51	524547	79380	35000	44380	1017-105	2999	Baghouse	
10/17/2008	16:53	510332	61020	27440	33580	1017-106	3000	Baghouse	
10/18/2008	8:07	510332	62000	27440	34560	1018-1	3001	Baghouse	
10/18/2008	8:10	510335	57260	26120	31140	1018-2	3002	Baghouse	
10/18/2008	8:13	524547	87120	35000	52120	1018-3	3003	Baghouse	
10/18/2008	8:19	524545	87600	36000	51600	1018-4	3004	Baghouse	
10/18/2008	8:22	510332	63880	27440	36440	1018-5	3005	Baghouse	0809-CAMU-178
10/18/2008	8:26	510335	56760	26120	30640	1018-6	3006	Baghouse	
10/18/2008	8:31	524547	87680	35000	52680	1018-7	3007	Baghouse	
10/18/2008	8:36	524545	95880	36000	59880	1018-8	3008	Baghouse	
10/18/2008	8:38	510332	61740	27440	34300	1018-9	3009	Baghouse	
10/18/2008	8:41	510335	60300	26120	34180	1018-10	3010	Baghouse	
10/18/2008	8:47	524547	93540	35000	58540	1018-11	3011	Baghouse	
10/18/2008	8:50	524545	86080	36000	50080	1018-12	3012	Baghouse	
10/18/2008	8:57	510332	63460	27440	36020	1018-13	3013	Baghouse	
10/18/2008	9:00	510335	59460	26120	33340	1018-14	3014	Baghouse	
10/18/2008	9:04	524547	92000	35000	57000	1018-15	3015	Baghouse	
10/18/2008	9:10	524545	90540	36000	54540	1018-16	3016	Baghouse	
10/18/2008	9:13	510332	64260	27440	36820	1018-17	3017	Baghouse	
10/18/2008	9:15	510335	58660	26120	32540	1018-18	3018	Baghouse	
10/18/2008	9:18	524547	92280	35000	57280	1018-19	3019	Baghouse	
10/18/2008	9:21	524545	85360	36000	49360	1018-20	3020	Baghouse	
10/18/2008	9:30	510332	66100	27440	38660	1018-21	3021	Baghouse	
10/18/2008	9:45	524547	69180	35000	34180	1018-22	3022	Baghouse	
10/18/2008	9:48	510335	61900	26120	35780	1018-23	3023	Baghouse	
10/18/2008	9:50	510332	57060	27440	29620	1018-24	3024	Baghouse	
10/18/2008	10:00	524545	92500	36000	56500	1018-25	3025	Baghouse	0809-CAMU-179
10/18/2008	10:02	524547	90760	35000	55760	1018-26	3026	Baghouse	
10/18/2008	10:04	510335	56260	26120	30140	1018-27	3027	Baghouse	
10/18/2008	10:07	510332	62460	27440	35020	1018-28	3028	Baghouse	
10/18/2008	10:16	524545	90040	36000	54040	1018-29	3029	Baghouse	
10/18/2008	10:20	524547	90100	35000	55100	1018-30	3030	Baghouse	
10/18/2008	10:22	510335	50640	26120	24520	1018-31	3031	Baghouse	
10/18/2008	10:24	510332	60920	27440	33480	1018-32	3032	Baghouse	
10/18/2008	10:35	510335	54280	26120	28160	1018-33	3033	Baghouse	
10/18/2008	10:37	510332	53700	27440	26260	1018-34	3034	Baghouse	
10/18/2008	10:38	524545	73240	36000	37240	1018-35	3035	Baghouse	
10/18/2008	10:45	524547	74260	35000	39260	1018-36	3036	Baghouse	
10/18/2008	10:48	510332	54620	27440	27180	1018-37	3037	Baghouse	
10/18/2008	10:50	510335	54540	26120	28420	1018-38	3038	Baghouse	
10/18/2008	10:55	524545	76380	36000	40380	1018-39	3039	Baghouse	
10/18/2008	11:00	510332	56960	27440	29520	1018-40	3040	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/18/2008	11:02	524547	84120	35000	49120	1018-41	3041	Baghouse	
10/18/2008	11:05	510335	58300	26120	32180	1018-42	3042	Baghouse	
10/18/2008	11:10	524545	86400	36000	50400	1018-43	3043	Baghouse	
10/18/2008	11:13	510332	56600	27440	29160	1018-44	3044	Baghouse	
10/18/2008	11:15	510335	51300	26120	25180	1018-45	3045	Baghouse	0809-CAMU-180
10/18/2008	11:17	524547	79220	35000	44220	1018-46	3046	Baghouse	
10/18/2008	11:20	510332	59100	27440	31660	1018-47	3047	Baghouse	
10/18/2008	11:28	510335	56040	26120	29920	1018-48	3048	Baghouse	
10/18/2008	11:33	524545	72160	36000	36160	1018-49	3049	Baghouse	
10/18/2008	11:36	510332	54480	27440	27040	1018-50	3050	Baghouse	
10/18/2008	11:37	524547	71540	35000	36540	1018-51	3051	Baghouse	
10/18/2008	11:40	510335	51260	26120	25140	1018-52	3052	Baghouse	
10/18/2008	11:49	510332	54080	27440	26640	1018-53	3053	Baghouse	
10/18/2008	11:50	510335	51400	26120	25280	1018-54	3054	Baghouse	
10/18/2008	11:52	524545	80220	36000	44220	1018-55	3055	Baghouse	
10/18/2008	11:58	524547	85440	35000	50440	1018-56	3056	Baghouse	
10/18/2008	12:03	510332	50640	27440	23200	1018-57	3057	Baghouse	
10/18/2008	12:05	510335	47940	26120	21820	1018-58	3058	Baghouse	
10/18/2008	12:10	524545	89300	36000	53300	1018-59	3059	Baghouse	
10/18/2008	12:15	524547	85560	35000	50560	1018-60	3060	Baghouse	
10/18/2008	12:18	510335	48860	26120	22740	1018-61	3061	Baghouse	
10/18/2008	12:25	524545	57660	36000	21660	1018-62	3062	Baghouse	
10/18/2008	12:30	524547	90220	35000	55220	1018-63	3063	Baghouse	
10/18/2008	12:34	510335	52960	26120	26840	1018-64	3064	Baghouse	
10/18/2008	12:50	510335	50440	26120	24320	1018-65	3065	Baghouse	0809-CAMU-181
10/18/2008	12:51	524547	89040	35000	54040	1018-66	3066	Baghouse	
10/20/2008	8:20	524545	67740	36000	31740	1020-1	3067	Baghouse	
10/20/2008	8:31	524547	70180	35000	35180	1020-2	3068	Baghouse	
10/20/2008	8:49	520989	70540	36280	34260	1020-3	3069	Baghouse	
10/20/2008	9:12	524545	70460	36000	34460	1020-4	3070	Baghouse	
10/20/2008	9:25	524547	87680	35000	52680	1020-5	3071	Baghouse	
10/20/2008	9:37	520989	85840	36280	49560	1020-6	3072	Baghouse	
10/20/2008	9:40	524545	87200	36000	51200	1020-7	3073	Baghouse	
10/20/2008	9:46	524547	86060	35000	51060	1020-8	3074	Baghouse	
10/20/2008	9:50	520989	97920	36280	61640	1020-9	3075	Baghouse	
10/20/2008	9:55	524545	94900	36000	58900	1020-10	3076	Baghouse	
10/20/2008	10:01	524547	103140	35000	68140	1020-11	3077	Baghouse	
10/20/2008	10:07	520989	85580	36280	49300	1020-12	3078	Baghouse	
10/20/2008	10:11	524545	83200	36000	47200	1020-13	3079	Baghouse	
10/20/2008	10:18	524547	94840	35000	59840	1020-14	3080	Baghouse	
10/20/2008	10:32	520989	86920	36280	50640	1020-15	3081	Baghouse	
10/20/2008	10:47	524545	95380	36000	59380	1020-16	3082	Baghouse	
10/20/2008	10:50	524547	91420	35000	56420	1020-17	3083	Baghouse	
10/20/2008	10:53	520989	88620	36280	52340	1020-18	3084	Baghouse	
10/20/2008	11:08	524545	90720	36000	54720	1020-19	3085	Baghouse	0809-CAMU-182
10/20/2008	11:13	524547	91020	35000	56020	1020-20	3086	Baghouse	
10/20/2008	11:15	520989	91400	36280	55120	1020-21	3087	Baghouse	
10/20/2008	11:25	524545	92420	36000	56420	1020-22	3088	Baghouse	
10/20/2008	11:30	524547	91840	35000	56840	1020-23	3089	Baghouse	
10/20/2008	11:32	520989	92840	36280	56560	1020-24	3090	Baghouse	
10/20/2008	11:41	524545	95180	36000	59180	1020-25	3091	Baghouse	
10/20/2008	11:45	524547	93440	35000	58440	1020-26	3092	Baghouse	
10/20/2008	11:46	510335	61620	26120	35500	1020-27	3093	Baghouse	
10/20/2008	11:50	520989	92580	36280	56300	1020-28	3094	Baghouse	
10/20/2008	11:54	524545	98420	36000	62420	1020-29	3095	Baghouse	
10/20/2008	13:20	520989	91160	36280	54880	1020-30	3096	Baghouse	
10/20/2008	13:22	510335	51520	26120	25400	1020-31	3097	Baghouse	
10/20/2008	13:26	524545	91500	36000	55500	1020-32	3098	Baghouse	
10/20/2008	13:30	524547	85840	35000	50840	1020-33	3099	Baghouse	
10/20/2008	13:35	520989	90140	36280	53860	1020-34	3100	Baghouse	
10/20/2008	13:36	510335	60980	26120	34860	1020-35	3101	Baghouse	
10/20/2008	13:40	524545	93440	36000	57440	1020-36	3102	Baghouse	
10/20/2008	13:44	524547	92920	35000	57920	1020-37	3103	Baghouse	
10/20/2008	13:48	520989	86520	36280	50240	1020-38	3104	Baghouse	
10/20/2008	13:50	510335	56300	26120	30180	1020-39	3105	Baghouse	0809-CAMU-183
10/20/2008	13:55	524545	92580	36000	56580	1020-40	3106	Baghouse	
10/20/2008	13:59	524547	89540	35000	54540	1020-41	3107	Baghouse	
10/20/2008	14:03	520989	88120	36280	51840	1020-42	3108	Baghouse	
10/20/2008	14:07	510335	60160	26120	34040	1020-43	3109	Baghouse	
10/20/2008	14:10	524545	90020	36000	54020	1020-44	3110	Baghouse	
10/20/2008	14:15	524547	97040	35000	62040	1020-45	3111	Baghouse	
10/20/2008	14:19	520989	88900	36280	52620	1020-46	3112	Baghouse	
10/20/2008	14:22	510335	54740	26120	28620	1020-47	3113	Baghouse	
10/20/2008	14:26	524545	92160	36000	56160	1020-48	3114	Baghouse	
10/20/2008	14:32	524547	89760	35000	54760	1020-49	3115	Baghouse	
10/20/2008	14:35	520989	86340	36280	50060	1020-50	3116	Baghouse	
10/20/2008	14:37	510335	57480	26120	31360	1020-51	3117	Baghouse	
10/20/2008	14:44	524545	94760	36000	58760	1020-52	3118	Baghouse	
10/20/2008	14:46	524547	77020	35000	42020	1020-53	3119	Baghouse	
10/20/2008	14:50	520989	88980	36280	52700	1020-54	3120	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/20/2008	14:51	510335	58060	26120	31940	1020-55	3121	Baghouse	
10/20/2008	14:59	524545	90580	36000	54580	1020-56	3122	Baghouse	
10/20/2008	15:07	510335	56940	26120	30820	1020-57	3123	Baghouse	
10/20/2008	15:24	524545	97900	36000	61900	1020-58	3124	Baghouse	
10/20/2008	15:48	510335	52940	26120	26820	1020-59	3125	Baghouse	0809-CAMU-184
10/20/2008	16:03	510335	52720	26120	26600	1020-60	3126	Baghouse	
10/20/2008	16:17	510335	54600	26120	28480	1020-61	3127	Baghouse	
10/20/2008	16:32	510335	58160	26120	32040	1020-62	3128	Baghouse	
10/20/2008	16:45	510335	53760	26120	27640	1020-63	3129	Baghouse	
10/21/2008	10:39	510335	58500	26120	32380	1021-01	3130	Baghouse	
10/21/2008	10:40	524545	76600	36000	40600	1021-02	3131	Baghouse	
10/21/2008	10:45	524547	85180	35000	50180	1021-03	3132	Baghouse	
10/21/2008	10:50	520989	84480	36280	48200	1021-04	3133	Baghouse	
10/21/2008	10:53	510335	52380	26120	26260	1021-05	3134	Baghouse	
10/21/2008	10:58	524545	80380	36000	44380	1021-06	3135	Baghouse	
10/21/2008	11:05	524547	76320	35000	41320	1021-07	3136	Baghouse	
10/21/2008	11:15	520989	70300	36280	34020	1021-08	3137	Baghouse	
10/21/2008	11:19	510335	52600	26120	26480	1021-09	3138	Baghouse	
10/21/2008	11:25	524545	88120	36000	52120	1021-10	3139	Baghouse	
10/21/2008	11:31	524547	79700	35000	44700	1021-11	3140	Baghouse	
10/21/2008	11:36	520989	82520	36280	46240	1021-12	3141	Baghouse	
10/21/2008	11:43	524545	92720	36000	56720	1021-13	3142	Baghouse	
10/21/2008	11:46	524547	76880	35000	41880	1021-14	3143	Baghouse	
10/21/2008	11:52	510335	56540	26120	30420	1021-15	3144	Baghouse	
10/21/2008	13:40	520989	86860	36280	50580	1021-16	3145	Baghouse	0809-CAMU-185
10/21/2008	13:43	520989	83160	36280	46880	1021-17	3146	Baghouse	
10/21/2008	13:47	524547	84260	35000	49260	1021-18	3147	Baghouse	
10/21/2008	13:48	510335	55580	26120	29460	1021-19	3148	Baghouse	
10/21/2008	14:07	520989	79320	36280	43040	1021-20	3149	Baghouse	
10/21/2008	14:10	524545	81980	36000	45980	1021-21	3150	Baghouse	
10/21/2008	14:12	524547	76640	35000	41640	1021-22	3151	Baghouse	
10/21/2008	14:15	510335	57620	26120	31500	1021-23	3152	Baghouse	
10/21/2008	14:20	520989	80680	36280	44400	1021-24	3153	Baghouse	
10/21/2008	14:25	524545	85040	36000	49040	1021-25	3154	Baghouse	
10/21/2008	14:28	524547	77420	35000	42420	1021-26	3155	Baghouse	
10/21/2008	14:32	510335	59060	26120	32940	1021-27	3156	Baghouse	
10/21/2008	14:37	524545	82550	36000	46550	1021-28	3157	Baghouse	
10/21/2008	14:42	520989	83720	36280	47440	1021-29	3158	Baghouse	
10/22/2008	8:12	524547	83840	35000	48840	1022-01	3159	Baghouse	
10/22/2008	8:22	524545	83720	36000	47720	1022-02	3160	Baghouse	
10/22/2008	8:32	520989	85380	36280	49100	1022-03	3161	Baghouse	
10/22/2008	8:40	510335	58000	26120	31880	1022-04	3162	Baghouse	
10/22/2008	8:44	524547	86020	35000	51020	1022-05	3163	Baghouse	
10/22/2008	8:49	520989	77460	36280	41180	1022-06	3164	Baghouse	0809-CAMU-186
10/22/2008	8:54	510335	40180	26120	14060	1022-07	3165	Baghouse	
10/22/2008	9:02	524545	81180	36000	45180	1022-08	3166	Baghouse	
10/22/2008	9:07	524547	76800	35000	41800	1022-09	3167	Baghouse	
10/22/2008	9:14	510335	53760	26120	27640	1022-10	3168	Baghouse	
10/22/2008	9:15	520989	85640	36280	49360	1022-11	3169	Baghouse	
10/22/2008	9:17	524545	78840	36000	42840	1022-12	3170	Baghouse	
10/22/2008	9:24	510335	56000	26120	29880	1022-13	3171	Baghouse	
10/22/2008	9:26	524547	85520	35000	50520	1022-14	3172	Baghouse	
10/22/2008	9:34	520989	84500	36280	48220	1022-15	3173	Baghouse	
10/22/2008	9:42	524545	76800	36000	40800	1022-16	3174	Baghouse	
10/22/2008	9:44	510335	46220	26120	20100	1022-17	3175	Baghouse	
10/22/2008	9:47	524547	70280	35000	35280	1022-18	3176	Baghouse	
10/22/2008	10:05	520989	73460	36280	37180	1022-19	3177	Baghouse	
10/22/2008	10:10	510335	510335	26120	484215	1022-20	3178	Baghouse	
10/22/2008	10:20	524547	62480	35000	27480	1022-21	3179	Baghouse	
10/22/2008	10:21	524545	66060	36000	30060	1022-22	3180	Baghouse	
10/22/2008	10:32	520989	83380	36280	47100	1022-23	3181	Baghouse	
10/22/2008	10:33	510335	57100	26120	30980	1022-24	3182	Baghouse	
10/22/2008	10:42	524545	76680	36000	40680	1022-25	3183	Baghouse	
10/22/2008	10:43	524547	85320	35000	50320	1022-26	3184	Baghouse	
10/22/2008	10:48	510335	54360	26120	28240	1022-27	3185	Baghouse	0809-CAMU-187
10/22/2008	11:01	520989	85300	36280	49020	1022-28	3186	Baghouse	
10/22/2008	11:02	524545	86980	36000	50980	1022-29	3187	Baghouse	
10/22/2008	11:12	524547	85880	35000	50880	1022-30	3188	Baghouse	
10/22/2008	11:17	510335	53940	26120	27820	1022-31	3189	Baghouse	
10/22/2008	11:24	520989	60580	36280	24300	1022-32	3190	Baghouse	
10/22/2008	13:11	510335	53600	26120	27480	1022-33	3191	Baghouse	
10/22/2008	13:24	520989	74780	36280	38500	1022-34	3192	Baghouse	
10/22/2008	13:25	510335	53280	26120	27160	1022-35	3193	Baghouse	
10/22/2008	13:46	520989	85440	36280	49160	1022-36	3194	Baghouse	
10/22/2008	13:50	510335	55380	26120	29260	1022-37	3195	Baghouse	
10/22/2008	14:03	520989	92540	36280	56260	1022-38	3196	Baghouse	
10/22/2008	14:23	520989	92860	36280	56580	1022-39	3197	Baghouse	
10/22/2008	14:30	510335	53240	26120	27120	1022-40	3198	Baghouse	
10/22/2008	14:34	520989	88480	36280	52200	1022-41	3199	Baghouse	
10/22/2008	14:46	510335	54280	26120	28160	1022-42	3200	Baghouse	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/22/2008	14:52	520989	80460	36280	44180	1022-43	3201	Baghouse	
10/22/2008	15:01	510335	48300	26120	22180	1022-44	3202	Baghouse	
10/22/2008	15:05	520989	79360	36280	43080	1022-45	3203	Baghouse	
10/22/2008	15:14	510335	51860	26120	25740	1022-46	3204	Baghouse	
10/22/2008	15:17	520989	81180	36280	44900	1022-47	3205	Baghouse	
10/22/2008	15:26	510335	53840	26120	27720	1022-48	3206	Baghouse	0809-CAMU-188
10/22/2008	15:30	520989	82640	36280	46360	1022-49	3207	Baghouse	
10/22/2008	15:46	510335	53280	26120	27160	1022-50	3208	Baghouse	
10/22/2008	15:55	520989	81880	36280	45600	1022-51	3209	Baghouse	
10/22/2008	15:58	510335	53760	26120	27640	1022-52	3210	Baghouse	
10/22/2008	16:08	520989	90180	36280	53900	1022-53	3211	Baghouse	
10/22/2008	16:12	510335	51440	26120	25320	1022-54	3212	Baghouse	
10/22/2008	16:22	520989	85480	36280	49200	1022-55	3213	Baghouse	
10/22/2008	16:25	510335	57760	26120	31640	1022-56	3214	Baghouse	
10/22/2008	16:36	520989	93620	36280	57340	1022-57	3215	Baghouse	
10/22/2008	16:38	510335	59600	26120	33480	1022-58	3216	Baghouse	
10/22/2008	16:51	520989	98140	36280	61860	1022-59	3217	Baghouse	
10/23/2008	8:15	520989	94440	36280	58160	1023-01	3218	Baghouse	
10/23/2008	8:16	524545	86880	36000	50880	1023-02	3219	Monier Flue	
10/23/2008	8:17	510335	60960	26120	34840	1023-03	3220	Monier Flue	
10/23/2008	8:26	524545	87240	36000	51240	1023-04	3221	Monier Flue	
10/23/2008	8:29	520989	83620	36280	47340	1023-05	3222	Monier Flue	
10/23/2008	8:33	510335	63560	26120	37440	1023-06	3223	Monier Flue	
10/23/2008	8:35	524547	90520	35000	55520	1023-07	3224	Monier Flue	
10/23/2008	8:51	510335	55060	26120	28940	1023-08	3225	Monier Flue	0809-CAMU-189
10/23/2008	8:57	524547	88140	35000	53140	1023-09	3226	Monier Flue	
10/23/2008	9:11	510335	51240	26120	25120	1023-10	3227	Monier Flue	
10/23/2008	9:18	524547	80900	35000	45900	1023-11	3228	Monier Flue	
10/23/2008	9:20	510335	53960	26120	27840	1023-12	3229	Monier Flue	
10/23/2008	9:34	524547	85020	35000	50020	1023-13	3230	Monier Flue	
10/23/2008	9:41	510335	54960	26120	28840	1023-14	3231	Monier Flue	
10/23/2008	10:04	524547	84940	35000	49940	1023-15	3232	Monier Flue	
10/23/2008	10:05	510335	56440	26120	30320	1023-16	3233	Monier Flue	
10/23/2008	10:24	510335	53180	26120	27060	1023-17	3234	Monier Flue	
10/23/2008	10:30	524547	76960	35000	41960	1023-18	3235	Monier Flue	
10/23/2008	10:40	524545	79320	36000	43320	1023-19	3236	Monier Flue	
10/23/2008	10:47	510335	43920	26120	17800	1023-20	3237	Monier Flue	
10/23/2008	11:02	524547	78680	35000	43680	1023-21	3238	Monier Flue	
10/23/2008	11:14	524545	77980	36000	41980	1023-22	3239	Monier Flue	
10/23/2008	11:24	510335	34840	26120	8720	1023-23	3240	Monier Flue	
10/23/2008	11:53	520989	56780	36280	20500	1023-24	3241	Monier Flue	
10/24/2008	11:25	524547	74200	35000	39200	1024-01	3242	Baghouse	
10/24/2008	11:52	524547	65780	35000	30780	1024-02	3243	Baghouse	
10/24/2008	13:28	524545	81920	36000	45920	1024-03	3244	Acid Plant	0809-CAMU-190
10/24/2008	13:29	524547	73000	35000	38000	1024-04	3245	Baghouse	
10/24/2008	13:46	524545	90360	36000	54360	1024-05	3246	Acid Plant	
10/24/2008	13:58	524545	57260	36000	21260	1024-06	3247	Baghouse	
10/24/2008	14:04	524545	88380	36000	52380	1024-07	3248	Acid Plant	
10/24/2008	14:27	524545	87280	36000	51280	1024-08	3249	Acid Plant	
10/24/2008	14:51	524545	72900	36000	36900	1024-09	3250	Acid Plant	
10/24/2008	15:18	524545	83940	36000	47940	1024-10	3251	Acid Plant	
10/24/2008	15:37	524545	89620	36000	53620	1024-11	3252	Acid Plant	
10/24/2008	15:53	524545	85020	36000	49020	1024-12	3253	Acid Plant	
10/24/2008	16:18	524545	84200	36000	48200	1024-13	3254	Acid Plant	
10/25/2008	8:04	510335	54400	26120	28280	1025-01	3255	Monier Flue	
10/25/2008	8:13	524547	75700	35000	40700	1025-02	3256	Monier Flue	
10/25/2008	8:18	520989	72940	36280	36660	1025-03	3257	Monier Flue	
10/25/2008	8:25	524545	69920	36000	33920	1025-04	3258	Monier Flue	
10/25/2008	8:26	510335	47340	26120	21220	1025-05	3259	Monier Flue	
10/25/2008	8:34	524547	69660	35000	34660	1025-06	3260	Monier Flue	0809-CAMU-191
10/25/2008	8:36	520989	67480	36280	31200	1025-07	3261	Monier Flue	
10/25/2008	8:43	524545	65880	36000	29880	1025-08	3262	Monier Flue	
10/25/2008	8:49	510335	48780	26120	22660	1025-09	3263	Monier Flue	
10/25/2008	8:59	524547	68360	35000	33360	1025-10	3264	Monier Flue	
10/25/2008	9:00	520989	65880	36280	29600	1025-11	3265	Monier Flue	
10/25/2008	9:04	524545	72300	36000	36300	1025-12	3266	Monier Flue	
10/25/2008	9:06	510335	46900	26120	20780	1025-13	3267	Monier Flue	
10/25/2008	9:15	524547	65280	35000	30280	1025-14	3268	Monier Flue	
10/25/2008	9:19	520989	69860	36280	33580	1025-15	3269	Monier Flue	
10/25/2008	9:25	524545	75220	36000	39220	1025-16	3270	Monier Flue	
10/25/2008	9:29	510335	51880	26120	25760	1025-17	3271	Monier Flue	
10/25/2008	9:41	524547	85480	35000	50480	1025-18	3272	Monier Flue	
10/25/2008	9:53	520989	83980	36280	47700	1025-19	3273	Monier Flue	
10/25/2008	10:04	524545	93520	36000	57520	1025-20	3274	Monier Flue	
10/25/2008	10:06	510335	58180	26120	32060	1025-21	3275	Monier Flue	
10/25/2008	10:09	524547	76600	35000	41600	1025-22	3276	Monier Flue	
10/25/2008	10:14	520989	76840	36280	40560	1025-23	3277	Monier Flue	
10/25/2008	10:20	510335	53560	26120	27440	1025-24	3278	Monier Flue	
10/25/2008	10:27	524545	69040	36000	33040	1025-25	3279	Monier Flue	
10/25/2008	10:35	524547	60080	35000	25080	1025-26	3280	Monier Flue	

ATTACHMENT A
TRUCK WEIGHT SUMMARY

Date	Time	Truck ID	Weight	Tare Weight	Material Weight	Load ID	Load #	Waste Origin	Sample Taken
10/25/2008	10:45	520989	68760	36280	32480	1025-27	3281	Monier Flue	
10/25/2008	10:49	510335	44480	26120	18360	1025-28	3282	Monier Flue	0809-CAMU-192
10/25/2008	10:53	524545	74340	36000	38340	1025-29	3283	Monier Flue	
10/25/2008	11:02	524547	85560	35000	50560	1025-30	3284	Monier Flue	
10/25/2008	11:09	520989	79260	36280	42980	1025-31	3285	Monier Flue	
10/25/2008	11:19	524545	90300	36000	54300	1025-32	3286	Monier Flue	
10/25/2008	11:21	510335	57540	26120	31420	1025-33	3287	Monier Flue	
10/25/2008	11:25	524547	85160	35000	50160	1025-34	3288	Monier Flue	
10/25/2008	11:32	520989	82760	36280	46480	1025-35	3289	Monier Flue	
10/25/2008	11:40	510335	66900	26120	40780	1025-36	3290	Monier Flue	
10/25/2008	11:50	524547	90200	35000	55200	1025-37	3291	Monier Flue	
10/25/2008	12:24	510335	45480	26120	19360	1025-38	3292	Monier Flue	
10/25/2008	12:43	524545	91320	36000	55320	1025-39	3293	Monier Flue	
10/25/2008	12:49	510335	59100	26120	32980	1025-40	3294	Monier Flue	
10/25/2008	13:00	524545	82500	36000	46500	1025-41	3295	Monier Flue	
10/25/2008	13:02	510335	61480	26120	35360	1025-42	3296	Monier Flue	
10/25/2008	13:12	524545	91620	36000	55620	1025-43	3297	Monier Flue	
10/25/2008	13:14	510335	65340	26120	39220	1025-44	3298	Monier Flue	
10/25/2008	13:25	524545	94980	36000	58980	1025-45	3299	Monier Flue	
10/25/2008	13:30	510335	63320	26120	37200	1025-46	3300	Monier Flue	
10/25/2008	13:40	524545	81260	36000	45260	1025-47	3301	Monier Flue	
10/27/2008	11:25	524545	74820	36000	38820	1027-01	3302	Monier Flue	
10/27/2008	11:50	524545	77840	36000	41840	1027-02	3303	Monier Flue	
10/27/2008	13:58	524545	79500	36000	43500	1027-03	3304	Monier Flue	0809-CAMU-193
10/27/2008	13:53	520989	85800	36280	49520	1027-04	3305	Monier Flue	
10/27/2008	14:28	520989	46600	36280	10320	1027-05	3306	Monier Flue	
11/3/2008	10:21	510335	46800	26120	20680	1103-01	3307	Monier Flue	
11/3/2008	10:39	510335	63500	26120	37380	1103-02	3308	Monier Flue	
11/3/2008	10:49	510335	60440	26120	34320	1103-03	3309	Monier Flue	
11/3/2008	10:58	510335	55920	26120	29800	1103-04	3310	Monier Flue	
11/3/2008	11:07	510335	60820	26120	34700	1103-05	3311	Monier Flue	
11/3/2008	11:17	510335	61860	26120	35740	1103-06	3312	Monier Flue	
11/3/2008	11:25	510335	56900	26120	30780	1103-07	3313	Monier Flue	
11/3/2008	11:36	510335	59540	26120	33420	1103-08	3314	Monier Flue	
11/3/2008	11:46	510335	67440	26120	41320	1103-09	3315	Monier Flue	
11/3/2008	11:56	510335	61120	26120	35000	1103-10	3316	Monier Flue	
11/3/2008	12:11	510335	62000	26120	35880	1103-11	3317	Monier Flue	
11/3/2008	12:26	510335	57580	26120	31460	1103-12	3318	Monier Flue	
11/3/2008	13:14	510335	49980	26120	23860	1103-13	3319	Monier Flue	
11/3/2008	13:25	510335	60220	26120	34100	1103-14	3320	Monier Flue	
11/3/2008	13:38	510335	66980	26120	40860	1103-15	3321	Monier Flue	
11/3/2008	13:51	510335	41880	26120	15760	1103-16	3322	Monier Flue	
11/3/2008	14:08	510335	49840	26120	23720	1103-17	3323	Monier Flue	
11/3/2008	14:31	510335	41220	26120	15100	1103-18	3324	Monier Flue	
11/3/2008	14:42	510335	35540	26120	9420	1103-19	3325	Monier Flue	
11/17/2008	8:17	510034	38800	25220	13580	1117-01	3326	Other	
11/17/2008	8:26	510034	41140	25220	15920	1117-02	3327	Other	
11/17/2008	8:55	510034	46920	25220	21700	1117-03	3328	Other	
11/17/2008	9:10	510034	48960	25220	23740	1117-04	3329	Other	
11/17/2008	9:25	510034	54820	25220	29600	1117-05	3330	Other	
11/17/2008	9:35	510034	55600	25220	30380	1117-06	3331	Other	
11/17/2008	9:45	510034	53780	25220	28560	1117-07	3332	Other	
11/17/2008	10:00	510034	36440	25220	11220	1117-08	3333	Other	
11/19/2008	8:15	Asarco Loade	25800	22480	3320	1119-01	3334	Other	
11/19/2008	8:51	Asarco Loade	25540	22480	3060	1119-02	3335	Other	
11/19/2008	9:05	Asarco Loade	26220	22480	3740	1119-03	3336	Other	
11/19/2008	9:15	Asarco Loade	25940	22480	3460	1119-04	3337	Other	
11/19/2008	9:30	Asarco Loade	24140	22480	1660	1119-05	3338	Other	

ATTACHMENT B

TRUCK PHOTO LOG

TARGET SHEET

EPA REGION VIII

SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOCUMENT NUMBER: 1099468

SITE NAME: EAST HELENA RCRA CORRECTIVE ACTION

DOCUMENT DATE: 01/01/2009

DOCUMENT NOT SCANNED

Due to one of the following reasons:

- ☑ PHOTOGRAPHS
- ☐ 3-DIMENSIONAL
- ☐ OVERSIZED
- ☑ AUDIO/VISUAL
- ☐ PERMANENTLY BOUND DOCUMENTS
- ☐ POOR LEGIBILITY
- ☐ OTHER
- ☐ NOT AVAILABLE
- ☐ TYPES OF DOCUMENTS NOT TO BE SCANNED
  (Data Packages, Data Validation, Sampling Data, CBI, Chain of Custody)

DOCUMENT DESCRIPTION:

1 DVD - APPENDIX C, ATTACHMENT B TRUCK PHOTO LOG

Contact the Superfund Records Center to view available document.
(303) 312-6473

ATTACHMENT C

SAMPLE LOG AND SAMPLE RESULTS

ATTACHMENT C
SAMPLE LOG

Date	Time	Origin of Waste	Sample ID	Truck ID	Material Weight	Description
7/7/2008	15:00	Ringling Building	0807-CAMU-100	520989	40460	95% Dark Colored Soil and Small Rock and 5% Wood/Brick/Concrete
7/8/2008	7:00	Barnum Building	0807-CAMU-101	520990	37380	25% Soil/Small Rock, 25% Wood, 25% Brick, and 25% Concrete
7/8/2008	8:46	Barnum Building	0807-CAMU-102	524547	17000	Broken up Wood Debris and Large wood Timbers with 15% soil/brick/concrete
7/8/2008	9:58	Bailey Building	0807-CAMU-103	520996	46780	Sample consists of Soil from 3 locations, wood from 1 location, and concrete from 1 location.
7/8/2008	12:25	Bailey Building	0807-CAMU-104	520996	35400	Sample consists of Soil from 2 locations, wood from 1 location, and concrete from 2 location.
7/8/2008	13:51	Bailey Building	0807-CAMU-105	520996	31880	Sample consists of soil from 4 locations and concrete from 1 location
7/9/2008	6:20	Barnum Building	0807-CAMU-106	524545	24920	Sample consists of wood from 2 locations, brick from 2 locations, and concrete from 1 location.
7/9/2008	7:59	Bailey Building	0807-CAMU-107	520990	44820	Sample consists of soil/gravels from 4 locations and concrete from 1 location.
7/9/2008	9:15	Barnum Building	0807-CAMU-108	524547	43200	Sample consists of soil from 2 locations, brick from 2 locations, and concrete from 1 location.
7/9/2008	12:35	Bailey Building	0807-CAMU-109	520990	48080	Sample consists of soil from 2 locations, wood from 2 location, and concrete from 1 location.
7/9/2008	13:30	Barnum Building	0807-CAMU-110	524545	32080	Sample consists of soil from 2 locations, brick from 1 locations, wood from 1 location, and concrete from 1 location.
7/9/2008	15:09	Bailey Building	0807-CAMU-111	524545	34640	Sample consists of soil from 4 locations and wood from 1 location.
7/10/2008	7:10	Barnum Building	0807-CAMU-112	520996	33460	Sample consists of wood from 1 location, and brick, concrete, and soil from 2 locations.
7/10/2008	8:25	Bailey Building	0807-CAMU-113	520990	38100	Sample consists of wood from 1 location, concrete from 1 location, and soil from 3 locations.
7/10/2008	10:54	Barnum Building	0807-CAMU-114	524547	34480	Sample consists of wood from 2 locations, soil from 2 locations, and brick and concrete from 1 location.
7/10/2008	13:35	Barnum Building	0807-CAMU-115	520990	43540	Sample consists of wood from 3 locations, brick from 2 locations, soil from 3 locations, and concrete from 1 location.
7/11/2008	6:15	Barnum Building	0807-CAMU-116	524545	27440	Sample consists of wood from 3 locations, brick from 2 locations, and soil from 1 location.
7/11/2008	7:40	Barnum Building	0807-CAMU-117	524545	21380	Sample consists of wood from 3 locations, and soil and brick from 1 location.
7/11/2008	9:23	Barnum Building	0807-CAMU-118	520990	25680	Sample consists of wood from 3 locations, and brick and soil from 1 location.
7/11/2008	10:20	Barnum Building	0807-CAMU-119	520990	34420	Sample consists of wood from 2 locations, and soil, brick, and concrete from 1 location.
7/11/2008	12:35	Barnum Building	0807-CAMU-120	520989	37580	Sample consists of wood from 1 location, soil from 2 locations, and brick and concrete from 1 location.
7/11/2008	14:25	CSHB	0807-CAMU-121	510090	43820	Sample consists of soil from 3 locations, wood from 1 location, brick from 1 location, and concrete from 1 location.
7/12/2008	6:28	Barnum Building	0807-CAMU-122	520989	27220	Sample consists of wood from 2 locations, soil from 1 location, brick from 1 location, and concrete from 1 location.
7/12/2008	7:48	CSHB	0807-CAMU-123	510335	33220	Sample consists of soil from 3 locations, brick from 1 location, and concrete from 1 location.
7/12/2008	9:42	CSHB	0807-CAMU-124	510090	46360	Sample consists of soil from 4 locations, and concrete from 1 location.
7/12/2008	12:26	Barnum Building	0807-CAMU-125	520989	18260	Sample consists of wood from 2 locations, soil from one location, brick from 1 location, and concrete from 1 location.
7/12/2008	13:48	CSHB	0807-CAMU-126	510335	42660	Sample consists of soil from 3 locations, brick from 1 location, and concrete from 1 location.
7/14/2008	6:05	CSHB	0807-CAMU-127	510335	33980	Sample consists of soil from 3 locations, concrete from 2 locations, and wood from 2 locations.
7/14/2008	7:07	Barnum Building	0807-CAMU-128	524545	22300	Sample consists of soil, brick, and wood from 3 locations.
7/14/2008	8:20	Bailey Building	0807-CAMU-129	520989	26980	Sample consists of soil from 4 locations, concrete from 2 locations, and wood from 1 location.
7/14/2008	9:36	CSHB	0807-CAMU-130	510335	46180	Sample consists of soil from 4 locations, brick from 3 locations, concrete from 2 locations, and wood from 2 locations.
7/14/2008	10:44	Bailey Building	0807-CAMU-131	520990	34660	Sample consists of wood from 4 locations, concrete from 1 location, and soil from 2 locations.
7/15/2008	5:54	CSHB	0807-CAMU-132	510090	38080	Sample consists of soil from 3 locations, concrete and brick from 2 locations, and wood from 1 location.
7/15/2008	7:19	Bailey Building	0807-CAMU-133	524545	24260	Sample consists of wood from 3 locations, and concrete and soil from 2 locations.
7/15/2008	8:22	CSHB	0807-CAMU-134	510091	51300	Sample consists of soil from 4 locations, and concrete and brick from 3 locations.
7/15/2008	9:19	CSHB	0807-CAMU-135	510336	41600	Sample consists of soil from 4 locations, and wood, brick, and concrete from 2 locations.
7/15/2008	10:26	Bailey Building	0807-CAMU-136	524545	27500	Sample consists of soil from 4 locations, concrete from 2 locations, and wood from 1 location.
7/15/2008	12:42	CSHB	0807-CAMU-137	510091	32660	Sample consists of soil and brick from 3 locations, concrete from 2 locations, and wood from 1 location.
7/15/2008	13:48	CSHB	0807-CAMU-138	510336	35040	Sample consists of soil, concrete, wood from 2 locations, and brick from 1 location.
7/15/2008	15:08	CSHB	0807-CAMU-139	510335	29400	Sample consists of brick, soil, and wood from 2 locations, and concrete from 1 location.
7/16/2008	6:59	CSHB	0807-CAMU-140	510091	29260	Sample consists of soil and brick from 2 locations.
7/16/2008	8:39	CSHB	0807-CAMU-141	510090	29340	Sample consists of soil, brick, concrete, and wood from 2 locations.
7/16/2008	10:20	CSHB	0807-CAMU-142	510090	36200	Sample consists of brick, soil, and wood from 2 locations.
7/16/2008	12:49	CSHB	0807-CAMU-143	510336	25620	Sample consists of soil and concrete from 3 locations, as well as brick and wood from 1 location.
7/16/2008	14:27	CSHB	0807-CAMU-144	510090	24720	Sample consists of soil from 4 locations, as well as wood, brick, and concrete from 2 locations.
7/17/2008	8:30	CSHB	0807-CAMU-145	510335	28920	Sample consists of soil from 4 locations, as well as concrete from 3 locations, and brick from 1 location.
7/17/2008	9:48	CSHB	0807-CAMU-146	510090	35040	Sample consists of soil from 5 locations, brick from 1 location, concrete from 3 locations, and wood from 2 locations.

ATTACHMENT C
SAMPLE LOG

Date	Time	Origin of Waste	Sample ID	Truck ID	Material Weight	Description
7/17/2008	10:47	CSHB	0807-CAMU-147	510091	31160	Sample consists of soil from 4 locations, wood and concrete from 2 locations, and brick from 1 location.
7/17/2008	13:13	CSHB	0807-CAMU-148	510336	38060	Sample consists of soil from 3 locations, concrete from 1 location, and brick from 1 location.
7/17/2008	14:38	CSHB	0807-CAMU-149	510092	38860	Sample consists of soil from 3 locations, and concrete from 2 locations.
7/18/2008	6:37	CSHB	0807-CAMU-150	510336	19520	Sample consists of soil from 3 locations, as well as concrete, brick, and wood from 2 locations.
7/18/2008	7:58	CSHB	0807-CAMU-151	510335	12040	Sample consists of soil from 3 locations, as well as concrete and wood from 1 location.
7/18/2008	9:46	CSHB	0807-CAMU-152	510090	11660	Sample consists of brick from 4 locations, wood from 3 locations, and concrete from 2 locations.
7/18/2008	12:18	CSHB	0807-CAMU-153	510335	27180	Sample consists of soil from 3 locations, as well as brick, concrete, and wood from 1 location.
7/18/2008	13:31	CSHB	0807-CAMU-154	510090	18860	Sample consists of soil and wood from 4 locations, as well as brick and concrete from 2 locations.
7/18/2008	14:43	CSHB	0807-CAMU-155	510335	37880	Sample consists of soil from 2 locations, as well as brick, concrete, and wood from 1 location.
7/19/2008	6:20	CSHB	0807-CAMU-156	510336	20480	Sample consists of soil from 2 locations, as well as brick, concrete, and wood from 1 location.
7/19/2008	7:58	CSHB	0807-CAMU-157	510336	15240	Sample consists of concrete from 5 locations, wood from 4 locations, and soil from 1 location.
7/19/2008	8:54	CSHB	0807-CAMU-158	510090	36720	Sample consists of soil from 3 locations, and brick and concrete from 1 location.
7/19/2008	10:07	CSHB	0807-CAMU-159	510335	34880	Sample consists of soil and concrete from 3 locations, wood from 2 locations, and brick from 1 location.
7/19/2008	12:22	Bailey Building	0807-CAMU-160	510336	46300	Sample consists of soil from 3 locations, as well as wood and concrete from 1 location.
7/19/2008	13:47	CSHB	0807-CAMU-161	510336	26560	Sample consists of soil and concrete from 4 locations, as well as wood and brick from 2 locations.
7/19/2008	14:46	CSHB	0807-CAMU-162	510091	43860	Sample consists of soil from 2 locations, as well as brick, concrete, and wood from 1 location.
7/21/2008	6:24	CSHB	0807-CAMU-163	510091	39560	Sample consists of soil from 4 locations, concrete from 3 locations, wood from 2 locations, and brick from 1 location.
7/21/2008	7:27	CSHB	0807-CAMU-164	510091	43440	Sample consists of soil from 4 locations, concrete from 3 locations, as well as wood and brick from 2 locations.
7/21/2008	8:33	CSHB	0807-CAMU-165	510090	36400	Sample consists of soil from 3 locations, as well as concrete, brick, and wood from 2 locations.
7/21/2008	9:41	CSHB	0807-CAMU-166	510335	24020	Sample consists of soil and concrete from 4 locations.
7/21/2008	12:15	CSHB	0807-CAMU-167	510335	29580	Sample consists of soil and brick from 4 locations, and concrete from 3 locations, and wood from 1 location.
7/22/2008	13:23	CSHB	0807-CAMU-168	524547	53460	Sample consists of soil from 4 locations, brick and concrete from 3 locations, and wood from 1 location.
7/23/2008	13:35	CSHB	0807-CAMU-169	510335	23820	Sample consists of soil and wood from 1 location.
9/4/2008	14:00	Acid Plant Catalyst	0809-CAMU-100	n/a	n/a	Sample taken from bags placed in CAMU, catalyst removed from Acid Plant.
9/19/2008	8:54	Acid Plant	0809-CAMU-101	510092	14700	Sample consists of brick and wood from 3 locations, soil from 2 locations, and fiberglass from 1 location.
9/19/2008	11:08	Acid Plant	0809-CAMU-102	510335	7880	Sample consists of brick from 4 locations, and wood, fiberglass, and soil from 2 locations.
9/19/2008	14:14	Acid Plant	0809-CAMU-103	510092	21980	Sample consists of soil, wood, and brick from 3 locations.
9/20/2008	9:15	Baghouse	0809-CAMU-104	510092	20700	Sample consists of soil and concrete from 4 locations, as well as wood from 1 location.
9/20/2008	11:40	Baghouse	0809-CAMU-105	510090	22780	Sample consists of soil and concrete from 4 locations, as well as wood from 2 locations.
9/20/2008	14:56	Baghouse	0809-CAMU-106	510335	21960	Sample consists of brick from 3 locations.
9/22/2008	9:25	Baghouse	0809-CAMU-107	510092	24460	Sample consists of brick from 5 locations, as well as wood from 1 location.
9/22/2008	10:26	Baghouse	0809-CAMU-108	510335	19540	Sample consists of brick and soil from 4 locations, and wood from 2 locations.
9/22/2008	11:51	Baghouse	0809-CAMU-109	510335	28060	Sample consists of brick and soil from 5 locations.
9/22/2008	14:21	Baghouse	0809-CAMU-110	510092	24380	Sample consists of brick and soil from 4 locations, and concrete and wood from 3 locations.
9/22/2008	15:42	Flue Dust	0809-CAMU-111	Truck + Trailer	10780	Sample consists of dust from flue.
9/23/2008	9:11	Baghouse	0809-CAMU-112	510092	26360	Sample consists of brick from 3 locations and concrete and soil from 1 location
9/23/2008	10:37	Baghouse	0809-CAMU-113	510090	28120	Sample consists of brick from 3 locations, soil from 2 locations, concrete from 1 location and wood from 1 location.
9/23/2008	13:45	Baghouse	0809-CAMU-114	510092	25060	Sample consists of brick from 3 locations and concrete and soil from 1 location
9/23/2008	15:18	Baghouse	0809-CAMU-115	510090	20080	Sample consists of brick from 3 locations, soil from 2 locations, and wood from 1 location.
9/24/2008	8:23	Baghouse	0809-CAMU-116	510092	24460	Sample consists of brick from 3 locations and concrete and soil from 1 location
9/24/2008	9:55	Baghouse	0809-CAMU-117	510090	22820	Sample consists of brick from 5 locations.
9/24/2008	11:51	Baghouse	0809-CAMU-118	510090	26660	Sample consists of brick from 4 locations and soil from 1 location.
9/24/2008	14:27	Baghouse	0809-CAMU-119	510090	26000	Sample consists of brick from 5 locations.
9/25/2008	8:03	Baghouse	0809-CAMU-120	510090	23700	Sample consists of brick from 5 locations.
9/25/2008	9:30	Baghouse	0809-CAMU-121	510335	26720	Sample consists of brick from 4 locations, soil from 1 location and wood from 1 location.
9/25/2008	11:00	Baghouse	0809-CAMU-122	510335	21940	Sample consists of brick from 4 locations and concrete from 1 location.

ATTACHMENT C
SAMPLE LOG

Date	Time	Origin of Waste	Sample ID	Truck ID	Material Weight	Description
9/25/2008	13:45	Baghouse	0809-CAMU-123	510092	24360	Sample consists of brick from 2 locations, soil from 4 locations and concrete from 1 location.
9/25/2008	14:22	Flue Dust	0809-CAMU-124	Forklift	5220	Flue dust and soil from flue.
9/25/2008	15:50	Blast Furnace Flue	0809-CAMU-125	510335	30160	Sample consists of broken concrete from 5 locations.
9/26/2008	8:43	Acid Plant	0809-CAMU-126	510335	31260	Sample consists of brick from 5 locations.
9/26/2008	10:14	Baghouse	0809-CAMU-127	524547	41600	Sample consists of brick from 3 locations, concrete from 1 location and wood from 1 location.
9/26/2008	13:59	Blast Furnace Flue	0809-CAMU-128	520990	49100	Sample consists of concrete from 4 locations, brick from 1 location and soil from 1 location.
9/27/2008	8:33	Blast Furnace Flue	0809-CAMU-129	520990	41160	Sample consists of brick from 5 locations.
9/27/2008	12:11	Blast Furnace Flue	0809-CAMU-130	524545	45220	Sample consists of brick from 4 locations and soil from 1 location.
9/29/2008	9:57	Baghouse	0809-CAMU-131	520990	50880	Sample consists of brick from 4 locations and soil from 1 location.
9/29/2008	13:26	Baghouse	0809-CAMU-132	524545	46400	Sample consists of brick from 5 locations
9/29/2008	15:46	Baghouse	0809-CAMU-133	520990	46360	Sample consists of brick from 4 locations and concrete from 1 location.
9/30/2008	9:36	Baghouse	0809-CAMU-134	524545	47160	Sample consists of brick from 4 locations, wood from 1 location and concrete from 1 location
9/30/2008	16:40	Blast Furnace Flue	0809-CAMU-135	524545	56620	Sample consists of brick from 4 locations and soil from 1 location.
10/1/2008	9:32	Blast Furnace Flue	0809-CAMU-136	510090	23480	Sample consists of brick from 4 locations, soil from 1 location and concrete from 1 location.
10/1/2008	11:17	Blast Furnace Flue	0809-CAMU-137	510090	30160	Sample consists of brick from 3 locations, soil from 1 location and concrete from 1 location.
10/1/2008	14:19	Blast Furnace Flue	0809-CAMU-138	510090	26660	Sample consists of brick from 3 locations, soil from 2 locations and wood from 1 location.
10/2/2008	8:13	Blast Furnace Flue	0809-CAMU-139	524545	38200	Sample consists of soil from 2 locations, brick from 2 locations and wood from 1 location.
10/2/2008	11:05	Blast Furnace Flue	0809-CAMU-140	520990	46520	Sample consists of soil from 2 locations, brick from 2 locations, concrete from 2 locations and wood from 1 location.
10/2/2008	14:47	Blast Furnace Flue	0809-CAMU-141	520990	45340	Sample consists of brick from 2 locations, concrete from 2 locations and wood from 1 location.
10/3/2008	8:05	Blast Furnace Flue	0809-CAMU-142	520990	42560	Sample consists of soil from 1 location, wood from 1 location, brick from 1 location and concrete from 2 locations.
10/3/2008	10:41	Blast Furnace Flue	0809-CAMU-143	510335	21700	Sample consists of brick from 2 locations, concrete from 2 locations and soil from 1 location.
10/3/2008	14:21	Blast Furnace Flue	0809-CAMU-144	510335	29920	Sample consists of brick from 2 locations, soil from 1 location, concrete from 1 location and wood from 1 location.
10/3/2008	16:48	Blast Furnace Flue	0809-CAMU-145	524545	47320	Sample consists of concrete from 4 locations and soil from 1 location.
10/4/2008	10:19	Blast Furnace Flue	0809-CAMU-146	510335	23320	Sample consists of brick from 4 locations, concrete from 1 location and wood from 1 location.
10/6/2008	8:55	Blast Furnace Flue	0809-CAMU-147	510335	25220	Sample consists of soil from 4 locations.
10/6/2008	10:55	Blast Furnace Flue	0809-CAMU-148	524547	46440	Sample consists of 4 soil and 2 brick samples all from different locations.
10/6/2008	16:03	Cooling Tower	0809-CAMU-149	524547	44620	Sampled 5 locations - sample consists of soil and brick mix.
10/8/2008	10:42	Monier Flue	0809-CAMU-150	510335	13540	Sample consists of concrete from 5 locations.
10/8/2008	14:49	Monier Flue	0809-CAMU-151	524545	51480	Sample consists of broken concrete from 5 locations in trailer.
10/8/2008	16:36	Monier Flue	0809-CAMU-152	510335	27060	Sample consists of gravel and concrete from 5 locations in truck.
10/9/2008	11:09	Monier Flue	0809-CAMU-153	510335	33360	Sample consists of gravel, concrete, and soil from 5 locations in truck.
10/10/2008	8:13	Monier Flue	0809-CAMU-154	510335	30420	Sample consists of mixed broken brick, rock, and soil from 5 locations in truck.
10/10/2008	10:58	Monier Flue	0809-CAMU-155	524547	57420	Sample consists of mixed brick, soil, and concrete from 5 locations in truck.
10/11/2008	9:30	Monier Flue	0809-CAMU-156	524545	45160	Sample consists of mixed soil, brick, and rock from 5 locations in truck.
10/13/2008	13:17	Baghouse	0809-CAMU-157	510335	27600	Sample consists of brick, concrete and soil mixture from 5 locations.
10/13/2008	14:51	Baghouse	0809-CAMU-158	510335	35200	Sample consists of soil from 3 locations and concrete from 2 locations.
10/14/2008	8:14	Acid Plant	0809-CAMU-159	510335	30000	Sample consists of soil and broken concrete mixed from 5 locations.
10/14/2008	9:53	Acid Plant	0809-CAMU-160	510335	34240	Sample consists of soil and broken brick from 5 locations.
10/14/2008	11:19	Acid Plant	0809-CAMU-161	510332	23480	Sample consists of broken concrete and soil mixed from 5 locations.
10/14/2008	13:49	Acid Plant	0809-CAMU-162	524547	52660	Sample consists of broken concrete, broken brick and soil mixed from 5 locations.
10/14/2008	15:28	Acid Plant	0809-CAMU-163	524547	49560	Sample consists of a mixture of broken brick, broken concrete and soil from 5 locations.
10/14/2008	16:55	Acid Plant	0809-CAMU-164	510335	35400	Sample consists of a mixture of broken concrete and soil from 5 locations.
10/15/2008	9:37	Acid Plant	0809-CAMU-165	510332	29960	Sample consists of soil from 5 locations.
10/15/2008	11:02	Acid Plant	0809-CAMU-166	510335	28920	Sample consists of soil and broken brick from 5 locations.
10/15/2008	14:27	Baghouse	0809-CAMU-167	524547	34120	Sample consists of soil, broken brick, wood and broken concrete from 5 locations.
10/15/2008	16:06	Baghouse	0809-CAMU-168	510332	31480	Sample consists of broken concrete, soil and wood mixed from 5 locations.

ATTACHMENT C
SAMPLE LOG

Date	Time	Origin of Waste	Sample ID	Truck ID	Material Weight	Description
10/16/2008	9:04	Baghouse	0809-CAMU-169	524547	62260	Sample consists of broken brick, soil and broken concrete mixed from 5 locations.
10/16/2008	11:07	Baghouse	0809-CAMU-170	510335	30700	Sample consists of broken brick, soil and broken concrete mixed from 5 locations.
10/16/2008	14:10	Baghouse	0809-CAMU-171	524547	59160	Sample consists of soil and broken brick from 5 locations.
10/16/2008	16:01	Baghouse	0809-CAMU-172	510335	31820	Sample consists of soil from 5 locations.
10/17/2008	8:46	Baghouse	0809-CAMU-173	510335	27160	Sample consists of soil and broken concrete mixed from 5 locations.
10/17/2008	10:12	Baghouse	0809-CAMU-174	524545	52760	Sample consists of soil and wood from 5 locations.
10/17/2008	11:40	Baghouse	0809-CAMU-175	510335	40840	Sample consists of broken concrete and soil mixed from 5 locations.
10/17/2008	14:17	Baghouse	0809-CAMU-176	524547	60020	Sample consists of soil and broken brick from 5 locations.
10/17/2008	15:48	Baghouse	0809-CAMU-177	524547	32420	Sample consists of soil, gravel and brick from 5 locations.
10/18/2008	8:22	Baghouse	0809-CAMU-178	510332	36440	Sample consists of soil, brick and gravel from 5 locations.
10/18/2008	10:00	Baghouse	0809-CAMU-179	524545	56500	Sample consists of soil and gravel from 5 locations.
10/18/2008	11:15	Baghouse	0809-CAMU-180	510335	25180	Sample consists of soil, concrete, brick and wood from 5 locations.
10/18/2008	12:50	Baghouse	0809-CAMU-181	510335	24320	Sample consist of soil, brick and concrete from 5 locations.
10/20/2008	11:08	Baghouse	0809-CAMU-182	524545	54720	Sample consists of soil and broken concrete from 5 locations.
10/20/2008	13:50	Baghouse	0809-CAMU-183	510335	30180	Sample consists of soil and broken concrete from 5 locations.
10/20/2008	15:48	Baghouse	0809-CAMU-184	510335	26820	Sample consists of soil from 5 locations.
10/21/2008	13:40	Baghouse	0809-CAMU-185	520989	50580	Sample consists of soil and broken concrete from 5 locations.
10/22/2008	8:49	Baghouse	0809-CAMU-186	520989	41180	Sampled from 5 sample locations.
10/22/2008	10:48	Baghouse	0809-CAMU-187	510335	28240	Sampled from 5 sample locations.
10/22/2008	15:26	Baghouse	0809-CAMU-188	510335	27720	Sample consists of soil from 5 locations.
10/23/2008	8:51	Blast Furnace Flue	0809-CAMU-189	510335	28940	Sample consists of soil from 5 locations.
10/24/2008	13:28	Acid Plant	0809-CAMU-190	524545	45920	Sample consists of soil from 5 locations.
10/25/2008	8:36	Blast Furnace Flue	0809-CAMU-191	520989	34660	Sample consists of soil from 5 locations.
10/25/2008	10:49	Blast Furnace Flue	0809-CAMU-192	510335	18360	Sample consists of soil from 4 locations and BRKK from 1 location.
10/27/2008	13:58	Blast Furnace Flue	0809-CAMU-193	524545	43500	Sample consists of soil from 5 locations.

ATTACHMENT C
SAMPLE RESULTS

All sample results reported in mg/kg

	Sample ID	CollectionDate	Ag-T	Al-T	As-T	Ba-T	Be-T	Cd-T	Co-T	Cr-T	Cu-T	Fe-T	Hg	Mn-T	Ni-T	Pb-T	Sb-T	Se-T	Sn-T	Tl-T	V-T	Zn-T
Acid Plant	0809-CAMU-101	9/19/2008 8:54	28	6850	696	555	<5	106	59	29	880	34000	17	1800	15	2480	85	13	31	6	17	3250
	0809-CAMU-102	9/19/2008 11:08	41	3620	717	123	<5	86	<5	9	446	6080	46	184	11	4770	88	18	8	15	12	1050
	0809-CAMU-103	9/19/2008 14:14	23	3200	206	99	<5	83	<5	22	354	12200	160	258	18	2740	42	23	8	<5	13	1230
	0809-CAMU-126	9/26/2008 8:43	9	2020	99	57	<5	43	<5	143	277	9790	270	164	71	702	23	15	10	<5	7	424
	0809-CAMU-159	10/14/2008 8:14	20	9350	162	394	<5	132	10	47	749	41000	180	1070	23	2210	10	8	14	7	32	2920
	0809-CAMU-160	10/14/2008 9:53	84	8770	3180	399	<5	2140	14	13	1970	24000	130	1640	23	14000	82	29	62	68	32	8620
	0809-CAMU-161	10/14/2008 11:19	90	11000	3280	811	<5	899	92	30	2700	78000	230	4200	26	11700	84	45	42	38	29	13300
	0809-CAMU-162	10/14/2008 13:49	45	11100	2770	1180	<5	530	28	13	1480	89100	5	5230	18	13100	45	<5	30	6	44	24800
	0809-CAMU-163	10/14/2008 15:28	20	10100	1010	280	<5	1720	8	12	466	23000	33	1280	13	4340	19	5	13	41	39	6160
	0809-CAMU-164	10/14/2008 16:55	17	10300	274	252	<5	195	10	25	593	35600	32	1060	17	2840	11	<5	13	<5	38	3060
	0809-CAMU-165	10/15/2008 9:37	19	11700	2160	672	<5	513	8	11	528	52600	29	2160	14	5730	19	<5	11	<5	41	8530
	0809-CAMU-166	10/15/2008 11:02	94	9080	3950	389	<5	2810	15	16	1700	37700	73	2100	27	15000	72	24	64	108	35	12600
	0809-CAMU-190	10/24/2008 13:28	104	8650	706	358	<5	439	39	67	1920	47600	780	1530	65	9850	104	26	35	20	44	5480
Acid Plant Catalyst	0809-CAMU-100	9/4/08 14:00	189	5600	1890	24	7	1080	<5	53	174	5020	4	40	26	9040	1890	<5	12	563	37800	464
Baghouse	0809-CAMU-104	9/20/2008 9:15	14	9140	1320	444	<5	755	8	12	394	38200	160	2030	9	4180	11	<5	18	9	31	6640
	0809-CAMU-105	9/20/2008 11:40	34	9940	1640	489	<5	1580	12	15	672	51800	170	3510	14	9030	34	16	37	24	32	14100
	0809-CAMU-106	9/20/2008 14:56	<5	11700	621	98	<5	197	<5	9	37	9560	80	197	7	126	<5	<5	<5	5	23	348
	0809-CAMU-107	9/22/2008 9:25	<5	13600	262	107	<5	376	<5	11	119	9180	31	236	7	1060	<5	<5	6	<5	19	852
	0809-CAMU-108	9/22/2008 10:26	21	7420	1910	148	<5	1570	6	9	272	14400	260	495	9	4850	30	11	26	90	19	3010
	0809-CAMU-109	9/22/2008 11:51	38	7440	2030	143	<5	1990	10	11	535	13900	130	413	23	9010	41	9	23	48	23	3000
	0809-CAMU-110	9/22/2008 14:21	<5	7800	867	174	<5	903	<5	9	108	15100	100	616	6	2500	9	5	13	25	20	2700
	0809-CAMU-112	9/23/2008 9:11	26	8630	2850	142	<5	2640	8	10	415	13200	190	404	13	7880	46	15	32	84	24	3000
	0809-CAMU-113	9/23/2008 10:37	24	6780	827	105	<5	922	7	9	356	9590	130	311	14	3670	37	13	16	37	18	1440
	0809-CAMU-114	9/23/2008 13:45	25	6350	433	77	<5	717	10	13	468	11300	54	370	15	3030	32	7	14	24	27	1620
	0809-CAMU-115	9/23/2008 15:18	21	9240	1500	208	<5	1410	10	14	389	20900	90	614	12	4830	34	8	25	46	24	2970
	0809-CAMU-116	9/24/2008 8:23	8	8970	578	142	<5	567	<5	8	154	13400	150	453	6	1880	10	<5	11	7	24	2190
	0809-CAMU-117	9/24/2008 9:55	14	5380	4730	76	<5	6010	<5	7	259	19700	750	431	5	17500	49	39	88	158	16	8520
	0809-CAMU-118	9/24/2008 11:51	8	5760	1800	84	<5	2370	<5	6	206	8950	380	292	<5	5860	15	15	29	47	16	2900
	0809-CAMU-119	9/24/2008 14:27	<5	5100	1730	54	<5	1770	<5	6	81	7610	290	183	<5	4370	12	7	19	55	14	2210
	0809-CAMU-120	9/25/2008 8:03	7	7180	2270	76	<5	3920	<5	6	153	14700	500	433	<5	8240	24	22	46	190	19	5810
	0809-CAMU-121	9/25/2008 9:30	6	7660	1410	562	<5	1840	5	7	280	25700	380	2160	6	5690	15	14	33	89	21	7440
	0809-CAMU-122	9/25/2008 11:00	40	5240	4350	41	<5	22900	5	14	588	14000	690	202	9	39800	159	315	500	732	15	32500
	0809-CAMU-123	9/25/2008 13:45	9	11100	3020	211	<5	1350	14	12	582	21600	47	704	23	2980	32	<5	12	78	32	2750
	0809-CAMU-127	9/26/2008 10:14	97	5260	10400	82	<5	29800	10	18	3570	14800	130	511	20	37700	514	58	724	90	14	71000
	0809-CAMU-131	9/29/2008 9:57	<5	4730	1300	38	<5	1120	<5	<5	88	6840	220	124	<5	2780	8	10	19	24	12	1510
	0809-CAMU-132	9/29/2008 13:26	6	3560	2620	38	<5	3050	<5	<5	209	17800	450	152	<5	8910	24	23	60	65	10	4640
	0809-CAMU-133	9/29/2008 15:46	7	7620	1900	84	<5	2420	<5	9	141	11200	320	298	<5	6400	15	22	43	98	19	3470
	0809-CAMU-134	9/30/2008 9:36	26	7600	1830	112	<5	1770	<5	11	463	15000	410	466	8	7720	35	20	47	32	20	3530
	0809-CAMU-157	10/13/2008 13:17	277	8360	1880	93	<5	1610	57	13	130000	13800	8	381	113	51100	424	1490	374	30	20	6140
	0809-CAMU-158	10/13/2008 14:59	29	10300	699	124	<5	1720	12	16	1170	16700	22	394	15	6130	19	25	40	39	39	3290
	0809-CAMU-167	10/15/2008 14:27	45	5820	1440	146	<5	7330	20	16	738	15200	79	527	14	17900	40	82	144	146	17	10400
	0809-CAMU-168	10/15/2008 16:06	199	6580	5460	363	<5	7620	41	22	4200	35000	28	1210	67	38400	272	71	151	130	22	14800
	0809-CAMU-169	10/16/2008 9:04	15	11800	8040	499	<5	5980	83	27	941	59200	460	2860	13	10200	42	9	35	141	30	5950
	0809-CAMU-170	10/16/2008 11:07	29	9680	5100	172	<5	3370	7	12	488	22500	300	453	13	12600	36	9	33	129	25	4870
	0809-CAMU-171	10/16/2008 14:10	10	12600	2290	206	<5	2790	7	15	160	23400	130	708	12	4930	9	15	13	160	32	3620

ATTACHMENT C
SAMPLE RESULTS
All sample results reported in mg/kg

	Sample ID	CollectionDate	Ag-T	Al-T	As-T	Ba-T	Be-T	Cd-T	Co-T	Cr-T	Cu-T	Fe-T	Hg	Mn-T	Ni-T	Pb-T	Sb-T	Se-T	Sn-T	Tl-T	V-T	Zn-T
Baghouse (continued)	0809-CAMU-172	10/16/2008 16:01	10	12600	2150	225	<5	3010	7	15	243	23900	150	312	13	5410	16	11	17	174	33	2900
	0809-CAMU-173	10/17/2008 8:46	<5	15500	1550	196	<5	1800	8	16	103	20400	43	635	15	2390	6	8	<5	34	32	1470
	0809-CAMU-174	10/17/2008 10:12	58	9420	569	1590	<5	683	13	12	1060	58600	12	4970	15	11300	76	<5	29	8	32	13500
	0809-CAMU-175	10/17/2008 11:40	141	7690	1560	292	<5	4030	31	20	2760	42200	79	1360	39	18200	141	58	161	60	31	12200
	0809-CAMU-176	10/17/2008 14:17	27	10600	699	132	<5	847	10	17	552	18600	34	329	17	4120	29	<5	15	14	39	2670
	0809-CAMU-177	10/17/2008 15:48	91	6720	573	148	<5	1260	26	16	1210	21700	16	928	25	10400	68	24	65	22	23	4110
	0809-CAMU-178	10/18/2008 8:22	30	12200	2080	378	<5	6030	24	20	846	54600	40	2450	16	19300	43	26	108	74	39	17600
	0809-CAMU-179	10/18/2008 10:00	32	12000	1250	200	<5	4150	18	19	763	42600	20	1680	20	10300	51	13	50	118	46	8470
	0809-CAMU-180	10/18/2008 11:15	63	10300	3200	219	<5	4860	13	17	1350	25400	220	709	24	17300	76	34	94	68	33	9620
	0809-CAMU-181	10/18/2008 12:50	19	10300	598	152	<5	1390	7	13	383	17800	58	475	13	5920	19	<5	28	13	31	3370
	0809-CAMU-182	10/20/2008 11:08	73	11200	1170	350	<5	4800	30	19	1450	32700	16	1070	30	14200	109	32	81	157	38	7970
	0809-CAMU-183	10/20/2008 13:50	31	12000	1880	789	<5	4660	16	26	853	37600	35	869	22	10800	44	25	75	47	41	6600
	0809-CAMU-184	10/20/2008 15:48	34	11800	2030	486	<5	5980	18	19	778	45700	24	2140	16	18500	46	25	101	120	41	11400
	0809-CAMU-185	10/21/2008 13:40	14	12700	1600	216	<5	2830	11	17	322	31200	43	1060	15	7940	15	6	29	56	39	6320
	0809-CAMU-186	10/22/2008 8:49	76	12200	1320	421	<5	3600	25	18	1310	29400	31	1230	35	17600	55	33	97	84	39	10200
	0809-CAMU-187	10/22/2008 10:48	208	7620	1410	546	<5	894	52	22	3700	58600	41	2500	32	25500	303	20	98	16	23	8160
	0809-CAMU-188	10/22/2008 15:26	15	11100	3480	661	<5	2400	10	14	365	33200	32	1870	16	3490	15	<5	15	172	42	9330
Bailey Building	0807-CAMU-103	7/8/08 9:58	86	9740	947	522	<5	250	65	45	1430	42400	780	2460	36	8900	89	51	29	42	28	3470
	0807-CAMU-104	7/8/08 12:25	97	9420	1440	558	<5	269	30	44	1580	37100	2300	2080	49	13200	93	83	40	46	29	6180
	0807-CAMU-105	7/8/08 13:51	76	8580	1260	394	<5	210	37	39	1480	35400	230	1500	44	9940	94	46	36	43	30	3530
	0807-CAMU-107	7/9/08 7:59	616	5860	2700	224	<5	1560	33	86	5700	49400	680	1140	122	67800	756	312	130	602	18	11400
	0807-CAMU-109	7/9/08 12:35	945	2840	2240	169	<5	930	39	21	8470	34800	630	1140	125	58800	1110	88	169	144	12	14900
	0807-CAMU-111	7/9/08 15:09	893	4490	3200	124	<5	1360	61	43	11400	60800	620	2110	180	62800	1180	159	221	328	15	26300
	0807-CAMU-113	7/10/08 8:25	1110	5270	4990	122	<5	1910	77	72	11800	73000	860	2050	177	60100	1570	402	199	888	14	28700
	0807-CAMU-129	7/14/08 8:20	752	3840	2740	259	<5	1260	55	73	6400	202000	520	1900	155	63500	1100	241	205	498	13	14200
	0807-CAMU-131	7/14/08 10:44	728	4880	2820	200	<5	1310	49	116	6230	122000	450	1660	168	70200	1120	237	156	530	19	16200
	0807-CAMU-133	7/15/08 7:19	668	6640	1990	384	<5	957	38	42	5660	51400	290	1570	109	52300	730	171	146	282	30	15800
	0807-CAMU-136	7/15/08 10:26	136	10000	3500	340	<5	462	31	37	1680	32800	290	1520	43	17400	177	78	36	83	41	5490
	0807-CAMU-160	7/19/08 12:22	308	6550	1500	260	<5	635	36	48	3320	79300	240	1380	73	27400	326	108	82	153	24	7360
Barnum Building	0807-CAMU-101	7/8/08 7:00	34	8080	247	166	<5	101	11	28	944	30200	<1	528	37	3200	20	20	17	<5	23	1890
	0807-CAMU-102	7/8/08 8:46	58	7120	265	324	<5	97	11	22	1280	35400	4	854	31	3650	100	<5	17	<5	30	2520
	0807-CAMU-106	7/9/08 6:20	<5	7010	39	100	<5	10	<5	7	86	8090	<4	302	<5	301	<5	<5	<5	<5	16	552
	0807-CAMU-108	7/9/08 9:15	13	6880	131	171	<5	62	7	9	297	12200	350	467	6	1730	15	<5	9	<5	15	1060
	0807-CAMU-110	7/9/08 13:30	923	4310	2760	212	<5	1100	57	83	10100	74600	630	2450	204	63000	1060	110	225	267	13	26000
	0807-CAMU-112	7/10/08 7:10	69	7260	329	187	<5	148	10	12	1090	14000	1	495	22	7860	45	<5	16	<5	29	2480
	0807-CAMU-114	7/10/08 10:54	18	5180	75	88	<5	51	<5	<5	238	6000	<1	183	6	1380	16	<5	<5	<5	16	552
	0807-CAMU-115	7/10/08 13:35	31	5760	249	131	<5	83	9	11	626	11900	2	370	17	4100	34	8	11	<5	24	1800
	0807-CAMU-116	7/11/08 6:15	64	5560	404	134	<5	157	9	14	1230	11800	140	465	45	5010	80	8	33	<5	21	1760
	0807-CAMU-117	7/11/08 7:40	72	5100	324	156	<5	164	12	13	1120	20300	3	660	30	7230	81	6	29	<5	22	2900
	0807-CAMU-118	7/11/08 9:23	106	6290	643	389	<5	257	13	19	3690	18600	7	436	46	11600	280	12	71	31	26	3840
	0807-CAMU-119	7/11/08 10:20	17	6060	105	95	<5	28	6	12	416	12100	1	320	13	1370	24	<5	8	<5	29	687
	0807-CAMU-120	7/11/08 13:35	82	10200	194	414	<5	65	42	25	1340	38000	1	1500	27	10500	67	<5	35	<5	30	2520
	0807-CAMU-122	7/12/08 6:28	160	9570	788	860	<5	237	61	30	5370	76900	6	3020	64	10900	194	20	81	8	35	5840
	0807-CAMU-125	7/12/08 12:26	21	5600	138	167	<5	37	6	15	582	10900	<1	348	11	1980	30	<5	11	<5	23	801
	0807-CAMU-128	7/14/08 7:07	6	3760	60	63	<5	15	<5	<5	134	4810	15	174	<5	594	13	<5	<5	<5	14	226

ATTACHMENT C
SAMPLE RESULTS
All sample results reported in mg/kg

	Sample ID	CollectionDate	Ag-T	Al-T	As-T	Ba-T	Be-T	Cd-T	Co-T	Cr-T	Cu-T	Fe-T	Hg	Mn-T	Ni-T	Pb-T	Sb-T	Se-T	Sn-T	Tl-T	V-T	Zn-T
Blast Furnace Flue	0809-CAMU-125	9/25/2008 15:50	99	5860	697	121	<5	301	12	18	1590	15500	60	538	24	8970	133	15	25	11	83	2560
	0809-CAMU-128	9/26/2008 13:59	22	9340	1370	187	<5	2910	5	13	483	20500	370	865	10	12700	42	21	68	38	18	7080
	0809-CAMU-129	9/27/2008 8:33	32	9190	1630	90	<5	2380	6	14	580	14000	190	253	11	6610	49	18	24	25	38	3450
	0809-CAMU-130	9/27/2008 12:11	35	7560	1990	235	<5	1620	9	19	645	28800	160	681	33	6590	32	11	32	53	39	4330
	0809-CAMU-135	9/30/2008 16:40	50	8120	2750	426	<5	1940	13	13	1120	26400	97	1620	17	8610	48	13	41	78	33	8530
	0809-CAMU-136	10/1/2008 9:32	89	8160	13400	198	<5	9220	8	11	1390	16300	80	630	18	38300	122	13	57	181	34	11800
	0809-CAMU-137	10/1/2008 11:17	102	7840	4870	131	<5	14200	13	17	3960	15800	170	386	24	38200	260	82	314	120	32	25000
	0809-CAMU-138	10/1/2008 14:19	112	9510	2220	244	<5	5330	10	18	2040	16200	170	650	26	18500	102	45	109	48	32	8240
	0809-CAMU-139	10/2/2008 8:13	47	5880	1150	97	<5	1800	6	86	940	11600	160	337	15	6460	57	16	35	17	24	3360
	0809-CAMU-140	10/2/2008 11:05	38	11200	696	650	<5	937	9	14	714	23000	26	472	21	6570	33	7	20	20	47	2910
	0809-CAMU-141	10/2/2008 14:47	68	10200	2140	119	<5	2770	9	18	1070	18700	230	470	20	7250	58	19	36	16	32	3350
	0809-CAMU-142	10/3/2008 8:05	139	5800	5850	175	<5	19000	28	31	10300	14400	110	525	118	43000	985	360	887	218	17	41900
	0809-CAMU-143	10/3/2008 10:41	118	3760	2450	135	<5	6030	15	19	3560	16500	62	414	57	28800	256	83	293	69	13	14000
	0809-CAMU-144	10/3/2008 14:21	141	4060	6960	245	<5	22600	100	74	17100	20900	48	975	620	45300	1820	729	1290	157	16	46200
	0809-CAMU-145	10/3/2008 16:48	169	6640	3170	402	<5	5760	20	26	4570	26800	160	2180	120	35500	230	170	498	74	19	27200
	0809-CAMU-146	10/4/2008 10:19	75	7500	3680	202	<5	3280	12	14	1520	18300	420	323	37	11900	75	40	54	194	29	7490
	0809-CAMU-147	10/6/2008 8:55	254	2130	17200	93	<5	39600	67	21	22200	29000	530	788	131	47400	4140	514	1320	506	7	118000
	0809-CAMU-148	10/6/2008 10:55	156	4390	5050	81	<5	8080	12	9	3860	15700	610	614	25	39200	338	75	232	91	11	21200
	0809-CAMU-189	10/23/2008 8:51	22	12200	2890	457	<5	1150	9	15	478	24600	35	403	18	3580	33	<5	<5	152	50	2700
	0809-CAMU-191	10/25/2008 8:36	5	13800	271	714	<5	163	<5	8	152	13500	9	233	16	753	<5	<5	<5	<5	31	836
	0809-CAMU-192	10/25/2008 10:49	19	9140	1500	191	<5	2600	8	6	599	13600	16	485	16	2820	15	<5	<5	20	31	3960
	0809-CAMU-193	10/27/2008 13:58	69	9510	1960	261	<5	2300	22	811	1200	31400	170	840	782	12000	61	26	65	43	44	6020
Cooling Tower	0809-CAMU-149	10/6/2008 16:03	82	8860	2720	304	<5	5130	11	17	1980	23600	280	1320	22	15900	93	30	96	62	31	12600
Flue Dust	0809-CAMU-111	9/22/2008 15:42	198	5600	8270	176	<5	18200	14	14	4980	21500	410	2830	50	40700	336	128	315	215	22	31200
	0809-CAMU-124	9/25/2008 14:22	107	8330	3510	475	<5	5530	12	12	2120	75600	480	5230	23	20900	88	51	113	47	59	23200
Monier Flue	0809-CAMU-150	10/8/2008 10:42	294	3770	8980	110	<5	86900	28	39	8880	11400	660	338	101	48200	1240	1450	2590	1280	11	151000
	0809-CAMU-151	10/8/2008 14:49	29	10200	982	141	<5	2260	11	15	535	14200	310	545	11	6900	33	29	56	38	36	3940
	0809-CAMU-152	10/8/2008 16:36	25	7110	862	126	<5	920	8	12	531	20700	190	691	10	4440	22	11	24	14	27	2550
	0809-CAMU-153	10/9/2008 11:09	113	10500	1680	168	<5	3900	16	18	1720	20700	470	632	29	14000	82	55	93	44	37	9170
	0809-CAMU-154	10/10/2008 8:13	145	6070	2580	124	<5	5960	12	14	2800	15800	400	473	32	23900	170	95	199	90	25	13100
	0809-CAMU-155	10/10/2008 10:58	225	6000	5900	114	<5	13700	27	15	5750	15700	700	584	53	49400	442	173	365	155	21	24400
	0809-CAMU-156	10/11/2008 9:30	26	11400	2700	279	<5	3550	8	18	376	26600	190	954	16	10600	22	24	43	111	38	7320

ATTACHMENT C
SAMPLE RESULTS
All sample results reported in mg/kg

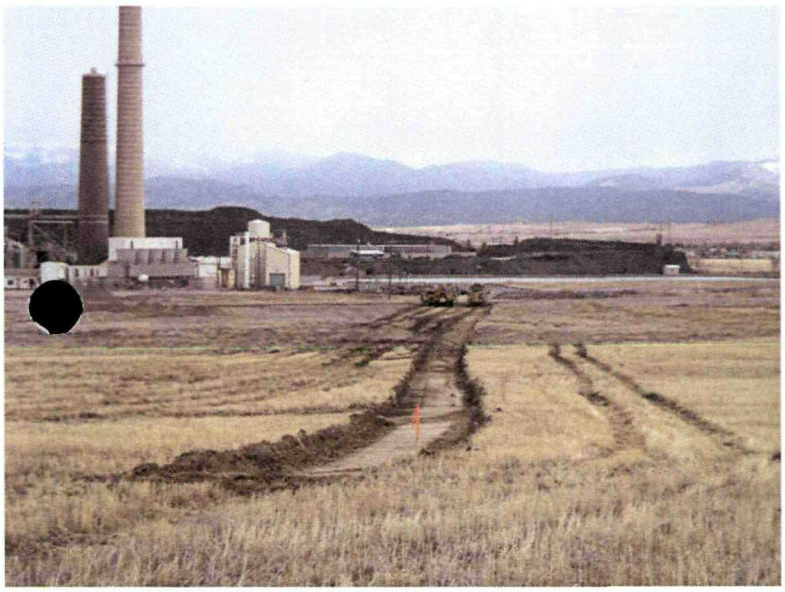
	Sample ID	CollectionDate	Ag-T	Al-T	As-T	Ba-T	Be-T	Cd-T	Co-T	Cr-T	Cu-T	Fe-T	Hg	Mn-T	Ni-T	Pb-T	Sb-T	Se-T	Sn-T	Tl-T	V-T	Zn-T
Concentrate Storage and Handling Building	0807-CAMU-121	7/11/08 14:25	402	9640	3080	513	<5	820	65	44	5860	74900	390	2440	110	38200	1450	236	172	354	47	14900
	0807-CAMU-123	7/12/08 7:48	306	8740	2340	372	<5	891	37	33	4280	48800	120	2120	77	26600	886	159	110	224	32	7060
	0807-CAMU-124	7/12/08 9:42	1430	8530	2630	596	<5	419	80	48	7610	60500	32	2900	122	62300	1880	125	326	99	27	6560
	0807-CAMU-126	7/12/08 13:48	256	7400	1810	332	<5	588	33	32	3820	37400	75	1360	62	20800	415	98	107	141	28	6090
	0807-CAMU-127	7/14/08 6:05	307	9080	2530	412	<5	906	42	47	4920	56700	1000	1870	129	26300	798	283	208	325	28	9460
	0807-CAMU-130	7/14/08 9:36	1150	5910	5280	136	<5	632	50	104	15100	19600	150	400	544	61600	2780	214	632	69	24	4520
	0807-CAMU-132	7/15/08 5:54	423	8730	3600	162	<5	1390	42	54	9680	58100	200	728	447	27700	750	144	352	90	26	3690
	0807-CAMU-134	7/15/08 8:22	1160	9060	5760	554	<5	769	104	46	11400	68000	92	2730	430	45100	1760	226	2310	94	31	7110
	0807-CAMU-135	7/15/08 9:19	529	7340	2290	337	<5	282	33	49	8440	32800	41	1500	145	34000	796	113	304	36	32	5340
	0807-CAMU-137	7/15/08 12:42	154	10200	12400	420	<5	1310	63	84	31300	45700	240	2130	307	41400	4280	453	575	237	32	6540
	0807-CAMU-138	7/15/08 13:48	1030	13600	5520	222	<5	1340	49	110	10500	35100	190	923	328	47900	1650	336	611	190	40	4260
	0807-CAMU-139	7/15/08 15:08	839	8050	6440	174	<5	2040	36	91	9740	29400	630	993	270	62500	3590	691	568	1220	27	8030
	0807-CAMU-140	7/16/08 6:59	751	9120	5120	503	<5	2260	77	75	13600	56200	1000	2350	337	53000	1370	537	522	344	30	11000
	0807-CAMU-141	7/16/08 8:39	667	9440	6180	184	<5	2480	37	94	10700	28800	920	884	226	72200	3880	1010	411	1070	26	8410
	0807-CAMU-142	7/16/08 10:20	744	13300	5280	400	<5	1980	79	72	12800	56300	580	1800	296	58000	2140	602	419	512	35	9800
	0807-CAMU-143	7/16/08 12:49	476	9080	3620	283	<5	1500	39	49	8320	40600	550	1400	198	44100	1450	448	285	439	26	7160
	0807-CAMU-144	7/17/08 14:27	491	8660	4870	602	<5	2880	31	54	4660	64000	540	3650	99	66100	2000	906	140	665	27	12600
	0807-CAMU-145	7/17/08 8:30	217	11800	2220	640	<5	792	27	55	3610	80400	480	3700	85	19500	303	174	121	135	39	8440
	0807-CAMU-146	7/17/08 9:48	428	11900	1660	128	<5	507	20	40	2790	26800	<200	790	68	32300	695	150	144	82	38	3690
	0807-CAMU-147	7/17/08 10:47	172	11500	1150	258	<5	286	29	33	2620	29600	170	1080	64	12800	252	109	77	61	36	2090
	0807-CAMU-148	7/17/08 13:13	583	8840	6990	425	<5	468	58	372	14000	34900	200	1900	642	60600	4780	378	952	68	39	5820
	0807-CAMU-149	7/17/08 14:38	439	9780	3280	224	<5	649	33	196	6790	31700	520	920	135	34900	714	225	464	229	36	5300
	0807-CAMU-150	7/18/08 6:37	134	9770	1280	234	<5	378	13	43	1940	22000	220	854	50	10600	193	176	87	57	31	1900
	0807-CAMU-151	7/18/08 7:58	353	9390	2370	341	<5	713	36	39	6790	42900	430	1460	165	24800	609	232	220	184	30	6220
	0807-CAMU-152	7/18/08 9:46	7	7380	59	234	<5	15	<5	8	152	6500	11	156	7	476	11	<5	<5	<5	20	144
	0807-CAMU-153	7/18/08 12:18	927	8860	4510	154	<5	886	42	54	14800	24000	27	401	480	60300	1220	280	511	31	27	3750
	0807-CAMU-154	7/18/08 13:31	19	11300	343	121	<5	67	<5	15	335	15600	8	331	11	1620	19	7	9	<5	33	509
	0807-CAMU-155	7/18/08 14:43	374	8500	2980	400	<5	620	46	39	6180	32500	290	1250	301	28200	654	231	229	143	31	4600
	0807-CAMU-156	7/19/08 6:20	16	6180	362	190	<5	43	6	10	275	12600	13	284	8	1970	22	16	6	6	22	876
	0807-CAMU-157	7/19/08 7:58	887	9990	5760	349	<5	1580	58	50	7680	54500	1000	1720	113	72300	1040	461	163	494	30	18600
	0807-CAMU-158	7/19/08 8:54	78	8360	1420	316	<5	135	20	25	1100	29700	66	653	51	8460	920	84	36	31	37	1480
	0807-CAMU-159	7/19/08 10:17	<5	6310	150	83	<5	8	<5	13	87	14100	6	251	<5	530	8	5	<5	<5	27	247
	0807-CAMU-161	7/19/08 13:47	44	7460	740	124	<5	75	5	16	511	14700	30	392	16	3650	52	10	11	13	31	929
	0807-CAMU-162	7/19/08 14:46	168	11800	1020	1130	<5	1010	89	41	4040	95400	7	4360	104	14500	119	24	134	21	36	10000
	0807-CAMU-163	7/21/08 6:24	929	7290	3420	238	<5	455	37	23	19800	37300	4	1130	222	65700	5100	457	349	6	30	5990
	0807-CAMU-164	7/21/08 7:27	78	15900	413	599	<5	416	76	39	2360	58700	3	3150	32	5480	58	20	76	8	33	6100
	0807-CAMU-165	7/21/08 8:33	665	9760	1800	319	<5	790	33	39	13600	49200	5	2040	131	59400	4220	220	610	9	29	9560
	0807-CAMU-166	7/21/08 9:41	265	13500	2180	283	<5	713	26	48	3010	45400	1700	1510	119	25300	920	197	158	267	33	7170
	0807-CAMU-167	7/21/08 12:15	204	10200	592	346	<5	399	36	25	4920	43400	24	1780	42	17000	108	31	89	10	38	6600
	0807-CAMU-168	7/22/08 13:23	269	10600	2290	474	<5	854	44	32	5440	44500	130	1770	132	24900	602	128	219	130	25	9870
	0807-CAMU-169	7/23/08 13:35	480	7990	3940	477	<5	1120	45	57	7870	38500	450	1170	221	37400	1290	306	340	250	28	8560
Ringling Building	0807-CAMU-100	7/7/08 15:00	42	8520	467	247	<5	135	9	12	810	21700	2	859	17	6080	22	<5	14	<5	33	2080

APPENDIX D

PHOTO LOG

001. CAMU Site Prior to Cell Excavation.jpg

002. Topsoil Stipping.jpg



003. Topsoil Stipping.jpg

004. Site Completely Stripped of Topsoil with Topsoil stockpile in back...

005. Subsoil Stripping.jpg

006. Road Surveyed and Staked.jpg

007. Site Surveyed and Staked for Cell Excavation.jpg

008. Cell Excavation.jpg

009. Cell Excavation.jpg

010. Final Subgrade Grading and Compaction.jpg

011. CCL Sieve Plant.JPG

012. CCL Placement.JPG

013. CCL Placement .JPG

014. CCL Moisture Conditioning and Placement.JPG

015. CCL Lift Placement.JPG

016. CCL Compaction.JPG

017. CCL Compaction.jpg

018. CCL Compaction .JPG

019. CCL Compaction.jpg

020. CCL Density Testing.JPG

021. CCL Density Testing.jpg

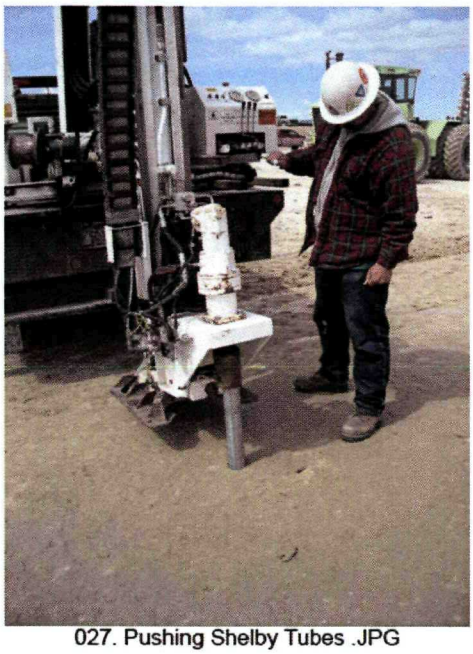
022. Discing and Moisture Conditioning CCL .jpg

023. Discing and Moisture Conditioning CCL Lift.jpg

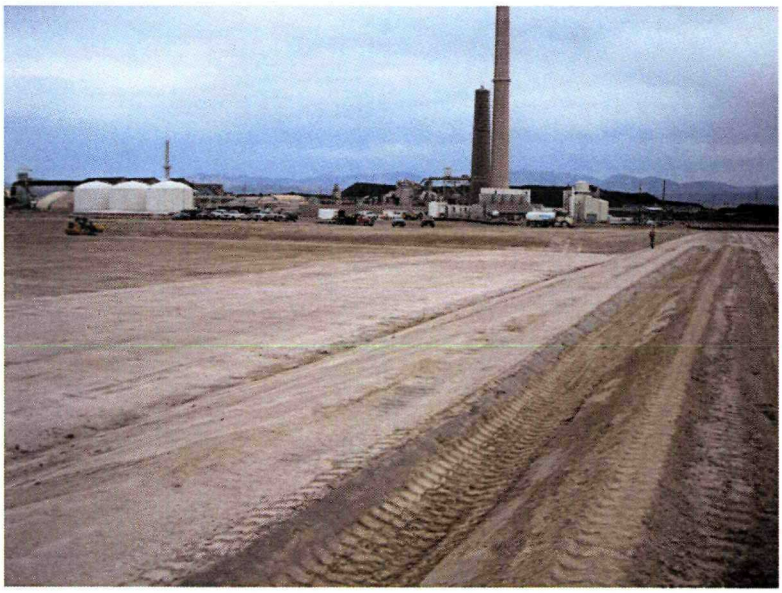
024. Leak Detection and Leachate Collection Sump Installation.JPG

025. Snow storm shuts down construction.jpg

026. Final CCL Grade.JPG



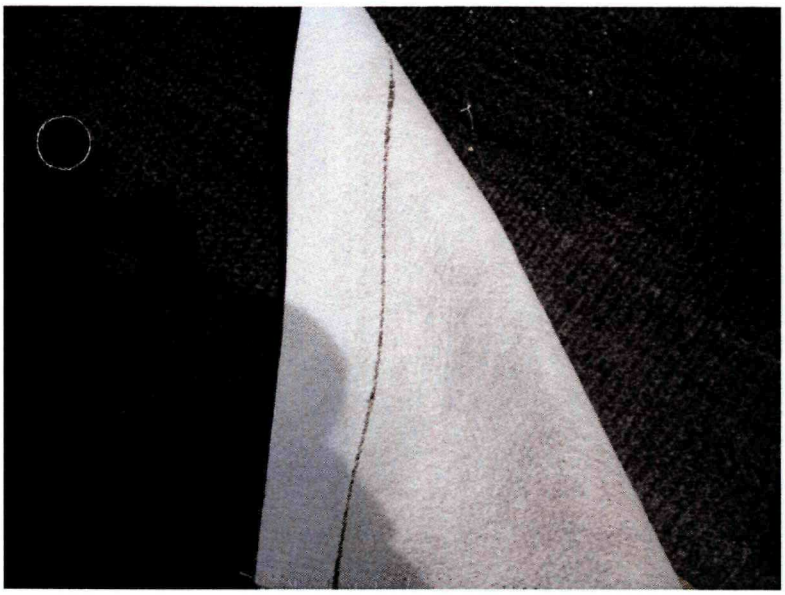
027. Pushing Shelby Tubes .JPG



028. Liner Anchor Trench.JPG

029. GCL Installation.JPG

030. GCL Installation.JPG



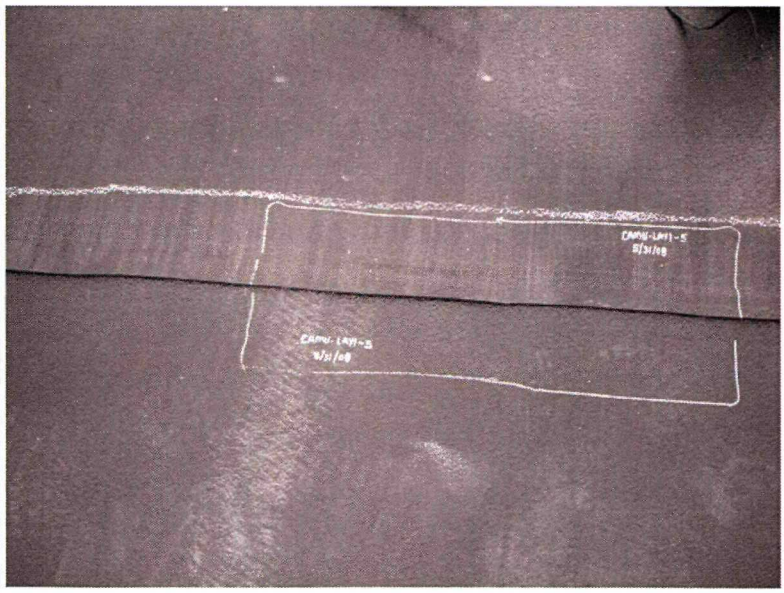
031. GCL Supergroove.JPG

032. GCL Butt Seam Sealed with Bentonite Crumbles.JPG

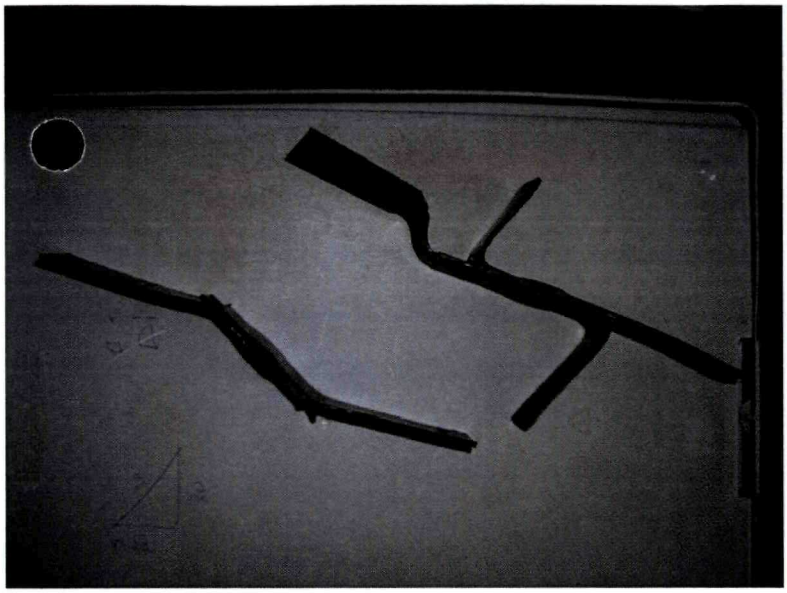
033. HDPE Liner Installation.JPG

034. HDPE Liner Installation.JPG

035. Pressure Testing HDPE Seams.JPG



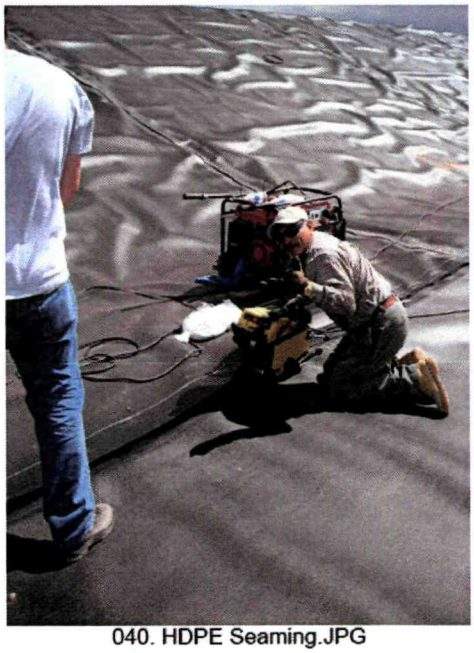
036. HDPE Destructive Test Marked Location.JPG



037. HDPE Destructive Testing Samples.JPG

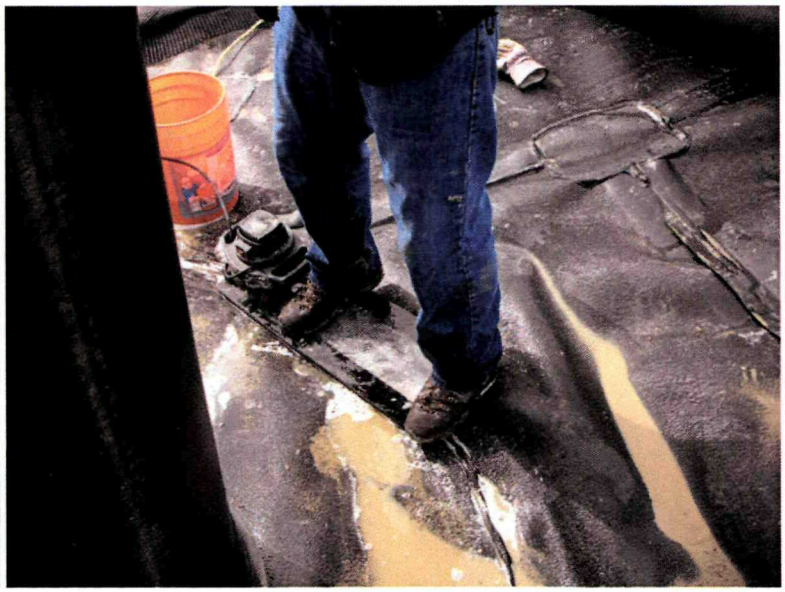
038. Extrusion Welding HDPE to Sump Pipe.JPG

039. Extrusion Welding HDPE.JPG



040. HDPE Seaming.JPG

041. Repairing Failed HDPE Seams.JPG



042. Vacume Box Seam Testing HDPE.JPG

043. Geocomposite Drainage Layer Installation.JPG

044. Geocomposite Installation.JPG

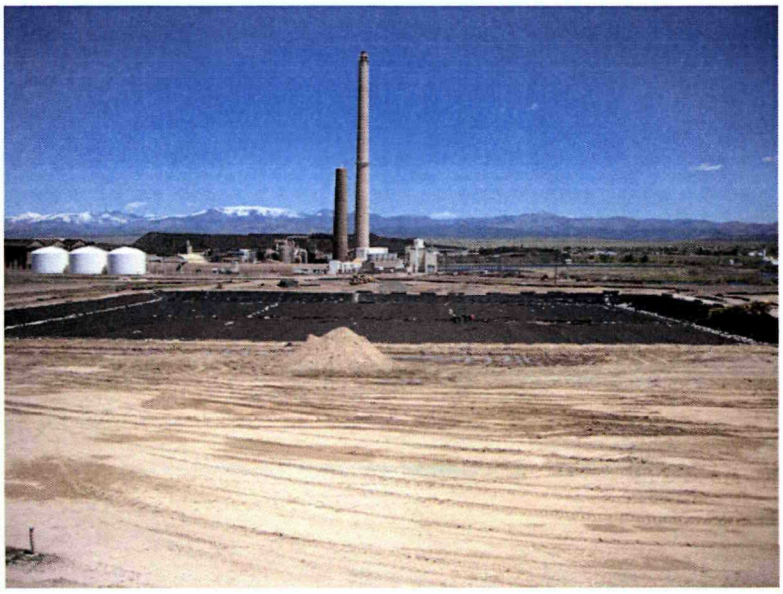
045. Leak Detection Drainage System.JPG

046. Leak Detection Drainage System2.JPG

047. Rain Storm during Leak Detection Drainage System Installation.J...

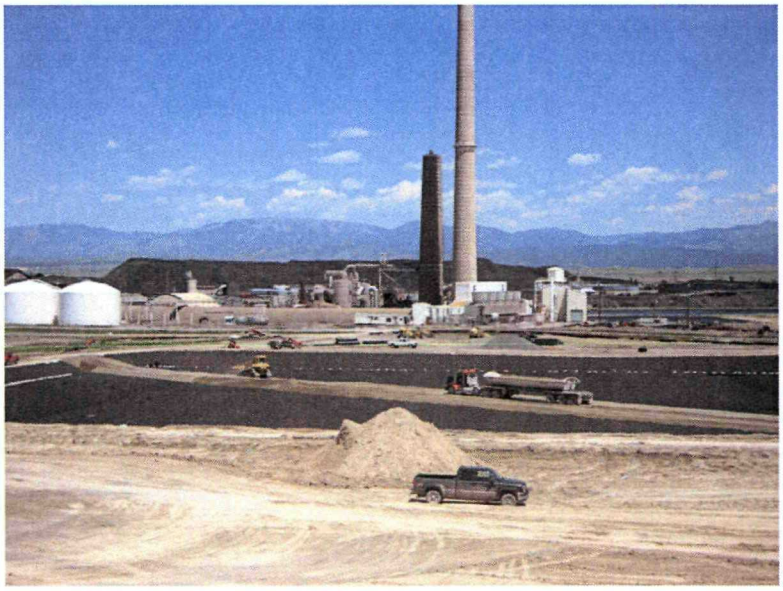
048. Leachate Collection HDPE Liner Installation.JPG

049. Leachate Collection Sump Gravel Installation.JPG

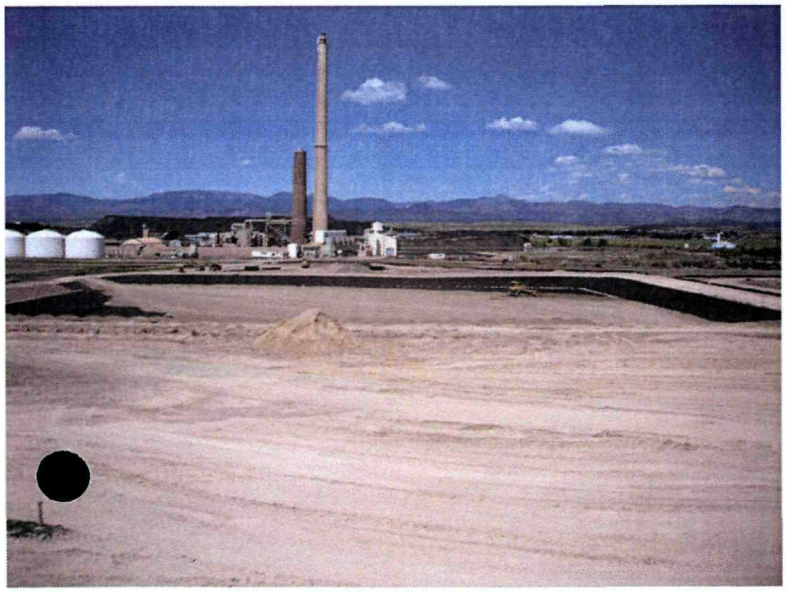


050. CAMU Liner Instalation Almost Complete.JPG

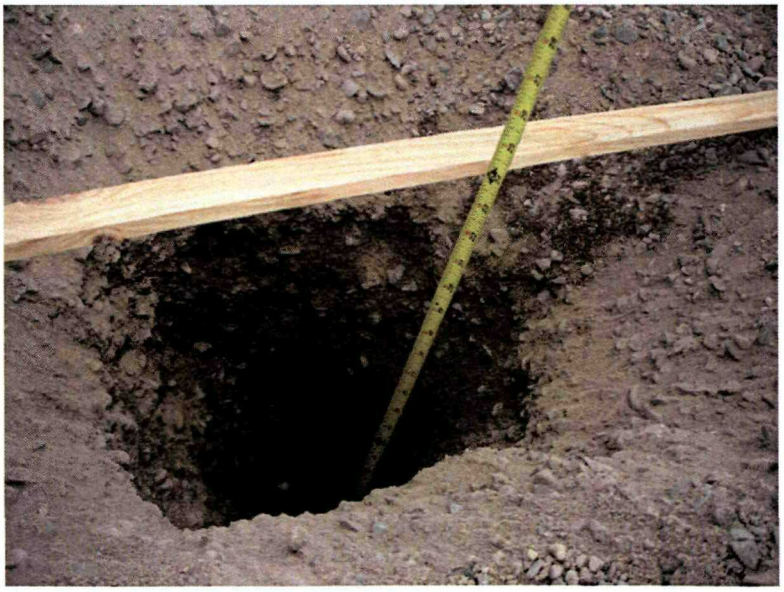
051. Cushion Layer Installation with LGP Dozer.JPG



052. Cushion Layer Installation.JPG

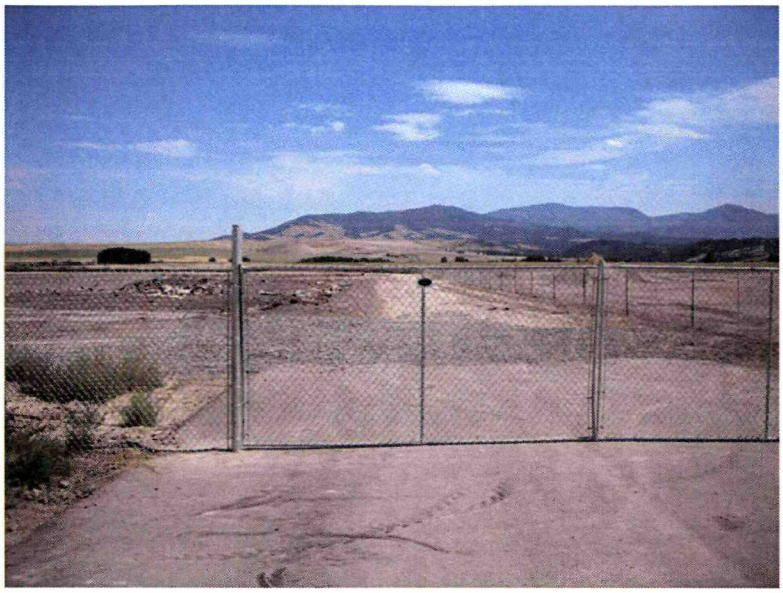


053. Cushion Layer Installation .JPG

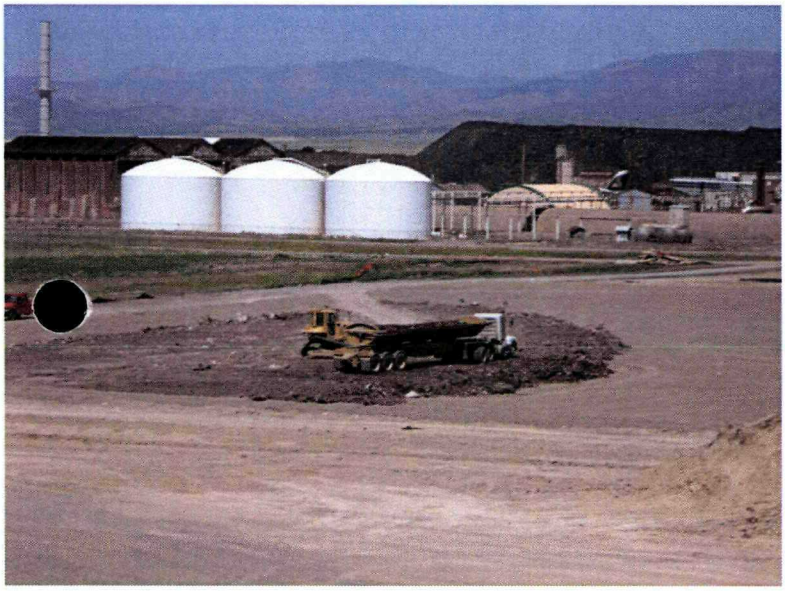


054. Cushion Layer Depth Verification.JPG

055. Haul Road Paving.JPG



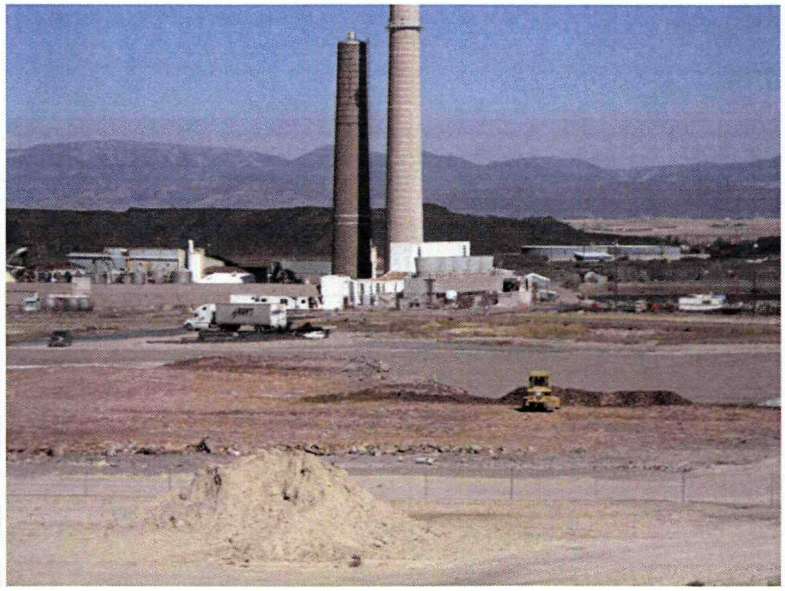
056. Temporary Fence.JPG



057. First Lift of Waste in CAMU Cell.JPG

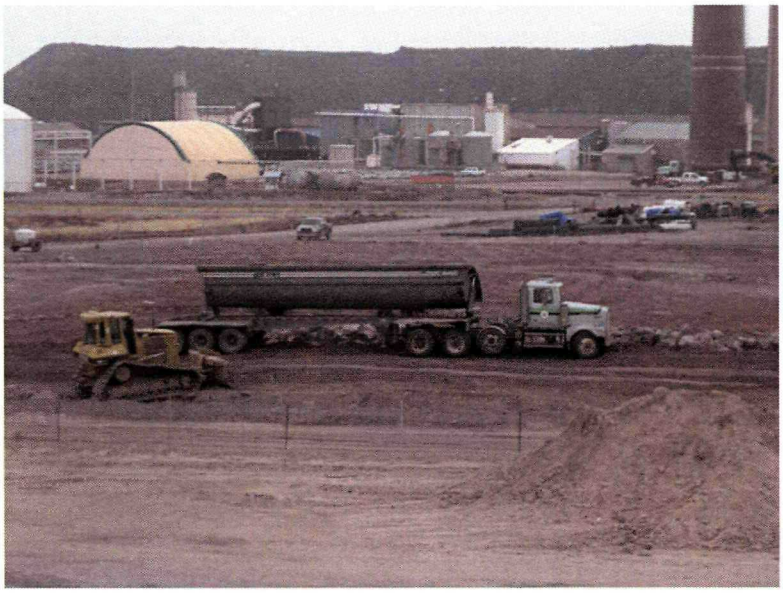
058. CAMU after placement of stored waste.JPG

059. Installation of Earthbound Soil Tackifier.JPG



060. Placement of 2008 Demolition Waste.JPG

061. Extention of Leak Detection and Leachate Collection Sumps.JPG



062. Placement of 2008 Demolition Waste.JPG

063. CAMU with Temporary Liner Installed.jpg

EXHIBIT 1

PROJECT CONSTRUCTION SCHEDULE

TARGET SHEET

EPA REGION VIII

SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOCUMENT NUMBER: 1099468

SITE NAME: EAST HELENA RCRA CORRECTIVE ACTION

DOCUMENT DATE: 01/01/2009

DOCUMENT NOT SCANNED

Due to one of the following reasons:

- ☐ PHOTOGRAPHS
- ☐ 3-DIMENSIONAL
- ☑ OVERSIZED
- ☐ AUDIO/VISUAL
- ☐ PERMANENTLY BOUND DOCUMENTS
- ☐ POOR LEGIBILITY
- ☐ OTHER
- ☐ NOT AVAILABLE
- ☐ TYPES OF DOCUMENTS NOT TO BE SCANNED
  (Data Packages, Data Validation, Sampling Data, CBI, Chain of Custody)

DOCUMENT DESCRIPTION:

EXHIBIT 1 PROJECT CONSTRUCTION SCHEDULE

Contact the Superfund Records Center to view available document.
(303) 312-6473

TARGET SHEET

EPA REGION VIII

SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOCUMENT NUMBER: 1099468

SITE NAME: EAST HELENA RCRA CORRECTIVE ACTION

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- ☐ NOT AVAILABLE
- ☐ TYPES OF DOCUMENTS NOT TO BE SCANNED
  (Data Packages, Data Validation, Sampling Data, CBI, Chain of Custody)

DOCUMENT DESCRIPTION:

1 CD - 2008 Construction Report ASARCO East Helena Plant Corrective Action Management Unit (CAMU) Phase 2 Cell Construction Project

Contact the Superfund Records Center to view available document.
(303) 312-6473