



Prepared for

Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89015

SOUTH BMI CLOSURE CONSTRUCTION QUALITY ASSURANCE REPORT

BMI COMMON AREAS REMEDIATION PROJECT

Prepared by

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consultants

engineers | scientists | innovators

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Project Number SC0313

June 2010

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1. INTRODUCTION

1.1 Terms of Reference

This report presents documentation of the Construction Quality Assurance (CQA) monitoring activities conducted by Geosyntec Consultants (Geosyntec) for the construction of the final cover system associated with the South BMI Landfill (hereafter referred to as the Project). The San Diego office of Geosyntec provided CQA services on behalf of BRC. The CQA activities for the Project included monitoring construction activities and installation of earthworks and geosynthetics.

This report contains documentation that the construction and CQA activities associated with the Project were performed in general accordance with the Project Documents, as defined by the Technical Specifications, Construction Drawings, CQA Plan, and Design Engineer-approved design modifications.

This report was prepared for BRC by Ms. Rebecca Flynn, P.E., of Geosyntec. The work described in this report was performed under the responsible charge of Mr. Ron Johnson, P.E., of Geosyntec. Mr. Greg Corcoran, P.E., reviewed this report in accordance with Geosyntec's peer review policy.

1.2 Report Organization

This report is organized as follows:

- Section 2 presents a brief description of the Project;
- Section 3 presents a description of the Project Documents, Geosyntec's scope of services, and project personnel;
- Section 4 describes the CQA activities related to earthworks;
- Section 5 describes the CQA activities related to geosynthetics;
- Section 6 describes the CQA activities related to surveying;

- Section 7 summarizes the CQA work and presents Geosyntec's statement that the work was completed in general accordance with the Project Documents;
- Section 8 presents the Engineer-of-Record stamp and signature;
- Section 9 presents the Environmental Manager Jurat; and
- Section 10 presents the references.

Supporting information and data are presented in appendices at the end of this report.

2. PROJECT DESCRIPTION

The South BMI Landfill is an approximately 8.1-acre unlined landfill closed with a geosynthetic liner system concurrently with the BRC Corrective Action Management Unit (CAMU) and the BMI Common Areas Remediation Project. The Project construction included the following:

- subgrade preparation;
- subgrade survey;
- installation of needle-punched geosynthetic clay liner (GCL);
- installation of textured 60-mil HDPE geomembrane;
- installation of 270-2-6 geocomposite;
- installation of 1 foot of 1-inch minus final cover material;
- installation of 1 foot of 6-inch minus final cover material including a 2-inch veneer of decorative rock on slopes steeper than 5H:1V; and
- installation of 1 foot of Type II aggregate base.

Subgrade preparation began 11 May 2009 followed by geosynthetic cover installation for the project beginning on 13 May 2009. Construction was completed on 15 May 2010. A photo log of the various stages of construction is presented in Appendix A.

Design and CQA services for the Project were performed by Geosyntec's San Diego, California office. Construction management services were provided by Weston Solutions, Inc. (Weston). ENTACT Environmental Services (ENTACT) of Friendswood, Texas was the General Contractor for the Project. ENTACT's subcontractors included the following:

- Environmental Specialties International, Inc. (ESI) installed the geosynthetic cover system.
- Absolute Boundary and Control Solutions (Absolute) provided surveying services to ENTACT for earthworks and liner placement.

3. CONSTRUCTION QUALITY ASSURANCE PROGRAM

3.1 Introduction

This section presents a description of the CQA program implemented for the construction of the Project. The project documents which provided the guidelines for the CQA program and key project personnel are identified in the following Sections.

3.2 Project Documents

CQA monitoring conducted during the Project was carried out in general accordance with the requirements of the following Project Documents:

Technical Specifications for the BRC Eastside Common Areas Soils Remediation, Henderson, Nevada

Prepared For: Basic Remediation Company

Prepared By: Geosyntec Consultants

Dated: May 2008

Construction Quality Assurance Plan for the Construction of Corrective Action Management Unit, Henderson, Nevada

Prepared For: Basic Remediation Company

Prepared By: Geosyntec Consultants

Dated: May 2008

Final Design: Basic Remediation Company, Corrective Action Management Unit, Control Systems Design, Henderson, Nevada

Prepared For: Basic Remediation Company

Prepared By: Geosyntec Consultants

Dated: October 2007, Conformed May 2008

In this South BMI Landfill Closure Report, the above documents are referred to as the Technical Specifications, the CQA Plan, and the Construction Drawings, respectively, or collectively as the Project Documents.

3.3 Design Changes

During construction, minor design changes can be made to the Project Documents, as approved by the Design Engineer. This report only documents design changes directly related to South BMI Landfill closure construction. Documents containing the details of these design changes, referred to as Design Change Notices (DCNs), are included in Appendix B-1 and are referenced in appropriate sections of this report. The following sections describe each of the design changes.

3.3.1 DCN-45 Aggregate Base Compaction

This design change reduced the aggregate base compaction requirement from 95% to 90% when aggregate base is directly overlying the final cover system geosynthetics.

3.4 Scope of Services

3.4.1 CQA Activities

CQA activities involved the monitoring of the construction of the Project, including performing and reviewing CQA tests, reviewing and generating appropriate correspondence, reviewing Contractor submittals, and summarizing field activities. Documentation of these CQA and construction activities is included herein.

Project correspondence and documentation related to design changes and contractor submittals are presented in Appendices B-1 and B-2, respectively.

3.4.2 Construction Record Drawings

The Construction Record Drawings for the Project are included in Appendix G. The Construction Record Drawings, prepared by the Contractor and reviewed by Geosyntec, indicate subgrade surface, limits of geosynthetic liner system components, and final cover elevations.

3.4.3 Final Report

The tasks performed by Geosyntec during CQA monitoring are summarized in this Final Report. Documentation of construction and CQA monitoring including

correspondence, field CQA test results, laboratory results of conformance testing, and Construction Record Drawings are also included.

3.5 Project Personnel

The following personnel participated in Project construction activities:

Basic Remediation Company (BRC)

(Project Owner)

- Lee Farris
Construction Manager
- Ranajit Sahu
Project Manager

Weston Solutions, Inc. (Weston)

(Construction Manager Assistant)

- Dan Brennecke
Project Manager
- Richard Laubinger
Project Superintendent

Geosyntec Consultants (Geosyntec)

(Construction Quality Assurance Consultant and Design Engineer)

- Ronald S. Johnson, P.E.
Engineer-of-Record
- Dan Street
Site CQA Manager
- Gregory T. Corcoran
Design Engineer
- Camon Liddell
CQA Field Technician
- Rebecca B. Flynn
Design Engineer
- Kevin Brown
CQA Field Technician
- Stuart Irwin
CQA Field Technician
- Graciano Malana, Jr.
CQA Field Technician

ENTACT Environmental Services (ENTACT)

(Contractor)

- Greg S. Tunstall
Project Director
- Erik Gehringer
Project Manager
- James Long
Field Project Manager
- Jeremy Schissler
Project Management
- Mike Carlson
Field Engineer

Environmental Specialties International, Inc. (ESI)

(Geosynthetic Installer)

- Kerry Gregg Abney
Project Manager
- Ismael Buitron
Superintendent
- Mario Buitron
Master Seamer/Foreman
- Victor Buitron
QC Foreman

TRI/Environmental, Inc. (TRI)

(Off-site Geosynthetics Testing Laboratory)

- Sam R. Allen
Laboratory Director

SGI Testing Services, LLC (SGI)

(Off-site Geosynthetics Testing Laboratory)

- Zehong Yuan
Laboratory Manager

Excel Geotechnical Testing (EGT)

(Off-site Soils Testing Laboratory)

- Nader Rad
Laboratory Manager

4. CONSTRUCTION QUALITY ASSURANCE - EARTHWORKS

4.1 General

CQA monitoring of the earthwork components of the Project included the observation of construction methods, testing of earthwork materials in place, and reviewing field test results for general conformance with the Project Documents. Geosyntec CQA personnel monitored the subgrade preparation and final cover placement. The following sections present an overview of the materials used for the earthwork components of the Project and summarize the methods, frequency, and results of Geosyntec's CQA testing.

4.2 CQA Monitoring and Testing – Final Cover Soil Placement

4.2.1 Overview

Final cover soil placement began on 21 May 2009 and was completed on 15 May 2010. Final cover soil material was obtained from the 200,000 cubic yard (cy) stockpile and screened to 1-inch minus for the first 1-foot lift and 6-inch minus for the second 1-foot lift. Geosyntec observed approximately 23,887 cy of final cover placement and approximately 136 cy of decorative rock mulch placement.

4.2.2 Material Placement and Compaction Observation

Geosyntec observed that the first foot of operations layer material had no particles greater than 1 inch and the second foot of operations layer material had no particles greater than 6 inches. The first lift of material was observed to be placed using a Caterpillar D-6 dozer exhibiting a ground contact pressure less than 10 psi and compacted with four (4) passes (each pass includes forward and reverse motions) in accordance with the Project Documents. The second lift of final cover soil was observed to be placed in the same manner as the first lift and compacted with 4 passes of a 20,000-lb compactor operating in vibratory mode going upslope and static mode going downslope slopes greater than 10:1 horizontal to vertical (H:V) sideslopes. On slopes less than 10H:1V, the second lift was observed to be compacted by 2 passes of the compactor operating in vibratory mode in both directions.

4.2.3 Moisture Content Test Results

Geosyntec personnel performed eight moisture content tests (ASTM D 4643) on the final cover material; four samples were from the 1-inch minus material represented by lab samples CS-16 and CS-29, and four samples were collected from the 6-inch minus material represented by lab samples CS-6 and CS-30. The testing resulted in a frequency of 1 per 2,986 cy of final cover soil meeting the minimum requirement of one test per material type and one per 5,000 cy. The test results indicate that the material is acceptable for use as final cover, in accordance with the requirements outlined in the Technical Specifications. Results of the moisture content tests are presented in Appendix C-4.

4.2.4 Particle Size Test Results

Geosyntec personnel performed four particle size analyses (ASTM D 422) on the final cover material; two from the 1-inch minus stockpile (CS-16 and CS-29) and two from the 6-inch minus stockpile (CS-6 and CS-30). The testing resulted in a frequency of one test per 5,972 cy of final cover soil, meeting the minimum requirement of one test per material type and one test per 10,000 cy. The test results indicate that the material is acceptable for use as final cover, in accordance with the requirements outlined in the Technical Specifications. Results of the particle size analysis for CS-6, -16, -29, and -30 are presented in Appendix C-1.

4.2.5 Atterberg Limits Test Results

Geosyntec personnel performed four Atterberg limits tests (ASTM D 4318) on the final cover material; two from the 1-inch minus stockpile (CS-16 and CS-29) and two from the 6-inch minus stockpile (CS-6 and -30). The testing resulted in a sampling frequency of 1 test per 5,972 cy, meeting the minimum requirements of one test per 10,000 cy of final cover placed and one test per material type. The test results indicate that the material is acceptable for use as final cover soil, in accordance with the requirements outlined in the Technical Specifications. Results of Atterberg limits tests for CS-6, -16, -29, and -30 are presented in Appendix C-1.

4.2.6 Soil Classification Test Results

Geosyntec personnel performed four soil classification tests (ASTM D 2487) on the final cover material; two from the 1-inch minus stockpile (CS-16 and -29) and two from

the 6-inch minus stockpile (CS-6 and -30). The testing resulted in a sampling frequency of 1 test per 5,972 cy, meeting the minimum requirements of one test per 10,000 cy of final cover placed and one test per material type. The test results indicate that the material is acceptable for use as final cover soil, in accordance with the requirements outlined in the Technical Specifications. Results of soil classification tests for CS-6, -16, -29, and -30 are presented in Appendix C-1.

4.2.7 Triaxial Shear Test Results

Geosyntec personnel performed two triaxial shear tests (ASTM D 4767) on the final cover material, exceeding the requirement of one per source for final cover placed on the side slopes. In accordance with the specifications at the time, the first triaxial shear test was performed at 90 percent compaction, based on Modified Proctor. Due to changes in compaction requirements for the first lift of final cover soil (DCN-015), the triaxial shear test was conducted again at 85 percent compaction, based on Modified Proctor. The test results indicate that the material is acceptable for use as final cover soil, in accordance with the requirements outlined in the Technical Specifications. Results of triaxial shear test for F-4 and CS-09 are presented in Appendix C-6 of the CAMU Closure Phase IIIA and a Portion of II Report (Geosyntec, 2010).

4.3 CQA Monitoring and Testing – Type II Aggregate Base

4.3.1 Overview

Geosyntec personnel observed the placement of Type II aggregate base in the stormwater channel adjacent to Phases IIIB and IV of the CAMU. The submittal package for the Type II aggregate base is included in Appendix B-2 of the CAMU Partial Closure Report (Geosyntec, 2010a).

Geosyntec CQA personnel observed that the material was placed in accordance with the locations and dimensions required by the Project Documents, and in a manner intended to protect underlying materials.

4.3.2 Compaction and Moisture/Density Testing

Geosyntec personnel observed the placement of approximately 626 cy of Type II aggregate base. Geosyntec personnel collected two Type II aggregate base samples for laboratory sieve analysis and Modified proctor compactions tests (ASTM D 1557).

The results of the testing indicated that the Type II aggregate base met the requirements of the Project Documents. The test results for the Type II aggregate base are included in Appendix C-1.

Geosyntec personnel performed three passing in-place moisture/density tests on Type II aggregate base using the nuclear gauge moisture/density method (ASTM D 6938). Results of nuclear gauge moisture/density tests indicate that the Type II aggregate base satisfies the requirements set forth in the Project Documents. Results of in-place nuclear gauge moisture/density tests are summarized on test logs presented in Appendix C-2.

Geosyntec personnel performed 1 passing field sand cone density tests on Type II aggregate base material in accordance with ASTM D 1556. The sand cone test was performed in the stormwater channel east of Phase IIIA and corresponds to test 1-004 on the nuclear density test log. The sand cone test was performed at the same time as the nuclear gauge moisture/density testing above the South BMI Landfill cover after compaction of the stormwater channel around Phase IIIA and the South BMI Landfill. The field sand cone density tests correspond to a frequency of one per 4 nuclear gauge moisture/density tests, exceeding the required frequency of one test per 20 nuclear gauge moisture/density tests. Results of sand cone density tests are presented in Appendix C-3.

5. CONSTRUCTION QUALITY ASSURANCE - GEOSYNTHETICS

5.1 General Overview

Geosyntec monitored installation of the geosynthetic components of the Project's engineered final cover system. This section contains a description of CQA tasks performed in support of geosynthetics installation and the geosynthetic components used in construction of the Project's final cover system. Subsequent sections contain descriptions of geosynthetic conformance testing and documentation and CQA monitoring and testing performed by Geosyntec during final cover construction. Documentation of the geosynthetic final cover materials and installation is presented in Appendices D through F.

The following geosynthetic materials were used during construction of the Project's composite liner system:

Geosynthetic Clay Liner (GCL):	<ul style="list-style-type: none">• CETCO Lining Technologies BENTOMAT DN
Geomembrane:	<ul style="list-style-type: none">• Agru 60-mil double-sided textured HDPE geomembrane (Microspike)
Geocomposite	<ul style="list-style-type: none">• Skaps Industries Transnet 270-2-6

5.2 Geosynthetic Clay Liner (GCL) CQA

5.2.1 General

ESI installed a total of approximately 349,496 square feet (sf) of GCL during this phase of closure. This section contains a description of CQA tasks performed in support of the GCL material and installation methods used in construction of the Project's liner system. GCL manufactured by CETCO was used as the GCL component of the final cover system. Documentation of the GCL material and installation during this phase is presented in Appendix D.

Installation of the GCL component of the final cover system began on 13 May 2009 and was completed on 12 April 2010. The CQA tasks performed during construction of the GCL component of the Project's composite final cover system included the following:

- documenting the GCL storage methods at the site and comparing the delivered inventory against the inventory list prepared in the factory;
- reviewing the manufacturer's certification and manufacturer quality control (MQC) test results for general compliance with the Project Documents;
- documenting the acceptance and/or rejection of GCL materials;
- monitoring and documenting the deployment and installation of the GCL materials; and
- monitoring and documenting damaged materials and the repairs performed on the GCL material.

Documentation in support of the GCL materials is presented in Appendix D.

5.2.2 Conformance Testing and Documentation

5.2.2.1 Manufacturer Quality Control Documentation

The Contractor submitted certification and MQC documentation provided by CETCO for the rolls of GCL delivered to the site. Geosyntec compared the information contained in the manufacturer's documentation against the requirements listed in the Project Documents. The documentation included information regarding the properties of the geotextile and bentonite clay components used to manufacture the GCL. Based on this comparison, the GCL material delivered to the site met the requirements of the Project Documents. The submittal package for the GCL materials, which contains certification and MQC documentation for all of the South BMI final closure, is presented in Appendix B-2.

Geosyntec performed a material inventory of the on-site GCL and compared the inventoried material to the list of MQC data submitted by the contractor. MQC data was received for the material inventoried and used for the Project. GCL Material Inventory Logs are presented in Appendix D-1.

5.2.2.2 Sampling and Conformance Testing

TRI sampled the GCL material for conformance testing at the CETCO manufacturing plant and shipped four samples to their laboratory in Austin, Texas for testing. Four GCL samples were tested for mass per unit area, and one of the four GCL samples was tested for index flux, with an approximate testing frequency of one test per 94,250 sf and 377,000 sf, respectively for each test, of GCL manufactured (377,000 sf manufactured for South BMI). This frequency exceeds the testing frequency of one test

per 100,000 sf and 400,000 sf for bentonite mass per unit area and moisture content, and index flux, respectively, as required in the Project Documents. In addition, one sample of GCL as well as one sample of geomembrane and geocomposite were tested for interface shear testing. The GCL was tested at a frequency of one test per 377,000 sf of material manufactured which meets the testing frequency of one test per 400,000 sf as required in the Project Documents. The GCL samples were tested using the following standards:

- Bentonite Mass per Unit Area (ASTM D 5993);
- Moisture Content (ASTM D 2216);
- Index Flux (ASTM D 5887); and
- Interface Shear Testing (ASTM D 5321).

Results indicate that the GCL meets the material requirements of the Project Documents. The CQA conformance testing results are included in Appendix D-2 and D-4.

5.2.3 Construction Quality Assurance Monitoring

5.2.3.1 On-Site Storage

On-site storage methods for the GCL material were monitored by Geosyntec personnel. Material stored longer than 30 days was stored out of drainage areas and covered with tarps to prevent damage or premature hydration of the bentonite. In addition, rolls were monitored for damage and thin areas of bentonite prior to placement. Geosyntec did not observe damage to the material during storage at the site.

5.2.3.2 Placement Methods

Geosyntec observed the subgrade prior to deployment of the GCL.

Geosyntec also monitored for the following potential problems:

- manufacturing defects;
- presence of needles that are used during the manufacturing process;
- evidence of damage which may have occurred during shipping, storage, or handling; and
- damage caused during installation activities as a consequence of placement, connection operations, or weather.

Repairs were made to the GCL in accordance with the Project Documents. In addition, Geosyntec monitored that entrapment of stones or other objects that could potentially damage the GCL or the overlying geomembrane did not occur.

5.2.3.3 Seaming Methods

The GCL was placed in individual panels. Adjacent panels were overlapped at least six inches along the sides and a minimum of 1 foot along the panel ends in accordance with the requirements of the Project Documents. Bentomat DN materials installed for this project included CETCO's "supergroove" along the sides, which negates the need for installing granular bentonite between the overlapped panels. End seams included bentonite between the overlapped panels in accordance with the project documents.

In areas where GCL was placed on slopes steeper than 10H:1V, adjacent panels were overlapped at least twelve (12) inches along the sides and a minimum of 2 feet along the panel ends in accordance with the general requirements of the Project Documents. On side slopes greater than 10H:1V, overlapped GCL end seams were minimized; however, several seams were required and were seamed using a small propane torch to heat-seal the overlapped seams in addition to the granular bentonite. This method was approved by the manufacturer for use (Appendix B-3, Phase I CQA Report, Geosyntec, 2008).

5.2.3.4 Geosynthetic Clay Liner Repairs

Geosyntec observed that holes or tears in the GCL were repaired in accordance with the requirements outlined in the Project Documents. Repairs were made by placing an additional piece of GCL over the defective area to a distance of at least 2 feet in all directions from the defect on slopes steeper than 10 percent. On slopes 10 percent or flatter, repairs were made by placing an additional piece of GCL over the defective area to a distance of at least 1 foot in all directions from the defect. Overlaps were seamed with granular bentonite.

5.3 Geomembrane CQA

5.3.1 General

Geosyntec monitored installation of approximately 349,496 sf of geomembrane for the project. This section contains a description of CQA tasks performed in support of the geomembrane installation methods used in construction of the Project. Textured 60-mil HDPE geomembrane manufactured by Agru was used as the geomembrane component

of the final cover system. Documentation of the geomembrane material and installation is provided in Appendix E.

Construction of the geomembrane components of the final cover system began on 13 May 2009 and was completed on 12 April 2010. The CQA tasks performed during construction of the geomembrane components of the Project's composite liner system included the following:

- documenting the geomembrane storage methods at the site and comparing the delivered inventory against the inventory list prepared in the factory;
- reviewing the geosynthetic installer's qualifications and resumes of personnel responsible for the project;
- reviewing the MQC documentation and test results for compliance with the Project Documents;
- reviewing the results of conformance testing for compliance with the Project Documents;
- documenting the acceptance and/or rejection of geomembrane materials;
- monitoring trial geomembrane seaming and the on-site destructive testing of trial seams by the contractor;
- monitoring and documenting production seaming of the adjacent geomembrane panels;
- monitoring and documenting the repairs for geomembrane;
- monitoring and documenting the non-destructive field testing of production geomembrane seams and other repairs;
- selecting destructive geomembrane production seam sample locations and documenting their location;
- shipping of geomembrane production seam samples for destructive testing;
- reviewing the destructive seam test results for compliance with the specifications;
- monitoring installation of overlying materials for damage to geomembrane; and
- monitoring and reviewing documentation of the repair of geomembrane production seams that failed either non-destructive or destructive CQA testing criteria.

5.3.2 Conformance Testing and Documentation

5.3.2.1 Manufacturer Quality Control Documentation

The Contractor submitted certification and MQC documentation for the rolls of 60-mil HDPE geomembrane. The documentation for the rolls of geomembrane material includes:

- polyethylene resin certificates;
- geomembrane inventory list; and
- geomembrane certificates and MQC test results.

The documentation indicates that the geomembrane and resin properties met the requirements specified in the Project Documents. This documentation reviewed by Geosyntec is presented in Appendix B-2.

Geosyntec performed a material inventory of the on-site geomembrane and compared this to the list of MQC data submitted by the contractor. The geomembrane Material Inventory Log is presented in Appendix E-1.

5.3.2.2 Sampling and Conformance Testing

TRI collected five samples of the geomembrane material for conformance testing at the geomembrane manufacturing plant and shipped the samples to their laboratory in Austin, Texas for testing. The 60-mil geomembrane was sampled and tested with an approximate testing frequency of one test per 88,664 sf of geomembrane material manufactured for final closure (443,318 sf manufactured for South BMI Landfill closure). These frequencies exceed the testing frequency of one test per 100,000 sf. The geomembrane samples were tested for the following:

- Thickness (ASTM D 5199);
- Specific Gravity (ASTM D 792, Method A);
- Tensile Properties (ASTM D 638);
- Carbon Black Content (ASTM D 1603);
- Interface Shear Strength (ASTM 5321); and
- Carbon Black Dispersion (ASTM D 5596).

Geosyntec reviewed the results of the conformance testing and found the results to meet or exceed the requirements of the Project Documents. The conformance test results are included in Appendix E-2.

5.3.3 Construction Quality Assurance Monitoring

5.3.3.1 Delivery and On-Site Storage

The geomembrane rolls were stored in such a way as to reduce exposure to sources of damage. Geosyntec did not observe damage to the material during storage at the site.

5.3.3.2 Placement Methods

The installer transported the rolls to the Project area by using a fork lift and attached spreader bar in a manner intended to reduce damage to the geomembrane. Panels were manually placed into position and temporarily secured with sandbags. Panel Placement Logs for the geomembrane installation were prepared by Geosyntec and are presented in Appendix E-5. The limits of HDPE geomembrane placed during the Project's composite liner system construction are shown on Construction Record Drawings presented in Appendix G.

During deployment, geomembrane panels or rolls were visually observed for the following potential problems:

- manufacturing defects;
- evidence of damage that may have occurred during shipping, storage, and handling; and
- damage caused by the installation activities (e.g., as a consequence of panel placement, seaming operations, or weather).

Damaged materials were either discarded or repaired, as described herein. Geosyntec observed repair locations. Whenever possible, the cause(s) of the damage was ascertained and addressed to minimize the potential for further damage.

5.3.3.3 Trial Seams

Geomembrane trial seams for each welding technician and for each piece of seaming equipment (i.e., fusion or extrusion) were prepared at the beginning of the morning and afternoon seaming shifts. Additional trial seams were performed if the welding material changed, if adjustments were made to the seaming equipment, or if there was a significant change in weather. Geosyntec observed that the trial seams were prepared in general accordance with the requirements of the Project Documents. Each trial seam was approximately 1 foot wide by 5 feet long for both fusion and extrusion welds, with the seam centered lengthwise. Following completion of the trial seams, the seams were destructively tested in the field by ESI by using a calibrated field tensiometer

(Appendix E-3). Geosyntec monitored and documented the geomembrane trial seams for general conformance to the Project Documents. The following procedure was followed for trial seam testing:

- four (4) 1-inch wide coupons were cut every 1 foot along the trial weld;
- two (2) coupons were tested in peel strength (both tracks were tested for the fusion welds) and two (2) coupons were tested for shear strength by using a digital tensiometer;
- a passing test for each specimen was confirmed when the requirements in the Project Documents were met or exceeded; and
- if a specimen failed a test, two (2) additional new trial seams were fabricated and the test procedure was repeated.

The technician proceeded with the production seaming operations once a technician produced a trial seam or seams passing the above-described tests, and his trial seams met or exceeded the requirements of the Project Documents. A total of 95 trial seams were tested by ESI and documented by Geosyntec. These trial seams met the requirements of the Project Documents. Geosyntec CQA personnel recorded the trial seam testing results on Trial Seam Logs. Copies of the completed logs are presented in Appendix E-4.

5.3.3.4 Production Seaming

Geomembrane production seaming operations were monitored and documented by Geosyntec CQA personnel. Geosyntec recorded the date, seam and panel numbers, time, technician, and machine number for each seam on the Seam Logs. These Seam Logs are presented in Appendix E-6. Approximately 18,692 and 792 LF of production fusion and extrusion seams, respectively, were welded during installation of the Project's liner system. Geomembrane seams were visually examined for workmanship and continuity. Areas of the seams suspected of being substandard were marked by Geosyntec CQA personnel for destructive testing and, if necessary, for repair. During seaming, geomembrane panels were observed for the following:

- joints between geomembrane panels were overlapped by a minimum of four (4) inches;
- weld area was free of dirt, dust, moisture, or other foreign material;
- extrusion welding rod resin used for extrusion welding were the same resin type used to manufacture geomembrane material;

- edges of the geomembrane were protected during placement to prevent movement by wind or other damage prior to seaming;
- seams were wiped with oil-free rags, where appropriate, to remove moisture or dirt and dust;
- weld was made immediately after preparation and cleaning was complete;
- excessive wrinkles were cut, overlapped, and extrusion welded;
- geomembrane areas showing excessive scuffing, puncture, or distress were replaced; and
- damage caused by the installation activities (e.g., as a consequence of panel placement, seaming operations, or weather) was repaired.

Damaged geomembrane welds that were identified by Geosyntec CQA personnel were brought to the attention of the installer for repair. Geomembrane repairs are described in Section 5.3.6. Repairs were destructively tested as described herein.

5.3.4 Nondestructive HDPE Geomembrane Seam Testing

5.3.4.1 General

Geomembrane seams were nondestructively tested by ESI for continuity by using air-pressure or vacuum test procedures. Double-track fusion seams were tested by using the air-pressure test method (ASTM D 5820). The extrusion welds were tested with the vacuum test method (ASTM D 5641). Defects identified by nondestructive testing were repaired, as described in Section 5.3.6.

5.3.4.2 Test Methods

Double-track fusion seams were nondestructively tested by using the air-pressure test. The procedure followed for the air-pressure test was:

- visually observe the integrity of the section of seam being tested;
- seal both ends of the air channel by using heat and pressure;
- insert the needle of a pressure gauge into the air channel at one end of the seam;
- pressurize the air channel between 25-30 psi gauge pressure with an air pump;
- maintain the gauge pressure for at least five minutes;

- if a loss of pressure exceeding 3 psi occurs or if the pressure does not stabilize during the test, identify the faulty area and repair in accordance with the procedure described in Section 5.3.6 of this report;
- record the location of the test; and
- upon completion of the nondestructive test, confirm the continuity of the air channel by releasing air from the end of the seam opposite the end in which the needle was inserted.

The vacuum test was used to nondestructively test extrusion seams. The procedure followed was:

- connect the hose and vacuum box assembly to the vacuum pump;
- wet a strip of seam approximately 1 foot wide by 3 feet long with soapy solution;
- place the vacuum box over the wetted area;
- open the bleed valve on the vacuum box test apparatus;
- force the box onto the sheet until a vacuum is established, as evidenced by a negative box pressure of approximately 5 psi gauge;
- hold the vacuum box in place for a minimum of 10 seconds while examining the seam through the viewing window for the occurrence of air bubbles; and
- record the location of leaks, if any, and repair the area.

5.3.4.3 Summary of Test Results

Seams passing the nondestructive testing were temporarily accepted. Final evaluation of the seams is measured by the destructive test results described in the following section. Portions of the seam that did not pass nondestructive testing were repaired as outlined in Section 5.3.6.

5.3.5 Destructive HDPE Geomembrane Seam Testing

5.3.5.1 General

Geomembrane seam samples were destructively tested by TRI in accordance with the Project Documents. Samples of the production geomembrane seams for the Project were obtained by Geosyntec CQA personnel according to the procedures identified in the Project Documents. Geosyntec obtained 45 destructive geomembrane samples.

This equates to a frequency of one destruct per 433 linear feet (LF) of total production seaming, which satisfies the requirements of the Project Documents of one destructive sample per 500 LF of production seam. The locations of the destructive seam samples are described on the Destructive Test Logs presented in Appendix E-8. Sampling procedures, test methods, and test results of seam samples are discussed further in the following sections.

5.3.5.2 Seam Sampling and Destructive Testing

ESI removed destructive seam samples at locations designated by Geosyntec CQA personnel for destructive testing. Each sample's location was chosen to satisfy the frequency requirement, or to determine whether the seam was suspected of excess crystallinity, weld contamination, or other potential cause of poor welds.

Seam samples were tested in the field by ESI prior to laboratory testing. Field testing consisted of testing five (5) coupons for peel adhesion and five (5) coupons for bonded seam strength (shear) from each sample. Testing of the seams was performed under the observation of Geosyntec CQA personnel in general accordance with the requirements of the Project Documents. When test results and observations of seam testing in the field indicated that the seam satisfied the Project Documents, a portion of the sample was forwarded to TRI for laboratory destructive seam testing. Laboratory testing consisted of testing five (5) coupons for peel adhesion and five (5) coupons for bonded seam strength (shear).

5.3.5.3 Summary of Destructive Test Results

All of the 45 geomembrane seam samples destructive test results met or exceeded the requirements outlined in the Project Documents as outlined below:

60-mil Geomembrane Seam Strength Requirements	
• Peel – Fusion (lbs/in.)	91
• Peel – Extrusion (lbs/in.)	78
• Shear (lbs/in.)	120

Destructive test results are presented in Appendix E-8.

5.3.6 Geomembrane Repairs

Defects identified by visual inspection, nondestructive testing, or destructive testing were repaired by the installer using hand-held extrusion welders. Tears and holes in the

geomembrane were patched (i.e., capped) by using extrusion welders. Repairs were performed in accordance with the requirements of the Project Documents. Geosyntec personnel monitored the geomembrane repair work and recorded the locations and subsequent nondestructive testing on the Repair Summary Logs located in Appendix E-7. Geomembrane repair locations are shown on the Construction Record Drawings presented in Appendix G.

5.4 Geocomposite CQA

5.4.1 General

The contractor installed approximately 349,496 sf of geocomposite overlying the geomembrane for final cover drainage. The tasks performed to monitor the geocomposite component installation included the following:

- documenting the geocomposite storage methods at the site and comparing the delivered inventory against the inventory list prepared in the factory;
- reviewing the manufacturer's certification for compliance with the Project Documents;
- documenting the acceptance and/or rejection of geocomposite materials;
- monitoring the deployment and installation of the geocomposite materials; and
- monitoring and documenting damaged materials and the repair methods performed on the geocomposite material.

5.4.2 Manufacturer Quality Control Documentation

The Contractor submitted certification and MQA/MQC documentation provided by Skaps for the geocomposite delivered to the site. Geosyntec compared the information contained in the manufacturer's documentation against the requirements listed in the Project Documents. Based on this comparison, the geocomposite material delivered to the site met or exceeded the requirements of the Project Documents. The submittal package for the geocomposite materials is presented in Appendix B-2.

Geosyntec performed a material inventory of the on-site geocomposite and compared this to the list of MQC data submitted by the contractor. The geocomposite Material Inventory Log is presented in Appendix F-1.

5.4.2.1 Sampling and Conformance Testing

TRI sampled the geocomposite material at the manufacturing facility and sent the samples to their laboratory in Austin, Texas for testing. Three samples were sent to TRI for conformance testing for peel strength (ASTM D 413) and hydraulic transmissivity (ASTM D 4716), with an approximate testing frequency of one test per 125,667 sf of geocomposite manufactured (377,000 sf of geocomposite manufactured for South BMI). This frequency exceeds the testing frequency of one test per 200,000 ft for peel strength and hydraulic transmissivity as required in the Project Documents. Results indicate that the geocomposite meets or exceeds the requirements of the Project Documents. The CQA conformance testing results are included in Appendix F-2.

5.4.3 Construction Quality Assurance Monitoring

5.4.3.1 On-Site Storage

On-site storage methods for the geocomposite material were monitored by Geosyntec personnel. Geosyntec personnel observed that the geocomposite material was properly stored to prevent damage. Geosyntec did not observe damage to the material during storage at the site.

5.4.3.2 Placement Methods

Geosyntec monitored for the following potential problems:

- manufacturing defects;
- evidence of damage which may have occurred during shipping, storage, or handling; and
- damage caused during installation activities, as a consequence of placement, connection operations, or weather.

Damaged geocomposite that was identified was brought to the attention of the installer for removal or repair. Repairs performed on the material are described in Section 5.4.3.4.

5.4.3.3 Seaming Methods

The geocomposite was placed in individual panels. Geosyntec monitored that the geonet adjacent rolls were overlapped by at least 4 inches along the length and 12 inches along the width. Geonet overlaps were secured with nylon ties at a minimum of 5-foot intervals on side-to-side seams, and every 12 inches along end-to-end seams. Bottom geotextile components were overlapped, and top geotextile components were

continuously sewn. Geosyntec monitored that seaming was performed in general accordance with the Project Documents.

5.4.3.4 Geocomposite Repairs

Geosyntec observed that holes or tears in the geocomposite were repaired. Repairs were made by placing an additional piece of geocomposite over the defective area to a distance of at least 2 feet in all directions from the defect, and secured every 6 inches with nylon ties. The top geotextile component of the patch was heat sealed to the top geotextile of the geocomposite needing repair.

6. CONSTRUCTION QUALITY ASSURANCE – SURVEYING

Geosyntec personnel reviewed the surveyor's submittals to ensure a minimum final cover thickness was placed over the South BMI Landfill. Record drawings of the subgrade, cover geosynthetics, and final cover are included in Appendix G.

7. SUMMARY AND CONCLUSIONS

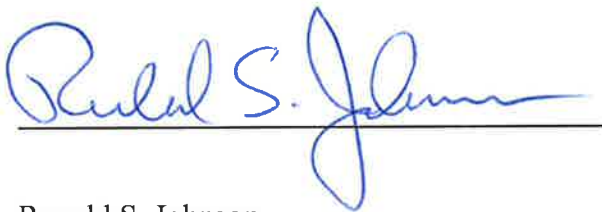
South BMI Landfill closure began on 11 May 2009 and was completed following final cover placement on 15 May 2010. During this time, Geosyntec provided CQA personnel on site to monitor construction and document consistency with the requirements of the Project Documents. As part of the CQA activities, Geosyntec personnel monitored the construction and installation of the following:

- Earthworks (subgrade preparation and final cover placement);
- Geosynthetics (geocomposite, geomembrane, and GCL); and
- Type II Aggregate Base Placement.

During construction, Geosyntec CQA personnel performed conformance testing and CQA testing on the construction materials identified in this report at the frequencies required in the Project Documents. Geosyntec CQA personnel monitored that the materials used for construction conformed to the requirements of the Project Documents. A condition or material that was identified as not conforming to the requirements of the Project Documents or approved modifications thereto was corrected, repaired, and retested (as described in this report) or discarded and not used. Based on our observations and testing, Geosyntec concludes that the South BMI Landfill closure was constructed in accordance with the Project Documents.

8. ENGINEER - OF - RECORD

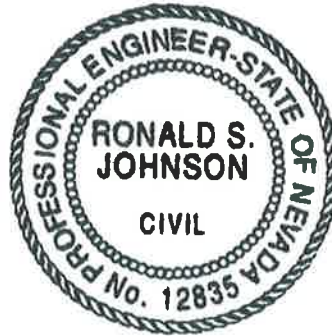
Based on the observations made on site during the closure of the South BMI landfill by Geosyntec personnel working under my direction and supervision as described herein, and based on the logs and test results presented in the appendices to this report, the South BMI landfill closure in Henderson, Nevada was constructed in accordance with the Technical Specifications, CQA Plan, Construction Drawings, and design changes.



Ronald S. Johnson

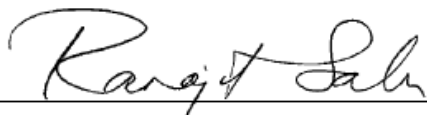
Registered Professional Engineer (Civil)

Certificate No. 12835



9. CERTIFIED ENVIRONMENTAL MANAGER JURAT

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.



6/14/10

Dr. Ranajit Sahu, C.E.M. (No. EM-1699, Exp. 10/07/2010)
BRC Project Manager

Date

10. REFERENCES

Geosyntec, 2008. Phase I Construction Quality Assurance Report, Basic Remediation Company, Corrective Action Management Unit, Henderson, Nevada. September.

Geosyntec, 2008a. BRC CAMU Waste Processing and Placement Plan, September (Addendum October 2008).

Geosyntec, 2009. Phase IIIB Construction Quality Assurance Report, Basic Remediation Company, Corrective Action Management Unit, Henderson, Nevada. May.

Geosyntec, 2010. CAMU Partial Final Closure Construction Quality Assurance Report, Phase IIIA and Portion of II, Basic Remediation Company, Corrective Action Management Unit, Henderson, Nevada, April.

Geosyntec, 2010a. CAMU Partial Final Closure Construction Quality Assurance Report, Phases I, II, IIIB, IV, and Portions of II and V, Basic Remediation Company, Corrective Action Management Unit, Henderson, Nevada, May.

APPENDIX A

Photo Log

Date: N/A

Direction:
N/A

Description:
The
installation of
geosynthetics
began on
05/13/2009.
Installation
was stopped
temporarily
on
05/21/2009.



Date:
03/12/10

Direction:
East

Description:
Construction
of the
geosynthetic
cap resumed
on 03/11/10.



Date:
3/12/2010

Direction:
West

Description:
Geomembrane
Deployment



Date:
3/12/2010

Direction:
North

Description:
Primary
seaming
produces a
dual track
fusion weld



Date: N/A

Direction:
N/A

Description:
Dual track
fusion
seaming is
tested for
continuity
with air
pressure



Date: N/A

Direction:
N/A

Description:
Trial welds
were made
and tested
prior to
welding using
an electronic
tensiometer



Date:
N/A

Direction:
N/A

Description:
Repairs to
primary
seaming are
made with an
extrusion
welder



Date: N/A

Direction:
N/A

Description:
Extrusion
weld repairs
are tested for
leaks using a
soapy solution
and a vacuum
box



Date:
N/A

Direction:
North

Description:
Installation of
geocomposite
includes
sewing of the
overlapped
geotextile



Date:
N/A

North

Description:
Installation of
Final Cover
includes 12"
of 1" minus
material and a
second 12" lift
of 6" minus
material



Date: N/A

Direction:
East

Description:
Installation of
geosynthetics
beneath
stormwater
channel along
north side of
BMI South.
Geomembrane
was extrusion
welded to
CAMU Phase
IV
geomembrane.



Date: N/A

Direction:
N/A

Description:
Density
testing of
Type II
Aggregate at
the drainage
channel north
of the BMI
South Landfill



Date:
05-15-10

Direction:
East

Description:
Gravel Mulch
at the South
Slope of the
BMI South
Landfill



Date:
05-15-10

Direction:
North

Description:
Gravel Mulch
at the West
Slope of the
BMI South
Landfill



APPENDIX B

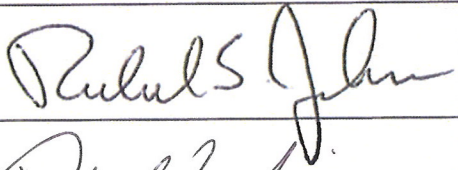
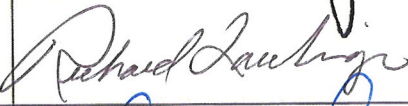
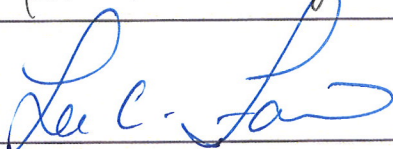
Construction Documentation and Correspondence

APPENDIX B-1

Design Changes



Design Change Notification

Project: BRC Eastside Common Areas Soils Remediation, Henderson, Nevada		DCN No.: ESR DCN-045
Contract No.: 6389		Contractor: ENTACT Environmental Services
References:		
RFI No.: 101	Drawing No.:	
Specification Section: 02200	CQA Section No.:	
Design Change: This design change reduces the aggregate base compaction requirement from 95% to 90% compaction when aggregate base is directly overlying the final cover system geosynthetics.		
Attachments: Revised Section 02200		
This design change notification shall be included into the contract documents referenced above and is officially incorporated into the contract documents as of the date latest signature approval date on this document.		
Approved By:		
Engineer of Record:		Date: 28-May-2010
Construction Manager:		Date: 6/14/10
BRC Project Manager:		Date: 6/14/10

**TECHNICAL SPECIFICATIONS
FOR THE
BRC EASTSIDE COMMON AREAS SOILS
REMEDIATION
HENDERSON, NEVADA**

Prepared for:



Basic Remediation Company
875 West Warm Springs Road
Henderson, Nevada 89015
(702) 567-0400

Prepared by:



Geosyntec Consultants
10875 Rancho Bernardo Road, Suite 200
San Diego, California 92127
(858) 674-6559

May 2008
Revised:
July 2008
September 2008
October 2008
December 2008
January 2009
February 2009
May 2009
June 2009
October 2009
May 2010

SECTION 02200

EARTHWORK

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

- A. The Contractor shall furnish all labor, materials, tools, supervision, transportation, and equipment necessary to perform all Work specified herein and as shown on the Construction Drawings.
- B. The Work shall include, but not be limited to excavating, hauling, placing, moisture conditioning, backfilling, compacting, grading, stockpiling, and subgrade preparation, including subgrade preparation for storm water pipeline and appurtenances. Earthwork shall conform to the dimensions, lines, grades and sections shown on the Drawings or as directed by the Construction Manager.
- C. Construction of the final CAMU cover system and associated storm water management features overlying the CAMU will be held as an Option Scope that may be added to the contract via Contract Modification at the Owner's sole discretion. If the Owner decides to exercise its option to add the Option Scope, the Construction Manager will notify the Contractor no later than 30 days after receipt of the final Eastside Area confirmation sampling

1.02 RELATED SECTIONS

Section 01025 — Measurement and Payment

Section 02110 — Site Clearing

Section 02205 — Remedial Excavating and Filling

Section 02771 — Geotextile

Section 02772 — Geosynthetic Clay Liner

Section 02773 — Geocomposite

Section 03400 — Cast-in-Place Concrete

1.03 REFERENCES

- A. Construction Drawings
- B. Clark County Area Uniform Standard Specifications (CCAUSS) and Clark County Area Uniform Standard Drawings (CCAUSD).
- C. Geosyntec, 2007 “Construction Quality Assurance Plan for the Construction of the Corrective Action Management Unit, Basic Remediation Company, Henderson, Nevada,” August.
- D. Latest version of American Society for Testing and Materials (ASTM) standards:

CAMU Construction

Earthwork Rev-3.DCN-011
Rev-5.DCN-015
Rev-14.DCN-036
Rev-15.DCN-039
Rev-16.DCN-45
Basic Remediation Company

- ASTM D 422 Standard Method for Particle-Size Analysis of Soils
- ASTM D 1557 Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))
- ASTM D 2216 Standard Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures
- ASTM D 2487 Standard Test Method for Classification of Soils for Engineering Purposes
- ASTM D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate In-Place by Nuclear Density Methods (Shallow Depth)
- ASTM D 3017 Standard Test Method for Water Content of Soil and Rock In-Place by Nuclear Methods (Shallow Depth)
- ASTM D 3080 Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
- ASTM D 4318 Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- E. Latest version of American Association of State Highway and Transportation Officials (AASHTO) standards:
 - AASHTO T 180 Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

1.04 SUBMITTALS

- A. Prior to beginning earthwork, Contractor shall perform baseline topographic survey on a minimum 50-foot grid and at all grade breaks. Baseline topographical survey shall be submitted to the Construction Manager within 20 working days of notice to proceed.
- B. The Contractor shall submit to the Construction Manager a notice of completion for within 24 hours of completed excavation, engineered fill, prepared subgrade and cover layer as-built survey to provide the Owner with sufficient time to verify as-built surveys
- C. The Contractor shall submit to the Construction Manager laboratory test data for cover soils demonstrating shear strength parameters. Shear strength tests shall be conducted at 90 percent maximum dry density at optimum moisture content.
- D. The Contractor shall submit to the Construction Manager the GPS excavation control methods the Contractor has available for use.
- E. The Contractor shall submit to the Construction Manager the Stockpile Plan prior to Notice to Proceed.
- F. The Contractor shall submit to the Construction Manager product data sheets and manufacturer's recommendations for soil binder material that will be used.

1.05 QUALITY ASSURANCE

- A. The Contractor shall ensure that the materials and methods used for Earthwork meet the requirements of the Construction Drawings and this Section. Any material or method that does not conform to these documents, or to alternatives approved in writing by the Construction Manager shall be rejected and shall be repaired or replaced by the Contractor.
- B. The Contractor shall be aware of and accommodate all monitoring and field/laboratory conformance testing required by the CQA Plan. This monitoring and testing, including random conformance testing of construction materials and completed work, shall be performed by the CQA Engineer. If nonconformances or other deficiencies are found in the materials or completed work, the Contractor shall be required to repair the deficiency or replace the deficient materials.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and protect products brought to the Project site in accordance with this Section.
- B. Stockpiles
 - 1. Stockpile materials at locations in accordance with the Stockpile Plan or as agreed to by the Contractor and the Construction Manager. Stockpiles shall be located so as not to interfere with other aspects of the work.
 - 2. Clear stockpile areas and install erosion and sedimentation controls before depositing fill or excavated materials on approved stockpile areas.
 - 3. Prevent segregation of fill materials and mixing of one type of fill material with other types.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Engineered fill shall consist of on-site relatively homogeneous, natural soils that contain <5% of debris, foreign objects, large rock fragments (greater than 6 inches in maximum dimension), roots, and organics. No materials larger than 6 inches shall be allowed within the Engineered fill. The Engineered fill shall be classified according to the Unified Soil Classification System (per ASTM D 2487) as SC, ML, CL, SM, SW, SP, GW, GP, GM, GC, or combinations of these materials. The Contractor may propose the use of other soil types as Engineered fill, but then such use shall be at the sole discretion of the Engineer.

~~Cover soil shall consist of on-site relatively homogeneous, natural soils that are free of debris, foreign objects, large rock fragments (greater than 6 inches in maximum dimension), roots, and organics. The first lift of cover soil placed directly overlying the geosynthetic components of the cover system shall have a maximum particle size of 1 inch. The cover soil shall be classified according to the Unified Soil Classification System (per ASTM D 2487) as SC, ML, CL, SM, SW, GW, GM, GC, or combinations of these materials. The Contractor may propose the use of other soil types as cover soil, but then such use shall be at the sole discretion of the Engineer. Cover soil shall have a~~

~~remolded minimum shear strength of 32 degrees and at least 500 psf cohesion at 90% compaction, based on Modified Proctor, at optimum moisture content, as measured by ASTM D 3080.~~ **DCN-015, 12/01/08.**

~~Cover soil shall consist of on-site relatively homogeneous, natural soils that are free of debris, foreign objects, large rock fragments (greater than 6 inches in maximum dimension), roots, and organics. The first lift of cover soil placed directly overlying the geosynthetic components of the cover system shall have a maximum particle size of 1 inch. The cover soil shall be classified according to the Unified Soil Classification System (per ASTM D 2487) as SC, ML, CL, SM, SW, GW, GM, GC, or combinations of these materials. The Contractor may propose the use of other soil types as cover soil, but then such use shall be at the sole discretion of the Engineer. Cover soil shall have a remolded minimum angle of internal friction of 28 degrees at 85% compaction, based on Modified Proctor, at optimum moisture content, as measured by ASTM D 4767. Testing shall be run with normal loads of 1, 2, and 4 psi. Pore pressure measurements shall be collected such that the consolidated, drained strength parameters are obtained from the test.~~ **DCN-015, 12/01/08.**

- B. ~~Cover soil shall consist of on-site relatively homogeneous, natural soils that are free of debris, foreign objects, large rock fragments (greater than 6 inches in maximum dimension), roots, and organics. The first lift of cover soil placed directly overlying the geosynthetic components of the cover system shall have a maximum particle size of 1 inch. The cover soil shall be classified according to the Unified Soil Classification System (per ASTM D 2487) as SC, ML, CL, SM, SW, GW, GM, GC, or combinations of these materials. The Contractor may propose the use of other soil types as cover soil, but then such use shall be at the sole discretion of the Engineer. Cover soil shall have a remolded minimum angle of internal friction of 28 degrees at 87% compaction, based on Modified Proctor, at optimum moisture content, as measured by ASTM D 4767. Testing shall be run with normal loads of 1, 2, and 4 psi. Pore pressure measurements shall be collected such that the consolidated, drained strength parameters are obtained from the test.~~ **DCN-036, 10/28/09.**
- C. Operations layer shall consist of Eastside Area or Western Ditch materials conforming to Specifications in Section 02205.
- D. Prepared subgrade is defined as the material directly underlying the geosynthetic liner system which shall meet the requirements listed above for Engineered fill. No materials larger than 3/4 inch shall project or protrude from the surface of the prepared subgrade. Prepared subgrade limits are the top inside edge of the perimeter anchor trench.
- E. Pipe Trench Backfill shall be in accordance with CCAUSS Section 208 and the Construction Drawings.
- F. Anchor Trench Backfill materials shall meet the requirements listed above for the Engineered Fill.
- G. Slit Trench Backfill shall consist of earthen materials excavated from the slit trenches that are separated and earthen materials adjacent to the slit trenches.
- H. Structure Embankment shall conform to CCAUSS Section 207 and the requirements shown on the Construction Drawings.

- I. Aggregate base for storm water channels and CAMU Base Road shall conform to CCAUSS Section 704.03.04 for Type II Aggregate Base and the Construction Drawings.
- J. Grouted Riprap atop 6-inch Type II aggregate base along the embankment channels shall have D50 = 12-inch rip rap. Grouted rip rap shall be in accordance with CCAUSS Section 610 and the Construction Drawings.
- K. Grout shall be in accordance with CCAUSS Section 706 and the Construction Drawings.
- L. Final cover side slope surface treatment layer (gravel mulch) shall be 3/4-inch "Vista Gold" by Vista Landscape, Henderson, NV; telephone (702) 565-6611, or Construction Manager approved equal.
- M. Soil binder shall be long lasting plant derived material such as pitch and rosin emulsion, polymeric emulsion blends, or Portland cement based material as approved by the Construction Manager.

2.02 EQUIPMENT

- A. The Contractor shall furnish, operate, and maintain compaction equipment as is necessary to produce the required in-place soil density and moisture content.
- B. The Contractor shall furnish, operate and maintain tank trucks, pressure distributors, or other equipment designed to apply water uniformly and in controlled quantities to variable surface widths.
- C. The Contractor shall furnish, operate, and maintain miscellaneous equipment such as scarifiers or disks, earth excavating equipment, earth hauling equipment, and other equipment, as necessary for Earthwork construction.
- D. Equipment used in spreading the cover layer material on top of the geosynthetic liner system shall be restricted to the following maximum allowable equipment ground pressures:

MAXIMUM ALLOWABLE EQUIPMENT GROUND PRESSURE (psi)	INITIAL LIFT THICKNESS OF OVERLYING AGGREGATE THICKNESS OF COVER SOIL OVERLYING GEOCOMPOSITE <u>DCN- 015, 12/01/08</u> (ft)
<10	1.0
<20 <u>DCN-015, 12/01/08</u>	2.0 <u>DCN-015, 12/01/08</u>
>20 <u>DCN-015, 12/01/08</u>	3.0 <u>DCN-015, 12/01/08</u>

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<2.0 <u>DCN-015, 12/01/08</u>	>1.0 and <2.0 <u>DCN-015, 12/01/08</u>
≥2.0 <u>DCN-015, 12/01/08</u>	≥2.0 <u>DCN-015, 12/01/08</u>

PART 3 – EXECUTION

3.01 FAMILIARIZATION

- A. Prior to implementing any of the work in this Section, the Contractor shall become thoroughly familiar with the site, the site conditions, and all portions of the work falling within this and other related Sections.
- B. Inspection:
 1. The Contractor shall carefully inspect the installed work of all other Sections and verify that all work is complete to the point where the installation of the work specified in this Section may properly commence without adverse impact.
 2. If the Contractor has any concerns regarding the installed work of other Sections, the Construction Manager shall be notified in writing prior to commencing work. Failure to notify the Construction Manager or continuance of the work of this Section shall be construed as Contractor's acceptance of the related work of all other Sections.
- C. For CAMU stormwater control grading, "Improvement Plans for Eastside Landfill" prepared by PBS&J, October 2006, shall take precedence over "Final Construction Drawings, Basic Remediation Company, Corrective Action Management Unit, Henderson, Nevada," August 2007, conformed May 2008, prepared by Geosyntec Consultants. **DCN-011 09/24/08, RFI-031**

3.02 SITE PREPARATION

- A. Prior to performing any earthworks on the site, the Contractor shall perform a baseline topographic survey. The survey, at a minimum shall be performed on a 50 foot grid and account for grade breaks and other topographic features affecting volume of earthworks. This survey shall be conducted by a Professional Land Surveyor licensed in the state of Nevada. This survey shall serve as the starting point for earthwork quantities, both excavation and fill placement.
- B. The Contractor shall perform demolition and site clearing in accordance with the Construction Drawings and Sections 02010 and 02110 of these Specifications prior to any Earthwork activity.
- C. Prior to performing earthworks on the site, the Contractor shall install drainage and erosion-control measures in accordance with the SWPPP.

3.03 GENERAL EXCAVATION

- A. The Contractor shall excavate materials to the limits and grades shown on the Drawings.

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- B. All excavated materials not used for Engineered Fill shall be stockpiled in accordance with the Stockpile Plan or in an area designated by the Construction Manager in accordance with Subpart 3.06 of this Section.
- C. Excavated materials shall be used onsite only. Contractor shall not export excavated CAMU soils.
- D. Excavations in native soil shall not have slopes steeper than 2.1H:1V, unless otherwise indicated on the Construction Drawings or when approved by the Construction Manager.
- E. No excavations deeper than 4 feet with side slopes steeper than 2:1 (horizontal:vertical) shall be made unless otherwise indicated on the Construction Drawings or without the prior approval of the Construction Manager. When shoring is required, the design and inspection of such shoring shall be the Contractor's responsibility and shall be subject to the review of the Construction Manager prior to use. No personnel shall Work within or next to an excavation requiring shoring until such shoring has been installed, inspected, and approved by an engineer registered in the State of Nevada. The Contractor shall be responsible for any fines imposed due to violation of any laws and regulations relating to the safety of the Contractor's personnel.
- F. Excavations shall be kept free from water.
- G. The Contractor shall notify the Construction Manager at once of springs, seeps, or wet zones found in excavations.
- H. Oversized materials encountered within the excavation or that result from screening operations of clean fill shall be segregated and stockpiled in accordance with the Stockpile Plan and Subpart 2.06 of this Section or in a location approved by the Construction Manager.
- I. Permanent Ditches and Channels:
 - 1. Cut ditches and channels accurately to the cross sections, grades, and elevations indicated on the drawings. Do not cut below indicated grades without prior Construction Manager authorization.
 - 2. Do not deposit excavated material within 4 feet from the edge of a ditch or channel, unless the material is fill placed as indicated and specified.
 - 3. Keep completed ditches and channels free from blockage or obstruction by leaves, brush, sticks, trash, sediment, and other debris.
 - 4. Storm water ditch excavation through the Western Ditch shall be excavated 2.5 feet lower than grades shown on Construction Drawings. Excavated Western Ditch soil shall be stockpiled over the Western Ditch within the footprint of the Cell II in accordance with the Stockpile Plan. The storm water ditch shall immediately have 2.5 foot over excavation backfilled with clean soil to the grades shown on the construction drawings.

3.04 ANCHOR TRENCH EXCAVATION

- A. The Contractor shall excavate the anchor trench to the limits and grades shown on the Drawings.
- B. All excavated materials not used for Anchor Trench Backfill or Engineered fill shall be stockpiled in areas shown on Construction Drawings or as designated by the Construction Manager in accordance with Subpart 3.06 of this Section and the Stockpile Plan.

3.05 SUBGRADE SURFACE PREPARATION

- A. The subgrade shall be prepared and made suitable as a foundation for placement and compaction of soil material and geosynthetic components of liner system, where applicable. The prepared subgrade shall be proof-rolled and meet the requirements outlined in Subpart 2.01. The subgrade shall be firm and able to support the Contractor's construction equipment without the development of depressions or ruts. In addition, the subgrade shall provide adequate support such that the overlying fill material may be placed and compacted to the specified density.

3.06 STOCKPILING

- A. Soil shall be stockpiled in areas shown on Construction Drawings and in accordance with the Stockpile Plan, or as designated by the Construction Manager. Stockpile shall be free of incompatible soil, clearing, clearing debris, or other objectionable materials.

~~Stockpiles shall be no steeper than 2H:1V (Horizontal:Vertical) or other slope approved by the Construction Manager, graded to drain, sealed by tracking parallel with the direction of to the slope with a dozer or other means approved by the Construction Manager, and dressed daily during periods when fill is taken from the stockpile. The Contractor shall employ temporary erosion and sediment control measures (i.e. silt fence) in accordance with the Contractor prepared SWPPP or as directed by the Construction Manager around stockpile areas. DCN-011 09/24/08, RFI-039~~

- B. The 200,000 cy stockpile as defined by the Construction Drawings shall be no steeper than 1.5H:1V (Horizontal:Vertical). Additional stockpiles shall be no steeper than 2H:1V or other slope approved by the Construction Manager. All stockpiles shall be graded to drain, sealed by tracking parallel with the direction of the slope with a dozer or other means approved by the Construction Manager, and dressed daily during periods when fill is taken from the stockpile. The Contractor shall employ temporary erosion and sediment control measures (i.e. silt fence) in accordance with the Contractor prepared SWPPP or as directed by the Construction Manager around stockpile areas. DCN-011 09/24/08, RFI-039
- C. Western Ditch soil excavated during Phase IIIA shall be stockpiled over the Western Ditch within Cell II or placed within the lined areas of the CAMU as waste fill in accordance with Section 02205 of these Specifications.

3.07 PIPE TRENCH EXCAVATION AND BACKFILL

- A. See CCAUSS Sections 206, 207, and 208.

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- B. Trench excavation and backfill shall conform to the lines and grades shown on the Construction Drawings.

ENGINEERED FILL, SLIT TRENCH BACKFILL, AND ANCHOR TRENCH BACKFILL
DCN-022, 02/03/2009

- A. ~~The Engineered Fill, Slit Trench Backfill, and Anchor Trench Backfill shall be placed to the lines and grades shown on the Drawings.~~ **DCN-022, 02/03/2009**
- B. ~~Soil used for the Engineered Fill, Slit Trench Backfill, and Anchor Trench Backfill shall be on-site materials meeting the requirements of Subpart 2.01 of this Section.~~ **DCN-022, 02/03/2009**
- C. ~~Soil used for the Engineered Fill, Slit Trench Backfill, and Anchor Trench Backfill shall be placed in a loose lift that results in a compacted lift thickness of no greater than 12 inches. The maximum permissible pre-compaction soil clod size is 6 inches.~~ **DCN-022, 02/03/2009**
- D. ~~Each 12-inch horizontal lift of Engineered Fill and Slit Trench Backfill placed against a slope shall be keyed into the slope a minimum of 3 feet, as measured horizontally from the top of the 12-inch lift.~~ **DCN-022, 02/03/2009**
- E. ~~The Contractor shall compact each lift to at least 90 percent of its modified Proctor maximum dry density (ASTM D 1557) at a moisture content of between -4% and +4% of the optimum moisture content for the soil. The Contractor shall utilize compaction equipment suitable for achieving the soil compaction requirements~~ **DCN-022, 02/03/2009**
- F. ~~Contaminated water shall not be used for moisture conditioning or as dust control of final cover soils.~~ **DCN-022, 02/03/2009**
- G. ~~During wetting or drying, the material shall be regularly disced or otherwise mixed so that uniform moisture conditions in the appropriate range are obtained.~~ **DCN-022, 02/03/2009**

3.08 ENGINEERED FILL AND SLIT TRENCH, WASTE TRENCH, AND ANCHOR TRENCH BACKFILL **DCN-022, 02/03/2009**

- A. The Engineered Fill and Slit Trench, Waste Trench, and Anchor Trench Backfill shall be placed to the lines and grades shown on the Drawings. **DCN-022, 02/03/2009**
- B. Soil used for the Engineered Fill, Slit Trench Backfill, and Anchor Trench Backfill shall be on-site materials meeting the requirements of Subpart 2.01 of this Section. **DCN-022, 02/03/2009**
- C. Soil used for the Waste Trench Backfill shall consist of on-site materials specified on the Construction Drawings. **DCN-022, 02/03/2009**
- D. Soil used for the Engineered Fill, Slit Trench and Waste Trench Backfill, and Anchor Trench Backfill shall be placed in a loose lift that results in a compacted lift thickness of no greater than 12 inches. **DCN-022, 02/03/2009**
- E. The maximum permissible Engineered Fill and Anchor Trench Backfill pre-compaction soil clod size is 6 inches. **DCN-022, 02/03/2009**

- F. Each 12-inch horizontal lift of Engineered Fill and Slit and Waste Trench Backfill placed against a slope shall be keyed into the slope a minimum of 3 feet, as measured horizontally from the top of the 12-inch lift. DCN-022, 02/03/2009
- G. The Contractor shall compact each lift to at least 90 percent of its modified Proctor maximum dry density (ASTM D 1557) at a moisture content of between -4% and +4% of the optimum moisture content for the soil. The Contractor shall utilize compaction equipment suitable for achieving the soil compaction requirements DCN-022, 02/03/2009
- H. The Contractor shall construct a test pad of Slit or Waste Trench Backfill materials, minimum of 2 lifts and a length and width 2 times the length and width of the compactor using in constructing the test pad to verify compaction requirements specified in 3.08. Gare achieved using proposed equipment. DCN-022, 02/03/2009
- I. Waste Trench and Slit Trench Backfill shall be compacted by a minimum of 2 passes, forward and backward are counted as one pass, of a smooth drum compactor operating in static mode, Ingersoll-Rand SD 122 or equivalent. DCN-022, 02/03/2009
- J. Contaminated water shall not be used for moisture conditioning or as dust control of final cover soils. DCN-022, 02/03/2009
- K. During wetting or drying, the material shall be regularly disced or otherwise mixed so that uniform moisture conditions in the appropriate range are obtained. DCN-022, 02/03/2009

3.09 STRUCTURE EXCAVATION AND EMBANKMENT

- A. This shall include, but not be limited to, the following: detention basins, footings for riprap, concrete-lined storm water channels, aggregate-lined storm water channels, and cut-off walls for concrete aprons.
- B. Refer to CCAUSS Sections 206 and 207 for Structure Excavation and Structure Backfill, respectively.

3.10 FINAL COVER SOIL

- A. Place only when underlying drainage aggregate and filter geotextile or geocomposite installation is complete including all Construction Quality Control (CQC) and CQA work and approved by the Construction Manager.
- B. The subgrade to the cover soil consists of a geotextile or geocomposite. Therefore, the Contractor shall avoid tearing, puncturing, folding, or damaging in any way the filter geotextile or geocomposite geotextile during placement of the cover layer material.
- C. Any damage to the geosynthetic liner system which is caused by the Contractor or representatives of the Contractor shall be repaired by the Geosynthetics Installer at the expense of the Contractor.

~~The Contractor shall compact each final lift of final cover soil to at least 90 percent of its modified Proctor maximum dry density (ASTM D 1557) at a moisture content between -4% and +4% of the optimum moisture content for the soil. The Contractor shall utilize compaction equipment suitable for achieving the soil compaction requirements. DCN-015, 12/01/08~~

~~The Contractor shall compact the first 12-inch lift of final cover soil by 4 passes of a D-6 dozer with ground pressure no less than 4 psi and no greater than 10 psi, or equivalent. The Contractor shall compact the second 12-inch lift of final cover soil to at least 90 percent of its modified Proctor maximum dry density (ASTM D 1557) at a moisture content between -4% and +4% of the optimum moisture content for the soil. The Contractor shall utilize compaction equipment suitable for achieving the soil compaction requirements that meets the requirements for maximum ground pressure of subpart 2.02 of this Section. **DCN-015, 12/01/08 DCN-036, 10/28/09**~~

- D. The Contractor shall compact the first 12-inch lift of final cover soil by 4 passes of a D-6 dozer with ground pressure no less than 4 psi and no greater than 10 psi, or equivalent. On 3:1 cover slopes, the Contractor shall compact the second 12-inch lift by 4 passes of a compactor with a weight exceeding 20,000 lb (Ingersoll Rand SD-122DX, or equivalent). The compactor shall operate in vibratory mode going upslope and in static mode while going down slope. On flat cover surfaces, the Contractor shall compact the second 12-inch lift by 2 passes of the compactor operating in vibratory mode in both directions. A pass shall be combined forward and reverse operation over the same area of the material being compacted. The Contractor shall moisture condition cover soil (both 1-inch minus and 6-inch minus) to within -4% and +4% of optimum moisture content based on modified proctor (ASTM D 1557) for the 1-inch minus material. **DCN-036, 10/28/09**
- E. The cover soil material shall be placed out in front of the equipment used to place the cover layer such that a 1-foot minimum thickness requirement is maintained at all times between the geosynthetic materials and the wheels or tracks of the equipment used to place the cover layer material.
- F. Care must be exercised by the operators of tracked equipment to avoid sharp pivoting turns that could displace the cover layer material and result in damage to the liner system.
- G. Contaminated water shall not be used for moisture conditioning or as dust control of final cover soils.
- H. A 2 inch layer of $\frac{3}{4}$ inch gravel mulch shall be placed on side slopes equal and greater than 5H:1V for all CAMU and BMI Landfill Covers.
- I. Soil binder shall be placed on top deck areas less than 5H:1V. Soil binder shall be applied at rates as recommended by the manufacturer for the prevention of water and wind induced erosion on exposed soils.

3.11 AGGREGATE BASE

~~Aggregate base placement and compaction shall be in accordance with CCAUSS Section 301 and 302 for Type II aggregate base. Aggregate base shall be compacted to not less than 95% compaction as determined by AASHTO T 180. **RFI-097; DCN-036, 4/1/10**~~

- A. ~~Aggregate base shall be placed and compacted at the following lift thickness: **RFI-097; DCN-039, 4/1/10**~~
 - 1. ~~Where the required thickness is 6-inches or less, the base course may be spread and compacted in 1 layer. **RFI-097; DCN-039, 4/1/10**~~

- a. Compaction testing shall be performed at the full depth of aggregate base installed over soil. RFI-097; DCN-039, 4/1/10
- 2. If vibratory compaction equipment of a type approved by the Engineer is used, and the requirement for density is complied with, the compacted thickness of any 1 layer may be increased to 12 inches. RFI-097; DCN-039, 4/1/10
- a. Compaction testing of the upper 6-inches shall be performed when aggregate base is overlying the geosynthetic liner system or woven geotextile; and RFI-097; DCN-039, 4/1/10
- b. Compaction testing shall be performed at the full depth of aggregate base installed over soil. RFI-097; DCN-039, 4/1/10

~~Aggregate base shall be compacted to not less than 95% compaction as determined by AASHTO T 180. RFI-097; DCN-039, 4/1/10~~

- B. When directly overlying the final cover system geosynthetics, aggregate base shall be compacted to not less than 90% compaction. Aggregate base shall be compacted to not less than 95% compaction when overlying soil, including cover soil. Compaction shall be determined by AASHTO T 180. RFI-101; DCN-045, 5/27/10

3.12 GROUTED RIPRAP

- A. Grouted rip rap shall be placed in accordance with Section 610 of the CCAUSS and the Construction Drawings.

3.13 FIELD TESTING

- A. The minimum frequency and details of quality control testing for engineered fill and final cover soil are provided below. The Contractor shall provide equipment and operators to accommodate testing. This testing shall be performed by the CQA Engineer and is not separate from the testing outlined in the CQA Plan (i.e. QC and QA testing are the same and will not be duplicated). The Contractor shall take this testing frequency into account in planning the construction schedule.

~~Engineered fill and final cover soil material quality control testing: DCN-036, 10/28/09~~

- 1. Engineered fill and 1-inch minus final cover soil material quality control testing: DCN-036, 10/28/09
 - a. Moisture content in accordance with ASTM D2216 at a frequency of one test per 5,000 yd³ (1-inch minus cover soil material only); DCN-036, 10/28/09
 - b. particle-size analyses conducted in accordance with ASTM D 422 at a frequency of one test per 10,000 yd³;
 - c. Atterberg Limits conducted in accordance with ASTM D 4318 at a frequency of one test per 10,000 yd³;
 - d. soil classification tests conducted in accordance with ASTM D 2487 at a frequency of one test per 10,000 yd³; and

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- e. modified Proctor compaction tests conducted in accordance with ASTM D 1557 at a frequency of one test per 10,000 yd³/lift.
- 2. 6-inch minus Final Cover material quality control testing:
 - a. Moisture content in accordance with ASTM D2216 at a frequency of one test per 5,000 yd³; **DCN-036, 10/28/09**
 - b. Particle-size analyses conducted in accordance with ASTM D 422 at a frequency of one test per 10,000 yd³; **DCN-036, 10/28/09**
 - c. Atterberg Limits conducted in accordance with ASTM D 4318 at a frequency of one test per 10,000 yd³; and **DCN-036, 10/28/09**
 - d. soil classification tests conducted in accordance with ASTM D 2487 at a frequency of one test per 10,000 yd³; **DCN-036, 10/28/09**

~~The CQA Engineer shall perform conformance tests on placed and compacted engineered fill and cover soil to evaluate compliance with these Specifications. These tests shall include in situ moisture content and dry density. The frequency and procedures for moisture density testing are given in the CQA Plan. At a minimum, the dry density and moisture content of the soil shall be measured in situ in accordance with ASTM D 2922 and ASTM D 3017, respectively. **DCN-036, 10/28/09**~~

- 3. The CQA Engineer shall perform conformance tests on placed and compacted engineered fill and cover soil to evaluate compliance with these Specifications. These tests shall include moisture content (engineered fill and cover soil) and dry density (engineered fill only). The frequency and procedures for moisture-density testing are given in the CQA Plan. **DCN-036, 10/28/09**
- 4. A special testing frequency shall be used by the CQA Engineer when visual observations of construction performance indicate a potential problem. Additional testing shall be considered when:
 - a. the rollers slip during rolling operation;
 - b. the lift thickness is greater than specified;
 - c. the fill is at improper and/or variable moisture content;
 - d. fewer than the specified number of roller passes are made;
 - e. dirt-clogged rollers are used to compact the material;
 - f. the rollers do not have optimum ballast; or
 - g. the degree of compaction is doubtful.
- 5. During construction, the frequency of testing shall be increased by the CQA Engineer in the following situations:
 - a. adverse weather conditions;

- b. breakdown of equipment;
- c. at the start and finish of grading;
- d. if the material fails to meet specifications; or
- e. the work area is reduced.

B. Defective Areas:

1. If a defective area is discovered in the Earthwork, the CQA Engineer shall evaluate the extent and nature of the defect. If the defect is indicated by an unsatisfactory test result, the CQA Engineer shall determine the extent of the defective area by additional tests, observations, a review of records, or other means that the CQA Engineer deems appropriate. If the defect is related to adverse site conditions, such as overly wet soils or surface desiccation, the CQA Engineer shall define the limits and nature of the defect.
2. Once the extent and nature of a defect is determined, the Contractor shall correct the deficiency to the satisfaction of the CQA Engineer. The Contractor shall not perform additional work in the area until the CQA Engineer approves the correction of the defect.
3. Additional testing may be performed by the CQA Engineer to verify that the defect has been corrected. This additional testing shall be performed before any additional work is allowed in the area of deficiency. The cost of the additional testing after failure shall be borne by the Contractor.

3.14 SURVEY CONTROL

- A. The Contractor shall perform all surveys necessary for construction layout and control.

3.15 CONSTRUCTION TOLERANCE

- A. The Contractor shall perform the Earthwork construction to within ± 0.1 ft on areas with a slope less than 10 percent and ± 0.2 ft on areas with a slope greater than 10 percent of the grades indicated on the Drawings.

3.16 PROTECTION OF WORK

- A. The Contractor shall use all means necessary to protect completed work of this Section.
- B. At the end of each day, the Contractor shall verify that the entire work area is left in a state that promotes drainage of surface water away from the area and from finished work. If threatening weather conditions are forecast, at a minimum, compacted surfaces shall be seal-rolled to protect finished work.
- C. In the event of damage to prior work, the Contractor shall make repairs and replacements to the satisfaction of the Construction Manager.

PART 4 – MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Providing for and complying with the requirements set forth in this Section for CAMU Excavation shall be measured as Lump Sum (LS) and payment shall be based on the lump sum price provided on the Bid Schedule. Specified items incidental to CAMU Excavation include:
 - 1. Anchor trench excavation
 - 2. Storm water channel excavation
 - 3. Stockpiling
 - 4. Prepared subgrade
 - 5. And all other incidentals necessary for a complete CAMU excavation.
- B. Providing for and complying with the requirements set forth in this Section for CAMU Engineered Fill shall be measured as Lump Sum (LS) and payment shall be based on the lump sum price provided on the Bid Schedule. Anchor trench backfill shall be incidental to CAMU Engineered Fill. This lump sum shall include all incidentals necessary for a complete CAMU Engineered Fill.
- C. Providing for and complying with the requirements set forth in this Section for Slit Trench Backfill shall be measured as compacted and moisture conditioned in-place cubic yards (CY), and payment shall be based on the unit price provided on the Bid Schedule. Incidental to Slit Trench Backfill shall be slit trench cover excavation. This lump sum shall include all incidentals necessary for a complete slit trench backfill.
- D. Providing for and complying with the requirements set forth in this Section for the BMI Landfills Cover Soil shall be measured as Lump Sum (LS), and payment shall be based on the lump sum price provided on the Bid Schedule. Incidental to the BMI Landfill Cover Soil shall be soil binder and gravel mulch. This lump sum shall include all incidentals necessary for a complete Cover soil placement on the BMI Landfills.
- E. Providing for and complying with the requirements set forth in this Section for CAMU Cover Soil shall be measured as in-place cubic yards (CY), and payment shall be based on the unit price provided on the Option Scope Bid Item Schedule. Incidental to CAMU Cover soil shall be gravel mulch rip-rap and soil binder. The unit price shall include all incidentals necessary for a complete CAMU cover soil placement.
- F. Providing for and complying with the requirements set forth in this Section for the Storm Water Channel Excavation and Embankment shall be measured as Lump Sum (LS), and payment shall be based on the lump sum price provided on the Bid Schedule. The following are considered incidental to Storm water channel excavation and embankment:
 - 1. Subgrade preparation
 - 2. Aggregate base
 - 3. All other necessary incidentals for complete installation of storm water channels.

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- G. Providing for and complying with the requirements set forth in this Section for the Storm Water Detention Basin Excavation and Embankment shall be measured as Lump Sum (LS), and payment shall be based on the lump sum price provided on the Bid Schedule. Lump sum shall include all necessary incidentals for complete installation of storm water detention basins.
- H. Providing for and complying with the requirements set forth in this Section for the Storm Water Channel Rip-Rap shall be measured as Lump Sum (LS), and payment shall be based on the lump sum price provided on the Bid Schedule. The following are considered incidental to Storm Water Collection Improvements:
1. Rip Rap
 2. Aggregate base
 3. Subgrade Preparation
 4. All necessary incidentals for complete installation of storm water concrete channels.
- I. Providing for and complying with the requirements set forth in this Section for Aggregate Base Road shall be measured as-lump sum (LS) and payment shall be based on the lump sum price provided on the Option Scope Bid Schedule. The price shall include all incidentals necessary for a complete aggregate base road installation.
- J. Providing for and complying with the requirements set forth in this Section for CAMU cover embankment channel grouted rip rap shall be measured as Square Foot (SF), and payment shall be based on the unit price provided on the Option Scope Bid Schedule. Specified items incidental to CAMU cover embankment channel rip rap are as follows:
1. Grout
 2. Aggregate Base
 3. Subgrade preparation
 4. All other necessary incidentals for a complete CAMU cover embankment channel installation.
- K. Providing for and complying with the following incidentals shall be included in the Earthworks and Remedial Excavation and Filling, Sections 02200 and 02205, costs on the Bid Schedules:
1. Construction and Dust Control Water
 2. Uncontaminated Dewatering
 3. On-site Contaminated Water Management and Disposal
 4. Dust Control
 5. Vacuum Trucks
 6. Spill Clean up

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7. Health and Safety
 - a. Personal Protective Equipment
 - b. Monitoring
8. Operations and Maintenance of the following items:
 - a. Parking Areas
 - b. Temporary Roads
 - c. Temporary Trailers
 - d. Temporary Utilities
 - e. On-site communications
 - f. Weather Protection
 - g. Contractor Generated Debris and Trash Control
 - h. Temporary Sanitary Facilities
 - i. Lighting
 - j. Material and Equipment Storage
 - k. Dust Control Water Storage
 - l. Vacuum Truck Staging Area
 - m. Decontamination Area
 - n. Construction Equipment
 - o. First Aid Facilities
 - p. Dust Control
 - q. Pollution Control
 - r. Traffic and Safety Control
 - s. Decontamination
 - t. Noise Control
9. And all other incidentals necessary for Earthwork

[END OF SECTION]

APPENDIX B-2
Contractor's Submittals



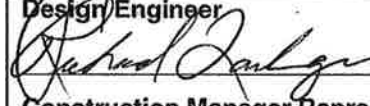


875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehring
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 01/14/2009	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02770-004G		Revision No.: - N/A	Date Submittal Rec'd by BRC: 01/08/2009
Specification Section(s): 02770.1.06 Geomembrane Submittals			
Submittal Subject: Additional CAMU Closure Geomembrane Resin/Roll Production Data			
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items			
Review Comments:			
Comment #	Reference	Comment	
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>			
 Design Engineer		 BRC Project Manager	
Date		Date	
1/14/09		1/14/09	
 Construction Manager Representative		Lee Farris, P.E.	
Date		Date	
1/14/09			
Distribution: <input checked="" type="checkbox"/> File			

02770-004G

60 mil micro
HDPE

ESI Landwell Basic Remed doc 10167

PO# 9036

Henderson, NV

METRIC DIMENSIONS

757 rolls 60 HD microspike

485

left

60 mil

ROLL #

wid

len

AREA

149 spools 5mm HD CHEVRON WELD ROD

wgt

lot #

prod

date

(K)952106 .08	7	125	875.0	60HD micro	757 TOT	706	3134	7181327	12/22/2008
(K)952107 .08	7	125	875.0	60HD micro	757 TOT	707	3136	7181327	12/22/2008
(K)952108 .08	7	125	875.0	60HD micro	757 TOT	708	3136	7181327	12/22/2008
(K)952109 .08	7	125	875.0	60HD micro	757 TOT	709	3152	7181327	12/22/2008
(K)952110 .08	7	125	875.0	60HD micro	757 TOT	710	3144	7181327	12/22/2008
(K)952111 .08	7	125	875.0	60HD micro	757 TOT	711	3158	7181327	12/22/2008
(K)952112 .08	7	125	875.0	60HD micro	757 TOT	712	3164	7181327	12/22/2008
(K)952113 .08	7	125	875.0	60HD micro	757 TOT	713	3164	7181327	12/22/2008
(K)952114 .08	7	125	875.0	60HD micro	757 TOT	714	3164	7181327	12/22/2008
(K)952115 .08	7	125	875.0	60HD micro	757 TOT	715	3166	7181327	12/22/2008
(K)952116 .08	7	125	875.0	60HD micro	757 TOT	716	3160	7181327	12/22/2008
(K)952117 .08	7	125	875.0	60HD micro	757 TOT	717	3162	7181327	12/22/2008
(K)952118 .08	7	125	875.0	60HD micro	757 TOT	718	3164	7181327	12/22/2008
(K)952119 .08	7	125	875.0	60HD micro	757 TOT	719	3162	7181327	12/22/2008
(K)952120 .08	7	125	875.0	60HD micro	757 TOT	720	3158	7181327	12/22/2008
(K)952121 .08	7	125	875.0	60HD micro	757 TOT	721	3156	7181327	12/22/2008
(K)952222 .08	7	125	875.0	60HD micro	757 TOT	722	3158	7181327	12/23/2008
(K)952223 .08	7	125	875.0	60HD micro	757 TOT	723	3158	7181327	12/23/2008
(K)952224 .08	7	125	875.0	60HD micro	757 TOT	724	3158	7181327	12/23/2008
(K)952225 .08	7	125	875.0	60HD micro	757 TOT	725	3156	7181327	12/23/2008
(K)952226 .08	7	125	875.0	60HD micro	757 TOT	726	3156	7181327	12/23/2008
(K)952227 .08	7	125	875.0	60HD micro	757 TOT	727	3156	7181327	12/23/2008
(K)952228 .08	7	125	875.0	60HD micro	757 TOT	728	3158	7181327	12/23/2008
(K)952229 .08	7	125	875.0	60HD micro	757 TOT	729	3156	7181327	12/23/2008
(K)952230 .08	7	125	875.0	60HD micro	757 TOT	730	3160	7181327	12/23/2008
(K)952231 .08	7	125	875.0	60HD micro	757 TOT	731	3166	7181327	12/23/2008
(K)952232 .08	7	125	875.0	60HD micro	757 TOT	732	3160	7181327	12/23/2008
(K)952233 .08	7	125	875.0	60HD micro	757 TOT	733	3170	7181327	12/23/2008
(K)952234 .08	7	125	875.0	60HD micro	757 TOT	734	3172	7181327	12/23/2008
(K)952235 .08	7	125	875.0	60HD micro	757 TOT	735	3172	7181327	12/23/2008
(K)952236 .08	7	125	875.0	60HD micro	757 TOT	736	3172	7181327	12/23/2008
(K)952237 .08	7	125	875.0	60HD micro	757 TOT	737	3168	7181327	12/23/2008
(K)952238 .08	7	125	875.0	60HD micro	757 TOT	738	3164	7181327	12/23/2008
(K)952239 .08	7	125	875.0	60HD micro	757 TOT	739	3170	7181327	12/23/2008
(K)952240 .08	7	125	875.0	60HD micro	757 TOT	740	3166	7181327	12/23/2008
(K)952241 .08	7	125	875.0	60HD micro	757 TOT	741	3160	7181327	12/23/2008
(K)952242 .08	7	125	875.0	60HD micro	757 TOT	742	3158	7181327	12/23/2008
(K)952243 .08	7	125	875.0	60HD micro	757 TOT	743	3152	7181327	12/23/2008
(K)952344 .08	7	125	875.0	60HD micro	757 TOT	744	3148	7181327	12/24/2008
(K)952345 .08	7	125	875.0	60HD micro	757 TOT	745	3146	7181327	12/24/2008
(K)952346 .08	7	125	875.0	60HD micro	757 TOT	746	3142	7181327	12/24/2008
(K)952347 .08	7	125	875.0	60HD micro	757 TOT	747	3144	7181327	12/24/2008
(K)952348 .08	7	125	875.0	60HD micro	757 TOT	748	3140	7181327	12/24/2008
(K)902101 .09	7	125	875.0	60HD micro	757 TOT	749	3144	7181327	1/5/2008
(K)902102 .09	7	125	875.0	60HD micro	757 TOT	750	3142	7181327	1/5/2008
(K)902103 .09	7	125	875.0	60HD micro	757 TOT	751	3136	7181327	1/5/2008
(K)902104 .09	7	125	875.0	60HD micro	757 TOT	752	3136	7181327	1/5/2008
(K)902105 .09	7	125	875.0	60HD micro	757 TOT	753	3144	7181327	1/5/2008
(K)902106 .09	7	125	875.0	60HD micro	757 TOT	754	3148	7181327	1/5/2008
(K)902107 .09	7	125	875.0	60HD micro	757 TOT	755	3146	7181327	1/5/2008
(K)902108 .09	7	125	875.0	60HD micro	757 TOT	756	3150	7181327	1/5/2008
(K)902109 .09	7	125	875.0	60HD micro	757 TOT	757	3150	7181327	1/5/2008

☒ No Exception Taken ☐ Correct As Noted
☐ Revise And Resubmit ☐ Submit Specified Item ☐ Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By: [Signature] Date: 1/14/09
 BRC Initials: LC

BASIC REMEDIATION COMPANY



quality certificate

ROLL # **952107-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

		METRIC	ENGLISH
MIN:	1.54	mm	61 mil
MAX:	1.63	mm	64 mil
AVE:	1.57	mm	62 mil

Thickness.....	1.5	mm	60 mil
Length.....	125	m	410.1 feet
Width.....	7.00	m;	23.0 feet

Asperity GRI GM12: **31** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.22

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

29 N/mm

165 ppi

2,666 psi

Average Strength @ Break

28 N/mm

162 ppi

2,622 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

16.42

Lo = 2.0" Break

Average Elongation @ Break

%

425.8

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

305.9 N

68.774 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

408.3 N

91.805 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

636.0 N

142.98 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic.FRM
REV 03
12/23/05



quality certificate

ROLL # **952108-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.49 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.60 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **25** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.22
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	29 N/mm	165 ppi	2,666 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	28 N/mm	162 ppi	2,622 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	16.42
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	425.8
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	305.9 N	68.774 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	408.3 N	91.805 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	636.0 N	142.98 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic.FRM
REV 03
12/23/05



quality certificate

ROLL # **952109-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.56 mm 61 mil**
MAX: **1.61 mm 63 mil**
AVE: **1.59 mm 63 mil**

Thickness..... **1.5 mm 60 mil**
Length..... **125 m 410.1 feet**
Width..... **7.00 m; 23.0 feet**

Asperity GRI GM12: **25 mil**
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.17

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

27 N/mm

156 ppi

2,497 psi

Average Strength @ Break

32 N/mm

185 ppi

2,959 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

16.55

Lo = 2.0" Break

Average Elongation @ Break

%

507.3

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

306.0 N

68.804 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

444.9 N

100.01 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

601.5 N

135.23 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic.FRM
REV 03
12/23/05



quality certificate

ROLL # **952110-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

	METRIC	ENGLISH
MIN:	1.50 mm	59 mil
MAX:	1.60 mm	63 mil
AVE:	1.57 mm	62 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **26** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.17**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **27** N/mm **154** psi **2,497** psi

Average Strength @ Break **32** N/mm **183** psi **2,959** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **16.55**

Lo = 2.0" Break

Average Elongation @ Break % **507.3**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **306.0** N **68.804** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **444.9** N **100.01** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **601.5** N **135.23** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDm1c.FRM
REV 03
12/23/05



quality certificate

ROLL # **952111-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.47 mm	58 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.60 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.53** mm **60** mil

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.17
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	26 N/mm	150 ppi	2,497 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)	Average Strength @ Break	31 N/mm	178 ppi	2,959 psi

Elongation ASTM D6693	Average Elongation @ Yield	%	16.55
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	507.3
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	306.0 N	68.804 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	444.9 N	100.01 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	601.5 N	135.23 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic.FRM
REV 03
12/23/05



quality certificate

ROLL # **952112-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.55 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.62 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.58 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792 Density g/cc **.946**

MFI ASTM D1238
COND. E Melt Flow Index 190°C /2160 g g/10 min **.25**
GRADE: **K307**

Carbon Black Content
ASTM D4218 Range % **2.17**

Carbon Black Dispersion
ASTM D5596 Category **10 in Cat 1**

Tensile Strength
ASTM D6693 Average Strength @ Yield **27 N/mm 155 ppi 2,497 psi**
ASTM D638 (Modified)
(2 inches / minute) Average Strength @ Break **32 N/mm 184 ppi 2,959 psi**

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute) Average Elongation @ Yield % **16.55**
Lo = 1.3" Yield

Lo = 2.0" Break Average Elongation @ Break % **507.3**

Dimensional Stability
ASTM D1204 (Modified) Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified) Average Tear Resistance **306.0 N 68.804 lbs**

Puncture Resistance
FTMS 101 Method 2065 (Modified) Load **444.9 N 100.01 lbs**

Puncture Resistance
ASTM D4833 (Modified) Load **601.5 N 135.23 lbs**

ESCR
ASTM D1693 Minimum Hrs w/o Failures 1500 hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397 pass / fail @ 30% 300 hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic FRM
REV 03
12/23/05



quality certificate

ROLL # **952113-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.57 mm	62 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.62 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **26** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.60 mm 63 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc	.946
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.17
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Carbon Black Dispersion ASTM D5596	Category		10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	28 N/mm	157 ppi	2,497 psi
ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	33 N/mm	186 ppi	2,959 psi

Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	16.55
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Lo = 2.0" Break	Average Elongation @ Break	%	507.3
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	306.0 N	68.804 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	444.9 N	100.01 lbs
--	------	---------	------------

Puncture Resistance ASTM D4833 (Modified)	Load	601.5 N	135.23 lbs
--	------	---------	------------

ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
Quality Control Department

60HDmic.FRM
REV 03
12/23/05



quality certificate

ROLL # **952114-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.55 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.68 mm	66 mil	Width.....	7.00 m	23.0 feet
Asperity GRI GM12: 28 mil	AVE:	1.58 mm	62 mil			
ODD #: TOP				OIT(Standard) ASTM D3895 minutes	208	TEST RESULTS
EVEN #: BOTTOM						

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.20
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	27 N/mm	153 ppi	2,457 psi
ASTM D6693				
ASTM D638 (Modified)	Average Strength @ Break	31 N/mm	179 ppi	2,881 psi
(2 inches / minute)				

Elongation ASTM D6693	Average Elongation @ Yield	%	14.03
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	484.7
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	299.2 N	67.255 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	420.9 N	94.625 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	619.9 N	139.36 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

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quality certificate

ROLL #

952115-08

Lot #:

7181327Liner Type: **MICROSPIKE™ HDPE**

Measurement

ASTM D5994

(Modified)

MIN:

METRIC

ENGLISH

1.53 mm 60 mil

MAX:

1.62 mm 64 mil

AVE:

1.57 mm 62 mil

Thickness..... 1.5 mm 60 mil

Length..... 125 m 410.1 feet

Width..... 7.00 m; 23.0 feet

TEST

RESULTS

Asperity GRI GM12: 28 mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes 208

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.20

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

27 N/mm

152 ppi

2,457 psi

Average Strength @ Break

31 N/mm

178 ppi

2,881 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

14.03

Lo = 2.0" Break

Average Elongation @ Break

%

484.7

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

299.2 N

67.255 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

420.9 N

94.625 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

619.9 N

139.36 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
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ROLL # **952116-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.56 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.60 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **26** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.59 mm 63 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.20
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	27 N/mm	154 psi	2,457 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	180 psi	2,881 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	14.03
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	484.7
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	299.2 N	67.255 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	420.9 N	94.625 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	619.9 N	139.36 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

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ROLL # **952117-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.53 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.63 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.59** mm **63** mil

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc	.946
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.20
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Carbon Black Dispersion ASTM D5596	Category	10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	27 N/mm	154 ppi	2,457 psi
ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	32 N/mm	180 ppi	2,881 psi

Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	14.03
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Lo = 2.0" Break	Average Elongation @ Break	%	484.7
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	299.2 N	67.255 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	420.9 N	94.625 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	619.9 N	139.36 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

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ROLL # **952118-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.53** mm **60** mil
MAX: **1.60** mm **63** mil
AVE: **1.57** mm **62** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.20**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **27** N/mm **152** psi **2,457** psi

Average Strength @ Break **31** N/mm **178** psi **2,881** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **14.03**

Lo = 2.0" Break

Average Elongation @ Break % **484.7**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **299.2** N **67.255** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **420.9** N **94.625** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **619.9** N **139.36** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures 1500 hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% 300 hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

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ROLL # **952119-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.49 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.66 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.60 mm 63 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.945
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.18
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	162 ppi	2,574 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	184 ppi	2,915 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.96
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	506.6
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	309.4 N	69.559 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	442.4 N	99.458 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	637.0 N	143.20 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

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ROLL # **952120-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.53 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.60 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.945
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.18
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	159 ppi	2,574 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	180 ppi	2,915 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.96
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	506.6
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	309.4 N	69.559 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	442.4 N	99.458 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	637.0 N	143.20 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
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ROLL # **952121-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.49 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.58 mm	62 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.55 mm 61 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc	.945
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.18
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Carbon Black Dispersion ASTM D5596	Category	10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	28 N/mm	157 ppi	2,574 psi
ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	31 N/mm	178 ppi	2,915 psi

Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	15.96
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Lo = 2.0" Break	Average Elongation @ Break	%	506.6
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	309.4 N	69.559 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	442.4 N	99.458 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	637.0 N	143.20 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-22-08**

Signature: 
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ROLL # **952222-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.53** mm **60** mil
MAX: **1.63** mm **64** mil
AVE: **1.59** mm **63** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

Asperity GRI GM12: **24** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.945**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.18**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **28** N/mm **161** ppi **2,574** psi

Average Strength @ Break **32** N/mm **182** ppi **2,915** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **15.96**

Lo = 2.0" Break

Average Elongation @ Break % **506.6**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **309.4** N **69.559** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **442.4** N **99.458** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **637.0** N **143.20** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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quality certificate

ROLL # **952223-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.66 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **25** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.58** mm **62** mil

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.945
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.18
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	160 ppi	2,574 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	181 ppi	2,915 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.96
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	506.6
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	309.4 N	69.559 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	442.4 N	99.458 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	637.0 N	143.20 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
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ROLL # **952224-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.59 mm	63 mil	Width.....	7.00 m	23.0 feet
Asperity GRI GM12:	33 mil	AVE:	1.55 mm	61 mil		
ODD #: TOP	EVEN #: BOTTOM					

TEST RESULTS

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE:	K307		

Carbon Black Content	Range	%	2.19
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	157 ppi	2,578 psi
ASTM D6693				
ASTM D638 (Modified)	Average Strength @ Break	31 N/mm	180 ppi	2,942 psi
(2 inches / minute)				

Elongation ASTM D6693	Average Elongation @ Yield	%	15.59
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	493.0
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	303.4 N	68.205 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	406.0 N	91.283 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.5 N	139.95 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
Quality Control Department

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ROLL # **952225-08**Lot #: **7181327**Liner Type: **MICROSPIKE™ HDPE**

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Measurement
ASTM D5994
(Modified)MIN:
MAX:

METRIC	ENGLISH
1.52 mm	60 mil
1.65 mm	65 mil
1.58 mm	62 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **32** mil
ODD #: TOP EVEN #: BOTTOM

AVE:

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**Specific Gravity
ASTM D792

Density

g/cc

.946MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25Carbon Black Content
ASTM D4218

Range

%

2.19Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

28 N/mm**160** ppi**2,578** psi

Average Strength @ Break

32 N/mm**183** ppi**2,942** psiElongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

15.59

Lo = 2.0" Break

Average Elongation @ Break

%

493.0Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

303.4 N**68.205** lbsPuncture Resistance
FTMS 101 Method 2065 (Modified)

Load

406.0 N**91.283** lbsPuncture Resistance
ASTM D4833 (Modified)

Load

622.5 N**139.95** lbsESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIEDNotched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOINGCustomer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**Date: **12-23-08**Signature: 
Quality Control Department60HDm.c.FRM
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ROLL # **952226-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

		METRIC	ENGLISH
MIN:	1.51	mm	59 mil
MAX:	1.61	mm	63 mil
AVE:	1.57	mm	62 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **33** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.19

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

28 N/mm

159 ppi

2,578 psi

Average Strength @ Break

32 N/mm

182 ppi

2,942 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

15.59

Lo = 2.0" Break

Average Elongation @ Break

%

493.0

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

303.4 N

68.205 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

406.0 N

91.283 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

622.5 N

139.95 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
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ROLL # **952227-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.50 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.57 mm	62 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **36** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.54 mm 61 mil** OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc	.946
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.19
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Carbon Black Dispersion ASTM D5596	Category		10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	27 N/mm	156 psi	2,578 psi
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ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	31 N/mm	178 psi	2,942 psi
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Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	15.59
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Lo = 2.0" Break	Average Elongation @ Break	%	493.0
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	303.4 N	68.205 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	406.0 N	91.283 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	622.5 N	139.95 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952228-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.65 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **35** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.19
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	159 psi	2,578 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	182 psi	2,942 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.59
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	493.0
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	303.4 N	68.205 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	406.0 N	91.283 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.5 N	139.95 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
Quality Control Department

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ROLL # **952229-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

	METRIC	ENGLISH
MIN:	1.56 mm	61 mil
MAX:	1.64 mm	65 mil
AVE:	1.59 mm	63 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **34** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.26**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **28** N/mm **158** ppi **2,528** psi

Average Strength @ Break **33** N/mm **187** ppi **2,981** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **15.42**

Lo = 2.0" Break

Average Elongation @ Break % **498.7**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **303.8** N **68.292** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **428.1** N **96.242** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **611.3** N **137.44** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952230-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.49 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.57 mm	62 mil	Width.....	7.00 m	23.0 feet
Asperity GRI GM12:	27 mil	AVE:	1.54 mm	61 mil		
ODD #: TOP	EVEN #: BOTTOM			OIT(Standard) ASTM D3895	minutes	208

TEST RESULTS

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE:	K307		

Carbon Black Content	Range	%	2.26
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	27 N/mm	153 ppi	2,528 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	32 N/mm	181 ppi	2,981 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.42
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	498.7
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	303.8 N	68.292 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	428.1 N	96.242 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	611.3 N	137.44 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination: **Henderson, NV**

Date: **12-23-08**

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ROLL # **952231-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.57** mm **62** mil
MAX: **1.62** mm **64** mil
AVE: **1.59** mm **63** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

TEST RESULTS
OIT(Standard) ASTM D3895 minutes **208**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.26**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **28** N/mm **158** ppi **2,528** psi

Average Strength @ Break **33** N/mm **187** ppi **2,981** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **15.42**

Lo = 2.0" Break

Average Elongation @ Break % **498.7**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **303.8** N **68.292** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **428.1** N **96.242** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **611.3** N **137.44** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952232-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.62 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.59 mm 63 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.26
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	158 ppi	2,528 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	33 N/mm	187 ppi	2,981 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.42
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	498.7
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	303.8 N	68.292 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	428.1 N	96.242 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	611.3 N	137.44 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952233-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.59 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **30** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.56 mm 61 mil**
OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.26
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	27 N/mm	155 ppi	2,528 psi
ASTM D6693				
ASTM D638 (Modified)	Average Strength @ Break	32 N/mm	183 ppi	2,981 psi
(2 inches / minute)				

Elongation ASTM D6693	Average Elongation @ Yield	%	15.42
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	498.7
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	303.8 N	68.292 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	428.1 N	96.242 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	611.3 N	137.44 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
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ROLL # **952234-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

		METRIC	ENGLISH
MIN:	1.53	mm	60 mil
MAX:	1.64	mm	65 mil
AVE:	1.60	mm	63 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208**

TEST RESULTS

Specific Gravity ASTM D792	Density	g/cc	.945
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.19
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Carbon Black Dispersion ASTM D5596	Category	10 in Cat 1
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Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	28 N/mm	162 ppi	2,567 psi
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Average Strength @ Break	31 N/mm	179 ppi	2,849 psi
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Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	15.70
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Lo = 2.0" Break	Average Elongation @ Break	%	475.9
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	307.5 N	69.139 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	420.6 N	94.549 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	616.0 N	138.48 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
Quality Control Department

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ROLL # **952235-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

		METRIC	ENGLISH
MIN:	1.54	mm	61 mil
MAX:	1.60	mm	63 mil
AVE:	1.58	mm	62 mil

Thickness.....	1.5	mm	60 mil
Length.....	125	m	410.1 feet
Width.....	7.00	m	23.0 feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.945

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.19

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

28 N/mm

160 ppi

2,567 psi

Average Strength @ Break

31 N/mm

177 ppi

2,849 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

15.70

Lo = 2.0" Break

Average Elongation @ Break

%

475.9

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

307.5 N

69.139 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

420.6 N

94.549 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

616.0 N

138.48 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
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ROLL # **952236-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.50** mm **59** mil
MAX: **1.58** mm **62** mil
AVE: **1.54** mm **61** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.945**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.19**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **27** N/mm **156** ppi **2,567** psi

Average Strength @ Break **30** N/mm **173** ppi **2,849** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **15.70**

Lo = 2.0" Break

Average Elongation @ Break % **475.9**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **307.5** N **69.139** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **420.6** N **94.549** lbs

Puncture Resistance
ASTM D4833 (Modified)

Load **616.0** N **138.48** lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

Signature: 
Quality Control Department

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12/23/05



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ROLL # **952237-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.59 mm 63 mil**
OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity Density g/cc **.945**
ASTM D792

MFI ASTM D1238 Melt Flow Index 190°C /2160 g g/10 min **.25**
COND. E
GRADE: **K307**

Carbon Black Content Range % **2.19**
ASTM D4218

Carbon Black Dispersion Category **10 in Cat 1**
ASTM D5596

Tensile Strength Average Strength @ Yield **28 N/mm 161 psi 2,567 psi**
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Break **31 N/mm 178 psi 2,849 psi**

Elongation ASTM D6693 Average Elongation @ Yield % **15.70**
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Lo = 2.0" Break Average Elongation @ Break % **475.9**

Dimensional Stability Average Dimensional change % **-0.21**
ASTM D1204 (Modified)

Tear Resistance Average Tear Resistance **307.5 N 69.139 lbs**
ASTM D-1004 (Modified)

Puncture Resistance Load **420.6 N 94.549 lbs**
FTMS 101 Method 2065 (Modified)

Puncture Resistance Load **616.0 N 138.48 lbs**
ASTM D4833 (Modified)

ESCR Minimum Hrs w/o Failures **1500 hrs CERTIFIED**
ASTM D1693

Notched Constant Tensile Load pass / fail @ 30% **300 hrs ONGOING**
ASTM D5397

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

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ROLL # **952238-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.62 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **26** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.58 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.945
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.19
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	160 ppi	2,567 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	31 N/mm	177 ppi	2,849 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.70
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	475.9
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	307.5 N	69.139 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	420.6 N	94.549 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	616.0 N	138.48 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**
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ROLL # **952239-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.54** mm **61** mil
MAX: **1.59** mm **63** mil
AVE: **1.57** mm **62** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.20

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield

30 N/mm

169 ppi

2,727 psi

Average Strength @ Break

33 N/mm

189 ppi

3,060 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield

%

16.25

Lo = 2.0" Break

Average Elongation @ Break

%

490.2

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance

309.5 N

69.585 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load

430.2 N

96.707 lbs

Puncture Resistance
ASTM D4833 (Modified)

Load

588.1 N

132.21 lbs

ESCR
ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

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ROLL # **952240-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.53 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.66 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.60** mm **63** mil

OIT(Standard) ASTM D3895 minutes **208**

TEST RESULTS

Specific Gravity ASTM D792	Density	g/cc	.946
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.20
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Carbon Black Dispersion ASTM D5596	Category		10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	30 N/mm	172 ppi	2,727 psi
ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	34 N/mm	193 ppi	3,060 psi

Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%	16.25
Lo = 2.0" Break	Average Elongation @ Break	%	490.2

Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	309.5 N	69.585 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	430.2 N	96.707 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	588.1 N	132.21 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952241-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)
Asperity GRI GM12: **27** mil
ODD #: TOP EVEN #: BOTTOM

METRIC ENGLISH
MIN: **1.52** mm **60** mil
MAX: **1.61** mm **63** mil
AVE: **1.58** mm **62** mil

Thickness..... **1.5** mm **60** mil
Length..... **125** m **410.1** feet
Width..... **7.00** m; **23.0** feet

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792
Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**
Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218
Range % **2.20**

Carbon Black Dispersion
ASTM D5596
Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Average Strength @ Yield **30** N/mm **170** ppi **2,727** psi
Average Strength @ Break **33** N/mm **190** ppi **3,060** psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield
Average Elongation @ Yield % **16.25**
Lo = 2.0" Break
Average Elongation @ Break % **490.2**

Dimensional Stability
ASTM D1204 (Modified)
Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)
Average Tear Resistance **309.5** N **69.585** lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)
Load **430.2** N **96.707** lbs

Puncture Resistance
ASTM D4833 (Modified)
Load **588.1** N **132.21** lbs

ESCR
ASTM D1693
Minimum Hrs w/o Failures **1500** hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397
pass / fail @ 30% **300** hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**
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ROLL # **952242-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.57 mm	62 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.65 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.60 mm 63 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.20
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	30 N/mm	172 ppi	2,727 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	34 N/mm	193 ppi	3,060 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	16.25
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	490.2
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	309.5 N	69.585 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	430.2 N	96.707 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	588.1 N	132.21 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952243-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

	METRIC	ENGLISH
MIN:	1.55 mm	61 mil
MAX:	1.65 mm	65 mil
AVE:	1.62 mm	64 mil

Thickness.....	1.5 mm	60 mil
Length.....	125 m	410.1 feet
Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **30 mil**
ODD #: TOP EVEN #: BOTTOM

ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.20**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **30 N/mm** **174 psi** **2,727 psi**

Average Strength @ Break **34 N/mm** **195 psi** **3,060 psi**

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield
Lo = 2.0" Break

Average Elongation @ Yield % **16.25**

Average Elongation @ Break % **490.2**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **309.5 N** **69.585 lbs**

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **430.2 N** **96.707 lbs**

Puncture Resistance
ASTM D4833 (Modified)

Load **588.1 N** **132.21 lbs**

ESCR
ASTM D1693

Minimum Hrs w/o Failures 1500 hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% 300 hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-23-08**

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ROLL # **952344-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.51 mm 59 mil**
MAX: **1.60 mm 63 mil**
AVE: **1.55 mm 61 mil**

Thickness..... **1.5 mm 60 mil**
Length..... **125 m 410.1 feet**
Width..... **7.00 m; 23.0 feet**

Asperity GRI GM12: **28 mil**
ODD #: TOP EVEN #: BOTTOM

AVE: **1.55 mm 61 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.19**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **28 N/mm 161 ppi 2,644 psi**

Average Strength @ Break **29 N/mm 163 ppi 2,670 psi**

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield

Average Elongation @ Yield % **15.56**

Lo = 2.0" Break

Average Elongation @ Break % **434.1**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **305.7 N 68.719 lbs**

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **414.1 N 93.096 lbs**

Puncture Resistance
ASTM D4833 (Modified)

Load **633.2 N 142.36 lbs**

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500 hrs CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300 hrs ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-24-08**

Signature: 
Quality Control Department

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ROLL # **952345-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.51 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.63 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **31** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.58 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.19
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	29 N/mm	164 ppi	2,644 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	29 N/mm	166 ppi	2,670 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.56
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	434.1
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	305.7 N	68.719 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	414.1 N	93.096 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	633.2 N	142.36 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-24-08**

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ROLL # **952346-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)

METRIC ENGLISH
MIN: **1.52 mm 60 mil**
MAX: **1.64 mm 65 mil**
AVE: **1.59 mm 63 mil**

Thickness..... **1.5 mm 60 mil**
Length..... **125 m 410.1 feet**
Width..... **7.00 m 23.0 feet**

Asperity GRI GM12: **30 mil**
ODD #: TOP EVEN #: BOTTOM

TEST RESULTS
OIT(Standard) ASTM D3895 minutes **208**

Specific Gravity
ASTM D792

Density g/cc **.946**

MFI ASTM D1238
COND. E
GRADE: **K307**

Melt Flow Index 190°C /2160 g g/10 min **.25**

Carbon Black Content
ASTM D4218

Range % **2.19**

Carbon Black Dispersion
ASTM D5596

Category **10 in Cat 1**

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)

Average Strength @ Yield **29 N/mm 165 ppi 2,644 psi**

Average Strength @ Break **29 N/mm 167 ppi 2,670 psi**

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield
Lo = 2.0" Break

Average Elongation @ Yield % **15.56**

Average Elongation @ Break % **434.1**

Dimensional Stability
ASTM D1204 (Modified)

Average Dimensional change % **-0.21**

Tear Resistance
ASTM D-1004 (Modified)

Average Tear Resistance **305.7 N 68.719 lbs**

Puncture Resistance
FTMS 101 Method 2065 (Modified)

Load **414.1 N 93.096 lbs**

Puncture Resistance
ASTM D4833 (Modified)

Load **633.2 N 142.36 lbs**

ESCR
ASTM D1693

Minimum Hrs w/o Failures **1500 hrs CERTIFIED**

Notched Constant Tensile Load
ASTM D5397

pass / fail @ 30% **300 hrs ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **12-24-08**

Signature: 
Quality Control Department

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ROLL # **952347-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.47 mm	58 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet
Asperity GRI GM12:	31 mil	AVE:	1.55 mm	61 mil		
ODD #: TOP	EVEN #: BOTTOM					

OIT(Standard) ASTM D3895 minutes **208**

TEST RESULTS

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.19
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	161 ppi	2,644 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	29 N/mm	163 ppi	2,670 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.56
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			

Lo = 2.0" Break	Average Elongation @ Break	%	434.1
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Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	305.7 N	68.719 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	414.1 N	93.096 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	633.2 N	142.36 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failure's	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date:.....**12-24-08**

Signature.....
Quality Control Department

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quality certificate

ROLL # **952348-08**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.58 mm	62 mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12:	30 mil	AVE:	1.56 mm	61 mil		
ODD #: TOP	EVEN #: BOTTOM					

TEST RESULTS

Specific Gravity ASTM D792	Density					.946
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g					.25
Carbon Black Content ASTM D4218	Range					2.19
Carbon Black Dispersion ASTM D5596	Category					10 in Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	28 N/mm	162 ppi	2,644 psi		
	Average Strength @ Break	29 N/mm	164 ppi	2,670 psi		
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%				15.56
	Average Elongation @ Break	%				434.1
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-0.21
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	305.7 N				68.719 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	414.1 N				93.096 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	633.2 N				142.36 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date:..... **12-24-08**

Signature.....
Quality Control Department

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quality certificate

ROLL # **902101-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.65 mm	65 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **28** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.58 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.46
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	159 ppi	2,553 psi
ASTM D6693				
ASTM D638 (Modified)	Average Strength @ Break	34 N/mm	194 ppi	3,116 psi
(2 inches / minute)				

Elongation ASTM D6693	Average Elongation @ Yield	%	15.98
ASTM D638 (Modified)			
(2 inches / minute)	Average Elongation @ Break	%	506.4
Lo = 1.3" Yield			
Lo = 2:0" Break			

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	300.4 N	67.536 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	413.0 N	92.860 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.0 N	139.82 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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quality certificate

ROLL # **902102-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement
ASTM D5994
(Modified)
MIN: 1.54 mm 61 mil
MAX: 1.60 mm 63 mil
AVE: 1.57 mm 62 mil

Thickness..... 1.5 mm 60 mil
Length..... 125 m 410.1 feet
Width..... 7.00 m; 23.0 feet

Asperity GRI GM12: 31 mil
ODD #: TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes 208
TEST RESULTS

Specific Gravity
ASTM D792
Density g/cc .946

MFI ASTM D1238
COND. E
GRADE: **K307**
Melt Flow Index 190°C /2160 g g/10 min .25

Carbon Black Content
ASTM D4218
Range % 2.46

Carbon Black Dispersion
ASTM D5596
Category 10 in Cat 1

Tensile Strength
ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Average Strength @ Yield 28 N/mm 158 psi 2,553 psi
Average Strength @ Break 34 N/mm 193 psi 3,116 psi

Elongation ASTM D6693
ASTM D638 (Modified)
(2 inches / minute)
Lo = 1.3" Yield
Lo = 2.0" Break
Average Elongation @ Yield % 15.98
Average Elongation @ Break % 506.4

Dimensional Stability
ASTM D1204 (Modified)
Average Dimensional change % -0.21

Tear Resistance
ASTM D-1004 (Modified)
Average Tear Resistance 300.4 N 67.536 lbs

Puncture Resistance
FTMS 101 Method 2065 (Modified)
Load 413.0 N 92.860 lbs

Puncture Resistance
ASTM D4833 (Modified)
Load 622.0 N 139.82 lbs

ESCR
ASTM D1693
Minimum Hrs w/o Failures 1500 hrs **CERTIFIED**

Notched Constant Tensile Load
ASTM D5397
pass / fail @ 30% 300 hrs **ONGOING**

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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REV 03
12/23/05



quality certificate

ROLL # **902103-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.54 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.62 mm	64 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **31** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.46
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	158 ppi	2,553 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	34 N/mm	193 ppi	3,116 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.98
ASTM D638 (Modified)			
(2 inches / minute)			

Lo = 1.3" Yield			
Lo = 2.0" Break	Average Elongation @ Break	%	506.4

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	300.4 N	67.536 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	413.0 N	92.860 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.0 N	139.82 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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ROLL # **902104-09**Lot #: **7181327**Liner Type: **MICROSPIKE™ HDPE**

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Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.59 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **30** mil
ODD #: TOP EVEN #: BOTTOMAVE: **1.57 mm 62 mil**OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.46
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	158 ppi	2,553 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	34 N/mm	193 ppi	3,116 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.98
ASTM D638 (Modified)			
(2 inches / minute)			
Lo = 1.3" Yield			
Lo = 2.0" Break	Average Elongation @ Break	%	506.4

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	300.4 N	67.536 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	413.0 N	92.860 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.0 N	139.82 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**Date: **1-5-09**Signature:
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quality certificate

ROLL # **902105-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.45 mm	57 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.57 mm	62 mil	Width.....	7.00 m	23.0 feet
Asperity GRI GM12:	27 mil	AVE:	1.52 mm	60 mil		
ODD #: TOP	EVEN #: BOTTOM			OIT(Standard) ASTM D3895	minutes	208

TEST RESULTS

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE:	K307		

Carbon Black Content	Range	%	2.46
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	27 N/mm	153 ppi	2,553 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	33 N/mm	186 ppi	3,116 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	15.98
ASTM D638 (Modified)			
(2 inches / minute)			

Lo = 1.3" Yield			
Lo = 2.0" Break	Average Elongation @ Break	%	506.4

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	300.4 N	67.536 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	413.0 N	92.860 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	622.0 N	139.82 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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quality certificate

ROLL # **902106-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.52 mm	60 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **22** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57** mm **62** mil

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.30
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	162 ppi	2,622 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	30 N/mm	173 ppi	2,806 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	16.49
ASTM D638 (Modified)			
(2 inches / minute)			

Lo = 1.3" Yield			
Lo = 2.0" Break	Average Elongation @ Break	%	475.5

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	302.3 N	67.971 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	410.4 N	92.255 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	634.9 N	142.74 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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quality certificate

ROLL # **902107-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.51 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57** mm **62** mil

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc	.946
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MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min	.25
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Carbon Black Content ASTM D4218	Range	%	2.30
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Carbon Black Dispersion ASTM D5596	Category	10 in Cat 1
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Tensile Strength ASTM D6693	Average Strength @ Yield	28 N/mm	162 psi	2,622 psi
ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Break	30 N/mm	173 psi	2,806 psi

Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Elongation @ Yield	%	16.49
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Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Break	%	475.5
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Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%	-0.21
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Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	302.3 N	67.971 lbs
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Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	410.4 N	92.255 lbs
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Puncture Resistance ASTM D4833 (Modified)	Load	634.9 N	142.74 lbs
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ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
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Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs	ONGOING
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Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date:..... **1-5-09**

Signature.....
Quality Control Department

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quality certificate

ROLL # **902108-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.55 mm	61 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity	Density	g/cc	.946
ASTM D792			

MFI ASTM D1238	Melt Flow Index 190°C /2160 g	g/10 min	.25
COND. E			
GRADE: K307			

Carbon Black Content	Range	%	2.30
ASTM D4218			

Carbon Black Dispersion	Category	10 in Cat 1
ASTM D5596		

Tensile Strength	Average Strength @ Yield	28 N/mm	162 ppi	2,622 psi
ASTM D6693				
ASTM D638 (Modified)				
(2 inches / minute)				

Average Strength @ Break	30 N/mm	173 ppi	2,806 psi
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Elongation ASTM D6693	Average Elongation @ Yield	%	16.49
ASTM D638 (Modified)			
(2 inches / minute)			

Lo = 1.3" Yield			
Lo = 2.0" Break	Average Elongation @ Break	%	475.5

Dimensional Stability	Average Dimensional change	%	-0.21
ASTM D1204 (Modified)			

Tear Resistance	Average Tear Resistance	302.3 N	67.971 lbs
ASTM D-1004 (Modified)			

Puncture Resistance	Load	410.4 N	92.255 lbs
FTMS 101 Method 2065 (Modified)			

Puncture Resistance	Load	634.9 N	142.74 lbs
ASTM D4833 (Modified)			

ESCR	Minimum Hrs w/o Failures	1500 hrs	CERTIFIED
ASTM D1693			

Notched Constant Tensile Load	pass / fail @ 30%	300 hrs	ONGOING
ASTM D5397			

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date:..... **1-5-09**

Signature.....
Quality Control Department

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12/23/05



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ROLL # **902109-09**

Lot #: **7181327**

Liner Type: **MICROSPIKE™ HDPE**

Measurement		METRIC	ENGLISH	Thickness.....	1.5 mm	60 mil
ASTM D5994	MIN:	1.51 mm	59 mil	Length.....	125 m	410.1 feet
(Modified)	MAX:	1.61 mm	63 mil	Width.....	7.00 m	23.0 feet

Asperity GRI GM12: **29** mil
ODD #: TOP EVEN #: BOTTOM

AVE: **1.57 mm 62 mil**

OIT(Standard) ASTM D3895 minutes **208** **TEST RESULTS**

Specific Gravity
ASTM D792

Density

g/cc

.946

MFI ASTM D1238

COND. E

GRADE:

K307

Melt Flow Index 190°C /2160 g

g/10 min

.25

Carbon Black Content
ASTM D4218

Range

%

2.30

Carbon Black Dispersion
ASTM D5596

Category

10 in Cat 1

Tensile Strength

ASTM D6693

ASTM D638 (Modified)

(2 inches / minute)

Average Strength @ Yield

28 N/mm

162 ppi

2,622 psi

Average Strength @ Break

30 N/mm

173 ppi

2,806 psi

Elongation ASTM D6693

ASTM D638 (Modified)

(2 inches / minute)

Lo = 1.3" Yield

Lo = 2.0" Break

Average Elongation @ Yield

%

16.49

Average Elongation @ Break

%

475.5

Dimensional Stability

ASTM D1204 (Modified)

Average Dimensional change

%

-0.21

Tear Resistance

ASTM D-1004 (Modified)

Average Tear Resistance

302.3 N

67.971 lbs

Puncture Resistance

FTMS 101 Method 2065 (Modified)

Load

410.4 N

92.255 lbs

Puncture Resistance

ASTM D4833 (Modified)

Load

634.9 N

142.74 lbs

ESCR

ASTM D1693

Minimum Hrs w/o Failures

1500 hrs

CERTIFIED

Notched Constant Tensile Load

ASTM D5397

pass / fail @ 30%

300 hrs

ONGOING

Customer: **Environmental Specialties**
PO: **9036 Landwell Basic Remediation**
Destination **Henderson, NV**

Date: **1-5-09**

Signature: 
Quality Control Department

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12/23/05



CoA Date: 12/03/2008

Certificate of Analysis

Shipped To: AGRU AMERICA INC
2000 EAST NEWLANDS
FERNLEY NV 89408
USA

Recipient: PALMER
Fax:

CPC Delivery #: 87780369
PO #: 4923
Weight: 191700 LB
Ship Date: 12/03/2008
Package: BULK
Mode: Hopper Car
Car #: PSPX006190
Seal No: 270461

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: 7181327

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.250	g/10mi
HLMI Flow Rate	ASTM D1238	22.00	g/10mi
Density	ASTM D1505	0.9370	g/cm3
Pellet Count	P02.08.03	33.000	pel/g
Production Date		10/25/2008	


The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP.
However, there is no warranty of any kind, either expressed or implied, applicable to its use, and the user assumes all risk and liability in connection therewith.

Troy Griffin
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4637

Contractor's Stamp



Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	Additional CAMU Closure & BMI South Closure Geomembrane Resin/Roll Production Data
Submittal Number:	02770-004G
Specification Section:	Section 02770, Part 2.02
Drawing Number (s):	8, 10, 14, 16, 19, 21, 23, 25, 27, 29, 31, 33, 35-36, 38-45
Page Number:	02770-5 and 02770-6
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	1/8/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By:  Date: 1/14/09
BRC Initials: 

BASIC REMEDIATION COMPANY


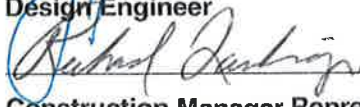

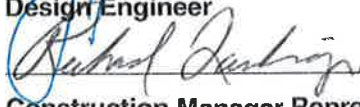
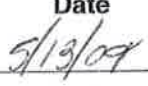



875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

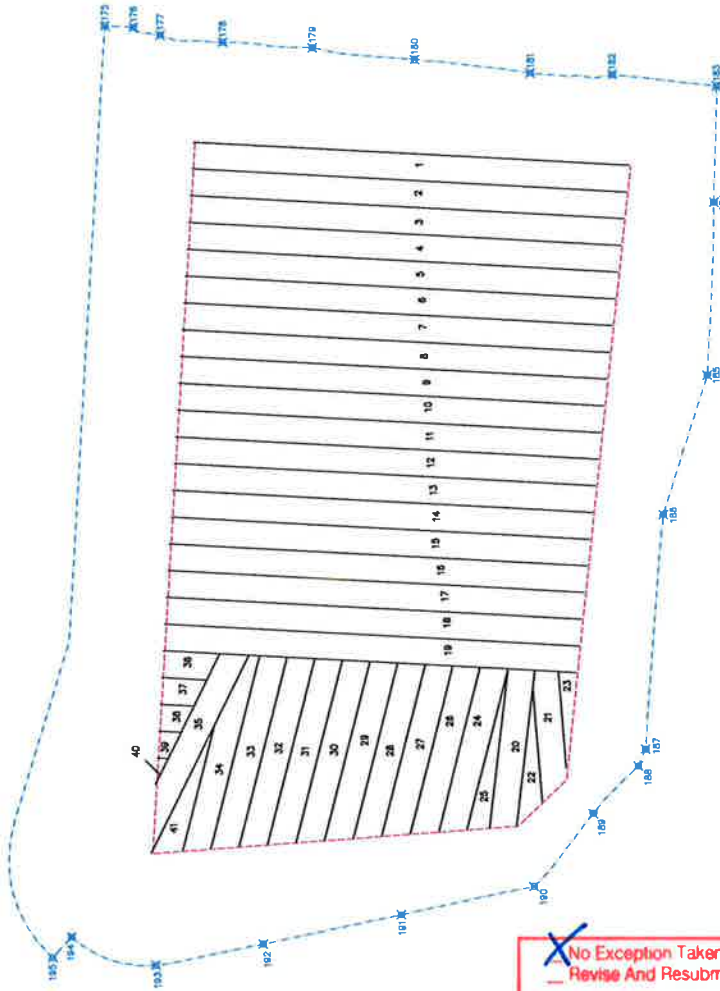
TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 05/13/09	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02770-006I	Revision No.: - N/A	Date Submittal Rec'd by BRC: 05/08/09
Specification Section(s): 02270.1.06 Geomembrane Submittals		
Submittal Subject: BMI South-Interim Closure-Panel Layout Drawing		
Notations:	<input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items	
Review Comments:		
Comment	Reference	Comment
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer	 Construction Manager Representative	 BRC Project Manager Lee Farris, P.E.
 Date	 Date	 Date
Distribution: <input checked="" type="checkbox"/> File		

LEGEND

- PANEL EDGE
- SLOPE BREAK
- TOE OF SLOPE
- LIMIT OF LINER (INTERIM CLOSURE)
- DESIGN BMI-SOUTH LINER LIMIT



☒ No Exception Taken ☐ Correct As Noted
☐ Revise And Resubmit ☐ Submit Specified Item ☐ Reject

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for safe fabrication processes, for techniques of assembly, and for performing the work in a safe manner.


Checked By: Richard Delinger Date: 5/13/09
 BRC Initials: CD

- NOTES:
- PROPOSED PANEL LAYOUT MAY BE MODIFIED BY THE ESI SITE SUPERINTENDENT AS FIELD CONDITIONS REQUIRE.
 - GEOSYNTHETIC TERMINATIONS SHALL BE MADE IN ACCORDANCE WITH PROJECT TECHNICAL SPECIFICATIONS AND CONSTRUCTION DRAWINGS.



		885 South Fritch Road Houston, Texas 77046 P: 281-995-6862	
DRAWING 1 BMI-SOUTH INTERIM CLOSURE GEOSYNTHETIC PANEL LAYOUT PLAN		PROJECT NO. 07007 SHEET NO. 1 OF 1	
PREPARED BY: M. CARLSON CHECKED BY: E. HENNINGER DATE: 5-4-09	PROJECT NO. 07007 SHEET NO. 1 OF 1	PROJECT NO. 07007 SHEET NO. 1 OF 1	

**Contractor's Stamp**

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	BMI-S (Interim Closure)- Geomembrane Panel Layout Drawing
Submittal Number:	02770-0061
Specification Section:	Section 02770, Part 3.02, Subpart A
Drawing Number (s):	8
Page Number:	02770-7
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	5/8/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

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Checked By Michael Carlson Date 5/13/09
BRC Initials LCF

BASIC REMEDIATION COMPANY



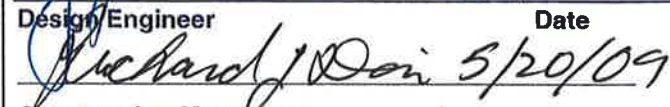


875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

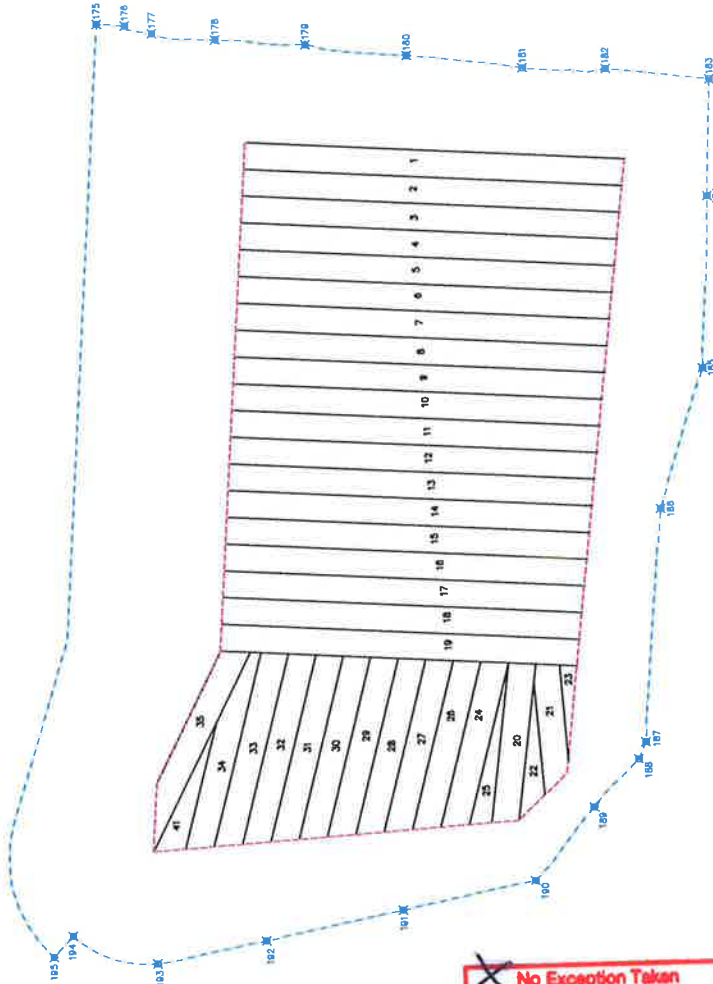
TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 05/19/09	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02770-006J		Revision No.: - N/A		Date Submittal Rec'd by BRC: 05/13/09	
Specification Section(s): 02270.1.06 Geomembrane Submittals					
Submittal Subject: Revised BMI South-Interim Closure Geomembrane Panel Layout Drawing					
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items					
Review Comments:					
Comment	Reference	Comment			
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>					
 Design Engineer		5/19/09 Date		 BRC Project Manager	
 Construction Manager Representative		5/20/09 Date		Lee Farris, P.E. Date	
Distribution: <input checked="" type="checkbox"/> File					

LEGEND

- PANEL EDGE
- SLOPE BREAK
- TOE OF SLOPE
- LIMIT OF LINER (INTERIM CLOSURE)
- DESIGN BMI-SOUTH LINER LIMIT



☒ No Exception Taken
☐ Correct As Noted
☐ Review And Resubmit
☐ Submit Specified Item
☐ Rejected

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Checked By Meldan Date 5/20/09
 BRC Initials Lu

BASIC REMEDIATION COMPANY

NOTES:
 1. PROPOSED PANEL LAYOUT IS TENTATIVE AND MAY BE MODIFIED BY THE ESI SITE SUPERINTENDENT

2. GEOSYNTHETIC TERMINATIONS WILL BE MADE IN ACCORDANCE WITH PROJECT TECHNICAL SPECIFICATIONS AND CONSTRUCTION DRAWINGS.




699 South Friesland Dr., Suite 101
 Friendswood, Texas 77546
 P. 281-998-9892

PROJECT NAME	PROJECT NO.	PROJECT DATE	PROJECT LOCATION	PROJECT STATUS
BMI-SOUTH INTERIM CLOSURE GEOTECHNICAL PROJECT	101	5-20-09	101	101
DESIGNED BY	CHECKED BY	APPROVED BY	DATE	REVISION
M. CARSON	M. CARSON	E. GORHAM	5-20-09	1
PROJECT NO.	DRAWING NO.	DRAWING DATE	DRAWING SCALE	SHEET NO.
101	101	5-20-09	1:20" = 1'	1 OF 1





Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	Revised BMI-S (Interim Closure)- Geomembrane Panel Layout Drawing
Submittal Number:	02770-006J
Specification Section:	Section 02770, Part 3.02, Subpart A
Drawing Number (s):	8
Page Number:	02770-7
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	5/8/2009
Date Submitted:	5/13/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

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Checked By Michael M. Carlson Date 5/20/09
BRC Initials LCF

BASIC REMEDIATION COMPANY

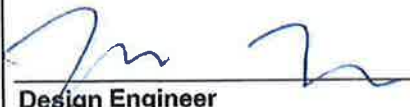




875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: Mar 05, 2010	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02770-006S		Revision No.: - N/A	Date Submittal Rec'd by BRC: 3/04/10
Specification Section(s): 02770 Geomembrane			
Submittal Subject: BMI-South Final Closure Geomembrane Panel Layout			
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items			
Review Comments:			
Comment #	Reference	Comment	
		No comments	
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>			
 Design Engineer		 BRC Project Manager	
Date 3/8/10		Date 3/10/10	
 Construction Manager Representative		Lee Farris, P.E.	
Date 3/9/10			
Distribution: <input checked="" type="checkbox"/> File			



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 3/4/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 387
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	3/4/10			Submittal 02770-006S – BMI-South Final Closure Geomembrane Panel Layout	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

F – FILE

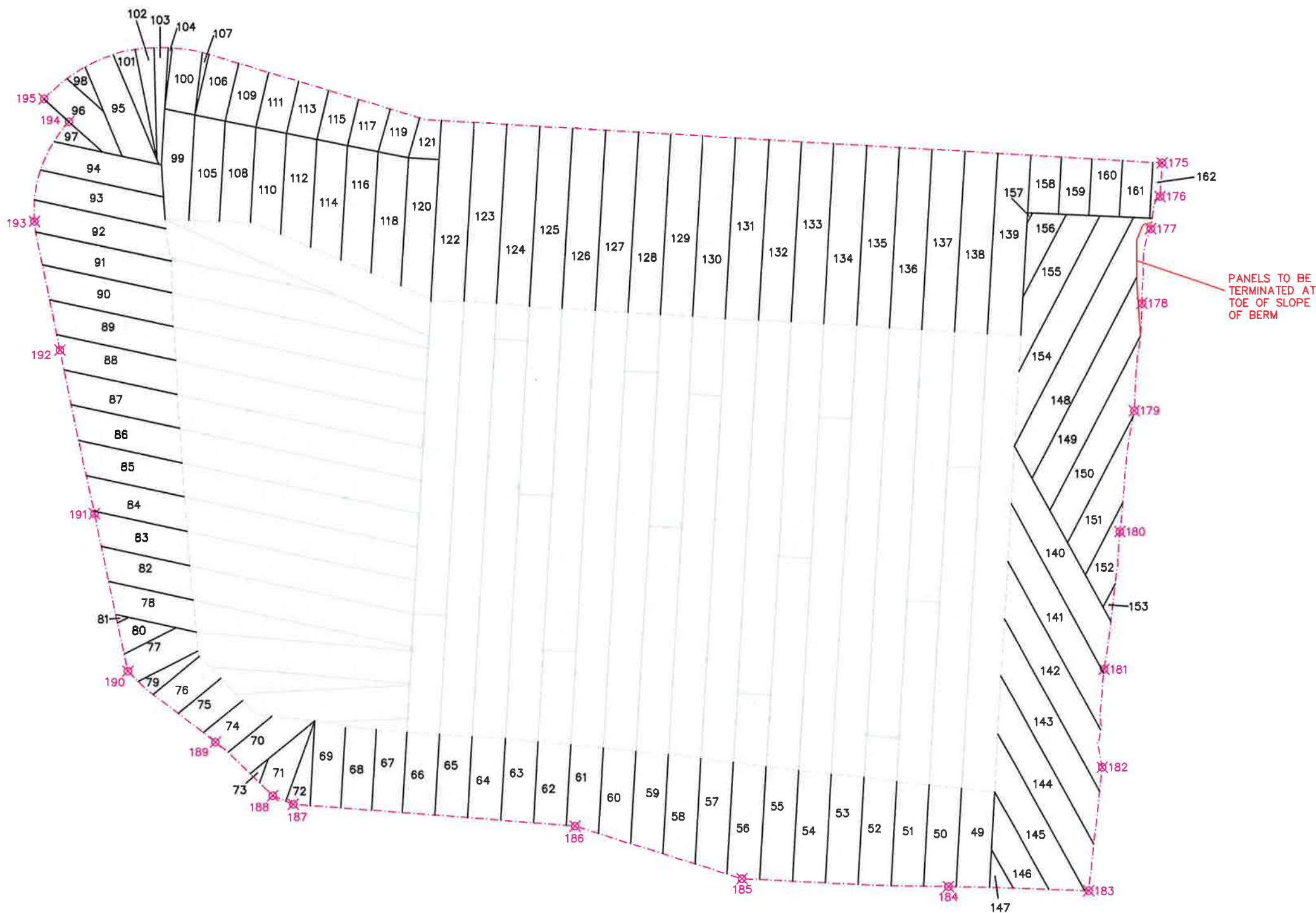
RC - REVIEW & COMMENT

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL ☐ MAIL ☐ OVERNIGHT ☒ HAND DELIVERY ☐ FACSIMILE
COPY TO: Ranajit Sahu, Lee Farris BY: Michael M. Carlson (630)-330-8237

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



☒ No Exception Taken
☐ Review And Resubmit

☐ Correct As Noted
☐ Submit Specified Item

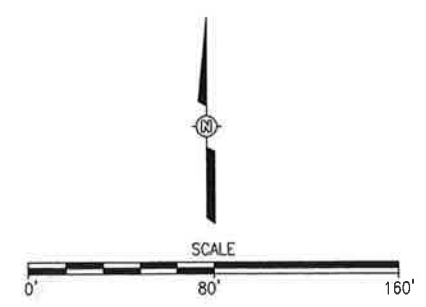
☐ Rejected

This review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By: *[Signature]* Date: 3/9/10
BRC Initials: LCF

BASIC REMEDIATION COMPANY

- LEGEND
- PANEL EDGE
 - SLOPE BREAK
 - TOE OF SLOPE
 - LIMIT OF LINER (INTERIM CLOSURE)
 - EXISTING GRADE CONTOURS




- NOTES:
- PROPOSED PANEL LAYOUT IS TENTATIVE AND MAY BE MODIFIED BY THE ESI SITE SUPERINTENDENT AS FIELD CONDITIONS DICTATE.
 - GEOSYNTHETIC TERMINATIONS WILL BE MADE IN ACCORDANCE WITH PROJECT TECHNICAL SPECIFICATIONS AND CONSTRUCTION DRAWINGS.

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Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	BMI-South Final Closure Geomembrane Panel Layout
Submittal Number:	02770-006S
Specification Section:	Section 02770, Part 3.02, Subpart A
Drawing Number (s):	8
Page Number:	02770-7
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	3/4/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected
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Checked By: 	Date: 3/9/10
BASIC REMEDIATION COMPANY	



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 5/24/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 419
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	5/24/10			Submittal 02770-008J – Geomembrane QC Data (BMI-South Closure)	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

F – FILE

RC - REVIEW & COMMENT

COMMENTS: Hard copies will be delivered to BRC this afternoon.

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COPY Ranajit Sahu, Lee Farris BY: Michael M. Carlson (630)-330-8237
TO:

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Panel Placement Forms

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

PAGE 1 of 5

Date	Panel #	Roll #	Panel Length	Panel Width	Comments/Panel Location
5/13/2009	1	902101-08	314	22.5	7065
5/13/2009	2	902101-08	92	22.5	2070
5/13/2009	3	902107-08	220	22.5	4950
5/13/2009	4	902107-08	186	22.5	4185
5/13/2009	5	902108-08	126	22.5	2835
		TOTAL TODAY			21105
		TOTAL TO DATE			21105

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 2 of 5

Date	Panel #	Roll #	Panel Length	Panel Width	Comments/Panel Location
5/14/2009	6	902108-08	280	22.5	6300
5/14/2009	7	952237-08	30	22.5	675
5/14/2009	8	952237-08	312	22.5	7020
5/14/2009	9	952237-08	64	22.5	1440
5/14/2009	10	952348-08	246	22.5	5535
5/14/2009	11	952348-08	162	22.5	3645
5/14/2009	12	952347-08	146	22.5	3285
5/14/2009	13	952347-08	258	22.5	5805
5/14/2009	14	952238-08	48	22.5	1080
5/14/2009	15	952238-08	306	22.5	6885
5/14/2009	16	952238-08	54	22.5	1215
5/14/2009	17	952242-08	252	22.5	5670
5/14/2009	18	952242-08	156	22.5	3510
5/14/2009	19	952243-08	146	22.5	3285
5/14/2009	20	952243-08	262	22.5	5895
5/14/2009	21	952240-08	40	22.5	900
5/14/2009	22	952240-08	300	22.5	6750
		TOTAL TODAY			68895
		TOTAL TO DATE			90000

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

PAGE 3 of 5

Date	Panel #	Roll #	Panel Length	Panel Width	Comments/Panel Location
5/14/2009	23	952240-08	64	22.5	1440
5/14/2009	24	902104-08	238	22.5	5355
5/14/2009	25	902104-08	170	22.5	3825
5/14/2009	26	952344-08	130	22.5	2925
		TOTAL TODAY			13545
		TOTAL TO DATE			103545

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 4 of 5

Date	Panel #	Roll #	Panel Length	Panel Width	Comments/Panel Location
5/15/2009	27	952344-08	278	22.5	6255
5/15/2009	28	952234-08	24	22.5	540
5/15/2009	29	952234-08	300	22.5	6750
5/15/2009	30	952234-08	82	22.5	1845
5/15/2009	31	902106-08	218	22.5	4905
5/15/2009	32	902102-08	130/196	22.5	3667.5
5/15/2009	33	902102-08	128	22.5	1440
5/15/2009	34	952241-08	184/118	22.5	3397.5
5/15/2009	35	952241-08	184/178	22.5	4072.5
5/15/2009	36	902106-08	178/176	22.5	3982.5
5/15/2009	37	952235-08	176/172	22.5	3915
5/15/2009	38	952235-08	172/170	22.5	3847.5
5/15/2009	39	902103-08	170/166	22.5	3780
5/15/2009	40	902103-08	166/164	22.5	3712.5
5/15/2009	41	952236-08	164/160	22.5	3645
5/15/2009	42	952236-08	160/154	22.5	3532.5
5/15/2009	43	952121-08	154	22.5	3465
5/15/2009	44	952121-08	154	11	1732.5
		TOTAL TODAY			64485
		TOTAL TO DATE			168030

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL PLACEMENT FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

PAGE 5 of 5

Date	Panel #	Roll #	Panel Length	Panel Width	Comments/Panel Location
5/15/2009	45	952117-08	150/136	10	3217.5
5/15/2009	46	952121-08	136	22.5	1530
5/15/2009	47	952119-08	116	22.5	2610
5/15/2009	48	952119-08	54	8	216
		TOTAL TODAY			7573.5
		TOTAL TO DATE			175603.5



Daily Panel Placement

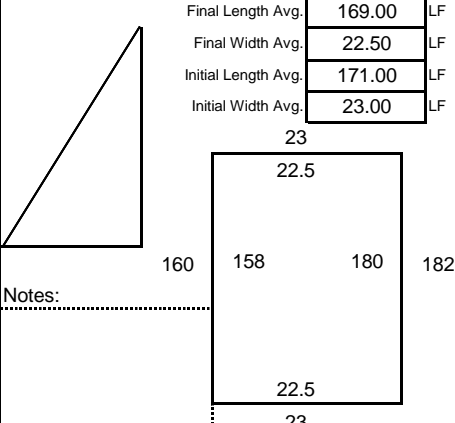
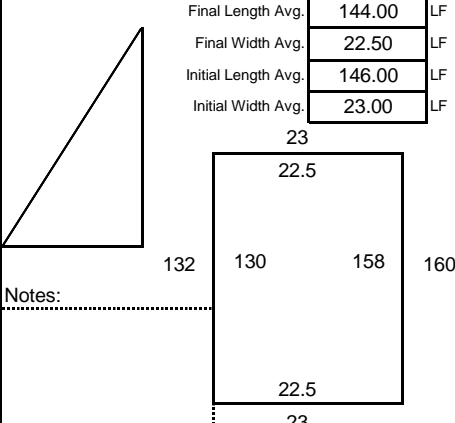
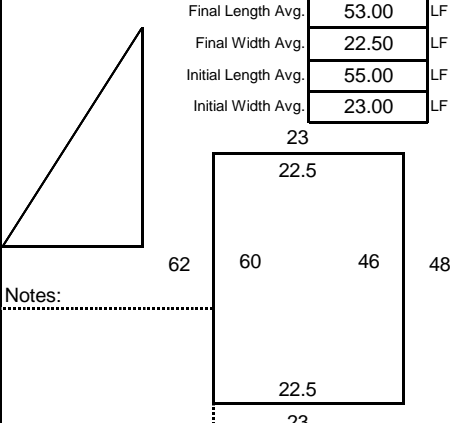
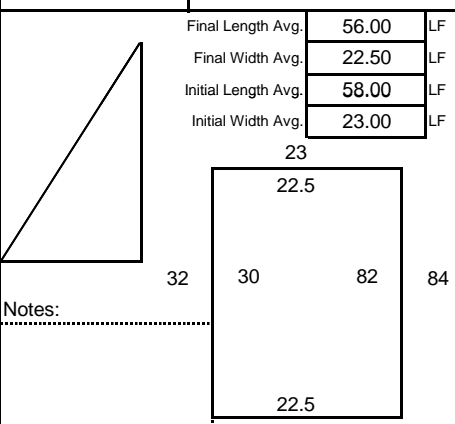
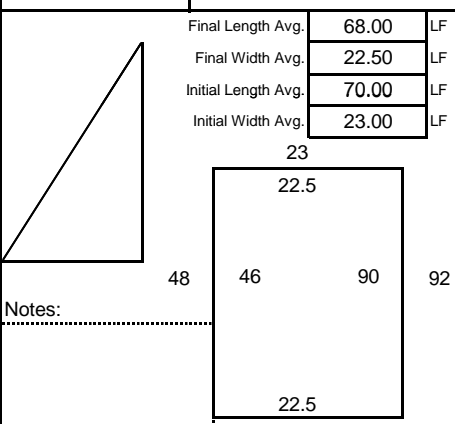
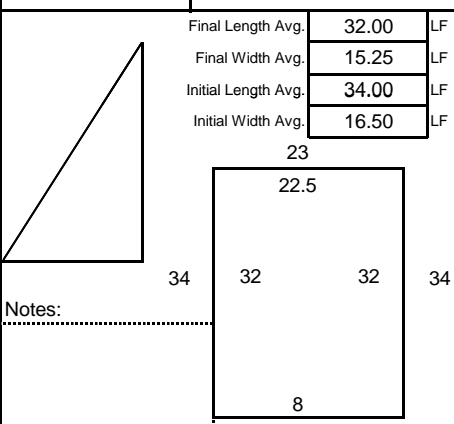
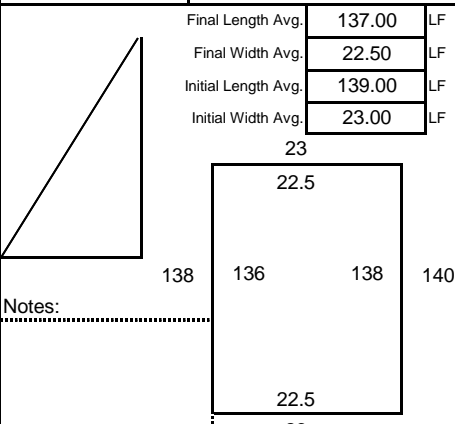
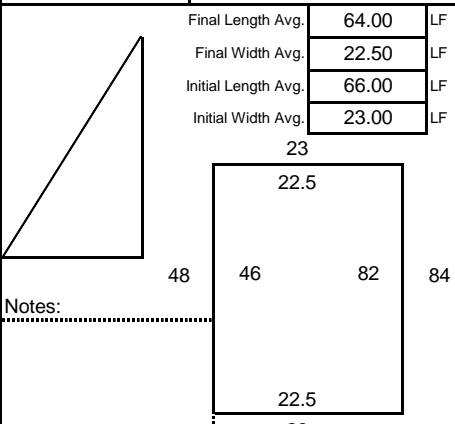
Page 1

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 03/11/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
49	942119-08	50	942119-08	51	942119-08																																												
 <p>Final Length Avg. 169.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 171.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 160 158 180 182 Notes: 22.5 23</p>		 <p>Final Length Avg. 144.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 146.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 132 130 158 160 Notes: 22.5 23</p>		 <p>Final Length Avg. 53.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 55.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 62 60 46 48 Notes: 22.5 23</p>																																													
Initial SF 3,933	Lineal Feet Trench	Initial SF 3,358	Lineal Feet Trench	Initial SF 1,265	Lineal Feet Trench																																												
Final SF 3,803		Final SF 3,240		Final SF 1,193																																													
52	942114-08	53	942114-08	54	942114-08																																												
 <p>Final Length Avg. 56.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 58.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 32 30 82 84 Notes: 22.5 23</p>		 <p>Final Length Avg. 68.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 70.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 48 46 90 92 Notes: 22.5 23</p>		 <p>Final Length Avg. 32.00 LF Final Width Avg. 15.25 LF Initial Length Avg. 34.00 LF Initial Width Avg. 16.50 LF</p> <p>23 22.5 34 32 32 34 Notes: 8 10</p>																																													
Initial SF 1,334	Lineal Feet Trench	Initial SF 1,610	Lineal Feet Trench	Initial SF 561	Lineal Feet Trench																																												
Final SF 1,260		Final SF 1,530		Final SF 488																																													
55	942114-08	56	942114-08	Material in Anchor Trench																																													
 <p>Final Length Avg. 137.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 139.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 138 136 138 140 Notes: 22.5 23</p>		 <p>Final Length Avg. 64.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 66.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 48 46 82 84 Notes: 22.5 23</p>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>16,036</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>16,036</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>175,604</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>191,639</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>191,639</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>-</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>16,776</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>16,776</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	16,036	SF	Total Pay Area This Page	16,036	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	175,604	SF	Total Panel SF To Date	191,639	SF	Total Pay Area To Date Including Anchor Trench	191,639		Initial Quantity Previous	-	SF	Initial Quantity This Page	16,776	SF	Initial Quantity To Date	16,776	SF
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Initial SF 3,197	Lineal Feet Trench	Initial SF 1,518	Lineal Feet Trench																																														
Final SF 3,083		Final SF 1,440																																															



Daily Panel Placement

Page 2Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 03/11/10Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other: _____Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

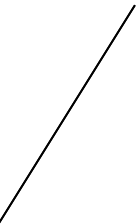
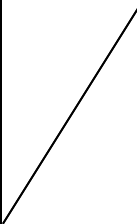
Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																																																				
57	942114-08	58	942108-08	59	942114-08																																																																				
<div>Final Length Avg. _____ LF Final Width Avg. _____ LF Initial Length Avg. _____ LF Initial Width Avg. _____ LF</div> <div>Notes: _____</div> <div>Initial SF 80 Lineal Feet Trench Final SF 56</div>		<div>Final Length Avg. 58.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 60.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes: _____</div> <div>Initial SF 1,380 Lineal Feet Trench Final SF 1,305</div>		<div>Final Length Avg. _____ LF Final Width Avg. _____ LF Initial Length Avg. _____ LF Initial Width Avg. _____ LF</div> <div>Notes: _____</div> <div>Initial SF 391 Lineal Feet Trench Final SF 360</div>		60	942108-08	61	942108-08	62	942108-08	<div>Final Length Avg. 136.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 138.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes: _____</div> <div>Initial SF 3,174 Lineal Feet Trench Final SF 3,060</div>		<div>Final Length Avg. _____ LF Final Width Avg. _____ LF Initial Length Avg. _____ LF Initial Width Avg. _____ LF</div> <div>Notes: _____</div> <div>Initial SF 437 Lineal Feet Trench Final SF 405</div>		<div>Final Length Avg. 116.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 118.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes: _____</div> <div>Initial SF 2,714 Lineal Feet Trench Final SF 2,610</div>		63	942108-08	64	942110-08	Material in Anchor Trench		<div>Final Length Avg. 60.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 62.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes: _____</div> <div>Initial SF 1,426 Lineal Feet Trench Final SF 1,350</div>		<div>Final Length Avg. 67.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 69.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes: _____</div> <div>Initial SF 1,587 Lineal Feet Trench Final SF 1,508</div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>10,654</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>10,654</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>191,639</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>202,293</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>202,293</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>16,776</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>11,189</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>27,965</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	10,654	SF	Total Pay Area This Page	10,654	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	191,639	SF	Total Panel SF To Date	202,293	SF	Total Pay Area To Date Including Anchor Trench	202,293		Initial Quantity Previous	16,776	SF	Initial Quantity This Page	11,189	SF	Initial Quantity To Date	27,965	SF
60	942108-08	61	942108-08	62	942108-08																																																																				
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63	942108-08	64	942110-08	Material in Anchor Trench																																																																					
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Daily Panel Placement

Page 3Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 03/11/10Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other: _____Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #
65	942110-08	66	942110-08	67	942110-08
<div>Final Length Avg. 82.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 84.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>		<div>Final Length Avg. LF Final Width Avg. LF Initial Length Avg. LF Initial Width Avg. LF</div> <div>Notes:</div>		<div>Final Length Avg. 72.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 74.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>	
Initial SF 1,932	Lineal Feet Trench	Initial SF 667	Lineal Feet Trench	Initial SF 1,702	Lineal Feet Trench
Final SF 1,845		Final SF 630		Final SF 1,620	
68	942110-08	69	902102-08	70	942111-08
<div>Final Length Avg. 72.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 74.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>		<div>Final Length Avg. 74.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 76.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>		<div>Final Length Avg. 76.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 78.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>	
Initial SF 1,702	Lineal Feet Trench	Initial SF 1,748	Lineal Feet Trench	Initial SF 1,794	Lineal Feet Trench
Final SF 1,620		Final SF 1,665		Final SF 1,710	
71	942111-08	72	942111-08	Material in Anchor Trench	
<div>Final Length Avg. 76.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 78.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>		<div>Final Length Avg. 78.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 80.00 LF Initial Width Avg. 23.00 LF</div> <div>Notes:</div>	<div>Total LF In Trench This Page - LF</div> <div>Depth and Width Allowed in Trench LF</div> <div>Total SF Trench This Page - SF</div> <div>Total Panel SF This Page 12,555 SF</div> <div>Total Pay Area This Page 12,555 SF</div> <div>LF In Trench Previous - LF</div> <div>LF In Trench To Date - LF</div> <div>SF In Trench Previous - SF</div> <div>Total SF in Trench to Date - SF</div> <div>Total Panel SF Previous 202,293 SF</div> <div>Total Panel SF To Date 214,848 SF</div> <div>Total Pay Area To Date Including Anchor Trench 214,848</div> <div>Initial Quantity Previous 27,965 SF</div> <div>Initial Quantity This Page 13,179 SF</div> <div>Initial Quantity To Date 41,144 SF</div>		
Initial SF 1,794	Lineal Feet Trench	Initial SF 1,840	Lineal Feet Trench		
Final SF 1,710		Final SF 1,755			

Panel #	Roll #	Panel #	Roll #	Material in Anchor Trench				
	Final Length Avg.		LF	Total LF In Trench This Page	-	LF		
	Final Width Avg.		LF	Depth and Width Allowed in Trench		LF		
	Initial Length Avg.		LF	Total SF Trench This Page	-	SF		
	Initial Width Avg.		LF	Total Panel SF This Page	3,510	SF		
				Total Pay Area This Page	3,510	SF		
	Final Length Avg.		LF	LF In Trench Previous	-	LF		
	Final Width Avg.		LF	LF In Trench To Date	-	LF		
	Initial Length Avg.		LF	SF In Trench Previous	-	SF		
	Initial Width Avg.		LF	Total SF in Trench to Date	-	SF		
				Total Panel SF Previous	214,848	SF		
Notes:		Notes:		Total Panel SF To Date	218,358	SF		
				Total Pay Area To Date Including Anchor Trench	218,358			
Initial SF	-	Lineal Feet Trench	Initial SF	-	Lineal Feet Trench	Initial Quantity Previous	41,144	SF
Final SF	-		Final SF	-		Initial Quantity This Page	3,680	SF
						Initial Quantity To Date	44,824	SF



Daily Panel Placement

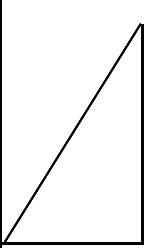
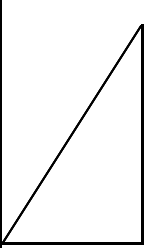
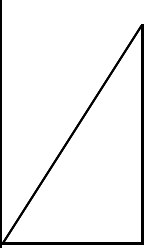
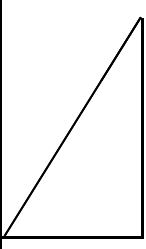
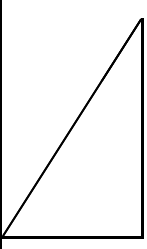
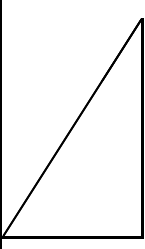
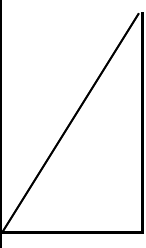
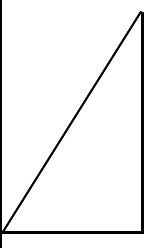
Page 5

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 03/12/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
75	952121-08	76	952119-08	77	952112-08																																												
 <div>Final Length Avg. 76.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 78.00 LF Initial Width Avg. 23.00 LF</div>		 <div>Final Length Avg. 72.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 74.00 LF Initial Width Avg. 23.00 LF</div>		 <div>Final Length Avg. 68.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 70.00 LF Initial Width Avg. 23.00 LF</div>																																													
Notes:		Notes:		Notes:																																													
Initial SF 1,794	Lineal Feet Trench	Initial SF 1,702	Lineal Feet Trench	Initial SF 1,610	Lineal Feet Trench																																												
Final SF 1,710		Final SF 1,620		Final SF 1,530																																													
78	942112-08	79	942112-08	80	942112-08																																												
 <div>Final Length Avg. 64.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 66.00 LF Initial Width Avg. 23.00 LF</div>		 <div>Final Length Avg. 62.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 64.00 LF Initial Width Avg. 23.00 LF</div>		 <div>Final Length Avg. 60.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 62.00 LF Initial Width Avg. 23.00 LF</div>																																													
Notes:		Notes:		Notes:																																													
Initial SF 1,518	Lineal Feet Trench	Initial SF 1,472	Lineal Feet Trench	Initial SF 1,426	Lineal Feet Trench																																												
Final SF 1,440		Final SF 1,395		Final SF 1,350																																													
81	942112-08	82	942112-08	Material in Anchor Trench																																													
 <div>Final Length Avg. 60.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 62.00 LF Initial Width Avg. 23.00 LF</div>		 <div>Final Length Avg. 60.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 62.00 LF Initial Width Avg. 23.00 LF</div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>11,745</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>11,745</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>218,358</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>230,103</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>230,103</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>44,824</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>12,374</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>57,198</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	11,745	SF	Total Pay Area This Page	11,745	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	218,358	SF	Total Panel SF To Date	230,103	SF	Total Pay Area To Date Including Anchor Trench	230,103		Initial Quantity Previous	44,824	SF	Initial Quantity This Page	12,374	SF	Initial Quantity To Date	57,198	SF
Total LF In Trench This Page	-	LF																																															
Depth and Width Allowed in Trench		LF																																															
Total SF Trench This Page	-	SF																																															
Total Panel SF This Page	11,745	SF																																															
Total Pay Area This Page	11,745	SF																																															
LF In Trench Previous	-	LF																																															
LF In Trench To Date	-	LF																																															
SF In Trench Previous	-	SF																																															
Total SF in Trench to Date	-	SF																																															
Total Panel SF Previous	218,358	SF																																															
Total Panel SF To Date	230,103	SF																																															
Total Pay Area To Date Including Anchor Trench	230,103																																																
Initial Quantity Previous	44,824	SF																																															
Initial Quantity This Page	12,374	SF																																															
Initial Quantity To Date	57,198	SF																																															
Notes:		Notes:																																															
Initial SF 1,426	Lineal Feet Trench	Initial SF 1,426	Lineal Feet Trench																																														
Final SF 1,350		Final SF 1,350																																															



Daily Panel Placement

Page 6

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 03/12/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

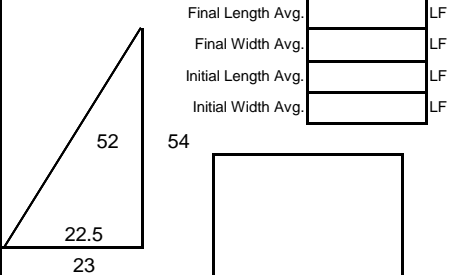
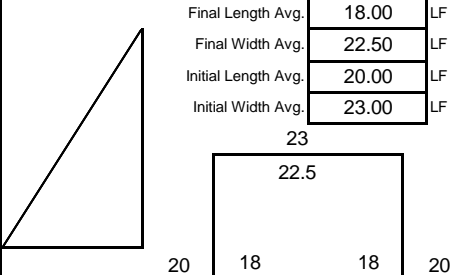
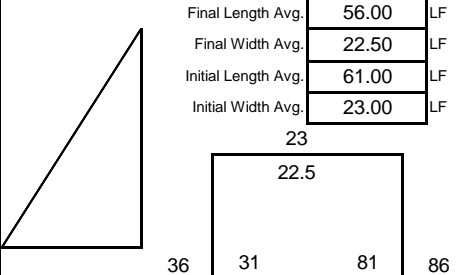
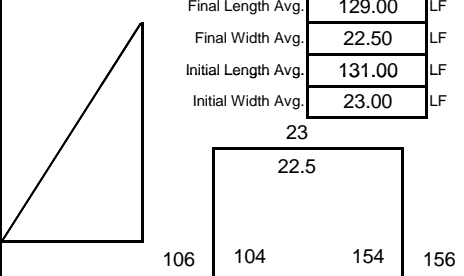
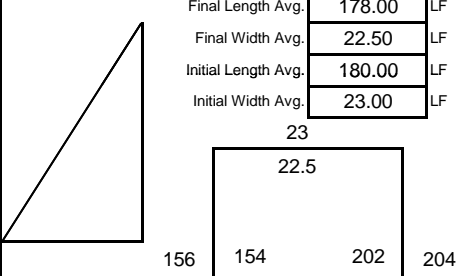
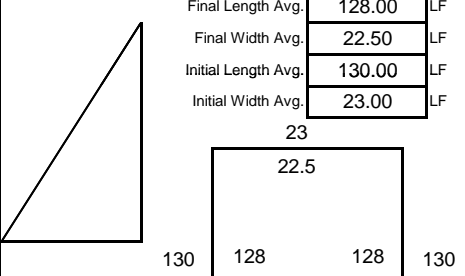
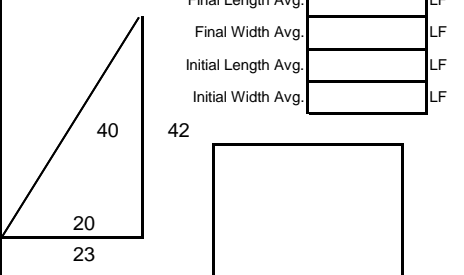
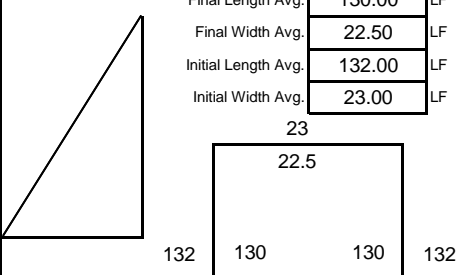
Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #
83	952236-08	84	902103-08	85	942117-08
<div>Final Length Avg. 60.00 LF</div> <div>Final Width Avg. 22.50 LF</div> <div>Initial Length Avg. 62.00 LF</div> <div>Initial Width Avg. 23.00 LF</div> <div>23</div> <div>22.5</div> <div>62 60 60 62</div> <div>Notes:</div> <div>22.5</div> <div>23</div>		<div>Final Length Avg. 60.00 LF</div> <div>Final Width Avg. 22.50 LF</div> <div>Initial Length Avg. 62.00 LF</div> <div>Initial Width Avg. 23.00 LF</div> <div>23</div> <div>22.5</div> <div>62 60 60 62</div> <div>Notes:</div> <div>22.5</div> <div>23</div>		<div>Final Length Avg. 60.00 LF</div> <div>Final Width Avg. 22.50 LF</div> <div>Initial Length Avg. 62.00 LF</div> <div>Initial Width Avg. 23.00 LF</div> <div>23</div> <div>22.5</div> <div>62 60 60 62</div> <div>Notes:</div> <div>22.5</div> <div>23</div>	
Initial SF 1,426 Lineal Feet Trench		Initial SF 1,426 Lineal Feet Trench		Initial SF 1,426 Lineal Feet Trench	
Final SF 1,350		Final SF 1,350		Final SF 1,350	
86	942117-08	87	942117-08		
<div>Final Length Avg. 62.00 LF</div> <div>Final Width Avg. 22.50 LF</div> <div>Initial Length Avg. 64.00 LF</div> <div>Initial Width Avg. 23.00 LF</div> <div>23</div> <div>22.5</div> <div>64 62 62 64</div> <div>Notes:</div> <div>22.5</div> <div>23</div>		<div>Final Length Avg. 62.00 LF</div> <div>Final Width Avg. 22.50 LF</div> <div>Initial Length Avg. 64.00 LF</div> <div>Initial Width Avg. 23.00 LF</div> <div>23</div> <div>22.5</div> <div>64 62 62 64</div> <div>Notes:</div> <div>22.5</div> <div>23</div>		<div>Final Length Avg. LF</div> <div>Final Width Avg. LF</div> <div>Initial Length Avg. LF</div> <div>Initial Width Avg. LF</div> <div>23</div> <div>22.5</div> <div>64 62 62 64</div> <div>Notes:</div> <div>22.5</div> <div>23</div>	
Initial SF 1,472 Lineal Feet Trench		Initial SF 1,472 Lineal Feet Trench		Initial SF - Lineal Feet Trench	
Final SF 1,395		Final SF 1,395		Final SF -	
<div>Final Length Avg. LF</div> <div>Final Width Avg. LF</div> <div>Initial Length Avg. LF</div> <div>Initial Width Avg. LF</div> <div>23</div> <div>22.5</div> <div>64 62 62 64</div> <div>Notes:</div> <div>22.5</div> <div>23</div>		<div>Final Length Avg. LF</div> <div>Final Width Avg. LF</div> <div>Initial Length Avg. LF</div> <div>Initial Width Avg. LF</div> <div>23</div> <div>22.5</div> <div>64 62 62 64</div> <div>Notes:</div> <div>22.5</div> <div>23</div>			
Initial SF - Lineal Feet Trench		Initial SF - Lineal Feet Trench			
Final SF -		Final SF -			
Material in Anchor Trench					
Total LF In Trench This Page - LF					
Depth and Width Allowed in Trench LF					
Total SF Trench This Page - SF					
Total Panel SF This Page 6,840 SF					
Total Pay Area This Page 6,840 SF					
LF In Trench Previous - LF					
LF In Trench To Date - LF					
SF In Trench Previous - SF					
Total SF in Trench to Date - SF					
Total Panel SF Previous 230,103 SF					
Total Panel SF To Date 236,943 SF					
Total Pay Area To Date Including Anchor Trench 236,943					
Initial Quantity Previous 57,198 SF					
Initial Quantity This Page 7,222 SF					
Initial Quantity To Date 64,420 SF					



Daily Panel Placement

Page 7Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/01/10Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other: _____Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #
88	952224-08	89	942117-08	90	952224-08
	Final Length Avg. _____ LF Final Width Avg. _____ LF Initial Length Avg. _____ LF Initial Width Avg. _____ LF		Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 56.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 61.00 LF Initial Width Avg. 23.00 LF
Notes: _____		Notes: _____		Notes: _____	
Initial SF 621	Lineal Feet Trench	Initial SF 460	Lineal Feet Trench	Initial SF 1,403	Lineal Feet Trench
Final SF 585		Final SF 405		Final SF 1,260	
91	952224-08	92	952224-08	93	928227-08
	Final Length Avg. 129.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 131.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 178.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 180.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF
Notes: _____		Notes: _____		Notes: _____	
Initial SF 3,013	Lineal Feet Trench	Initial SF 4,140	Lineal Feet Trench	Initial SF 2,990	Lineal Feet Trench
Final SF 2,903		Final SF 4,005		Final SF 2,880	
94	952224-08	95	952226-08	Material in Anchor Trench	
	Final Length Avg. _____ LF Final Width Avg. _____ LF Initial Length Avg. _____ LF Initial Width Avg. _____ LF		Final Length Avg. 130.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 132.00 LF Initial Width Avg. 23.00 LF	Total LF In Trench This Page - LF	
Notes: _____		Notes: _____		Depth and Width Allowed in Trench - LF	
Initial SF 483	Lineal Feet Trench	Initial SF 3,036	Lineal Feet Trench	Total SF Trench This Page - SF	
Final SF 400		Final SF 2,925		Total Panel SF This Page 15,363 SF	
				Total Pay Area This Page 15,363 SF	
				LF In Trench Previous - LF	
				LF In Trench To Date - LF	
				SF In Trench Previous - SF	
				Total SF in Trench to Date - SF	
				Total Panel SF Previous 236,943 SF	
				Total Panel SF To Date 252,305 SF	
				Total Pay Area To Date Including Anchor Trench 252,305	
				Initial Quantity Previous 64,420 SF	
				Initial Quantity This Page 16,146 SF	
				Initial Quantity To Date 80,566 SF	



Daily Panel Placement

Page 8

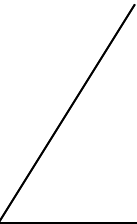
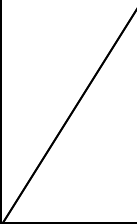
Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/01/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																													
96	952226-08	97	952226-08	98	952229-08																																													
Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF																																														
Notes:		Notes:		Notes:																																														
Initial SF 2,990 Lineal Feet Trench		Initial SF 2,990 Lineal Feet Trench		Initial SF 2,990 Lineal Feet Trench																																														
Final SF 2,880		Final SF 2,880		Final SF 2,880																																														
99	952229-08	100	952229-08	101	952233-08																																													
Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF																																														
Notes:		Notes:		Notes:																																														
Initial SF 2,990 Lineal Feet Trench		Initial SF 2,990 Lineal Feet Trench		Initial SF 2,990 Lineal Feet Trench																																														
Final SF 2,880		Final SF 2,880		Final SF 2,880																																														
102	952233-08	103	952233-08	Material in Anchor Trench <table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>23,040</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>23,040</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>252,305</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>275,345</td><td>SF</td></tr><tr><td colspan="2">Total Pay Area To Date Including Anchor Trench</td><td>275,345</td></tr><tr><td>Initial Quantity Previous</td><td>80,566</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>23,920</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>104,486</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	23,040	SF	Total Pay Area This Page	23,040	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	252,305	SF	Total Panel SF To Date	275,345	SF	Total Pay Area To Date Including Anchor Trench		275,345	Initial Quantity Previous	80,566	SF	Initial Quantity This Page	23,920	SF	Initial Quantity To Date	104,486	SF
Total LF In Trench This Page	-	LF																																																
Depth and Width Allowed in Trench		LF																																																
Total SF Trench This Page	-	SF																																																
Total Panel SF This Page	23,040	SF																																																
Total Pay Area This Page	23,040	SF																																																
LF In Trench Previous	-	LF																																																
LF In Trench To Date	-	LF																																																
SF In Trench Previous	-	SF																																																
Total SF in Trench to Date	-	SF																																																
Total Panel SF Previous	252,305	SF																																																
Total Panel SF To Date	275,345	SF																																																
Total Pay Area To Date Including Anchor Trench		275,345																																																
Initial Quantity Previous	80,566	SF																																																
Initial Quantity This Page	23,920	SF																																																
Initial Quantity To Date	104,486	SF																																																
Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF		Final Length Avg. 128.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 130.00 LF Initial Width Avg. 23.00 LF																																																
Notes:		Notes:																																																
Initial SF 2,990 Lineal Feet Trench		Initial SF 2,990 Lineal Feet Trench																																																
Final SF 2,880		Final SF 2,880																																																

Panel #	Roll #	Panel #	Roll #	Material in Anchor Trench				
	Final Length Avg.		LF	Total LF In Trench This Page	-	LF		
	Final Width Avg.		LF	Depth and Width Allowed in Trench		LF		
	Initial Length Avg.		LF	Total SF Trench This Page	-	SF		
	Initial Width Avg.		LF	Total Panel SF This Page	5,760	SF		
				Total Pay Area This Page	5,760	SF		
	Final Length Avg.		LF	LF In Trench Previous	-	LF		
	Final Width Avg.		LF	LF In Trench To Date	-	LF		
	Initial Length Avg.		LF	SF In Trench Previous	-	SF		
	Initial Width Avg.		LF	Total SF in Trench to Date	-	SF		
				Total Panel SF Previous	275,345	SF		
Notes:		Notes:		Total Panel SF To Date	281,105	SF		
				Total Pay Area To Date Including Anchor Trench	281,105			
Initial SF	-	Lineal Feet Trench	Initial SF	-	Lineal Feet Trench	Initial Quantity Previous	104,486	SF
Final SF	-		Final SF	-		Initial Quantity This Page	5,980	SF
						Initial Quantity To Date	110,466	SF



Daily Panel Placement

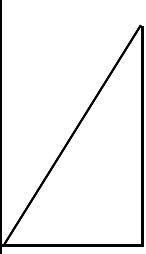
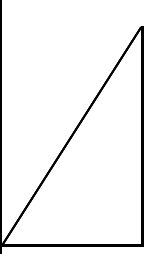
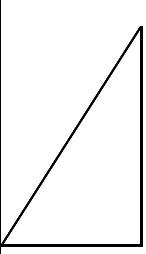
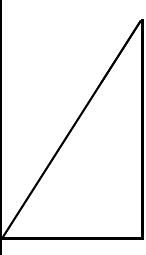
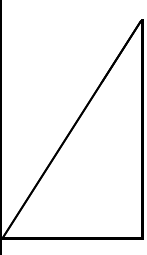
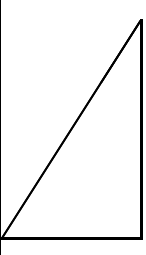
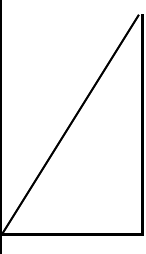
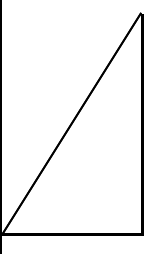
Page 10

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/02/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																																																				
106	952232-08	107	952231-08	108	952231-08																																																																				
 <table border="1"><tr><td>Final Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>130.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	128.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	130.00	LF	Initial Width Avg.	23.00	LF		 <table border="1"><tr><td>Final Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>130.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	128.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	130.00	LF	Initial Width Avg.	23.00	LF		 <table border="1"><tr><td>Final Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>130.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	128.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	130.00	LF	Initial Width Avg.	23.00	LF																																	
Final Length Avg.	128.00	LF																																																																							
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Initial Length Avg.	130.00	LF																																																																							
Initial Width Avg.	23.00	LF																																																																							
Initial SF	2,990	Lineal Feet Trench	Initial SF	2,990	Lineal Feet Trench																																																																				
Final SF	2,880		Final SF	2,880																																																																					
109	952231-08	110	952227-08	111	952227-08																																																																				
 <table border="1"><tr><td>Final Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>130.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	128.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	130.00	LF	Initial Width Avg.	23.00	LF		 <table border="1"><tr><td>Final Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>130.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	128.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	130.00	LF	Initial Width Avg.	23.00	LF		 <table border="1"><tr><td>Final Length Avg.</td><td>126.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>128.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	126.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	128.00	LF	Initial Width Avg.	23.00	LF																																	
Final Length Avg.	128.00	LF																																																																							
Final Width Avg.	22.50	LF																																																																							
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Final Length Avg.	128.00	LF																																																																							
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Initial Length Avg.	128.00	LF																																																																							
Initial Width Avg.	23.00	LF																																																																							
Initial SF	2,990	Lineal Feet Trench	Initial SF	2,990	Lineal Feet Trench																																																																				
Final SF	2,880		Final SF	2,880																																																																					
112	952227-08	113	952228-08	Material in Anchor Trench																																																																					
 <table border="1"><tr><td>Final Length Avg.</td><td>123.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>125.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	123.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	125.00	LF	Initial Width Avg.	23.00	LF		 <table border="1"><tr><td>Final Length Avg.</td><td>101.00</td><td>LF</td></tr><tr><td>Final Width Avg.</td><td>22.50</td><td>LF</td></tr><tr><td>Initial Length Avg.</td><td>103.00</td><td>LF</td></tr><tr><td>Initial Width Avg.</td><td>23.00</td><td>LF</td></tr></table> <p>Notes:</p>	Final Length Avg.	101.00	LF	Final Width Avg.	22.50	LF	Initial Length Avg.	103.00	LF	Initial Width Avg.	23.00	LF	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>22,275</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>22,275</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>281,105</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>303,380</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>303,380</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>110,466</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>23,138</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>133,604</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	22,275	SF	Total Pay Area This Page	22,275	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	281,105	SF	Total Panel SF To Date	303,380	SF	Total Pay Area To Date Including Anchor Trench	303,380		Initial Quantity Previous	110,466	SF	Initial Quantity This Page	23,138	SF	Initial Quantity To Date	133,604	SF
Final Length Avg.	123.00	LF																																																																							
Final Width Avg.	22.50	LF																																																																							
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Total Panel SF This Page	22,275	SF																																																																							
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Total Panel SF Previous	281,105	SF																																																																							
Total Panel SF To Date	303,380	SF																																																																							
Total Pay Area To Date Including Anchor Trench	303,380																																																																								
Initial Quantity Previous	110,466	SF																																																																							
Initial Quantity This Page	23,138	SF																																																																							
Initial Quantity To Date	133,604	SF																																																																							
Initial SF	2,875	Lineal Feet Trench	Initial SF	2,369	Lineal Feet Trench																																																																				
Final SF	2,768		Final SF	2,273																																																																					



Daily Panel Placement

Page 11

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/02/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #
114	952228-08	115	952119-08	116	952119-08
 Final Length Avg. 97.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 99.00 LF Initial Width Avg. 23.00 LF Notes:		 Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF Notes:		 Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF Notes:	
Initial SF 2,277 Lineal Feet Trench Final SF 2,183		Initial SF 460 Lineal Feet Trench Final SF 405		Initial SF 460 Lineal Feet Trench Final SF 405	
117	952228-08	118	952228-08	119	952230-08
 Final Length Avg. 94.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 96.00 LF Initial Width Avg. 23.00 LF Notes:		 Final Length Avg. 88.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 90.00 LF Initial Width Avg. 23.00 LF Notes:		 Final Length Avg. 89.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 91.00 LF Initial Width Avg. 23.00 LF Notes:	
Initial SF 2,208 Lineal Feet Trench Final SF 2,115		Initial SF 2,070 Lineal Feet Trench Final SF 1,980		Initial SF 2,093 Lineal Feet Trench Final SF 2,003	
120	952230-08	121	952230-08	Material in Anchor Trench	
 Final Length Avg. 92.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 94.00 LF Initial Width Avg. 23.00 LF Notes:		 Final Length Avg. 97.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 99.00 LF Initial Width Avg. 23.00 LF Notes:		Total LF In Trench This Page - LF Depth and Width Allowed in Trench - LF Total SF Trench This Page - SF Total Panel SF This Page 13,343 SF Total Pay Area This Page 13,343 SF LF In Trench Previous - LF LF In Trench To Date - LF SF In Trench Previous - SF Total SF in Trench to Date - SF Total Panel SF Previous 303,380 SF Total Panel SF To Date 316,723 SF Total Pay Area To Date Including Anchor Trench 316,723 Initial Quantity Previous 133,604 SF Initial Quantity This Page 14,007 SF Initial Quantity To Date 147,611 SF	
Initial SF 2,162 Lineal Feet Trench Final SF 2,070		Initial SF 2,277 Lineal Feet Trench Final SF 2,183			



Daily Panel Placement

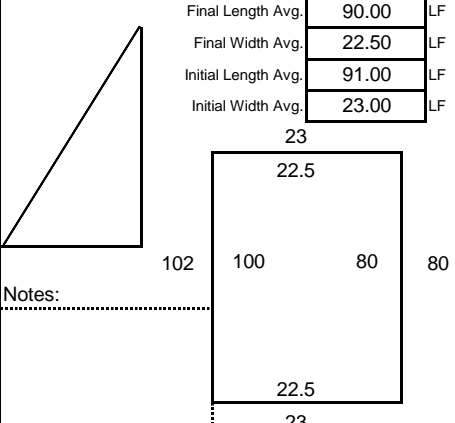
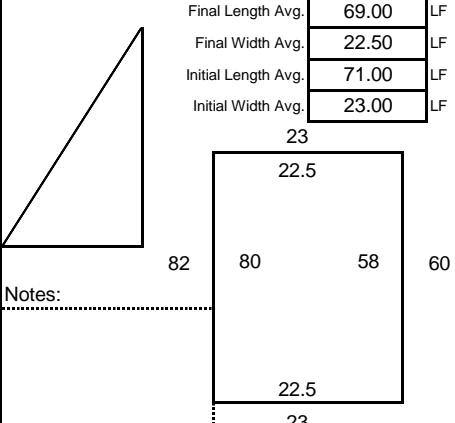
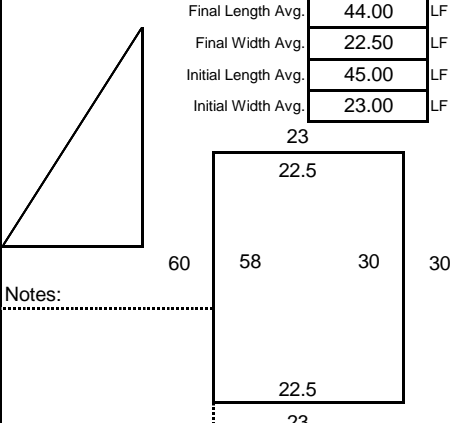
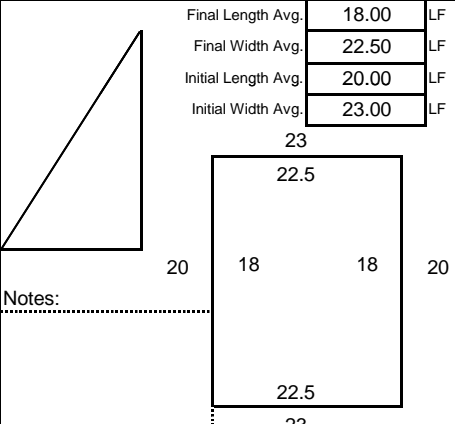
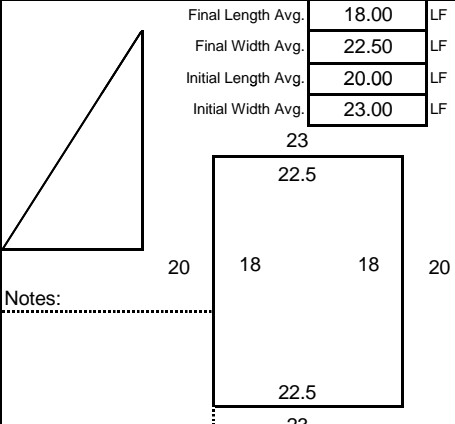
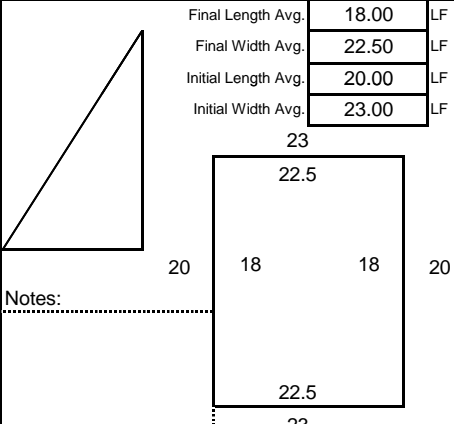
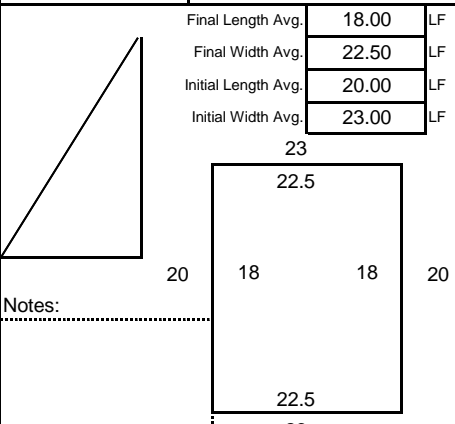
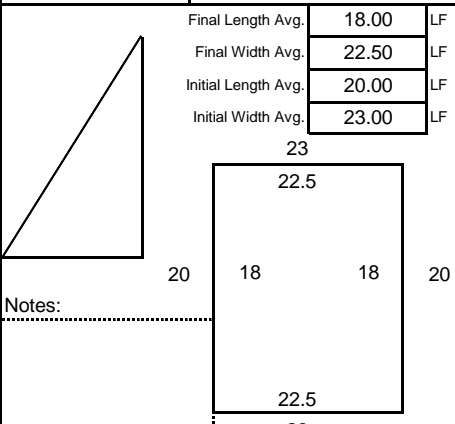
Page 12

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/02/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
122	952230-08	123	952225-08	124	952225-08																																												
 <div>Final Length Avg. 90.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 91.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>102 100 80 80</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 69.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 71.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>82 80 58 60</div> <div>Notes:</div> <div>22.5 23</div>	 <div>Final Length Avg. 44.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 45.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>60 58 30 30</div> <div>Notes:</div> <div>22.5 23</div>																																														
Initial SF 2,093	Lineal Feet Trench	Initial SF 1,633	Lineal Feet Trench	Initial SF 1,035	Lineal Feet Trench																																												
Final SF 2,025		Final SF 1,553		Final SF 990																																													
125	952225-08	126	952225-08	127	952225-08																																												
 <div>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>20 18 18 20</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>20 18 18 20</div> <div>Notes:</div> <div>22.5 23</div>	 <div>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>20 18 18 20</div> <div>Notes:</div> <div>22.5 23</div>																																														
Initial SF 460	Lineal Feet Trench	Initial SF 460	Lineal Feet Trench	Initial SF 460	Lineal Feet Trench																																												
Final SF 405		Final SF 405		Final SF 405																																													
128	952225-08	129	952225-08	Material in Anchor Trench																																													
 <div>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>20 18 18 20</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>20 18 18 20</div> <div>Notes:</div> <div>22.5 23</div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>6,593</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>6,593</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>316,723</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>323,315</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>323,315</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>147,611</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>7,061</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>154,672</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	6,593	SF	Total Pay Area This Page	6,593	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	316,723	SF	Total Panel SF To Date	323,315	SF	Total Pay Area To Date Including Anchor Trench	323,315		Initial Quantity Previous	147,611	SF	Initial Quantity This Page	7,061	SF	Initial Quantity To Date	154,672	SF
Total LF In Trench This Page	-	LF																																															
Depth and Width Allowed in Trench		LF																																															
Total SF Trench This Page	-	SF																																															
Total Panel SF This Page	6,593	SF																																															
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SF In Trench Previous	-	SF																																															
Total SF in Trench to Date	-	SF																																															
Total Panel SF Previous	316,723	SF																																															
Total Panel SF To Date	323,315	SF																																															
Total Pay Area To Date Including Anchor Trench	323,315																																																
Initial Quantity Previous	147,611	SF																																															
Initial Quantity This Page	7,061	SF																																															
Initial Quantity To Date	154,672	SF																																															
Initial SF 460	Lineal Feet Trench	Initial SF 460	Lineal Feet Trench																																														
Final SF 405		Final SF 405																																															



Daily Panel Placement

Page 13

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/02/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
130	952225-08	131	952225-08	132	952225-08																																												
<p>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 20 18 18 20</p> <p>Notes:</p>		<p>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 20 18 18 20</p> <p>Notes:</p>		<p>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 20 18 18 20</p> <p>Notes:</p>																																													
Initial SF 460 Final SF 405	Lineal Feet Trench	Initial SF 460 Final SF 405	Lineal Feet Trench	Initial SF 460 Final SF 405	Lineal Feet Trench																																												
133	952225-08	134	952225-08	135	952225-08																																												
<p>Final Length Avg. 6.00 LF Final Width Avg. 18.00 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 6 18 20</p> <p>Notes:</p>		<p>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 20 18 18 20</p> <p>Notes:</p>		<p>Final Length Avg. 18.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 20.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 20 18 18 20</p> <p>Notes:</p>																																													
Initial SF 70 Final SF 54	Lineal Feet Trench	Initial SF 460 Final SF 405	Lineal Feet Trench	Initial SF 460 Final SF 405	Lineal Feet Trench																																												
136	952225-08	137	928227-08	Material in Anchor Trench																																													
<p>Final Length Avg. 22.50 LF Final Width Avg. 30.00 LF Initial Length Avg. 32.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 30 32</p> <p>Notes:</p>		<p>Final Length Avg. 13.00 LF Final Width Avg. 22.00 LF Initial Length Avg. 24.00 LF Initial Width Avg. 23.00 LF</p> <p>23 22.5 13 22 24</p> <p>Notes: Installed on 4/6/2010</p>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>2,560</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>2,560</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>323,315</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>325,875</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>325,875</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>154,672</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>2,906</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>157,578</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	2,560	SF	Total Pay Area This Page	2,560	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	323,315	SF	Total Panel SF To Date	325,875	SF	Total Pay Area To Date Including Anchor Trench	325,875		Initial Quantity Previous	154,672	SF	Initial Quantity This Page	2,906	SF	Initial Quantity To Date	157,578	SF
Total LF In Trench This Page	-	LF																																															
Depth and Width Allowed in Trench		LF																																															
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Total Panel SF This Page	2,560	SF																																															
Total Pay Area This Page	2,560	SF																																															
LF In Trench Previous	-	LF																																															
LF In Trench To Date	-	LF																																															
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Total SF in Trench to Date	-	SF																																															
Total Panel SF Previous	323,315	SF																																															
Total Panel SF To Date	325,875	SF																																															
Total Pay Area To Date Including Anchor Trench	325,875																																																
Initial Quantity Previous	154,672	SF																																															
Initial Quantity This Page	2,906	SF																																															
Initial Quantity To Date	157,578	SF																																															
Initial SF 368 Final SF 338	Lineal Feet Trench	Initial SF 168 Final SF 143	Lineal Feet Trench																																														



Daily Panel Placement

Page 14

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/09/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
138	942117-08	139	952345-08	140	952345-08																																												
<div>Final Length Avg. <input type="text"/> LF Final Width Avg. <input type="text"/> LF Initial Length Avg. <input type="text"/> LF Initial Width Avg. <input type="text"/> LF</div> <div>Notes: <input type="text"/></div>		<div>Final Length Avg. <input type="text"/> 61.00 LF Final Width Avg. <input type="text"/> 22.50 LF Initial Length Avg. <input type="text"/> 63.00 LF Initial Width Avg. <input type="text"/> 23.00 LF</div> <div>Notes: <input type="text"/></div>		<div>Final Length Avg. <input type="text"/> 48.00 LF Final Width Avg. <input type="text"/> 22.50 LF Initial Length Avg. <input type="text"/> 50.00 LF Initial Width Avg. <input type="text"/> 23.00 LF</div> <div>Notes: <input type="text"/></div>																																													
Initial SF 416	Lineal Feet Trench	Initial SF 1,449	Lineal Feet Trench	Initial SF 1,150	Lineal Feet Trench																																												
Final SF 372		Final SF 1,373		Final SF 1,080																																													
141	952345-08	142	952346-08	143	952345-08																																												
<div>Final Length Avg. <input type="text"/> 39.00 LF Final Width Avg. <input type="text"/> 22.50 LF Initial Length Avg. <input type="text"/> 42.00 LF Initial Width Avg. <input type="text"/> 23.00 LF</div> <div>Notes: <input type="text"/></div>		<div>Final Length Avg. <input type="text"/> LF Final Width Avg. <input type="text"/> LF Initial Length Avg. <input type="text"/> LF Initial Width Avg. <input type="text"/> LF</div> <div>Notes: <input type="text"/></div>		<div>Final Length Avg. <input type="text"/> 40.00 LF Final Width Avg. <input type="text"/> 22.50 LF Initial Length Avg. <input type="text"/> 44.00 LF Initial Width Avg. <input type="text"/> 23.00 LF</div> <div>Notes: <input type="text"/></div>																																													
Initial SF 966	Lineal Feet Trench	Initial SF 90	Lineal Feet Trench	Initial SF 1,012	Lineal Feet Trench																																												
Final SF 878		Final SF 70		Final SF 900																																													
144	952345-08	145	952346-08	Material in Anchor Trench																																													
<div>Final Length Avg. <input type="text"/> 41.00 LF Final Width Avg. <input type="text"/> 22.50 LF Initial Length Avg. <input type="text"/> 43.00 LF Initial Width Avg. <input type="text"/> 23.00 LF</div> <div>Notes: <input type="text"/></div>		<div>Final Length Avg. <input type="text"/> 43.00 LF Final Width Avg. <input type="text"/> 8.00 LF Initial Length Avg. <input type="text"/> 45.00 LF Initial Width Avg. <input type="text"/> 9.00 LF</div> <div>Notes: <input type="text"/></div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>5,939</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>5,939</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>325,875</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>331,813</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>331,813</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>157,578</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>6,477</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>164,055</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	5,939	SF	Total Pay Area This Page	5,939	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	325,875	SF	Total Panel SF To Date	331,813	SF	Total Pay Area To Date Including Anchor Trench	331,813		Initial Quantity Previous	157,578	SF	Initial Quantity This Page	6,477	SF	Initial Quantity To Date	164,055	SF
Total LF In Trench This Page	-	LF																																															
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Total SF Trench This Page	-	SF																																															
Total Panel SF This Page	5,939	SF																																															
Total Pay Area This Page	5,939	SF																																															
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Total SF in Trench to Date	-	SF																																															
Total Panel SF Previous	325,875	SF																																															
Total Panel SF To Date	331,813	SF																																															
Total Pay Area To Date Including Anchor Trench	331,813																																																
Initial Quantity Previous	157,578	SF																																															
Initial Quantity This Page	6,477	SF																																															
Initial Quantity To Date	164,055	SF																																															
Initial SF 989	Lineal Feet Trench	Initial SF 405	Lineal Feet Trench																																														
Final SF 923		Final SF 344																																															



Daily Panel Placement

Page 15

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/09/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																											
146	952345-08	147	952346-08	148	952345-08																																											
<div>Final Length Avg. 42.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 44.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 40 38 46 48 Notes: 22.5 23</div>	<div>Final Length Avg. 21.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 23.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 6 4 38 40 Notes: 22.5 23</div>	<div>Final Length Avg. 58.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 60.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 58 56 60 62 Notes: 22.5 23</div>																																														
Initial SF 1,012 Final SF 945	Initial SF 529 Final SF 473	Initial SF 1,380 Final SF 1,305																																														
Lineal Feet Trench	Lineal Feet Trench	Lineal Feet Trench																																														
149	952346-08	150	952346-08	151	952346-08																																											
<div>Final Length Avg. 62.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 64.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 62 60 64 66 Notes: 22.5 23</div>	<div>Final Length Avg. 65.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 67.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 66 64 66 68 Notes: 22.5 23</div>	<div>Final Length Avg. 68.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 70.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 68 66 70 72 Notes: 22.5 23</div>																																														
Initial SF 1,472 Final SF 1,395	Initial SF 1,541 Final SF 1,463	Initial SF 1,610 Final SF 1,530																																														
Lineal Feet Trench	Lineal Feet Trench	Lineal Feet Trench																																														
152	952346-08	153	952346-08	Material in Anchor Trench																																												
<div>Final Length Avg. 73.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 75.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 72 70 76 78 Notes: 22.5 23</div>	<div>Final Length Avg. 22.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 24.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5 20 18 26 28 Notes: 22.5 23</div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>9,248</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>9,248</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>331,813</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>341,061</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>341,061</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>164,055</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>9,821</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>173,876</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	9,248	SF	Total Pay Area This Page	9,248	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	331,813	SF	Total Panel SF To Date	341,061	SF	Total Pay Area To Date Including Anchor Trench	341,061		Initial Quantity Previous	164,055	SF	Initial Quantity This Page	9,821	SF	Initial Quantity To Date	173,876	SF
Total LF In Trench This Page	-	LF																																														
Depth and Width Allowed in Trench		LF																																														
Total SF Trench This Page	-	SF																																														
Total Panel SF This Page	9,248	SF																																														
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SF In Trench Previous	-	SF																																														
Total SF in Trench to Date	-	SF																																														
Total Panel SF Previous	331,813	SF																																														
Total Panel SF To Date	341,061	SF																																														
Total Pay Area To Date Including Anchor Trench	341,061																																															
Initial Quantity Previous	164,055	SF																																														
Initial Quantity This Page	9,821	SF																																														
Initial Quantity To Date	173,876	SF																																														
Initial SF 1,725 Final SF 1,643	Initial SF 552 Final SF 495																																															
Lineal Feet Trench	Lineal Feet Trench																																															



Daily Panel Placement

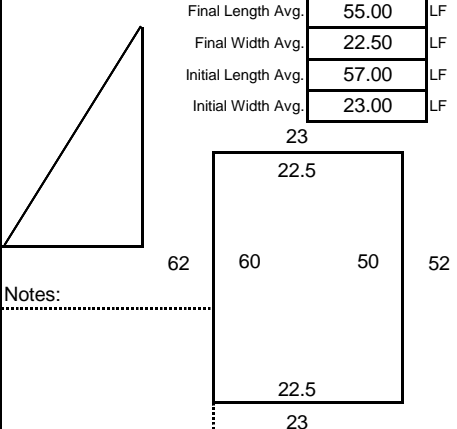
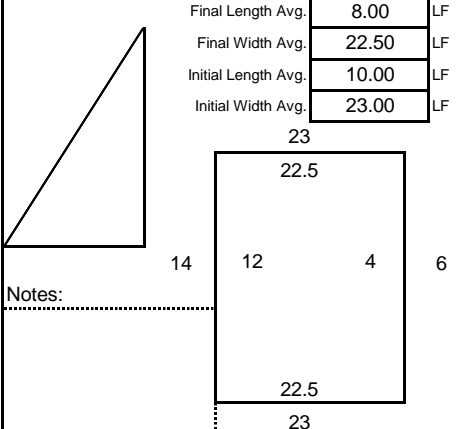
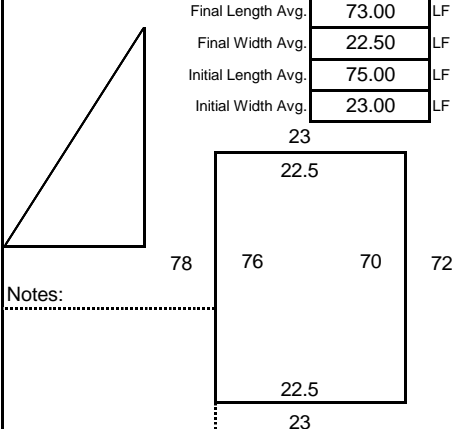
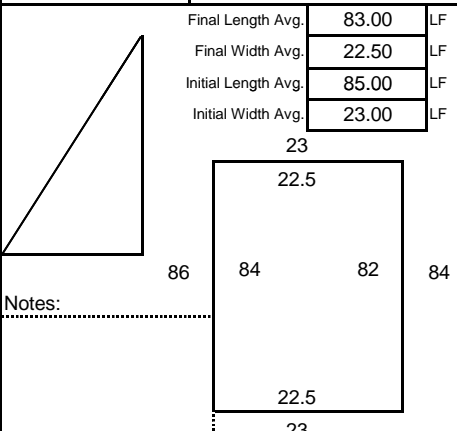
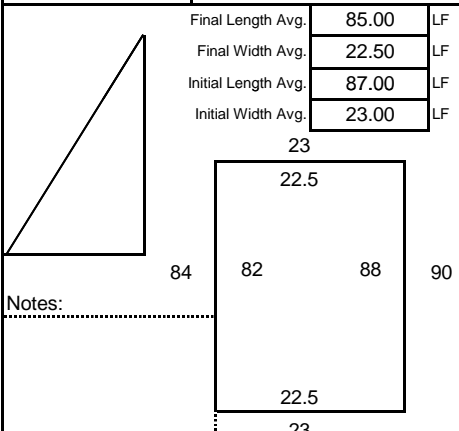
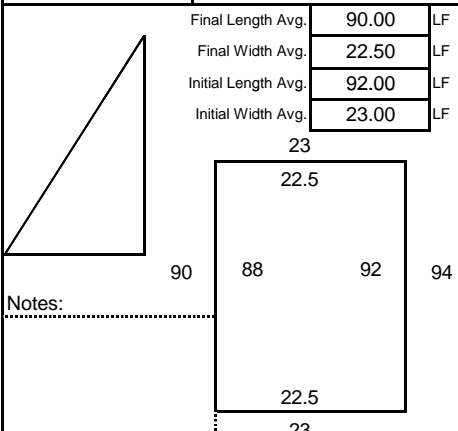
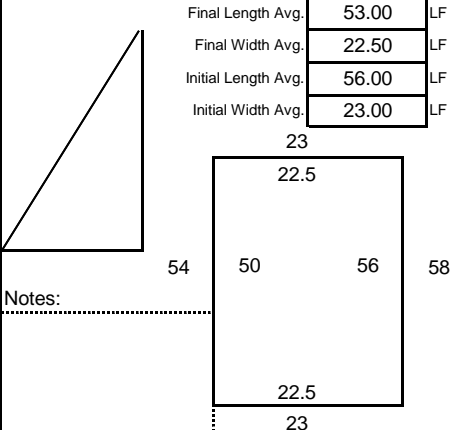
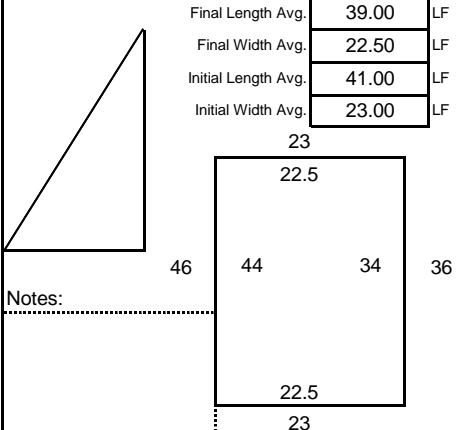
Page 16

Project Name: BASIC REMEDIATION Job # 07-11-1271 Deployment Date 04/09/10

Superintendent: ISMAEL BUITRON Material Type: 60 MIL HDP

☒ Primary ☐ Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.) BMI SOUTH COVER Roll Stock Width 23

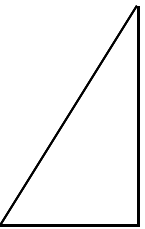
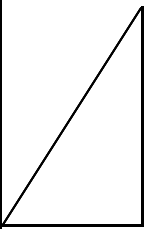
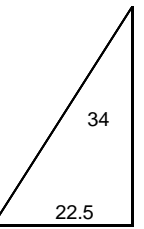
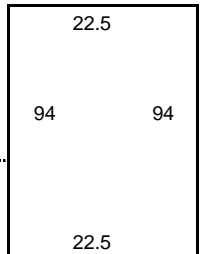
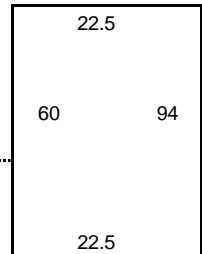
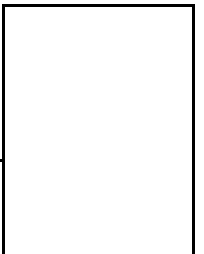
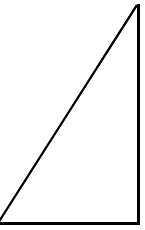
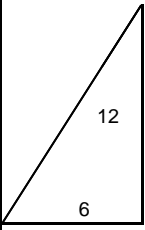
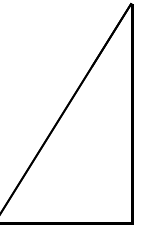
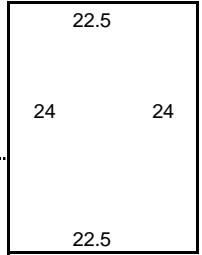
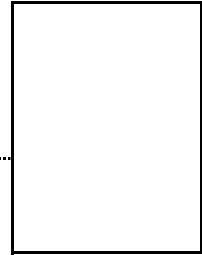
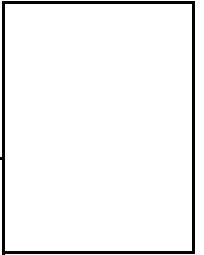
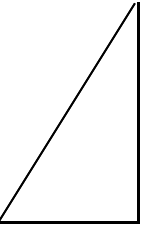
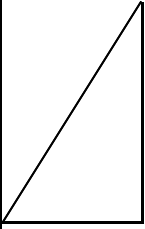
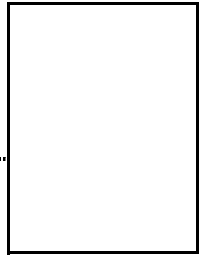
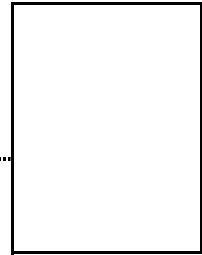
Panel #	Roll #	Panel #	Roll #	Panel #	Roll #																																												
154	952120-08	155	952120-08	156	902105-08																																												
 <div>Final Length Avg. 55.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 57.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>62 60 50 52</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 8.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 10.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>14 12 4 6</div> <div>Notes:</div> <div>22.5 23</div>	 <div>Final Length Avg. 73.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 75.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>78 76 70 72</div> <div>Notes:</div> <div>22.5 23</div>																																														
Initial SF 1,311	Lineal Feet Trench	Initial SF 230	Lineal Feet Trench	Initial SF 1,725	Lineal Feet Trench																																												
Final SF 1,238		Final SF 180		Final SF 1,643																																													
157	902105-08	158	902105-08	159	902105-08																																												
 <div>Final Length Avg. 83.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 85.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>86 84 82 84</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 85.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 87.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>84 82 88 90</div> <div>Notes:</div> <div>22.5 23</div>	 <div>Final Length Avg. 90.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 92.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>90 88 92 94</div> <div>Notes:</div> <div>22.5 23</div>																																														
Initial SF 1,955	Lineal Feet Trench	Initial SF 2,001	Lineal Feet Trench	Initial SF 2,116	Lineal Feet Trench																																												
Final SF 1,868		Final SF 1,913		Final SF 2,025																																													
160	902105-08	161	952120-08	Material in Anchor Trench																																													
 <div>Final Length Avg. 53.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 56.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>54 50 56 58</div> <div>Notes:</div> <div>22.5 23</div>		 <div>Final Length Avg. 39.00 LF Final Width Avg. 22.50 LF Initial Length Avg. 41.00 LF Initial Width Avg. 23.00 LF</div> <div>23 22.5</div> <div>46 44 34 36</div> <div>Notes:</div> <div>22.5 23</div>	<table border="1"><tr><td>Total LF In Trench This Page</td><td>-</td><td>LF</td></tr><tr><td>Depth and Width Allowed in Trench</td><td></td><td>LF</td></tr><tr><td>Total SF Trench This Page</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF This Page</td><td>10,935</td><td>SF</td></tr><tr><td>Total Pay Area This Page</td><td>10,935</td><td>SF</td></tr><tr><td>LF In Trench Previous</td><td>-</td><td>LF</td></tr><tr><td>LF In Trench To Date</td><td>-</td><td>LF</td></tr><tr><td>SF In Trench Previous</td><td>-</td><td>SF</td></tr><tr><td>Total SF in Trench to Date</td><td>-</td><td>SF</td></tr><tr><td>Total Panel SF Previous</td><td>341,061</td><td>SF</td></tr><tr><td>Total Panel SF To Date</td><td>351,996</td><td>SF</td></tr><tr><td>Total Pay Area To Date Including Anchor Trench</td><td>351,996</td><td></td></tr><tr><td>Initial Quantity Previous</td><td>173,876</td><td>SF</td></tr><tr><td>Initial Quantity This Page</td><td>11,569</td><td>SF</td></tr><tr><td>Initial Quantity To Date</td><td>185,445</td><td>SF</td></tr></table>		Total LF In Trench This Page	-	LF	Depth and Width Allowed in Trench		LF	Total SF Trench This Page	-	SF	Total Panel SF This Page	10,935	SF	Total Pay Area This Page	10,935	SF	LF In Trench Previous	-	LF	LF In Trench To Date	-	LF	SF In Trench Previous	-	SF	Total SF in Trench to Date	-	SF	Total Panel SF Previous	341,061	SF	Total Panel SF To Date	351,996	SF	Total Pay Area To Date Including Anchor Trench	351,996		Initial Quantity Previous	173,876	SF	Initial Quantity This Page	11,569	SF	Initial Quantity To Date	185,445	SF
Total LF In Trench This Page	-	LF																																															
Depth and Width Allowed in Trench		LF																																															
Total SF Trench This Page	-	SF																																															
Total Panel SF This Page	10,935	SF																																															
Total Pay Area This Page	10,935	SF																																															
LF In Trench Previous	-	LF																																															
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SF In Trench Previous	-	SF																																															
Total SF in Trench to Date	-	SF																																															
Total Panel SF Previous	341,061	SF																																															
Total Panel SF To Date	351,996	SF																																															
Total Pay Area To Date Including Anchor Trench	351,996																																																
Initial Quantity Previous	173,876	SF																																															
Initial Quantity This Page	11,569	SF																																															
Initial Quantity To Date	185,445	SF																																															
Initial SF 1,288	Lineal Feet Trench	Initial SF 943	Lineal Feet Trench																																														
Final SF 1,193		Final SF 878																																															

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Deployment Date	04/09/10
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Superintendent: ISMAEL BUITRON **Material Type:** 60 MIL HDP

☒ Primary Secondary ☐ Cell ☐ Pond ☐ Cap ☒ Other:

Description (i.e. Phase #, Cell #, Pond # etc.)	BMI SOUTH COVER	Roll Stock Width	23
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Panel # 162			Roll # 952120-08			Panel # 163			Roll # 952120-08			Panel # 164			Roll # 952120-08								
			Final Length Avg.		94.00	LF				Final Length Avg.		77.00	LF				Final Length Avg.			LF			
			Final Width Avg.		22.50	LF				Final Width Avg.		22.50	LF				Final Width Avg.			LF			
			Initial Length Avg.		96.00	LF				Initial Length Avg.		80.00	LF				Initial Length Avg.			LF			
			Initial Width Avg.		23.00	LF				Initial Width Avg.		23.00	LF				Initial Width Avg.			LF			
			23							23							23						
			22.5							22.5													
			94							60							36						
			94							94													
			22.5							22.5													
			23							23													
Initial SF			2,208		Lineal Feet Trench			Initial SF			1,840		Lineal Feet Trench			Initial SF			414		Lineal Feet Trench		
Final SF			2,115					Final SF			1,733					Final SF			383				
Panel # 165			Roll # 952120-08			Panel # 166			Roll # 952227-08			Panel #			Roll #								
			Final Length Avg.		24.00	LF				Final Length Avg.			LF				Final Length Avg.			LF			
			Final Width Avg.		22.50	LF				Final Width Avg.			LF				Final Width Avg.			LF			
			Initial Length Avg.		26.00	LF				Initial Length Avg.			LF				Initial Length Avg.			LF			
			Initial Width Avg.		23.00	LF				Initial Width Avg.			LF				Initial Width Avg.			LF			
			23							14							14						
			22.5																				
			26							6							6						
			24							7							7						
			22.5							22.5							22.5						
			23							23							23						
Initial SF			598		Lineal Feet Trench			Initial SF			49		Lineal Feet Trench			Initial SF			-		Lineal Feet Trench		
Final SF			540					Final SF			36					Final SF			-				
Panel #			Roll #			Panel #			Roll #			Material in Anchor Trench											
			Final Length Avg.			LF				Final Length Avg.			LF	Total LF In Trench This Page						-	LF		
			Final Width Avg.			LF				Final Width Avg.			LF	Depth and Width Allowed in Trench							LF		
			Initial Length Avg.			LF				Initial Length Avg.			LF	Total SF Trench This Page						-	SF		
			Initial Width Avg.			LF				Initial Width Avg.			LF	Total Panel SF This Page						4,806	SF		
														Total Pay Area This Page						4,806	SF		
														LF In Trench Previous						-	LF		
														LF In Trench To Date						-	LF		
														SF In Trench Previous						-	SF		
														Total SF in Trench to Date						-	SF		
														Total Panel SF Previous						351,996	SF		
Initial SF			-		Lineal Feet Trench			Initial SF			-		Lineal Feet Trench			Total Panel SF To Date						356,802	SF
Final SF			-					Final SF			-					Total Pay Area To Date Including Anchor Trench						356,802	
Panel #			Roll #			Panel #			Roll #			Initial Quantity Previous						185,445	SF				
Panel #			Roll #			Panel #			Roll #			Initial Quantity This Page						5,109	SF				
Panel #			Roll #			Panel #			Roll #			Initial Quantity To Date						190,554	SF				

Trial Weld Logs

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

TRIAL WELD INFORMATION

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO. 07-11-1271

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TRIAL WELD INFORMATION

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO. 07-11-1271

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					Extrusion Welds		Fusion Welds													
Date	5/14/2009				Barrel Set	Preheat Set	Wedge Set	Speed Setting	Peel Values lbs/inch						Shear Values lbs/inch					Comments
Time	Ambient Temp(°F)	QC Initial	Machine #	Seamer Initials					Specified Value _____91_____						Specified Value _____120_____					
7:23 AM	72	V.B	20831	J.C	~	~	850	4.5	inner	117	137	136			167	170	167			P S/S
									outer	133	116	136								
7:25 AM	72	V.B	20831	J.C	~	~	850	3.5	inner	134	127	127			156	159	153			P T/T
									outer	143	118	120								
7:20 AM	72	V.B	1210	E.B	~	~	850	5.5	inner	130	133	119			167	162	174			P S/S
									outer	118	123	121								
7:25 AM	72	V.B	1210	E.B	~	~	850	4.5	inner	137	124	110			160	156	153			P T/T
									outer	142	127	133								
8:00 AM	72	V.B	513	B.R.S	500	300	~	~	inner	119	109	123			154	150	154			P T/T
									outer	~	~	~								
12:17 PM	95	V.B	20831	J.C	~	~	850	5	inner	131	117	132			145	142	146			P S/S
									outer	116	117	123								
12:36 PM	95	V.B	20831	J.C	~	~	850	4	inner	117	125	131			143	147	141			P T/T
									outer	128	110	120								
12:30 PM	95	V.B	1210	E.B	~	~	850	5.5	inner	128	132	130			145	145	144			P S/S
									outer	115	115	120								
12:25 PM	95	V.B	1210	E.B	~	~	850	4.5	inner	117	116	121			142	141	144			P T/T
									outer	131	124	110								
									inner											
									outer											
									inner											
									outer											
									inner											
									outer											
									inner											
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									inner											
									outer											

TRIAL WELD INFORMATION

PAGE 3 of 4

					Extrusion Welds		Fusion Welds													
Date	5/15/2009				Barrel Set	Preheat Set	Wedge Set	Speed Setting	Peel Values lbs/inch						Shear Values lbs/inch					Comments
Time	Ambient Temp(°F)	QC Initial	Machine #	Seamer Initials					Specified Value <u>91</u>						Specified Value <u>120</u>					
7:37 AM	70	V.B	20831	J.C	~	~	850	5	inner	137	141	138			170	160	167			P S/S
									outer	126	123	126								
7:39 AM	70	V.B	20831	J.C	~	~	850	4	inner	133	119	115			145	143	146			P T/T
									outer	112	114	126								
7:10 AM	70	V.B	1210	E.B	~	~	850	5.5	inner	131	122	124			160	157	157			P S/S
									outer	131	130	127								
7:15 AM	70	V.B	1210	E.B	~	~	850	4.5	inner	124	120	123			147	143	145			P T/T
									outer	128	127	109								
7:05 AM	70	V.B	513	B.R.S	500	300	~	~	inner	131	107	111			144	147	137			P T/T
									outer	~	~	~								
12:05 PM	94	V.B	20831	J.C	~	~	850	5	inner	129	110	126			149	149	147			P S/S
									outer	124	125	122								
12:00 PM	94	V.B	20831	J.C	~	~	850	4	inner	115	133	133			145	143	144			P T/T
									outer	134	120	127								
12:05 PM	94	V.B	1210	E.B	~	~	850	5.5	inner	140	126	131			147	150	147			P S/S
									outer	127	116	130								
12:10 PM	94	V.B	1210	E.B	~	~	850	4.5	inner	132	135	130			146	141	142			P T/T
									outer	133	137	124								
12:14 PM	94	V.B	513	B.R.S	500	300	~	~	inner	126	112	105			140	143	136			P T/T
									outer	~	~	~								
2:00 PM	94	V.B	1210	E.B	~	~	850	5	inner	124	117	110			145	149	145			P T/S
									outer	121	123	114								
1:40 PM	94	V.B	20831	J.C	~	~	850	4	inner	129	117	134			142	140	147			P T/S
									outer	127	121	114								
3:30 PM	94	V.B	1209	I.S	~	~	850	5.5	inner	126	118	128			144	141	143			P S/S
									outer	129	130	122								
									inner											
									outer											
									inner											
									outer											
									inner											
									outer											

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

TRIAL WELD INFORMATION

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO. 07-11-1271

PAGE 4 of 4

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Environmental Specialties International Inc.
Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border:1px solid black; padding:2px;">X</div>	Pond	<div style="border:1px solid black; width:20px; height:20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border:1px solid black; width:40px; height:20px;"></div>	Cell	<div style="border:1px solid black; width:20px; height:20px;"></div>
Reported By :	VICTOR BUITRON			Cap	<div style="border:1px solid black; padding:2px;">X</div>
Other :					

Peel Test Extrusion Minimum	78	PPI
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Peel Test Fusion Minimum	91	PPI
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Shear Test Minimum	120	PPI
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Liner Types **S = Smooth** **T = Textured** **SG = Super Grip**

Weld Date	Time	Liner Type			Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
11-Mar-10	7:32 AM	S	to	S	JOSE CAMPOS	20831	4.5	850	~	50	Peel	132 141	147 138	153 138			Pass
											Shear	202	207	201			
11-Mar-10	7:35 AM	T	to	S	JOSE CAMPOS	20831	3.5	850	~	50	Peel	161 150	153 131	157 140			Pass
											Shear	204	197	204			
11-Mar-10	7:37 AM	T	to	T	JOSE CAMPOS	20831	3.5	850	~	50	Peel	141 127	149 131	158 146			Pass
											Shear	192	191	194			
11-Mar-10	8:45 AM	S	to	S	EFREN BUITRON	1210	5.5	860	~	50	Peel	142 144	139 140	137 142			Pass
											Shear	199	201	197			
11-Mar-10	8:35 AM	T	to	T	EFREN BUITRON	1210	4	860	~	50	Peel	170 157	156 152	164 152			Pass
											Shear	188	187	191			
11-Mar-10	8:30 AM	T	to	S	EFREN BUITRON	1210	4	860	~	50	Peel	137 141	127 133	136 143			Pass
											Shear	189	193	190			
11-Mar-10	1:05 PM	S	to	S	EFREN BUITRON	1210	5.5	860	~	68	Peel	127 129	127 134	122 131			Pass
											Shear	170	167	173			
11-Mar-10	1:00 PM	T	to	S	EFREN BUITRON	1210	4	860	~	68	Peel	136 139	131 132	134 138			Pass
											Shear	164	167	163			
11-Mar-10	1:00 PM	T	to	T	LUIS LARA	1209	3.5	860	~	68	Peel	118 127	121 123	126 118			Pass
											Shear	158	163	163			
11-Mar-10	1:15 PM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	68	Peel	127 137	128 127	133 132			Pass
											Shear	176	177	173			
11-Mar-10	1:20 PM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	68	Peel	131 136	129 128	133 127			Pass
											Shear	167	164	170			
11-Mar-10	1:12 PM	S	to	S	LUIS LARA	1209	4.5	860	~	68	Peel	124 128	130 118	126 122			Pass
											Shear	170	167	154			
			to								Peel						
											Shear						
			to								Peel						
											Shear						
			to								Peel						
											Shear						
12-Mar-10	7:20 AM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	50	Peel	130 129	127 130	137 138			Pass
											Shear	183	187	181			

Environmental Specialties International Inc.
Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	Cell	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>
Reported By :	VICTOR BUITRON			Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>
Other :					

Peel Test Extrusion Minimum	78	PPI
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Peel Test Fusion Minimum	91	PPI
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Shear Test Minimum	120	PPI
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Liner Types **S = Smooth** **T = Textured** **SG = Super Grip**

Weld Date	Time	Liner Type		Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
12-Mar-10	7:56 AM	S	to	S	LUIS LARA	1209	4.5	860	~	50	Peel 127 134	123 131	130 137			Pass
											Shear 173	179	176			
12-Mar-10	7:30 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	50	Peel 150 ~	149 ~	140 ~			Pass
											Shear 171	167	169			
12-Mar-10	8:15 AM	S	to	S	EFREN BUITRON	1210	5.5	860	~	52	Peel 126 133	128 131	127 128			Pass
											Shear 173	177	175			
12-Mar-10	8:20 AM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	52	Peel 137 141	131 137	134 137			Pass
											Shear 181	178	180			
12-Mar-10	12:00 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	68	Peel 118 ~	131 ~	136 ~			Pass
											Shear 163	158	161			
12-Mar-10	12:00 PM	T	to	T	EFREN BUITRON	1210	4	860	~	68	Peel 122 117	122 120	120 132			Pass
											Shear 159	163	160			
12-Mar-10	12:30 PM	T	to	T	MARIO BUITRON	13	~	550	350	68	Peel 137 ~	117 ~	139 ~			Pass
											Shear 157	160	163			
			to								Peel 					
											Shear 					
			to								Peel 					
											Shear 					
			to								Peel 					
											Shear 					
			to								Peel 					
											Shear 					
1-Apr-10	9:30 AM	S	to	S	EFREN BUITRON	1210	5	860	~	60	Peel 128 126	127 128	128 131			Pass
											Shear 175	173	177			
1-Apr-10	9:35 AM	T	to	S	EFREN BUITRON	1210	4	860	~	60	Peel 134 131	126 132	136 128			Pass
											Shear 170	173	176			

Environmental Specialties International Inc.

Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 50px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div>	Cell	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;"> </div>
Reported By :	VICTOR BUITRON	Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Peel Test Extrusion Minimum	78 PPI
Other :					
				Peel Test Fusion Minimum	91 PPI
				Shear Test Minimum	120 PPI

Liner Types S = Smooth T = Textured SG = Super Grip

Weld Date	Time	Liner Type			Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
1-Apr-10	9:40 AM	T	to	T	EFREN BUITRON	1210	4	860	~	60	Peel	131 137	128 126	130 132			Pass
											Shear	168	171	173			
1-Apr-10	9:30 AM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	60	Peel	126 128	130 124	128 131			Pass
											Shear	174	178	175			
1-Apr-10	1:00 PM	S	to	S	EFREN BUITRON	1210	5.5	860	~	70	Peel	126 127	118 130	126 127			Pass
											Shear	160	163	164			
1-Apr-10	1:05 PM	T	to	S	EFREN BUITRON	1210	4	860	~	70	Peel	123 117	126 119	121 129			Pass
											Shear	165	159	163			
1-Apr-10	1:02 PM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	70	Peel	136 123	128 126	124 127			Pass
											Shear	160	164	162			
1-Apr-10	1:07 PM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	70	Peel	141 132	137 130	136 133			Pass
											Shear	157	161	160			
1-Apr-10	1:07 PM	T	to	T	EFREN BUITRON	1210	4	860	~	70	Peel	134 130	126 131	130 127			Pass
											Shear	167	164	164			
			to								Peel						
											Shear						
2-Apr-10	7:30 AM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	55	Peel	159 142	137 139	153 142			Pass
											Shear	186	165	182			
2-Apr-10	7:35 AM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	55	Peel	151 163	131 163	153 159			Pass
											Shear	216	191	191			
2-Apr-10	7:50 AM	S	to	S	EFREN BUITRON	1210	5	860	~	55	Peel	120 133	133 132	132 139			Pass
											Shear	195	188	189			
2-Apr-10	9:00 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	60	Peel	127 ~	136 ~	148 ~			Pass
											Shear	162	164	167			
2-Apr-10	11:00 AM	T	to	S	JOSE CAMPOS	1208	3.5	860	~	64	Peel	131 128	124 132	130 133			Pass
											Shear	167	170	169			
2-Apr-10	11:01 AM	T	to	S	EFREN BUITRON	1210	4	860	~	64	Peel	137 140	127 127	131 129			Pass
											Shear	166	163	168			
2-Apr-10	12:40 PM	S	to	S	EFREN BUITRON	1210	5.5	860	~	70	Peel	127 118	125 123	120 118			Pass
											Shear	168	164	166			
2-Apr-10	12:45 PM	T	to	S	EFREN BUITRON	1210	4	860	~	70	Peel	123 113	124 107	121 127			Pass
											Shear	168	157	161			

Environmental Specialties International Inc.

Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	Cell	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>
Reported By :	VICTOR BUITRON			Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>
Other :					

Peel Test Extrusion Minimum	78	PPI
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Peel Test Fusion Minimum	91	PPI
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Shear Test Minimum	120	PPI
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Liner Types **S = Smooth** **T = Textured** **SG = Super Grip**

Weld Date	Time	Liner Type			Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
2-Apr-10	12:50 PM	T	to	T	EFREN BUITRON	1210	4	860	~	70	Peel	130 140	134 122	131 143			Pass
											Shear	154	157	157			
2-Apr-10	1:00 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	70	Peel	139 ~	132 ~	124 ~			Pass
											Shear	153	146	149			
2-Apr-10	1:00 PM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	70	Peel	131 120	126 125	129 120			Pass
											Shear	158	154	166			
2-Apr-10	1:05 PM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	70	Peel	119 133	119 123	119 119			Pass
											Shear	166	166	168			
2-Apr-10	1:08 PM	T	to	S	JOSE CAMPOS	1208	3.5	860	~	70	Peel	128 123	127 129	132 137			Pass
											Shear	170	167	171			
			to								Peel						
											Shear						
3-Apr-10	7:10 AM	T	to	T	EFREN BUITRON	1210	4	860	~	58	Peel	136 134	128 141	140 144			Pass
											Shear	199	185	197			
3-Apr-10	7:14 AM	T	to	S	EFREN BUITRON	1210	4	860	~	58	Peel	137 151	140 142	149 150			Pass
											Shear	208	206	208			
3-Apr-10	7:11 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	58	Peel	140 ~	141 ~	150 ~			Pass
											Shear	178	179	182			
			to								Peel						
											Shear						
5-Apr-10	7:20 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	52	Peel	131 ~	129 ~	140 ~			Pass
											Shear	185	184	182			
5-Apr-10	1:00 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	64	Peel	127 ~	140 ~	154 ~			Pass
											Shear	186	183	187			
6-Apr-10	7:10 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	52	Peel	143 ~	155 ~	138 ~			Pass
											Shear	182	178	184			
6-Apr-10	1:40 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	68	Peel	126 ~	136 ~	140 ~			Pass
											Shear	164	159	162			
			to								Peel						
											Shear						
7-Apr-10	7:10 AM	T	to	T	IVAN SANCHEZ	513	~	500	500	55	Peel	147 ~	139 ~	143 ~			Pass
											Shear	168	173	170			

Environmental Specialties International Inc.
Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px;">X</div>	Pond	<div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	Cell	<div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></div>
Reported By :	VICTOR BUITRON	Cap	<div style="border: 1px solid black; padding: 2px;">X</div>	Peel Test Extrusion Minimum	78 PPI
Other :					
		Peel Test Fusion Minimum	91 PPI		
		Shear Test Minimum	120 PPI		

Liner Types **S = Smooth** **T = Textured** **SG = Super Grip**

Weld Date	Time	Liner Type			Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
7-Apr-10	8:30 AM	T	to	T	EFREN BUITRON	13	~	550	400	55	Peel	147 ~	133 ~	146			Pass
											Shear	167	167	164			
7-Apr-10	12:35 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	68	Peel	118 ~	127 ~	131 ~			Pass
											Shear	164	161	166			
7-Apr-10	12:30 PM	T	to	T	EFREN BUITRON	13	~	550	400	68	Peel	123 ~	134 ~	130 ~			Pass
											Shear	159	161	163			
			to								Peel						
											Shear						
9-Apr-10	8:55 AM	T	to	S	EFREN BUITRON	1210	4	860	~	60	Peel	131 137	136 127	129 138			Pass
											Shear	171	174	174			
9-Apr-10	8:50 AM	T	to	T	EFREN BUITRON	1210	4	860	~	60	Peel	123 121	126 130	120 117			Pass
											Shear	169	167	171			
9-Apr-10	9:00 AM	S	to	S	EFREN BUITRON	1210	5	860	~	60	Peel	127 123	142 141	131 129			Pass
											Shear	172	166	171			
9-Apr-10	8:55 AM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	60	Peel	117 124	123 129	121 126			Pass
											Shear	163	165	167			
9-Apr-10	9:00 AM	T	to	S	JOSE CAMPOS	1208	3.5	860	~	60	Peel	126 124	130 118	127 132			Pass
											Shear	167	163	161			
9-Apr-10	9:02 AM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	60	Peel	128 122	130 121	127 124			Pass
											Shear	166	164	167			
9-Apr-10	12:55 PM	S	to	S	EFREN BUITRON	1210	5.5	860	~	70	Peel	127 122	126 118	123 121			Pass
											Shear	164	161	157			
9-Apr-10	1:00 PM	T	to	T	EFREN BUITRON	1210	4	860	~	70	Peel	127 117	124 120	106 118			Pass
											Shear	163	152	155			
9-Apr-10	1:00 PM	S	to	S	JOSE CAMPOS	1208	4.5	860	~	70	Peel	110 110	114 113	110 107			Pass
											Shear	150	151	147			
9-Apr-10	1:05 PM	T	to	T	JOSE CAMPOS	1208	3.5	860	~	70	Peel	111 111	117 110	117 112			Pass
											Shear	155	143	148			
9-Apr-10	1:05 PM	T	to	T	IVAN SANCHEZ	513	~	500	500	70	Peel	126 ~	133 ~	134 ~			Pass
											Shear	142	145	149			
			to								Peel						
											Shear						

Environmental Specialties International Inc.
Preweld Test Report

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 50px; height: 20px;"></div>	Cell	<div style="border: 1px solid black; width: 30px; height: 20px;"></div>
Reported By :	VICTOR BUITRON	Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Peel Test Extrusion Minimum	78 PPI
Other :					
				Peel Test Fusion Minimum	91 PPI
				Shear Test Minimum	120 PPI

Liner Types S = Smooth T = Textured SG = Super Grip

Weld Date	Time	Liner Type		Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Ambient Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
10-Apr-10	7:00 AM	T	to	EFREN BUITRON	13	~	550	400	55	Peel	153 ~	147 ~	157 ~			Pass
										Shear	171	169	173			
10-Apr-10	7:00 AM	T	to	IVAN SANCHEZ	513	~	500	500	55	Peel	141 ~	153 ~	138 ~			Pass
										Shear	177	172	171			
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						
			to							Peel						
										Shear						

Panel Seaming Forms

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 1 OF 6

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ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 2 OF 6

Date	Seam #	Machine ID #	E-Extrusion W-Wedge	Seam Length	Seamer ID	Weld Time		Comments
						Start	Stop	
5/14/2009	4/6	20831	W	186	JOSE CAMPOS	8:20 AM	8:48 AM	
5/14/2009	5/7	20831	W	28	JOSE CAMPOS	9:11 AM	9:16 AM	
5/14/2009	6/7	20831	W	22	JOSE CAMPOS	9:06 AM	9:10 AM	
5/14/2009	5/6	20831	W	94	JOSE CAMPOS	8:49 AM	9:04 AM	
5/14/2009	6/8	1210	W	277	EFREN BUITRON	8:30 AM	9:10 AM	
5/14/2009	7/8	1210	W	27	EFREN BUITRON	9:12 AM	9:16 AM	
5/14/2009	9/10	1210	W	22	EFREN BUITRON	9:20 AM	9:25 AM	
5/14/2009	8/9	1210	W	64	EFREN BUITRON	9:30 AM	9:38 AM	
5/14/2009	8/10	1210	W	242	EFREN BUITRON	9:39 AM	10:14 AM	
5/14/2009	9/11	20831	W	64	JOSE CAMPOS	9:32 AM	9:41 AM	
5/14/2009	10/11	20831	W	96	JOSE CAMPOS	9:42 AM	9:54 AM	
5/14/2009	10/12	20831	W	144	JOSE CAMPOS	9:55 AM	10:11 AM	
5/14/2009	11/12	20831	W	22	JOSE CAMPOS	9:20 AM	9:25 AM	
5/14/2009	13/14	20831	W	22	JOSE CAMPOS	10:21 AM	10:26 AM	
5/14/2009	11/13	1210	W	160	EFREN BUITRON	10:15 AM	10:38 AM	
5/14/2009	12/13	1210	W	96	EFREN BUITRON	10:39 AM	10:51 AM	
5/14/2009	12/14	1210	W	48	EFREN BUITRON	10:52 AM	10:58 AM	
5/14/2009	13/15	20831	W	254	JOSE CAMPOS	12:45 PM	1:19 PM	
5/14/2009	14/15	20831	W	48	JOSE CAMPOS	1:20 PM	1:26 PM	
5/14/2009	16/17	1210	W	22	EFREN BUITRON	1:03 PM	1:07 PM	
5/14/2009	15/16	1210	W	54	EFREN BUITRON	1:15 PM	1:22 PM	

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 3 OF 6

Date	Seam #	Machine ID #	E-Extrusion W-Wedge	Seam Length	Seamer ID	Weld Time		Comments
						Start	Stop	
5/14/2009	15/17	1210	W	248	EFREN BUITRON	1:23 PM	1:55 PM	
5/14/2009	18/19	20831	W	22	JOSE CAMPOS	1:36 PM	1:41 PM	
5/14/2009	16/19	20831	W	54	JOSE CAMPOS	1:48 PM	1:54 PM	
5/14/2009	17/19	20831	W	92	JOSE CAMPOS	1:55 PM	2:06 PM	
5/14/2009	17/18	20831	W	156	JOSE CAMPOS	2:07 PM	2:28 PM	
5/14/2009	20/21	1210	W	22	EFREN BUITRON	2:00 PM	2:05 PM	
5/14/2009	19/21	1210	W	40	EFREN BUITRON	2:10 PM	2:15 PM	
5/14/2009	19/20	1210	W	106	EFREN BUITRON	2:16 PM	2:29 PM	
5/14/2009	18/20	1210	W	154	EFREN BUITRON	2:30 PM	2:51 PM	
5/14/2009	21/22	20831	W	40	JOSE CAMPOS	2:34 PM	2:37 PM	
5/14/2009	20/22	20831	W	257	JOSE CAMPOS	2:38 PM	3:11 PM	
5/14/2009	23-24	20831	W	22	JOSE CAMPOS	3:20 AM	3:24 AM	
5/14/2009	22/24	1210	W	233	EFREN BUITRON	3:10 PM	3:42 PM	
5/14/2009	22/23	1210	W	64	EFREN BUITRON	3:43 PM	3:53 PM	
5/14/2009	25/26	20831	W	22	JOSE CAMPOS	3:25 AM	3:28 AM	
5/14/2009	24/26	20831	W	127	JOSE CAMPOS	3:28 PM	3:43 PM	
5/14/2009	24/25	20831	W	105	JOSE CAMPOS	3:44 PM	3:57 PM	
5/14/2009	23/25	20831	W	64	JOSE CAMPOS	3:58 PM	4:07 PM	

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 4 OF 6

Date	Seam #	Machine ID #	E-Extrusion W-Wedge	Seam Length	Seamer ID	Weld Time		Comments
						Start	Stop	
5/15/2009	27/28	20831	W	22	JOSE CAMPOS	8:02 AM	8:07 AM	
5/15/2009	26/28	20831	W	24	JOSE CAMPOS	8:26 AM	8:29 AM	
5/15/2009	26/27	20831	W	106	JOSE CAMPOS	8:10 AM	8:25 AM	
5/15/2009	25/27	20831	W	168	JOSE CAMPOS	8:30 AM	8:53 AM	
5/15/2009	27/29	1210	W	271	EFREN BUITRON	8:12 AM	8:49 AM	
5/15/2009	28/29	1210	W	24	EFREN BUITRON	8:50 AM	8:54 AM	
5/15/2009	30/31	1210	W	22	EFREN BUITRON	9:00 AM	9:05 AM	
5/15/2009	29/30	20831	W	80	JOSE CAMPOS	8:55 AM	9:05 AM	
5/15/2009	29/31	20831	W	214	JOSE CAMPOS	9:06 AM	9:33 AM	
5/15/2009	34/35	20831	W	181	JOSE CAMPOS	2:48 PM	3:11 PM	
5/15/2009	33/34	1210	W	113	EFREN BUITRON	3:08 PM	3:26 PM	
5/15/2009	35/36	20831	W	178	JOSE CAMPOS	3:15 PM	3:40 PM	
5/15/2009	36/37	20831	W	176	JOSE CAMPOS	3:45 PM	4:10 PM	
5/15/2009	37/38	1209	W	172	IVAN SANCHEZ	3:46 PM	4:06 PM	
5/15/2009	38/39	1210	W	170	EFREN BUITRON	4:14 PM	4:36 PM	
5/15/2009	39/40	20831	W	166	JOSE CAMPOS	4:15 PM	4:36 PM	
5/15/2009	40/41	1209	W	164	IVAN SANCHEZ	4:13 PM	4:31 PM	
5/15/2009	41/42	1210	W	160	EFREN BUITRON	4:42 PM	5:05 PM	
5/15/2009	42/43	20831	W	154	JOSE CAMPOS	4:43 PM	3:05 PM	
5/15/2009	32/34	1210	W	72	EFREN BUITRON	3:42 PM	3:49 PM	
5/15/2009	32/33	1210	W	118	EFREN BUITRON	3:50 PM	3:08 PM	

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 5 OF 6

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ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

PANEL SEAMING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271 PAGE 6 OF 6

Date	Seam #	Machine ID #	E-Extrusion W-Wedge	Seam Length	Seamer ID	Weld Time		Comments
						Start	Stop	
5/16/2009	30/48	1210	W	8	EFREN BUITRON	6:16 AM	6:17 AM	
5/16/2009	30/47	1210	W	22	EFREN BUITRON	6:18 AM	6:21 AM	
5/16/2009	30/46	1210	W	2	EFREN BUITRON	6:21 AM	6:22 AM	
5/16/2009	30/45	1210	W	23	EFREN BUITRON	6:22 AM	6:25 AM	
5/16/2009	30/44	1210	W	3	EFREN BUITRON	6:26 AM	6:27 AM	
5/16/2009	30/43	1210	W	23	EFREN BUITRON	6:27 AM	6:31 AM	
5/16/2009	31/42	1210	W	23	EFREN BUITRON	6:32 AM	6:35 AM	
5/16/2009	31/41	1210	W	23	EFREN BUITRON	6:36 AM	6:39 AM	
5/16/2009	31/40	1210	W	23	EFREN BUITRON	6:40 AM	6:43 AM	
5/16/2009	31/39	1210	W	23	EFREN BUITRON	6:44 AM	6:47 AM	
5/16/2009	31/38	1210	W	23	EFREN BUITRON	6:48 AM	6:52 AM	
5/16/2009	31/37	1210	W	23	EFREN BUITRON	6:53 AM	6:56 AM	
5/16/2009	31/36	1210	W	23	EFREN BUITRON	6:56 AM	6:59 AM	
5/16/2009	31/35	1210	W	23	EFREN BUITRON	7:00 AM	7:04 AM	
5/16/2009	31/34	1210	W	8	EFREN BUITRON	7:04 AM	7:06 AM	
5/16/2009	31/32	1210	W	24	EFREN BUITRON	7:06 AM	7:10 AM	

Environmental Specialties International Inc.

Seam Control Form

1

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:		10,589
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results
3/11/10	49/50	158	10:02 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	11:00 AM 30	11:05 AM 30		Pass
3/11/10	51/52	22	10:12 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:01 AM 30	11:06 AM 30		Pass
3/11/10	50/52	82	10:20 AM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	11:02 AM 30	11:07 AM 30		Pass
3/11/10	50/51	46	10:33 AM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	11:00 AM 30	11:05 AM 30		Pass
3/11/10	52/53	30	10:30 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	11:03 AM 30	11:08 AM 30		Pass
3/11/10	51/53	60	10:37 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	11:04 AM 30	11:04 AM 30		Pass
3/11/10	54/57	8	11:00 AM	JOSE CAMPOS	20831	3.5	850		3/11/10	Air Pressure	11:34 AM 30	11:39 AM 30		Pass
3/11/10	53/57	16	11:05 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	11:33 AM 30	11:38 AM 30		Pass
3/11/10	53/54	32	11:09 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	11:26 AM 30	11:31 AM 30		Pass
3/11/10	49/55	26	10:50 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:16 AM 30	11:21 AM 30		Pass
3/11/10	50/55	26	10:57 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:17 AM 30	11:22 AM 30		Pass
3/11/10	51/55	26	11:02 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:19 AM 30	11:24 AM 30		Pass
3/11/10	53/55	26	11:08 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:20 AM 30	11:25 AM 30		Pass
3/11/10	54/55	26	11:15 AM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	11:25 AM 30	11:30 AM 30		Pass
3/11/10	56/58	22	11:18 AM	JOSE CAMPOS	20831	3.5	850		3/11/10	Air Pressure	1:01 PM 30	1:06 PM 30		Pass
3/11/10	58/59	20	11:25 AM	JOSE CAMPOS	20831	3.5	850		3/11/10	Air Pressure	1:04 PM 30	1:09 PM 30		Pass

Environmental Specialties International Inc.

Seam Control Form

2

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results			
3/11/10	55/56	82	11:25 AM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	1:00 PM	1:05 PM		Pass			
											30	30					
3/11/10	55/58	54	11:37 AM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	1:02 PM	1:07 PM		Pass			
											30	30					
3/11/10	59/60	32	11:32 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	1:10 PM	1:15 PM		Pass			
											30	30					
3/11/10	58/60	56	11:42 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	1:05 PM	1:10 PM		Pass			
											30	30					
3/11/10	56/60	46	11:52 AM	JOSE CAMPOS	20831	4.5	850		3/11/10	Air Pressure	1:04 PM	1:09 PM		Pass			
											30	30					
3/11/10	61/62	22	1:15 PM	LUIS LARA	1209	3.5	860		3/11/10	Air Pressure	3:36 PM	3:41 PM		Pass			
											30	30					
3/11/10	60/61	2	1:17 PM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	3:37 PM	3:42 PM		Pass			
											30	30					
3/11/10	60/62	134	1:18 PM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	2:51 PM	2:56 PM		Pass			
											30	30					
3/11/10	63/64	22	1:27 PM	LUIS LARA	1209	3.5	860		3/11/10	Air Pressure	3:26 PM	3:31 PM		Pass			
											30	30					
3/11/10	61/63	32	1:32 PM	JOSE CAMPOS	1208	4.5	860		3/11/10	Air Pressure	3:36 PM	3:41 PM		Pass			
											30	30					
3/11/10	62/63	12	1:36 PM	JOSE CAMPOS	1208	4.5	860		3/11/10	Air Pressure	3:27 PM	3:32 PM		Pass			
											30	30					
3/11/10	62/64	84	1:40 PM	JOSE CAMPOS	1208	4.5	860		3/11/10	Air Pressure	3:20 PM	3:25 PM		Pass			
											30	30					
3/11/10	63/65	58	1:40 PM	LUIS LARA	1209	4.5	860		3/11/10	Air Pressure	3:25 PM	3:30 PM		Pass			
											30	30					
3/11/10	64/65	50	1:48 PM	LUIS LARA	1209	4.5	860		3/11/10	Air Pressure	3:23 PM	3:28 PM		Pass			
											30	30					
3/11/10	65/66	56	1:44 PM	EFREN BUITRON	1210	5.5	860		3/11/10	Air Pressure	3:57 PM	4:02 PM		Pass			
											30	30					
3/11/10	67/68	72	3:02 PM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	8:13 AM	8:18 AM		Pass			
											30	30					

Environmental Specialties International Inc.

Seam Control Form

3

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results			
											PSI IN	PSI OUT					
3/11/10	68/69	72	3:08 PM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	6:15 AM	6:20 AM		Pass			
			30								30						
3/11/10	69/70	74	3:20 PM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	8:16 AM	8:21 AM		Pass			
			30								30						
3/11/10	70/71	76	3:20 PM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	8:17 AM	8:22 AM		Pass			
			30								30						
3/11/10	71/72	76	3:26 PM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	8:18 AM	8:23 AM		Pass			
			30								30						
3/11/10	1/55	42	2:00 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	2:45 PM	2:50 PM		Pass			
			30								30						
3/11/10	1/56	42	2:09 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	2:46 PM	2:51 PM		Pass			
			30								30						
3/11/10	1/60	42	2:18 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	2:49 PM	2:54 PM		Pass			
			30								30						
3/11/10	1/62	42	2:27 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	2:50 PM	2:55 PM		Pass			
			30								30						
3/11/10	1/64	42	2:36 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	3:21 PM	3:26 PM		Pass			
			30								30						
3/11/10	1/65	20	2:45 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	3:22 PM	3:27 PM		Pass			
			30								30						
3/11/10	65/67	22	3:00 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	3:55 PM	4:00 PM		Pass			
			30								30						
3/11/10	66/67	44	3:05 PM	EFREN BUITRON	1210	4	860		3/11/10	Air Pressure	3:56 PM	4:01 PM		Pass			
			30								30						
3/11/10	72/73	78	3:44 PM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	12:00 AM	12:05 AM		Pass			
			30								30						
3/11/10	73/74	78	3:37 PM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	8:21 AM	8:26 AM		Pass			
			30								30						
3/12/10	1/67	22	7:36 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:45 AM	8:50 AM		Pass			
			30								30						
3/12/10	3/68	22	7:43 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:46 AM	8:51 AM		Pass			
			30								30						

Environmental Specialties International Inc.

Seam Control Form

4

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results			
											PSI IN	PSI OUT					
3/12/10	5/69	22	7:47 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:48 AM	8:53 AM		Pass			
			30								30						
3/12/10	7/70	22	7:52 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:49 AM	8:54 AM		Pass			
			30								30						
3/12/10	8/71	22	7:56 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:50 AM	8:55 AM		Pass			
			30								30						
3/12/10	10/72	22	8:00 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:51 AM	8:56 AM		Pass			
			30								30						
3/12/10	12/73	22	8:04 AM	JOSE CAMPOS	1208	3.5	860		3/12/10	Air Pressure	8:52 AM	8:57 AM		Pass			
			30								30						
3/12/10	74/75	78	8:30 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:00 AM	10:05 AM		Pass			
			30								30						
3/12/10	75/76	74	8:32 AM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	10:01 AM	10:06 AM		Pass			
			30								30						
3/12/10	76/77	70	8:45 AM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	10:02 AM	10:07 AM		Pass			
			30								30						
3/12/10	77/78	66	8:53 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:03 AM	10:08 AM		Pass			
			30								30						
3/12/10	78/79	60	8:58 AM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	10:04 AM	10:09 AM		Pass			
			30								30						
3/12/10	79/80	58	9:02 AM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	10:05 AM	10:10 AM		Pass			
			30								30						
3/12/10	80/81	60	9:10 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:06 AM	10:11 AM		Pass			
			30								30						
3/12/10	81/82	60	9:11 AM	JOSE CAMPOS	1208	4.5	860		3/12/10	Air Pressure	10:15 AM	10:20 AM		Pass			
			30								30						
3/12/10	82/83	60	9:18 AM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	10:16 AM	10:21 AM		Pass			
			30								30						
3/12/10	83/84	60	9:25 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:40 AM	10:45 AM		Pass			
			30								30						
3/12/10	84/85	60	10:10 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:41 AM	10:46 AM		Pass			
			30								30						

Environmental Specialties International Inc.

Seam Control Form

5

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results			
											PSI IN	PSI OUT					
3/12/10	85/86	62	10:14 AM	LUIS LARA	1209	4.5	860		3/12/10	Air Pressure	10:42 AM	10:47 AM		Pass			
			30								30						
3/12/10	86/87	62	10:21 AM	EFREN BUITRON	1210	5.5	860		3/12/10	Air Pressure	10:43 AM	10:48 AM		Pass			
			30								30						
3/12/10	14/74	22	12:19 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:30 PM	12:35 PM		Pass			
			30								30						
3/12/10	15/75	22	12:24 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:31 PM	12:36 PM		Pass			
			30								30						
3/12/10	17/76	22	12:29 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:36 PM	12:41 PM		Pass			
			30								30						
3/12/10	18/77	22	12:34 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:38 PM	12:43 PM		Pass			
			30								30						
3/12/10	20/78	22	12:39 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:45 PM	12:50 PM		Pass			
			30								30						
3/12/10	22/79	22	12:43 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	12:47 PM	12:52 PM		Pass			
			30								30						
3/12/10	23/80	22	12:47 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:00 PM	1:05 PM		Pass			
			30								30						
3/12/10	25/81	22	12:51 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:00 PM	1:05 PM		Pass			
			30								30						
3/12/10	27/82	22	12:55 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:06 PM	1:11 PM		Pass			
			30								30						
3/12/10	29/83	21	1:00 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:06 PM	1:11 PM		Pass			
			30								30						
3/12/10	29/84	1	1:04 PM	EFREN BUITRON	1210	4	860		3/12/10	Vacuum				Pass			
3/12/10	30/84	21	1:05 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:15 PM	1:20 PM		Pass			
			30								30						
3/12/10	30/85	1	1:09 PM	EFREN BUITRON	1210	4	860		3/15/10	Vacuum				Pass			
3/12/10	48/85	21	1:10 PM	EFREN BUITRON	1210	4	860		3/12/10	Air Pressure	1:15 PM	1:20 PM		Pass			
			30								30						

Seam Control Form

6

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary	X
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Pond ☐

Air Pressure Test 30 PSI

Job Description: BMI SOUTH COVER

Secondary ☐

Cell

Air Pressure Hold Time **5** **Minutes**

Reported By VICTOR BUITRON

Cap	X
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Allowable Air Pressure Loss	2	PSI
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Other

[illegible]

Environmental Specialties International Inc.

Seam Control Form

7

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

X

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results				
												PSI IN	PSI OUT						
4/1/10	89	90	22	10:35 AM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	1:56 PM	2:01 PM		Pass				
												30	30						
4/1/10	91	89	18	10:42 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:57 PM	2:02 PM		Pass				
												30	30						
4/1/10	90	91	84	10:45 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:36 PM	1:41 PM		Pass				
												30	30						
4/1/10	88	89	18	11:20 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:55 PM	2:00 PM		Pass				
												30	30						
4/1/10	88	90	34	11:24 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:39 PM	1:44 PM		Pass				
												30	30						
4/1/10	88	94	17	11:35 AM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	1:51 PM	1:56 PM		Pass				
												30	30						
4/1/10	49	88	16	11:43 AM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	1:50 PM	1:55 PM		Pass				
												30	30						
4/1/10	49	94	18	11:33 AM	JOSE CAMPOS	1208	3.5	860		4/1/10	Air Pressure	1:52 PM	1:57 PM		Pass				
												30	30						
4/1/10	49	90	56	11:46 AM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	1:37 PM	1:42 PM		Pass				
												30	30						
4/1/10	49	91	56	1:15 PM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	2:20 PM	2:25 PM		Pass				
												30	30						
4/1/10	49	92	54	1:25 PM	EFREN BUITRON	1210	4	860		4/1/10	Air Pressure	2:26 PM	2:31 PM		Pass				
												30	30						
4/1/10	91	92	154	10:04 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:30 PM	1:35 PM		Pass				
												30	30						
4/1/10	92	93	128	9:55 AM	EFREN BUITRON	1210	5	860		4/1/10	Air Pressure	1:26 PM	1:31 PM		Pass				
												30	30						
4/1/10	1	92	74	10:15 AM	EFREN BUITRON	1210	5	860		4/1/10	Air Pressure	1:27 PM	1:32 PM		Pass				
												30	30						
4/1/10	93	95	128	11:40 AM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	1:25 PM	1:30 PM		Pass				
												30	30						

Environmental Specialties International Inc.

Seam Control Form

8

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results		
												PSI IN	PSI OUT				
4/1/10	95	96	128	1:15 PM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	2:40 PM	2:45 PM		Pass		
												30	30				
4/1/10	96	97	128	1:34 PM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	2:41 PM	2:46 PM		Pass		
												30	30				
4/1/10	97	98	128	1:38 PM	EFREN BUITRON	1210	5.5	860		4/1/10	Air Pressure	2:42 PM	2:47 PM		Pass		
												30	30				
4/1/10	98	99	128	2:20 PM	JOSE CAMPOS	1208	4.5	860		4/1/10	Air Pressure	2:43 PM	2:48 PM		Pass		
												30	30				
4/1/10	99	100	128	2:22 PM	EFREN BUITRON	1210	5.5	860		4/1/10	Air Pressure	2:44 PM	2:49 PM		Pass		
												30	30				
4/1/10	100	101	128	2:37 PM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	7:20 AM	7:25 AM		Pass		
												30	30				
4/1/10	101	102	128	2:57 PM	EFREN BUITRON	1210	5.5	860		4/2/10	Air Pressure	7:21 AM	7:26 AM		Pass		
												30	30				
4/1/10	102	103	128	3:20 PM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	7:22 AM	7:27 AM		Pass		
												30	30				
4/1/10	103	104	128	3:16 PM	EFREN BUITRON	1210	5.5	860		4/2/10	Air Pressure	7:23 AM	7:28 AM		Pass		
												30	30				
4/1/10	104	105	128	4:02 PM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	7:24 AM	7:29 AM		Pass		
												30	30				
4/2/10	21	105	22	7:50 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	7:26 AM	7:31 AM		Pass		
												30	30				
4/2/10	19	104	22	7:55 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	7:30 AM	7:35 AM		Pass		
												30	30				
4/2/10	16	103	22	7:59 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	7:40 AM	7:45 AM		Pass		
												30	30				
4/2/10	15	102	22	8:03 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	7:49 AM	7:54 AM		Pass		
												30	30				
4/2/10	13	101	22	8:07 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	7:55 AM	8:00 AM		Pass		
												30	30				

Environmental Specialties International Inc.

Seam Control Form

9

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

☒

Pond

☐

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

☐

Cell

☐

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

☒

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results		
												PSI IN	PSI OUT				
4/2/10	11	100	22	8:11 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:00 AM	8:05 AM		Pass		
												30	30				
4/2/10	9	99	22	8:15 AM	JOSE CAMPOS	1208	3.5	860		4/2/10	Air Pressure	2:40 PM	2:45 PM		Pass		
												30	30				
4/2/10	8	98	22	8:19 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:05 AM	8:10 AM		Pass		
												30	30				
4/2/10	6	97	22	8:22 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:10 AM	8:15 AM		Pass		
												30	30				
4/2/10	4	96	22	8:26 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:20 AM	8:25 AM		Pass		
												30	30				
4/2/10	2	95	22	8:30 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:25 AM	8:30 AM		Pass		
												30	30				
4/2/10	1	93	22	8:34 AM	JOSE CAMPOS	1208	3.5	860		4/6/10	Air Pressure	8:35 AM	8:40 AM		Pass		
												30	30				
4/2/10	105	106	128	8:30 AM	EFREN BUITRON	1210	5	860		4/2/10	Air Pressure	2:30 PM	2:35 PM		Pass		
												30	30				
4/2/10	106	107	128	8:58 AM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	2:31 PM	2:36 PM		Pass		
												30	30				
4/2/10	107	108	128	8:58 AM	EFREN BUITRON	1210	5	860		4/2/10	Air Pressure	2:32 PM	2:37 PM		Pass		
												30	30				
4/2/10	108	109	128	9:15 AM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	2:33 PM	2:38 PM		Pass		
												30	30				
4/2/10	109	110	128	9:22 AM	EFREN BUITRON	1210	5	860		4/2/10	Air Pressure	12:55 PM	1:00 PM		Pass		
												30	30				
4/2/10	110	111	126	10:20 AM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	2:35 PM	2:40 PM		Pass		
												30	30				
4/2/10	111	112	126	10:19 AM	EFREN BUITRON	1210	5	860		4/2/10	Air Pressure	2:45 PM	2:50 PM		Pass		
												30	30				
4/2/10	112	115	18	11:05 AM	JOSE CAMPOS	1208	3.5	860		4/2/10	Air Pressure	3:05 PM	3:10 PM		Pass		
												30	30				
4/2/10	112	113	102	10:43 AM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	12:56 PM	1:01 PM		Pass		
												30	30				

Environmental Specialties International Inc.

Seam Control Form

10

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

X

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI	Test		
												PSI IN	PSI OUT	Loss	Results		
4/2/10	113	114	100	10:42 AM	EFREN BUITRON	1210	5	860		4/2/10	Air Pressure	2:46 PM	2:51 PM		Pass		
												30	30				
4/2/10	115	116	18	11:05 AM	EFREN BUITRON	1210	4	860		4/2/10	Air Pressure	3:07 PM	3:12 PM		Pass		
												30	30				
4/2/10	113	115	22	11:20 AM	JOSE CAMPOS	1208	3.5	860		4/2/10	Air Pressure	3:06 PM	3:11 PM		Pass		
												30	30				
4/2/10	114	116	22	11:25 AM	JOSE CAMPOS	1208	3.5	860		4/2/10	Air Pressure	3:08 PM	3:13 PM		Pass		
												30	30				
4/2/10	114	117	67	2:24 PM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	2:50 PM	2:55 PM		Pass		
												30	30				
4/2/10	114	117	29	2:32 PM	JOSE CAMPOS	1208	4.5	860		4/2/10	Air Pressure	2:47 PM	2:52 PM		Pass		
												30	30				
4/2/10	117	118	91	2:27 PM	EFREN BUITRON	1210	5.5	860		4/2/10	Air Pressure	2:48 PM	2:53 PM		Pass		
												30	30				
4/2/10	118	119	88	2:42 PM	JOSE CAMPOS	1208	4.5	860		4/5/10	Air Pressure	9:40 AM	9:45 AM		Pass		
												30	30				
4/2/10	119	120	90	2:45 PM	EFREN BUITRON	1210	5.5	860		4/5/10	Air Pressure	9:10 AM	9:15 AM		Pass		
												30	30				
4/2/10	120	121	94	2:58 PM	JOSE CAMPOS	1208	4.5	860		4/5/10	Air Pressure	8:45 AM	8:50 AM		Pass		
												30	30				
4/2/10	121	122	98	3:01 PM	EFREN BUITRON	1210	5.5	860		4/5/10	Air Pressure	8:25 AM	8:30 AM		Pass		
												30	30				
4/2/10	122	123	80	3:17 PM	JOSE CAMPOS	1208	4.5	860		4/5/10	Air Pressure	8:10 AM	8:15 AM		Pass		
												30	30				
4/2/10	123	124	60	3:30 PM	JOSE CAMPOS	1208	4.5	860		4/5/10	Air Pressure	7:45 AM	7:50 AM		Pass		
												30	30				
4/2/10	116	125	18	3:17 PM	EFREN BUITRON	1210	5.5	860		4/2/10	Air Pressure	3:10 PM	3:15 PM		Pass		
												30	30				
4/2/10	125	126	18	3:23 PM	EFREN BUITRON	1210	5.5	860		4/5/10	Air Pressure	9:50 AM	9:55 AM		Pass		
												30	30				
4/2/10	126	127	18	3:27 PM	EFREN BUITRON	1210	5.5	860		4/5/10	Air Pressure	9:30 AM	9:35 AM		Pass		
												30	30				

Environmental Specialties International Inc.

Seam Control Form

11

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI	Test		
												PSI IN	PSI OUT	Loss	Results		
4/2/10	127	128	18	3:31 PM	EFREN BUITRON	1210	5.5	860		4/5/10	Air Pressure	9:00 AM	9:05 AM		Pass		
												30	30				
4/2/10	128	129	18	3:35 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	8:50 AM	8:55 AM		Pass		
												30	30				
4/2/10	129	130	18	3:40 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	8:35 AM	8:40 AM		Pass		
												30	30				
4/2/10	130	131	18	3:44 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:20 AM	8:25 AM		Pass		
												30	30				
4/2/10	131	132	18	3:48 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:50 AM	7:55 AM		Pass		
												30	30				
4/2/10	132	133	18	4:05 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:40 AM	7:45 AM		Pass		
												30	30				
4/2/10	133	134	18	3:58 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:35 AM	7:40 AM		Pass		
												30	30				
4/2/10	134	135	18	3:53 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	7:15 AM	7:20 AM		Pass		
												30	30				
4/2/10	135	136	10	4:24 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:03 AM	7:08 AM		Pass		
												30	30				
4/2/10	124	135	8	4:27 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:00 AM	7:05 AM		Pass		
												30	30				
4/2/10	124	136	17	4:07 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	7:20 AM	7:25 AM		Pass		
												30	30				
4/2/10	117	125	21	4:20 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	9:55 AM	10:00 AM		Pass		
												30	30				
4/2/10	117	126	2	4:24 PM	JOSE CAMPOS	1208	3.5	860		4/6/10	Vacuum				Pass		
4/2/10	118	126	21	4:25 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	9:20 AM	9:25 AM		Pass		
												30	30				
4/2/10	118	127	2	4:28 PM	JOSE CAMPOS	1208	3.5	860		4/6/10	Vacuum				Pass		
4/2/10	119	127	19	4:29 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	9:05 AM	9:10 AM		Pass		
												30	30				

Environmental Specialties International Inc.

Seam Control Form

12

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

X

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined				Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results	
4/2/10	119	128	3	4:32 PM	JOSE CAMPOS	1208	3.5	860		4/6/10	Vacuum				Pass	
4/2/10	120	128	19	4:33 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:55 AM 30	9:00 AM 30		Pass	
4/2/10	120	129	4	4:36 PM	JOSE CAMPOS	1208	3.5	860		4/6/10	Vacuum				Pass	
4/2/10	121	129	16	4:37 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:40 AM 30	8:45 AM 30		Pass	
4/2/10	121	130	7	4:40 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:30 AM 30	8:35 AM 30		Pass	
4/2/10	122	130	13	4:42 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:15 AM 30	8:20 AM 30		Pass	
4/2/10	122	131	9	4:45 PM	JOSE CAMPOS	1208	3.5	860		4/5/10	Air Pressure	8:00 AM 30	8:05 AM 30		Pass	
4/2/10	123	131	10	4:48 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:55 AM 30	8:00 AM 30		Pass	
4/2/10	123	132	12	4:41 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:47 AM 30	7:52 AM 30		Pass	
4/2/10	124	132	2	4:40 PM	EFREN BUITRON	1210	4	860		4/6/10	Vacuum				Pass	
4/2/10	124	134	22	4:32 PM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	7:30 AM 30	7:35 AM 30		Pass	
4/3/10	32	121	22	7:20 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	10:54 AM 30	10:59 AM 30		Pass	
4/3/10	32	120	22	7:24 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:00 AM 30	11:05 AM 30		Pass	
4/3/10	32	119	23	7:29 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:03 AM 30	11:08 AM 30		Pass	
4/3/10	32	118	24	7:34 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:10 AM 30	11:15 AM 30		Pass	

Seam Control Form

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined				Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI	Test	
												PSI IN	PSI OUT	Loss	Result	
4/3/10	32	117	24	7:39 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:15 AM	11:20 AM		Pass	
				30								30				
4/3/10	32	114	24	7:44 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:22 AM	11:27 AM		Pass	
				30								30				
4/3/10	32	113	24	7:49 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:30 AM	11:35 AM		Pass	
				30								30				
4/3/10	32	112	22	7:55 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:37 AM	11:42 AM		Pass	
				30								30				
4/3/10	31	111	22	8:05 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	11:43 AM	11:48 AM		Pass	
				30								30				
4/3/10	29	110	22	8:10 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	1:10 PM	1:15 PM		Pass	
				30								30				
4/3/10	28	109	22	8:15 AM	EFREN BUITRON	1210	4	860		4/5/10	Air Pressure	1:11 PM	1:16 PM		Pass	
				30								30				
4/3/10	26	108	22	8:20 AM	EFREN BUITRON	1210	4	860		4/6/10	Air Pressure	7:10 AM	7:15 AM		Pass	
				30								30				
4/3/10	24	107	22	8:25 AM	EFREN BUITRON	1210	4	860		4/6/10	Air Pressure	7:13 AM	7:18 AM		Pass	
				30								30				
4/3/10	22	106	22	8:30 AM	EFREN BUITRON	1210	4	860		4/6/10	Air Pressure	7:22 AM	7:27 AM		Pass	
				30								30				
4/2/10	TN-53	88	1	10:00 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass	
4/2/10	TN-52	88	11	10:02 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass	
4/2/10	TN-52	89	11	10:06 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass	
4/2/10	TN-51	89	11	10:09 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass	
4/2/10	TN-51	91	11	10:13 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass	

Environmental Specialties International Inc.

Seam Control Form

14

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined				Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results		
4/2/10	TN-50 / 91	11	10:16 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-50 / 92	11	10:20 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-49 / 92	11	10:23 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-49 / 93	11	10:27 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-48 / 93	11	10:31 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-48 / 95	11	10:35 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-31 / 95	11	10:40 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-31 / 96	11	10:44 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-30 / 96	11	10:50 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-30 / 97	11	10:55 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-29 / 97	11	10:59 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-29 / 98	11	11:03 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-28 / 98	11	11:06 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-28 / 99	11	1:20 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-27 / 99	11	1:23 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/2/10	TN-27 / 100	11	1:27 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		

Environmental Specialties International Inc.

Seam Control Form

15

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:		10,589
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results
4/2/10	TN-14 / 100	11	1:30 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-14 / 101	11	1:34 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-13 / 101	11	1:37 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-13 / 102	11	1:43 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-12 / 102	11	1:47 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-12 / 103	11	1:52 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-11 / 103	11	1:56 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-11 / 104	11	2:00 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/2/10	TN-10 / 104	11	2:04 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-10 / 105	11	9:18 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-9 / 105	11	9:21 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-9 / 106	11	9:25 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-8 / 106	11	9:28 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-8 / 107	11	9:32 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-7 / 107	11	9:36 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-7 / 108	11	9:40 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass

Environmental Specialties International Inc.

Seam Control Form

16

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined				Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results		
4/3/10	TN-4 / 108	11	9:44 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-4 / 109	11	9:48 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-3 / 109	11	9:53 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-3 / 110	11	9:57 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-2 / 110	11	10:00 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-2 / 111	11	10:04 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-1 / 111	12	10:08 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-1 / 112	11	10:12 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-5 / 112	10	10:16 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-5 / 115	1	10:20 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-131 / 115	19	10:21 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-131 / 116	6	10:27 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-132 / 116	17	10:29 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-132 / 125	6	10:34 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-133 / 125	17	10:36 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/3/10	TN-133 / 126	5	10:44 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		

Environmental Specialties International Inc.

Seam Control Form

17

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396	Total LF of Welding to Date Combined	807	Extrusion LF Weld Total To Date	10,589	Fusion LF Weld Total To Date:
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Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results
											PSI IN	PSI OUT		
4/3/10	TN-134 / 126	17	10:46 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-134 / 127	1	10:51 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-130 / 127	21	10:52 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-130 / 128	3	11:00 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-129 / 128	20	11:01 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-129 / 129	4	11:08 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/3/10	TN-128 / 129	18	11:09 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-128 / 130	7	8:40 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-124 / 130	15	8:42 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-124 / 131	8	8:47 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-121 / 131	14	8:49 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-121 / 132	7	8:54 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-120 / 132	13	8:56 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-120 / 133	6	9:00 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-120 / 134	5	9:02 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass
4/5/10	TN-119 / 134	17	9:04 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass

Environmental Specialties International Inc.

Seam Control Form

18

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

X

Allowable Air Pressure Loss

2

PSI

Other

11,397		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		808	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results		
4/5/10	TN-119	135	5	9:09 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/5/10	TN-118	135	15	9:11 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/5/10	TN-126	130	1	8:41 AM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/6/10	TN-53	137	10	2:40 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/6/10	88	137	21	2:43 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/6/10	94	137	13	2:50 PM	IVAN SANCHEZ	513		500	500	4/6/10	Vacuum				Pass		
4/9/10	87	138	62	9:15 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	9:35 AM	9:40 AM		Pass		
4/9/10	138	139	62	9:25 AM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	9:32 AM	9:37 AM		Pass		
4/9/10	87	139	2	9:38 AM	JOSE CAMPOS	1208	3.5	860		4/10/10	Vacuum				Pass		
4/9/10	86	139	2	9:39 AM	JOSE CAMPOS	1208	3.5	860		4/10/10	Vacuum				Pass		
4/9/10	139	140	57	9:31 AM	EFREN BUITRON	1210	5	860		4/9/10	Air Pressure	9:58 AM	10:03 AM		Pass		
4/9/10	140	141	42	9:42 AM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	10:05 AM	10:10 AM		Pass		
4/9/10	141	142	28	10:42 AM	EFREN BUITRON	1210	5	860		4/9/10	Air Pressure	11:34 AM	11:39 AM		Pass		
4/9/10	142	143	30	10:57 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	11:13 AM	11:18 AM		Pass		
4/9/10	143	144	40	9:53 AM	EFREN BUITRON	1210	5	860		4/9/10	Air Pressure	10:51 AM	10:56 AM		Pass		

Environmental Specialties International Inc.

Seam Control Form

19

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results		
4/9/10	144	145	42	10:28 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	10:50 AM	10:55 AM		Pass		
												30	30				
4/9/10	145	146	46	10:12 AM	EFREN BUITRON	1210	5	860		4/9/10	Air Pressure	10:30 AM	10:35 AM		Pass		
												30	30				
4/9/10	146	147	34	10:17 AM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	10:26 AM	10:31 AM		Pass		
												30	30				
4/9/10	147	148	38	10:27 AM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	10:35 AM	10:40 AM		Pass		
												30	30				
4/9/10	146	148	18	10:35 AM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	10:38 AM	10:43 AM		Pass		
												30	30				
4/9/10	148	149	60	10:42 AM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	11:15 AM	11:20 AM		Pass		
												30	30				
4/9/10	149	150	64	10:54 AM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	11:06 AM	11:11 AM		Pass		
												30	30				
4/9/10	141	143	7	11:04 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	11:11 AM	11:16 AM		Pass		
												30	30				
4/9/10	150	151	66	11:05 AM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	11:36 AM	11:41 AM		Pass		
												30	30				
4/9/10	151	152	62	1:37 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	1:54 PM	1:59 PM		Pass		
												30	30				
4/9/10	151	152	8	3:37 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	4:25 PM	4:30 PM		Pass		
												30	30				
4/9/10	153	154	22	1:44 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	2:05 PM	2:10 PM		Pass		
												30	30				
4/9/10	152	154	50	1:52 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:56 PM	3:01 PM		Pass		
												30	30				
4/9/10	152	153	26	1:59 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:00 PM	2:05 PM		Pass		
												30	30				
4/9/10	155	156	22	1:50 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	2:30 PM	2:35 PM		Pass		
												30	30				
4/9/10	154	155	4	2:08 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:25 PM	2:30 PM		Pass		
												30	30				

Environmental Specialties International Inc.

Seam Control Form

20

Project Name:	BASIC REMEDIATION	Job #	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported By	VICTOR BUITRON			Cap	X
Other					

Air Pressure Test	30	PSI
Air Pressure Hold Time	5	Minutes
Allowable Air Pressure Loss	2	PSI

11,396		Total LF of Welding to Date Combined					Extrusion LF Weld Total To Date			807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In PSI IN	AT Time Out PSI OUT	PSI Loss	Test Results	
4/9/10	154	156	58	2:09 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:25 PM	2:30 PM		Pass	
												30	30			
4/9/10	153	156	10	2:16 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:25 PM	2:30 PM		Pass	
												30	30			
4/9/10	153	156	8	3:40 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	4:40 PM	4:45 PM		Pass	
												30	30			
4/9/10	155	157	12	2:00 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	1:39 PM	1:44 PM		Pass	
												30	30			
4/9/10	156	157	70	2:02 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	1:38 PM	1:43 PM		Pass	
												30	30			
4/9/10	157	158	84	2:25 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:42 PM	2:47 PM		Pass	
												30	30			
4/9/10	158	159	88	2:20 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	2:50 PM	2:55 PM		Pass	
												30	30			
4/9/10	47	139	24	11:23 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	12:57 PM	1:02 PM		Pass	
												30	30			
4/9/10	47	140	22	11:28 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:00 PM	1:05 PM		Pass	
												30	30			
4/9/10	47	141	23	11:34 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:02 PM	1:07 PM		Pass	
												30	30			
4/9/10	47	143	6	11:38 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:04 PM	1:09 PM		Pass	
												30	30			
4/9/10	46	143	16	11:39 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:06 PM	1:11 PM		Pass	
												30	30			
4/9/10	46	144	9	11:43 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:10 PM	1:15 PM		Pass	
												30	30			
4/9/10	45	144	13	11:45 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:16 PM	1:21 PM		Pass	
												30	30			
4/9/10	45	145	4	11:48 AM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass	
4/9/10	45	146	11	11:49 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:20 PM	1:25 PM		Pass	
												30	30			

Environmental Specialties International Inc.

Seam Control Form

21

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined							Extrusion LF Weld Total To Date		807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.		Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI Loss	Test Results		
												PSI IN	PSI OUT				
4/9/10	44	148	21	11:52 AM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:26 PM	1:31 PM		Pass		
4/9/10	43	149	22	1:15 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:30 PM	1:35 PM		Pass		
4/9/10	42	149	1	1:19 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass		
4/9/10	42	150	22	1:20 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:30 PM	1:35 PM		Pass		
4/9/10	41	150	1	1:24 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass		
4/9/10	41	151	22	1:25 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	1:40 PM	1:45 PM		Pass		
4/9/10	160	161	22	2:40 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	3:00 PM	3:05 PM		Pass		
4/9/10	159	161	34	2:43 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	2:53 PM	2:58 PM		Pass		
4/9/10	159	160	56	2:50 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	3:01 PM	3:06 PM		Pass		
4/9/10	161	162	44	2:53 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	3:20 PM	3:25 PM		Pass		
4/9/10	160	162	50	3:00 PM	EFREN BUITRON	1210	5.5	860		4/9/10	Air Pressure	3:25 PM	3:30 PM		Pass		
4/9/10	162	163	94	3:08 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	3:33 PM	3:38 PM		Pass		
4/9/10	164	165	20	3:16 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	3:50 PM	3:55 PM		Pass		
4/9/10	163	165	24	3:25 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	3:35 PM	3:40 PM		Pass		
4/9/10	163	164	34	3:30 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	3:39 PM	3:44 PM		Pass		
4/9/10	165	166	12	3:40 PM	JOSE CAMPOS	1208	4.5	860		4/9/10	Air Pressure	3:57 PM	4:02 PM		Pass		

Environmental Specialties International Inc.

Seam Control Form

22

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary

X

Pond

Air Pressure Test

30

PSI

Job Description: BMI SOUTH COVER

Secondary

Cell

Air Pressure Hold Time

5

Minutes

Reported By VICTOR BUITRON

Cap

X

Allowable Air Pressure Loss

2

PSI

Other

11,396		Total LF of Welding to Date Combined				Extrusion LF Weld Total To Date				807	Fusion LF Weld Total To Date:				10,589	
Weld Date	Seam No.	Seam Length	Time Welded	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp	Test Date	Test Type	AT Time In	AT Time Out	PSI	Test		
											PSI IN	PSI OUT	Loss	Results		
4/9/10	136 / 166	12	3:52 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:00 PM	4:05 PM		Pass		
											30	30				
4/9/10	124 / 165	4	3:58 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:01 PM	4:06 PM		Pass		
											30	30				
4/9/10	124 / 164	10	3:59 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:05 PM	4:10 PM		Pass		
											30	30				
4/9/10	124 / 164	14	4:03 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:09 PM	4:14 PM		Pass		
											30	30				
4/9/10	123 / 164	16	4:07 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:12 PM	4:17 PM		Pass		
											30	30				
4/9/10	123 / 163	11	4:11 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:13 PM	4:18 PM		Pass		
											30	30				
4/9/10	122 / 163	28	4:15 PM	JOSE CAMPOS	1208	3.5	860		4/9/10	Air Pressure	4:15 PM	4:20 PM		Pass		
											30	30				
4/9/10	40 / 152	22	3:55 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	4:25 PM	4:30 PM		Pass		
											30	30				
4/9/10	39 / 152	1	3:59 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass		
4/9/10	39 / 153	22	4:00 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	4:25 PM	4:30 PM		Pass		
											30	30				
4/9/10	38 / 153	1	4:04 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum						
4/9/10	38 / 156	22	4:05 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	4:41 PM	4:46 PM		Pass		
											30	30				
4/9/10	37 / 156	1	4:09 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass		
4/9/10	37 / 157	22	4:10 PM	EFREN BUITRON	1210	4	860		4/9/10	Air Pressure	4:44 PM	4:49 PM		Pass		
											30	30				
4/9/10	36 / 157	1	4:14 PM	EFREN BUITRON	1210	4	860		4/10/10	Vacuum				Pass		
4/9/10	36 / 158	22	4:15 PM	EFREN BUITRON	1210	4	860		4/10/10	Air Pressure	7:00 AM	7:05 AM		Pass		
											30	30				

Seam Control Form

23

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary	X
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Pond

Air Pressure Test 30 PSI

Job Description: BMI SOUTH COVER

Secondary ☐

Cell	
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Air Pressure Hold Time **5** **Minutes**

Reported By VICTOR BUITRON

Cap	X
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Allowable Air Pressure Loss	2	PSI
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Other

[illegible]

Non-Destructive Testing Forms

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 1 of 5

			Air Testing						
			Pressure		Time				
Date	Seam #	Tester ID	Start	End	Start	End	Complete Y/N	V Box Complete Y/N	Location/Comments
5/14/2009	2/3	BRAULIO R SILVA	30	30	6:10 AM	6:15 AM	Y		
5/14/2009	1/2	BRAULIO R SILVA	30	30	6:12 AM	6:17 AM	Y		
5/14/2009	1/3	BRAULIO R SILVA	30	30	6:14 AM	6:19 AM	Y		
5/14/2009	2/4	BRAULIO R SILVA	30	30	6:08 AM	6:13 AM	Y		
5/14/2009	3/4	BRAULIO R SILVA	30	30	6:09 AM	6:14 AM	Y		
5/14/2009	4/5	BRAULIO R SILVA	30	30	6:20 AM	6:25 AM	Y		
5/14/2009	3/5	BRAULIO R SILVA	30	30	6:19 AM	6:24 AM	Y		
5/14/2009	6/7	BRAULIO R SILVA	30	30	10:31 AM	10:36 AM	Y		
5/14/2009	5/7	BRAULIO R SILVA	30	30	10:30 AM	10:35 AM	Y		
5/14/2009	5/6	BRAULIO R SILVA	30	30	10:26 AM	10:31 AM	Y		
5/14/2009	4/6	BRAULIO R SILVA	30	30	10:24 AM	10:29 AM	Y		
5/14/2009	6/8	BRAULIO R SILVA	30	30	10:35 AM	10:40 AM	Y		
5/14/2009	7/8	BRAULIO R SILVA	30	30	10:33 AM	10:38 AM	Y		
5/14/2009	8/10	BRAULIO R SILVA	30	30	10:47 AM	10:52 AM	Y		
5/14/2009	8/9	BRAULIO R SILVA	30	30	10:49 AM	10:54 AM	Y		
5/14/2009	9/10	BRAULIO R SILVA	30	30	10:51 AM	10:56 AM	Y		
5/14/2009	9/11	BRAULIO R SILVA	30	30	10:52 AM	10:57 AM	Y		
5/14/2009	10/11	BRAULIO R SILVA	30	30	10:42 AM	10:47 AM	Y		
5/14/2009	10/12	BRAULIO R SILVA	30	30	10:40 AM	10:45 AM	Y		
5/14/2009	11/12	BRAULIO R SILVA	30	30	10:41 AM	10:46 AM	Y		

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 2 of 5

			Air Testing						
			Pressure		Time				
Date	Seam #	Tester ID	Start	End	Start	End	Complete Y/N	V Box Complete Y/N	Location/Comments
5/14/2009	13/14	BRAULIO R SILVA	30	30	2:50 PM	2:55 PM	Y		
5/14/2009	12/14	BRAULIO R SILVA	30	30	12:26 PM	12:31 PM	Y		
5/14/2009	12/13	BRAULIO R SILVA	30	30	1:25 PM	1:30 PM	Y		
5/14/2009	11/13	BRAULIO R SILVA	30	30	1:20 PM	1:25 PM	Y		
5/14/2009	13/15	BRAULIO R SILVA	30	30	3:20 PM	3:25 PM	Y		
5/14/2009	14/15	BRAULIO R SILVA	30	30	2:51 PM	2:56 PM	Y		
5/14/2009	15/17	BRAULIO R SILVA	30	30	2:55 PM	3:00 PM	Y		
5/14/2009	16/17	BRAULIO R SILVA	30	30	3:23 PM	3:28 PM	Y		
5/14/2009	15/16	BRAULIO R SILVA	30	30	3:22 PM	3:27 PM	Y		
5/14/2009	17/18	BRAULIO R SILVA	30	30	3:00 PM	3:05 PM	Y		
5/14/2009	18/19	BRAULIO R SILVA	30	30	3:09 PM	3:14 PM	Y		
5/14/2009	17/19	BRAULIO R SILVA	30	30	3:05 PM	3:10 PM	Y		
5/14/2009	16/19	BRAULIO R SILVA	30	30	3:24 PM	3:29 PM	Y		
5/14/2009	20/21	BRAULIO R SILVA	30	30	3:26 PM	3:31 PM	Y		
5/14/2009	19/21	BRAULIO R SILVA	30	30	3:25 PM	3:30 PM	Y		
5/14/2009	19/20	BRAULIO R SILVA	30	30	3:07 PM	3:12 PM	Y		
5/14/2009	18/20	BRAULIO R SILVA	30	30	3:02 PM	3:07 PM	Y		
5/15/2009	20/22	BRAULIO R SILVA	30	30	6:35 AM	6:40 AM	Y		
5/15/2009	21/22	BRAULIO R SILVA	30	30	6:48 AM	6:53 AM	Y		
5/15/2009	22/24	BRAULIO R SILVA	30	30	6:30 AM	6:35 AM	Y		

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 3 of 5

			Air Testing						
			Pressure		Time				
Date	Seam #	Tester ID	Start	End	Start	End	Complete Y/N	V Box Complete Y/N	Location/Comments
5/15/2009	22/23	BRAULIO R SILVA	30	30	6:32 AM	6:37 AM	Y		
5/15/2009	23/24	BRAULIO R SILVA	30	30	6:36 AM	6:41 AM	Y		
5/15/2009	23/25	BRAULIO R SILVA	30	30	6:37 AM	6:42 AM	Y		
5/15/2009	24/25	BRAULIO R SILVA	30	30	6:39 AM	6:44 AM	Y		
5/15/2009	24/26	BRAULIO R SILVA	30	30	6:45 AM	6:50 AM	Y		
5/15/2009	25/26	BRAULIO R SILVA	30	30	6:43 AM	6:48 AM	Y		
5/15/2009	27/28	BRAULIO R SILVA	30	30	2:48 PM	2:53 PM	Y		
5/15/2009	26/28	BRAULIO R SILVA	30	30	2:47 PM	2:52 PM	Y		
5/15/2009	26/27	BRAULIO R SILVA	30	30	2:49 PM	2:54 PM	Y		
5/15/2009	27/29	BRAULIO R SILVA	30	30	2:52 PM	2:57 PM	Y		
5/15/2009	28/29	BRAULIO R SILVA	30	30	2:50 PM	2:55 PM	Y		
5/15/2009	29/31	BRAULIO R SILVA	30	30	2:50 PM	2:55 PM	Y		
5/15/2009	30/31	BRAULIO R SILVA	30	30	3:10 PM	3:15 PM	Y		
5/15/2009	29/30	BRAULIO R SILVA	30	30	3:00 PM	3:05 PM	Y		
5/15/2009	32/34	BRAULIO R SILVA	30	30	3:53 PM	3:58 PM	Y		
5/15/2009	32/33	BRAULIO R SILVA	30	30	3:25 PM	3:30 PM	Y		
5/15/2009	33/34	BRAULIO R SILVA	30	30	3:35 PM	3:40 PM	Y		
5/15/2009	34/35	BRAULIO R SILVA	30	30	3:37 PM	3:42 PM	Y		
5/15/2009	35/36	BRAULIO R SILVA	30	30	3:45 PM	3:50 PM	Y		
5/15/2009	36/37	BRAULIO R SILVA	30	30	4:33 PM	4:38 PM	Y		

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

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ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

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Destructive Test Logs

DESTRUCTIVE TEST LOG

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Date	Sample ID	Seam #	Machine #	Seamer Initials	Peel Values lbs/inch						Shear Values lbs/inch					Pass/Fail	Lab Pass/Fail	Comments
					Specified Value <u>91</u>						Specified Value <u>120</u>							
5/13/2009	DS-01	1/3	20831	J.C	inner	142	144	140	141	143	167	162	165	161	170	P	P	
					outer	116	116	113	117	117								
5/13/2009	DS-02	2/4	1210	E.B	inner	123	124	120	124	127	166	164	165	161	165	P	P	
					outer	130	131	128	123	128								
5/14/2009	DS-03	4/6	20831	J.C	inner	134	125	133	131	131	152	152	154	148	149	P	P	
					outer	136	117	119	107	121								
5/14/2009	DS-04	8/10	1210	E.B	inner	121	124	124	125	120	170	163	170	163	161	P	P	
					outer	114	110	121	119	117								
5/14/2009	DS-05	10/12	20831	J.C	inner	137	132	137	138	139	160	152	155	156	155	P	P	
					outer	120	117	113	117	109								
5/14/2009	DS-06	12/14	1210	E.B	inner	122	116	126	111	125	167	158	164	163	153	P	P	
					outer	124	107	124	122	119								
5/14/2009	DS-07	18/19	20831	J.C	inner	133	139	130	143	123	150	145	150	151	147	P	P	
					outer	142	119	140	133	106								
5/14/2009	DS-08	22/24	1210	E.B	inner	110	108	113	108	106	153	141	151	151	145	P	P	
					outer	107	110	105	105	111								
5/14/2009	DS-09	23/25	20831	J.C	inner	118	120	120	121	116	155	154	152	152	150	P	P	
					outer	108	109	104	112	104								
5/14/2009	DS-10	15/17	1210	E.B	inner	122	110	126	111	119	171	168	171	163	166	P	P	
					outer	118	140	132	114	136								
5/15/2009	DS-11	26/67	20831	J.C	inner	140	137	136	124	128	158	155	152	152	151	P	P	
					outer	121	118	125	127	117								
5/15/2009	DS-12	34/35	20831	J.C	inner	120	132	130	120	116	154	155	151	153	149	P	P	
					outer	129	113	118	128	114								
5/15/2009	DS-13	39/40	20831	J.C	inner	123	122	129	124	116	158	158	159	155	155	P	P	
					outer	112	139	106	117	139								
5/14/2009	DS-14	22/23	1210	E.B	inner	116	116	114	119	115	156	158	156	153	152	P	P	
					outer	110	113	110	111	110								
5/15/2009	DS-15	27/29	1210	E.B	inner	108	119	114	114	123	157	156	155	155	156	P	P	
					outer	119	126	123	127	122								
5/15/2009	DS-16	38/39	1210	E.B	inner	113	114	113	113	110	151	149	148	150	155	P	P	
					outer	116	118	118	115	111								
5/15/2009	DS-17	37/38	1209	I.S	inner	123	106	130	131	114	152	151	149	150	152	P	P	
					outer	126	124	132	133	126								

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

DESTRUCTIVE TEST LOG

PROJECT NAME: BASIC REMEDIATION BMI SOUTH CAP PROJECT NO. 07-11-1271

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Date	Sample ID	Seam #	Machine #	Seamer Initials	Peel Values lbs/inch						Shear Values lbs/inch					Pass/Fail	Lab Pass/Fail	Comments
					Specified Value <u>91</u>						Specified Value <u>120</u>							
5/15/2009	DS-18	45/46	1209	I.S	inner	122	117	119	117	121	159	157	156	157	156	P	P	
					outer	113	108	110	116	110								
5/16/2009	DS-19	27/R-36	513	I.S	inner	113	133	125	126	124	154	152	146	148	140	P	P	
					outer	~	~	~	~	~								
5/16/2009	DS-20	31/37	1210	E.B	inner	125	124	123	119	124	138	140	140	143	138	P	P	
					outer	136	127	135	133	132								
					inner													
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Environmental Specialties International Inc.

Destructive Sample Information

1

Project Name: BASIC REMEDIATION

Job # 07-11-1271

Superintendent: ISMAEL BUITRON

Material Type: 60 MIL HDT

Primary ☒

Pond ☐

Peel Test Extrusion Minimum 78 PPI

Job Description: BMI SOUTH COVER

Secondary ☐

Cell ☐

Peel Test Fusion Minimum 91 PPI

Reported By: VICTOR BUITRON

Cap ☒

Shear Test Minimum 120 PPI

Other:

D.S. No.	Seam No.	Weld Date	Operator Name/ ID	Mach No.	Mach Speed	Mach Temp	Preheat Temp		Coupon 1 A B	Coupon 2 A B	Coupon 3 A B	Coupon 4 A B	Coupon 5 A B	Test Results
21	55 / 56	3/11/10	EFREN BUITRON	1210	5.5	860	~	Peel Shear	155 141 184	145 153 187	150 131 187	142 147 184	140 136 187	Pass
22	56 / 58	3/11/10	JOSE CAMPOS	20831	3.5	850	~	Peel Shear	152 118 180	140 121 177	156 122 176	138 121 180	140 120 177	Pass
23	68 / 69	3/11/10	LUIS LARA	1209	4.5	860	~	Peel Shear	130 128 186	126 136 184	127 137 181	124 134 184	128 132 183	Pass
24	1 / 60	3/11/10	EFREN BUITRON	1210	4	860	~	Peel Shear	140 136 178	150 144 174	137 146 173	144 143 177	152 137 177	Pass
25	72 / 73	3/11/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	160 141 191	144 147 189	147 138 190	151 141 187	148 137 189	Pass
26	74 / 75	3/12/10	EFREN BUITRON	1210	5.5	860	~	Peel Shear	129 131 162	133 127 164	127 131 163	128 127 161	130 127 162	Pass
27	75 / 76	3/12/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	143 131 173	141 127 177	148 137 171	137 140 173	146 126 176	Pass
28	85 / 86	3/12/10	LUIS LARA	1209	4.5	860	~	Peel Shear	123 134 164	127 128 167	124 140 168	126 136 166	127 134 167	Pass
29	25 / 81	3/12/10	EFREN BUITRON	1210	4	860	~	Peel Shear	147 134 168	129 132 166	144 137 166	145 132 169	148 130 164	Pass
30	91 / 92	4/1/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	146 138 200	152 135 183	155 134 199	142 129 181	145 137 196	Pass
31	49 / 90	4/1/10	EFREN BUITRON	1210	4	860	~	Peel Shear	126 141 202	144 145 187	143 159 199	158 151 197	131 167 182	Pass
32	96 / 97	4/1/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	142 137 193	150 143 188	143 132 192	137 134 189	135 133 194	Pass
33	99 / 100	4/1/10	EFREN BUITRON	1210	5.5	860	~	Peel Shear	128 161 199	125 127 192	124 147 194	138 141 191	130 135 197	Pass
34	104 / 105	4/1/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	147 146 192	143 144 186	156 148 186	152 142 182	148 144 183	Pass
35	109 / 110	4/2/10	EFREN BUITRON	1210	5	860	~	Peel Shear	137 126 165	134 134 167	130 124 172	128 129 169	126 128 168	Pass
36	9 / 99	4/2/10	JOSE CAMPOS	1208	3.5	860	~	Peel Shear	168 151 170	163 149 167	164 144 176	154 145 171	153 136 168	Pass
37	112 / 113	4/2/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	154 130 155	139 127 164	137 133 169	139 134 165	146 133 162	Pass
38	119 / 120	4/2/10	EFREN BUITRON	1210	5.5	860	~	Peel Shear	150 151 203	152 146 208	149 146 206	147 161 204	137 143 207	Pass
39	120 / 121	4/2/10	JOSE CAMPOS	1208	4.5	860	~	Peel Shear	127 147 205	134 150 205	128 156 207	132 147 206	128 137 202	Pass

Destructive Sample Information

Other: _____

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Repair Reports

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

REPAIR REPORT

Project Name BASIC REMEDIATION BMI SOUTH CAPPROJECT NO 07-11-1271PAGE 1

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Repair # R -	Type of Repair	Panel #	Repair Date	Repair Time	Repair Crew	Machine #	Non- DestructiveT est Date	Test Crew	Non- Destructive Test P/F	Comments
1	PATCH	1/2/3	5/14/2009	8:58 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
2	DS-01	1/3	5/14/2009	9:47 AM	B.R.S	513	5/16/2009	J.M.B	P	10' S TO N
3	PATCH	3/4/5	5/14/2009	9:20 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
4	PATCH	2/3/4	5/14/2009	8:45 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
5	DS-02	2/4	5/14/2009	8:35 AM	B.R.S	513	5/16/2009	J.M.B	P	15' FROM N TO S
6	DS-03	4/6	5/15/2009	8:50 AM	B.R.S	513	5/16/2009	J.M.B	P	36' FROM N YO S
7	PATCH	6/7	5/15/2009	7:25 AM	B.R.S	513	5/16/2009	J.M.B	P	2' FROM E TO W
8	PATCH	4/5/6	5/15/2009	7:45 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
9	PATCH	5/6/7	5/15/2009	7:20 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
10	PATCH	6/7/8	5/15/2009	7:37 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
11	PATCH	8/9/10	5/15/2009	8:47 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
12	DS-04	8/10	5/15/2009	8:20 AM	B.R.S	513	5/16/2009	J.M.B	P	66' FROM N TO S
13	DS-05	10/12	5/15/2009	2:05 PM	B.R.S	513	5/16/2009	J.M.B	P	46' FROM S TO N
14	PATCH	10/11/12	5/15/2009	8:25 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
15	PATCH	9/10/11	5/15/2009	8:06 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
16	PATCH	11/12/13	5/15/2009	8:24 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
17	PATCH	12/13/14	5/15/2009	1:42 PM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
18	DS-06	12/14	5/16/2009	7:26 AM	I.S	513	5/16/2009	J.M.B	P	30' FROM S TO N
19	PATCH	14	5/15/2009	1:38 PM	B.R.S	513	5/16/2009	J.M.B	P	6' FROM N TO S
20	PATCH	15/14/13	5/15/2009	1:26 PM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
21	PATCH	15/16/17	5/15/2009	9:03 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

REPAIR REPORT

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Repair # R -	Type of Repair	Panel #	Repair Date	Repair Time	Repair Crew	Machine #	Non- Destructive Test Date	Test Crew	Non- Destructive Test P/F	Comments
22	DS-10	15/17	5/15/2009	1:12 PM	B.R.S	513	5/16/2009	J.M.B	P	67' FROM S TO N
23	PATCH	17/18/19	5/15/2009	10:00 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
24	DS-07	18/19	5/15/2009	10:10 AM	B.R.S	513	5/16/2009	J.M.B	P	11' FROM E TO W
25	PATCH	16/17/19	5/15/2009	9:09 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
26	PATCH	19/20/21	5/15/2009	9:19 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
27	PATCH	18/19/20	5/15/2009	10:21 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
28	PATCH	20/21/22	5/15/2009	9:30 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
29	DS-08	22/24	5/15/2009	9:44 AM	B.R.S	513	5/16/2009	J.M.B	P	48' FROM N TO S
30	PATCH	22/23/24	5/15/2009	10:45 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
31	DS-14	22/23	5/16/2009	7:30 AM	I.S	513	5/16/2009	J.M.B	P	14' FROM N TO S
32	DS-09	23/25	5/15/2009	12:54 PM	B.R.S	513	5/16/2009	J.M.B	P	8' FROM N TO S
33	PATCH	23/24/25	5/15/2009	12:35 PM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
34	PATCH	24/25/26	5/15/2009	10:31 AM	B.R.S	513	5/16/2009	J.M.B	P	INTERSECTION
35	PATCH	26/27/28	5/16/2009	6:33 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION
36	DS-11	26/27	5/16/2009	6:30 AM	I.S	513	5/16/2009	J.M.B	P	3' FROM S TO N
37	PATCH	25/26/27	5/16/2009	6:35 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION
38	DS-15	27/29	5/16/2009	7:40 AM	I.S	513	5/16/2009	J.M.B	P	30' FROM S TO N
39	PATCH	27/28/29	5/16/2009	6:36 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION
40	PATCH	29/30/31	5/16/2009	6:40 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION
41	PATCH	30/48/47	5/16/2009	8:07 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION
42	PATCH	30/47/46/45	5/16/2009	8:10 AM	I.S	513	5/16/2009	J.M.B	P	INTERSECTION

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

REPAIR REPORT

Project Name BASIC REMEDIATION BMI SOUTH CAP

PROJECT NO 07-11-1271

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ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

REPAIR REPORT

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Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent: ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; padding: 2px; text-align: center;"></div>	Cell
Reported by :	VICTOR BUITRON			Cap
Other:				<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types	
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit									
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot									
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out					LF Welded	Air Pressure Spark	*S=South *N=North *W=West	B--Extrusion Bead	
SJ --Seam Joint	AO --Add On	CS --Concrete Structure			AT -Air Test					1930.00	Air Lance	*E=East	

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
65	SJ	49/50/55	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
66	SJ	50/51/55	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
67	SJ	51/53/55	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
68	BO	53/57	2' *S	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
69	SJ	53/54/57	INTERSECTION	P	2	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
70	SJ	53/54/55	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
71	SJ	1/55/56	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
72	DS	55/56	15' *S DS-21	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
73	SJ	55/56/58	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
74	DS	56/58	10' *E DS-22	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
75	SJ	55/58/60	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
76	DO	58	24' *E	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
77	DO	58	31' *E	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
78	DO	58	38' *E	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
79	DO	58	45' *E	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
80	DO	58	52' *E	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
81	SJ	58/59/60	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
82	SJ	1/56/60	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
83	DS	1/60	15' *S DS-24	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
84	SJ	1/60/62	INTERSECTION	P	3	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent: ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; padding: 2px; text-align: center;"></div>	Cell
Reported by :	VICTOR BUITRON			Cap
Other:				<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>

Damage Codes									SF Patch Material 1364 LF Welded 1930.00	Test Type Vacuum Air Pressure Spark Air Lance	Abbrev. *S=South *N=North *W=West *E=East	Repair Types C--Cap Strip P--Patch B--Extrusion Bead
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out								
SJ --Seam Joint	AO --Add On	CS --Concrete Structure		AT -Air Test								

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
85	SJ	1/62/64	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
86	SJ	1/64/65	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
87	SJ	62/63/64	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
88	SJ	61/62/63	INTERSECTION	P	2	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
89	SJ	63/64/65	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
90	SJ	1/65/67	INTERSECTION	P	4	x	9		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
91	SJ	65/66/67	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
92	DO	66/67	2' *N	P	5	x	7		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
93	SJ	1/3/67/68	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
94	SJ	3/5/68/69	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
95	DS	68/69	25' *S DS-23	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
96	SJ	5/7/69/70	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
97	SJ	7/8/70/71	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
98	SJ	8/10/71/72	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
99	SJ	10/12/72/73	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
100	DS	72/73	15' *S DS-25	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
101	SJ	12/14/73/74	INTERSECTION	P	3	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
102	CR	56	14' *W	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
103	DS	74/75	20' *N DS-26	P	2	x	5		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
104	DS	75/76	20' *N DS-27	P	2	x	5		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent: ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; padding: 2px; text-align: center;"></div>	Cell
Reported by :	VICTOR BUITRON			Cap
Other:				<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out								
SJ --Seam Joint	AO --Add On	CS --Concrete Structure	AT -Air Test		1364	LF Welded	1930.00	Vacuum	*S=South	C--Cap Strip		
								Air Pressure	*N=North	P--Patch		
								Spark	*W=West	B--Extrusion Bead		
								Air Lance	*E=East			

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
105	SJ	14/15/74/75	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
106	SJ	15/17/75/76	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
107	SJ	17/18/76/77	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
108	SJ	18/20/77/78	INTERSECTION	P	2	x	3		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
109	SJ	20/22/78/79	INTERSECTION	P	2	x	2		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
110	SJ	22/23/79/80	INTERSECTION	P	2	x	2		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
111	SJ	23/25/80/81	INTERSECTION	P	2	x	2		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
112	SJ	25/81	10' *E DS-29	P	2	x	5		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
113	SJ	25/27/81/82	INTERSECTION	P	2	x	3		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
114	SJ	27/29/82/83	INTERSECTION	P	2	x	3		3/12/10	MARIO BUITRON	13	Vacuum	Pass	3/13/10
115	SJ	29/30/83/84	INTERSECTION	P	2	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
116	SJ	30/48/84/85	INTERSECTION	P	2	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
117	SJ	45/85/86	INTERSECTION	P	2	x	3		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
118	SJ	47/48/87/139	INTERSECTION	P	2	x	7		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
119	DS	85/86	25' *N DS-28	P	2	x	5		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
120	DO	54/55	2' *W	P	4	x	9		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
121	SJ	60/61/62	INTERSECTION	P	2	x	2		3/12/10	IVAN SANCHEZ	513	Vacuum	Pass	3/13/10
122	SJ	1/49/55/92	INTERSECTION	P	2	x	4		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
123	SJ	49/91/92	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
124	SJ	49/90/91	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported by :	VICTOR BUITRON			Cap	X
Other:					

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out								
SJ --Seam Joint	AO --Add On	CS --Concrete Structure	AT -Air Test		1364	LF Welded	1930.00	Vacuum	*S=South	C--Cap Strip		
								Air Pressure	*N=North	P--Patch		
								Spark	*W=West	B--Extrusion Bead		
								Air Lance	*E=East			

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
125	DS	49/90	15' *S DS-31	P	2	x	6		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
126	SJ	49/88/90	INTERSECTION	P	2	x	2		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
127	SJ	49/88/94	INTERSECTION	P	2	x	2		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
128	BO	49/94	2' *W	P	2	x	5		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
129	SJ	1/2/93/95	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
130	SJ	2/4/95/96	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
131	SJ	88/89/90	INTERSECTION	P	2	x	2		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
132	SJ	4/6/96/97	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
133	SJ	6/8/97/98	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
134	SJ	89/90/91	INTERSECTION	P	2	x	2		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
135	SJ	8/9/98/99	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
136	DS	91/92	30' * S DS-30	P	2	x	6		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
137	DS	9/99	10' *E DS-36	P	2	x	5		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
138	SJ	1/92/93	INTERSECTION	P	4	x	6		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
139	DS	96/97	45' * S DS-32	P	2	x	6		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
140	DS	99/100	45' *S DS-33	P	2	x	6		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
141	SJ	9/11/99/100	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
142	SJ	11/13/100/101	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
143	SJ	13/15/101/102	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
144	SJ	15/16/102/103	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent: ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; padding: 2px; text-align: center;"></div>	Cell
Reported by :	VICTOR BUITRON			Cap
Other:				<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>

Damage Codes									SF Patch Material 1364 LF Welded 1930.00	Test Type Vacuum Air Pressure Spark Air Lance	Abbrev. *S=South *N=North *W=West *E=East	Repair Types			
CR --Crease					FS --Failed Seam		MatD --Material Defect					LL --Lost Lap		CF --Custom Fit	
DS --Destruct Sample					WR --Wrinkle		WS --Welder Restart					MD --Mechanical Damage		PB --Pipe Boot	
SI --Subgrade Irregularity					AV --Airvent		RW --Roller Wrinkle					DO --Damage By Others		BO --Burn Out	
SJ --Seam Joint					AO --Add On		CS --Concrete Structure		AT -Air Test				C--Cap Strip P--Patch B--Extrusion Bead		

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
145	SJ	16/19/103/104	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
146	SJ	19/21/104/105	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
147	SJ	21/22/105/106	INTERSECTION	P	3	x	4		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
148	SJ	22/24/106/107	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
149	SJ	24/26/107/108	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
150	SJ	26/28/108/109	INTERSECTION	P	2	x	4		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
151	SJ	28/29/109/110	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
152	SJ	29/31/110/111	INTERSECTION	P	2	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
153	SJ	31/32/111/112	INTERSECTION	P	4	x	4		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
154	SJ	32/112/113	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
155	SJ	32/113/114	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
156	SJ	32/114/117	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
157	SJ	32/117/118	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
158	SJ	32/118/119	INTERSECTION	P	2	x	2		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
159	SJ	32/119/120	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
160	SJ	32/120/121	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
161	DS	120/121	30' *S DS-39	P	2	x	5		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
162	DS	119/120	25' *S DS-38	P	2	x	5		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
163	BO	114/117	67' *S	P	5	x	5		4/3/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
164	DS	112/113	30' *S DS-37	P	2	x	6		4/3/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	X	Pond	
Job Description:	BMI SOUTH COVER	Secondary		Cell	
Reported by :	VICTOR BUITRON			Cap	X
Other:					

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out	LF Welded				Air Pressure	*S=South	C--Cap Strip	
SJ --Seam Joint	AO --Add On	CS --Concrete Structure		AT -Air Test	1930.00				Spark	*N=North	P--Patch	
									Air Lance	*W=West	B--Extrusion Bead	
										*E=East		

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
165	DS	113/R-164	50' *S DS-40	P	2	x	5		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
166	DS	109/110	50' *S DS-35	P	2	x	5		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
167	DS	104/105	45' *S DS-34	P	2	x	6		4/3/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
168	SJ	112/113/115	INTERSECTION	P	2	x	2		4/3/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
169	SJ	113/114/115/116	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
170	SJ	114/116/117/125	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
171	SJ	117/118/125/126	INTERSECTION	P	2	x	4		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
172	SJ	118/119/126/127	INTERSECTION	P	2	x	4		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
173	SJ	119/120/127/128	INTERSECTION	P	2	x	6		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
174	SJ	32/33/121/122	INTERSECTION	P	6	x	7		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
175	SJ	120/121/128/129	INTERSECTION	P	2	x	6		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
176	SJ	121/129/130	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
177	SJ	121/122/130	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
178	DO	130	5' *N	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
179	SJ	122/130/131	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
180	SJ	122/123/131	INTERSECTION	P	2	x	3		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
181	SJ	123/131/132	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
182	SJ	123/124/132/134	INTERSECTION	P	3	x	6		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
183	SJ	124/134/135	INTERSECTION	P	2	x	2		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
184	SJ	124/135/136	INTERSECTION	P	4	x	4		4/5/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	Cell	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>
Reported by :	VICTOR BUITRON			Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>
Other:					

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types		
CR --Crease		FS --Failed Seam	MatD --Material Defect	LL --Lost Lap		CF --Custom Fit		1364				Vacuum	*S=South	C--Cap Strip
DS --Destruct Sample		WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage		PB --Pipe Boot						Air Pressure	*N=North	P--Patch
SI --Subgrade Irregularity		AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others		BO --Burn Out		LF Welded	Spark	*W=West	B--Extrusion Bead			
SJ --Seam Joint		AO --Add On	CS --Concrete Structure		AT -Air Test		1930.00		Air Lance	*E=East				

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
185	DO	101/102	1' *S	P	2	x	2		4/2/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
186	DO	49	14' *S	P	3	x	3		4/6/10	IVAN SANCHEZ	513	Vacuum	Pass	4/6/10
187	DS	TN-3/109	2' *W DS-41	P	2	x	5		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
188	SJ	TN-133/125/126	INTERSECTION	P	2	x	2		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
189	WR	96/97	2' *S	P	2	x	2		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
190	CR	TN-51/89	5' *E	P	2	x	2		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
191	CR	TN-8/TN-9/106	INTERSECTION	P	2	x	2		4/7/10	EFREN BUITRON	13	Vacuum	Pass	4/7/10
192	DO	137	3' *S	P	3	x	5		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
193	DO	135	4' *S	P	3	x	4		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
194	DO	135/136	ON TRENCH	P	6	x	6		4/7/10	IVAN SANCHEZ	513	Vacuum	Pass	4/7/10
195	SJ	86/87/138/139	INTERSECTION	P	2	x	6		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
196	SJ	47/139/140	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
197	SJ	47/140/141	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
198	SJ	47/141/143	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
199	SJ	141/142/143	INTERSECTION	P	2	x	5		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
200	SJ	46/47/143	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
201	SJ	46/143/144	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
202	SJ	45/46/144	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
203	SJ	45/144/145/146	INTERSECTION	P	2	x	5		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
204	DO	146/147	2' *E	P	4	x	6		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10

Environmental Specialties International Inc.

Repair Report

Project Name	BASIC REMEDIATION	Job # :	07-11-1271	Superintendent:	ISMAEL BUITRON
Material Type:	60 MIL HDT	Primary	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>	Pond	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>
Job Description:	BMI SOUTH COVER	Secondary	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	Cell	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>
Reported by :	VICTOR BUITRON			Cap	<div style="border: 1px solid black; padding: 2px; text-align: center;">X</div>
Other:					

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								
SI --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out								
SJ --Seam Joint	AO --Add On	CS --Concrete Structure		AT -Air Test	1364	LF Welded	1930.00	Vacuum	*S=South	C--Cap Strip		
								Air Pressure	*N=North	P--Patch		
								Spark	*W=West	B--Extrusion Bead		
								Air Lance	*E=East			

Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
205	SJ	152/153/154	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
206	SJ	146/147/148	INTERSECTION	P	3	x	3		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
207	SJ	44/45/146/148	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
208	SJ	43/44/148/149	INTERSECTION	P	2	x	4		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
209	SJ	42/43/149/150	INTERSECTION	P	2	x	3		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
210	SJ	41/42/150/151	INTERSECTION	P	2	x	5		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
211	DS	144/145	20' *E DS-42	P	2	x	6		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
212	DS	146/147	20' *E DS-43	P	2	x	6		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
213	DS	39/153	11' *S DS-44	P	2	x	6		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
214	DS	162/163	25' *E DS-45	P	2	x	6		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
215	SJ	40/41/151/152	INTERSECTION	P	4	x	4		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
216	BO	151/152	8' *W	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
217	DO	149/150	2' *E	P	2	x	6		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
218	SJ	39/40/152/153	INTERSECTION	P	2	x	4		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
219	SJ	153/154/156	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
220	BO	153/156	8' *W	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
221	SJ	38/39/153/156	INTERSECTION	P	2	x	4		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
222	SJ	154/155/156	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
223	SJ	155/156/157	INTERSECTION	P	2	x	2		4/9/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
224	SJ	36/37/157/158	INTERSECTION	P	2	x	4		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10

Environmental Specialties International Inc.
Repair Report

Project Name

BASIC REMEDIATION

Material Type:

60 MIL HDT

Job Description:

BMI SOUTH COVER

Reported by :

VICTOR BUITRON

Other:

Job # :

07-11-1271

Superintendent:

ISMAEL BUITRON

Primary

X

Pond

Secondary

Cell

Cap

X

Damage Codes									SF Patch Material	Test Type	Abbrev.	Repair Types		
CR --Crease	FS --Failed Seam	MatD --Material Defect	LL --Lost Lap	CF --Custom Fit								Vacuum	*S=South	C--Cap Strip
DS --Destruct Sample	WR --Wrinkle	WS --Welder Restart	MD --Mechanical Damage	PB --Pipe Boot								Air Pressure	*N=North	P--Patch
SJ --Subgrade Irregularity	AV --Airvent	RW --Roller Wrinkle	DO --Damage By Others	BO --Burn Out								Spark	*W=West	B--Extrusion Bead
SJ --Seam Joint	AO --Add On	CS --Concrete Structure				AT -Air Test			1930.00	Air Lance	*E=East			
Repair Number	Damage Code	Seam or Panel Number	Location	Repair Type	Patch (Feet)			Bead (Inches)	Date Welded	Operator Name	Machine Number	Test Type	Test Results	Date Complete
225	SJ	37/38/156/157	INTERSECTION	P	2	x	4		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
226	SJ	35/36/158/159	INTERSECTION	P	2	x	4		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
227	SJ	34/35/159/160	INTERSECTION	P	3	x	5		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
228	SJ	159/160/161	INTERSECTION	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
229	SJ	160/161/162	INTERSECTION	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
230	SJ	33/34/160/162	INTERSECTION	P	2	x	6		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
231	SJ	122/123/163	INTERSECTION	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
232	SJ	123/163/164	INTERSECTION	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
233	SJ	123/124/164	INTERSECTION	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
234	SJ	163/164/165	INTERSECTION	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
235	SJ	124/164	10' *E	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
236	SJ	124/164/165	10' *E	P	2	x	2		4/10/10	EFREN BUITRON	13	Vacuum	Pass	4/10/10
237	SJ	136/165/166	INTERSECTION	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
238	DO	159/161	7' *E	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
239	DO	159/161	16' *E	P	2	x	2		4/10/10	IVAN SANCHEZ	513	Vacuum	Pass	4/10/10
						x								
						x								
						x								
						x								
						x								

Inventory Checklist

ENVIRONMENTAL SPECIALTIES INTERNACIONAL, INC.

Inventory Checklist

Page 1 of 3

Date: 4/21/2010

QC ID: VICTOR BUITRON

Project#: 07-11-1271

Project Name: BASIC REMEDIATION

Location: HENDERSON, NV.

Material Type: BMI SOUTH CAP
60 MIL HDT

Number	Complete Roll Number	Batch Number	Roll Size	Used On
1	902101-08		410' X 23'	5/13/09
2	902102-08		410' X 23'	5/15/09
3	902103-08		410' X 23'	5/15/09
4	902104-08		410' X 23'	5/14/09
5	902105-08		410' X 23'	4/9/10
6	902106-08		410' X 23'	5/15/09
7	902107-08		410' X 23'	5/13/09
8	902108-08		410' X 23'	5/13/09
9	928227-08		410' X 23'	4/1/10
10	942108-07		410' X 23'	3/11/10
11	942110-08		410' X 23'	3/11/10
12	942111-08		410' X 23'	3/11/10
13	942112-08		410' X 23'	3/12/10
14	942114-08		410' X 23'	3/11/10
15	942117-08		410' X 23'	3/12/10
16	942119-08		410' X 23'	3/11/10
17	952119-08		410' X 23'	5/15/09
18	952120-08		410' X 23'	4/9/10
19	952121-08		410' X 23'	5/15/09
20	952224-08		410' X 23'	4/1/10

ENVIRONMENTAL SPECIALTIES INTERNACIONAL, INC.

Inventory Checklist

Page 2 of 3

Date: 4/21/2010

QC ID: VICTOR BUITRON

Project#: 07-11-1271

Project Name: BASIC REMEDIATION

Location: HENDERSON, NV.

Material Type: BMI SOUTH CAP
60 MIL HDT

Number	Complete Roll Number	Batch Number	Roll Size	Used On
21	952225-08		410' X 23'	4/2/10
22	952226-08		410' X 23'	4/1/10
23	952227-08		410' X 23'	4/2/10
24	952228-08		410' X 23'	4/2/10
25	952229-08		410' X 23'	4/1/10
26	952230-08		410' X 23'	4/2/10
27	952231-08		410' X 23'	4/2/10
28	952232-08		410' X 23'	4/1/10
29	952233-08		410' X 23'	4/1/10
30	952234-08		410' X 23'	5/15/09
31	952235-08		410' X 23'	5/15/09
32	952236-08		410' X 23'	5/15/09
33	952237-08		410' X 23'	5/14/09
34	952238-08		410' X 23'	5/14/09
35	952240-08		410' X 23'	5/14/09
36	952241-08		410' X 23'	5/15/09
37	952242-08		410' X 23'	5/14/09
38	952243-08		410' X 23'	5/14/09
39	952344-08		410' X 23'	5/15/09
40	952345-08		410' X 23'	4/9/10

ENVIRONMENTAL SPECIALTIES INTERNACIONAL, INC.

Inventory Checklist

Page 3 of 3

Date: 4/21/2010

QC ID: VICTOR BUITRON

Project#: 07-11-1271

Project Name: BASIC REMEDIATION

Location: HENDERSON, NV.

Material Type: 60 MIL HDT

[illegible]

Subgrade Acceptance Certificates

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BHI SOUTH DATE: 05/13/09

PROJECT NUMBER: 07-11-1271

TIME: 14:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # 1
TO PANEL # 05

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Litzgow

TITLE: Field Technician

SIGNATURE: Meghan Litzgow

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Const Manager

SIGNATURE: Richard Laubinger

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BMI SOUTH

DATE: 05/14/09

PROJECT NUMBER: 07-11-1271

TIME: _____

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # 06
TO PANEL # 26

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Robert Derosier

TITLE: EDI

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FORD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Const Manager

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: **BMI SOUTH CLOSURE**

DATE: 05-15-09

PROJECT NUMBER: 07-11-1271

TIME: 06:30

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # (27)
TO PANEL # (48)

ESI REPRESENTATIVE:

NAME: ISHAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Lithgow

TITLE: Field Technician

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: Michael M. Carlson

TITLE: Field Engineer

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU Closure

DATE: 03/11/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: BMI SOUTH

FROM PANEL # 49
TO PANEL # 74

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CAMON LIDDELL

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: INTERIOR M. CAMERON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BMI South

DATE: 03/12/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

FROM PANEL # 75
TO PANEL # 87

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Dan Street

TITLE: CQA Site Manager

SIGNATURE: D-Str 3-12-10

ENTACT REPRESENTATIVE:

NAME: MELHAR M. CARSON

TITLE: FOOD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: ASSISTANT CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/01/10

PROJECT NUMBER: 07-11-1271

TIME: 09:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: Phases BMI SOUTH

From PANEL # 88
TO PANEL # 105

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CARON LUDDELL

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MELISSA M. CARSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Cost Manager

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMT SOUTH

DATE: 04/02/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: Phases PHASE 1

FROM PANEL # 106
TO PANEL # 136 @ #137

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CARON LARSEN

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CHILSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: CHRIS WHITE

TITLE: ASSISTANT GM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/09/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: BMI SOUTH

From PANEL # 138
TO PANEL # 166

ESI REPRESENTATIVE:

NAME: ISRAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Camon Liddell

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: WILLIAM M. LARSON

TITLE: FOOD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS


NAME: Richard L. Langer

TITLE: Const Manager

SIGNATURE: [Signature]



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	Geomembrane QC Data (BMI-South Closure)
Submittal Number:	02770-008J
Specification Section:	Section 02770, Part 1.06, Subpart E
Drawing Number (s):	8, 10, 14, 16, 19, 21, 23, 25, 27, 29, 31, 33, 35-36, 38-45
Page Number:	02770-4
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	5/24/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 3/15/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 393
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	3/15/10			Submittal 02772-001RR - Subgrade Acceptance Certificates – BMI-South Final Closure (Panels 49-87)	RC

ACTION (*)

AR - AS REQUESTED	FA - FOR APPROVAL
F – FILE	RC - REVIEW & COMMENT

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL ☐ MAIL ☐ OVERNIGHT ☒ HAND DELIVERY ☐ FACSIMILE
COPY TO: Ranajit Sahu, Lee Farris BY: Michael M. Carlson (630)-330-8237

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

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU Closure

DATE: 03/11/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: BMI SOUTH

FROM PANEL # 49
TO PANEL # 74

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CAMON LIDDELL

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: IMELDA M. CAMISAN

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BMI South

DATE: 03/12/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

FROM PANEL # 75
TO PANEL # 87

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Dan Street

TITLE: CQA Site Manager

SIGNATURE: [Signature] 3-12-10

ENTACT REPRESENTATIVE:

NAME: MELHAR M. CARSON

TITLE: FOOD & PHARMACEUTICALS

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS


NAME: Chris White

TITLE: ASSISTANT CQA

SIGNATURE: [Signature]



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	Subgrade Acceptance Certificates – BMI-South Final Closure (Panels 49-87)
Submittal Number:	02772-001RR
Specification Section:	Section 02772, Part 3.02, Subpart A
Drawing Number (s):	NA
Page Number:	02772-6
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	3/15/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

FILE COPY

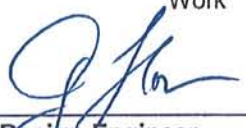

875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475



SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 05/19/2009	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02772-001U	Revision No.: - N/A	Date Submittal Rec'd by BRC: 05/15/2009
Specification Section(s): 02772.1.05 -Geosynthetic Clay Liner Submittals		
Submittal Subject: Subgrade Acceptance Certificates BMI South Interim Closure Panels 1-26		
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items		
Review Comments:		
Comment #	Reference	Comment
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer		 BRC Project Manager
Date		Date
Richard Davis 5/20/09		Lee Farris, P.E.
Construction Manager Representative		Date
Date		
Distribution: <input checked="" type="checkbox"/> File		

BRC Submittal Transmittal Form
041108- Rev 1



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 05/15/09
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 261
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:
☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	5/15/09			Submittal 02772-001U – Subgrade Acceptance Certificate–BMI–South Interim Closure (Panels 1-26)	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

☐

F – FILE

RC - REVIEW & COMMENT

☐

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL

☐ MAIL

☐ OVERNIGHT

☒ HAND DELIVERY

☐ FACSIMILE

COPY TO: Ranajit Sahu, Lee Farris

BY: Michael M. Carlson (630)-330-8237

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

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BHI SOUTH DATE: 05/13/09

PROJECT NUMBER: 07-11-1271

TIME: 14:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # 1
TO PANEL # 05

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Lihgow

TITLE: Field Technician

SIGNATURE: Meghan Lihgow

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Const Manager

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BMI SOUTH

DATE: 05/14/09

PROJECT NUMBER: 07-11-1271

TIME: _____

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted:

From PANEL # 06
TO PANEL # 26

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Robert Derosier

TITLE: EDI

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FORD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS


NAME: Richard Laubinger

TITLE: CONST MANAGER

SIGNATURE: [Signature]



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	Subgrade Acceptance Certificates - BMI-South Interim Closure (Panels 1-26)
Submittal Number:	02772-001U
Specification Section:	Section 02772, Part 3.02, Subpart A
Drawing Number (s):	NA
Page Number:	02772-6
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	5/15/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

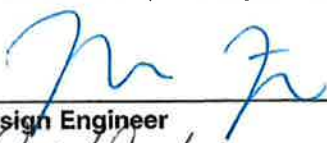
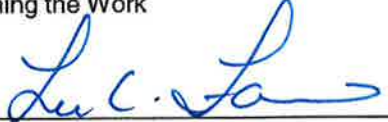

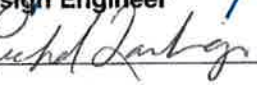




875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: April 27, 2010	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02772-001UU	Revision No.: - N/A	Date Submittal Rec'd by BRC: 4/15/10
Specification Section(s): 02772 GCL		
Submittal Subject: Subgrade Acceptance Certificates - BMI South Final Closure (Panels 88-166)		
Notations:	<input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items	
Review Comments:		
Comment #	Reference	Comment
		No comments
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer	 BRC Project Manager	 Construction Manager Representative
 Design Engineer	 BRC Project Manager	 Construction Manager Representative
Date	Date	Date
4/29/10	5/3/10	4/30/10
Date	Date	Date
Distribution: <input checked="" type="checkbox"/> File		



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 4/15/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 406
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	4/15/10			Submittal 02772-001UU - Subgrade Acceptance Certificates – BMI South Final Closure (Panels 88-166)	RC

ACTION (*)

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

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL ☐ MAIL ☐ OVERNIGHT ☒ HAND DELIVERY ☐ FACSIMILE
COPY TO: Ranajit Sahu, Lee Farris BY: Michael M. Carlson (630)-330-8237

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

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTHDATE: 04/01/10PROJECT NUMBER: 07-11-1271TIME: 09:00OWNER: BASIC REMEDIATION COMPANYLOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: Phases

BMI SOUTH

From PANEL # 88
TO PANEL # 105

<input checked="" type="checkbox"/> Correct As Noted	<input type="checkbox"/> Submit Specified Item	<input type="checkbox"/> Rejected
<p>The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.</p>		
Checked By: <u>[Signature]</u>	Date: <u>4/30/10</u>	
BASIC REMEDIATION COMPANY		

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRONTITLE: SUPERINTENDENTSIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CAMON LUDWELLTITLE: SETSIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MELANIE M. CHASETITLE: FIELD ENGINEERSIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard LankfordTITLE: Cost ManagerSIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMT SOUTH

DATE: 04/02/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted: Phases 1 & 2

FROM PANEL # 106
TO PANEL # 136 @ #137

ESI REPRESENTATIVE:

NAME: ISRAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CARON LARSEN

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CAMERON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: CHAR WILSON

TITLE: ASSISTANT CO

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/09/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted: BMI SOUTH

From PANEL # 138
TO PANEL # 166

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Camon Liddell

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: WILLIAM M. LARSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS


NAME: Richard L. Langer

TITLE: Cost Manager

SIGNATURE: [Signature]



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	Subgrade Acceptance Certificates – BMI South Final Closure (Panels 88-166)
Submittal Number:	02772-001UU
Specification Section:	Section 02772, Part 3.02, Subpart A
Drawing Number (s):	NA
Page Number:	02772-6
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	4/15/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.


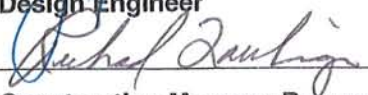


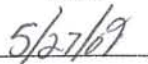

Checked By  Date 4/30/10
BRC Initials LEL

BASIC REMEDIATION COMPANY

FILE COPY875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475**SUBMITTAL TRANSMITTAL COVER SHEET**

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 05/27/2009	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02772-001V	Revision No.: - N/A	Date Submittal Rec'd by BRC: 05/19/2009
Specification Section(s): 02772.1.05 -Geosynthetic Clay Liner Submittals		
Submittal Subject: Subgrade Acceptance Certificates BMI South Interim Closure Panels 27-48		
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items		
Review Comments:		
Comment #	Reference	Comment
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer	 Construction Manager Representative	 BRC Project Manager Lee Farris, P.E.
 5/27/09 Date	 5/27/09 Date	 5/27/09 Date
Distribution: <input checked="" type="checkbox"/> File		

BRC Submittal Transmittal Form
041108- Rev 1



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 05/19/09
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 262
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:
☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	5/19/09			Submittal 02772-001V – Subgrade Acceptance Certificate–BMI-South Interim Closure (Panels 27-48)	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

☐

F – FILE

RC - REVIEW & COMMENT

☐

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL

☐ MAIL

☐ OVERNIGHT

☒ HAND DELIVERY

☐ FACSIMILE

COPY TO: Ranajit Sahu, Lee Farris

BY: Michael M. Carlson (630)-330-8237

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

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: **BMI SOUTH CLOSURE**

DATE: 05-15-09

PROJECT NUMBER: 07-11-1271

TIME: 06:30

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # (27)
TO PANEL # (48)

ESI REPRESENTATIVE:

NAME: ISHAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Lithgow

TITLE: Field Technician

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: Michael M. Carlson

TITLE: Field Engineer

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS


NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	Subgrade Acceptance Certificates - BMI-South Interim Closure (Panels 27-48)
Submittal Number:	02772-001V
Specification Section:	Section 02772, Part 3.02, Subpart A
Drawing Number (s):	NA
Page Number:	02772-6
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	5/19/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

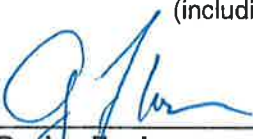

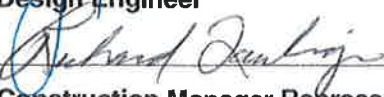


875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 05/13/09	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02772-004M	Revision No.: - N/A	Date Submittal Rec'd by BRC: 05/12/09
Specification Section(s): 02272-1.03 Geosynthetic Clay Liner Submittals		
Submittal Subject: GCL MQC Certificates, -BMI South Allocation and 2 nd Portion of CAMU Closure		
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items		
Review Comments:		
Comment #	Reference	Comment
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer	 BRC Project Manager	 Construction Manager Representative
Date 5/13/09	Date 5/14/09	Date 5/13/09
Distribution: <input checked="" type="checkbox"/> File		



Date: 4/27/2009
Purchase Order: 9114
ORDER NUMBER: 00238336F

Gregg Abney
ESI-Environmental Specialties INT'l, Inc.
7943 Pecue Lane
Baton Rouge, LA 70809
gabney@esiliners.com

To Whom it May Concern:

Please find enclosed the MQA/MQC test data package for Geosynthetic Clay Liner shipments to ESI-Environmental Specialties INT'l, Inc..

The enclosed data package includes results of all the MQC tests required by ASTM D5889, with the exception of index flux/hydraulic conductivity. This test, which is run according to ASTM D5887, is normally performed once per production lot (once per week), unless a higher frequency is required by the project specifications. Because of the GCL's low permeability, this test can take several weeks to complete. The index flux/hydraulic conductivity results associated with this lot of material will be provided under separate cover as soon as they are available.

Although the index flux/hydraulic conductivity test results are not yet available, CETCO accepts responsibility for our GCL should the index flux/hydraulic conductivity tests produce unacceptable results. If, upon delivery and prior to installation, individual rolls of GCL are found to be nonconforming to accepted project specifications, CETCO will replace the nonconforming material at no charge.

Questions regarding this information should be directed to Chris Athanassopoulos, Technical Support Engineer, at (847) 851-1831.

Sincerely,

Roger B. Wilkerson
Quality Assurance Coordinator
CETCO Lovell Plant

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected
The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.	
Checked By: <u>[Signature]</u>	Date: <u>5/13/09</u>
BRC Initials: <u>LOF</u>	
BASIC REMEDIATION COMPANY	



**GEOSYNTHETIC CLAY LINER
MANUFACTURING QUALITY ASSURANCE DATA PACKAGE**

PROJECT NAME: Landwell
CUSTOMER P.O.: 9114
ORDER NUMBER: 00238336F
PREPARED FOR: ESI-Environmental Specialties INT'l, Inc.

CONTENTS:

- Daily production and needle detection certification
- GCL property specifications
- Order packing list
- GCL MQA tracking form
- GCL manufacturing quality control test data
- Bentonite clay certification
- Raw material test results

PREPARED BY: Roger B. Wilkerson
Quality Assurance Coordinator
CETCO
P.O. Box 428
92 Hwy. 37
Lovell, WY 82431

Telephone: 800-322-1149 ext. 413
Fax:
E-Mail: rwilke@cetco.com



PRODUCTION CERTIFICATION

PROJECT NAME: Landwell
CUSTOMER P.O.: 9114
PREPARED FOR: ESI-Environmental Specialties INT'l, Inc.

CETCO affirms that these products meet the physical and chemical criteria listed on the attached GCL property specification sheet.

NEEDLE REMOVAL AND DETECTION PROCEDURE

CETCO hereby affirms that all Bentomat[®] geosynthetic clay liner material manufactured for this project is continually passed under a magnet for needle removal and then screened with a metal detection device. CETCO certifies Bentomat[®] to be essentially free of broken needles and fragments of needles that would negatively effect the performance of the final product.

A handwritten signature in black ink, appearing to read 'Roger B. Wilkerson', is positioned above the printed name.

Roger B. Wilkerson
Quality Assurance Coordinator
Colloid Environmental Technologies Co. (CETCO)



Ship Date: 4/26/2009

Order Number: 00238336F

Prepared For: ESI-Environmental Specialties INT'l, Inc.

The GCL raw materials and GCL finished product manufactured for the above-referenced order number(s) are hereby certified to achieve the properties listed in the tables below.

GCL PROPERTY SPECIFICATIONS FOR BENTOMAT DN

Test Method	Test Method Property	Test Frequency	Certified Value
ASTM D 5891	Bentonite Fluid Loss	1 per 50 Tons	18 ml Max
ASTM D 5993	Bentonite Mass/Area	40,000 sq ft (4000 sq m)	0.75 lb /sq ft (3.6 kg/sq m) Min
ASTM D 5890	Bentonite Swell Index	1 per 50 Tons	24 ml/2g Min
ASTM D 6768	GCL Grab Strength	200,000 sq ft (20,000 sq m)	50 lbs/in MARV
ASTM D 6243	GCL Hydrated Internal Shear Strength	Periodic	500 psf (48 kPa) typ @ 200 psf
ASTM D 5887	GCL Hydraulic Conductivity	Weekly	5 x 10 ⁻⁹ cm/ sec Max
ASTM D 5887	GCL Index Flux	Weekly	1 x 10 ⁻⁸ m ³ /m ² /sec Max
ASTM D 6496	GCL Peel Strength	40,000 sq ft (4000 sq m)	3.5 lbs/in Min
ASTM D4632*	Grab Strength*modified with 4-inch grips	200,000 sq ft (20,000 sq m)	150 lbs (660 N) MARV
ASTM D4632*	Peel Strength*modified with 4-inch grips	40,000 sq ft (4000 sq m)	15 lbs (65 N) Min

SPECIALY REQUESTED CERTIFIED PROPERTIES FOR THIS ORDER OF BENTOMAT DN

Test Method	Test Method Property	Requested Frequency	Requested Value	Requested Conditions
ASTM D 5887	GCL Index Flux	1/200,000 sqft	Standard	Standard
ASTM D 4643	GCL Moisture	Standard	30% Moisture (max)	Standard

Bentonite property tests are performed at a bentonite processing facility before shipment to CETCO's production facility.

All tensile testing is in the machine direction.

FABRIC SUPPLIER REQUIREMENTS FOR BENTOMAT DN

Raw Material	test method	mass per area	units
Nonwoven Cover Fabric	ASTM D 5261	6.0	oz/yd ²
Bentomat DN Base Nonwoven Fabric	ASTM D 5261	6.0	oz/yd ²

Fabric certifications from our raw material suppliers are on file at our production facility.



CETCO's MQA laboratory is GAI-accredited (www.geosynthetic-institute.org/gai/lab.html).

Roger B. Wilkerson
Quality Assurance Coordinator
CETCO Lovell Plant



LINING TECHNOLOGIES

800.527.9948 www.cetco.com

GCL ORDER PACKING LIST

GCL shipped for certification package number 00238336F

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002290	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002291	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002292	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002293	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002294	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002295	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002296	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002297	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002298	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002299	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002300	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002301	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002302	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002303	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002304	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002305	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002306	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002307	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002308	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002309	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002310	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002311	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002312	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002313	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002314	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002315	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002316	200	14.5	2900	3450

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002317	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002318	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002319	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002320	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002321	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002322	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002323	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002324	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002325	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002326	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002327	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002328	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002329	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002330	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002331	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002332	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002333	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002334	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002335	200	14.5	2900	3420
00238336F	LO-BENTOMAT DN	200917LO	00002336	200	14.5	2900	3405
00238336F	LO-BENTOMAT DN	200917LO	00002337	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002338	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002339	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002340	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002341	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002342	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002343	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002344	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002345	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002346	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002347	200	14.5	2900	3430
00238336F	LO-BENTOMAT DN	200917LO	00002348	200	14.5	2900	3475

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002349	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002350	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002351	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002352	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002353	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002354	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002355	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002356	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002357	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002358	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002359	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002360	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002361	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002362	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002363	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002364	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002365	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002366	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002367	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002368	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002369	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002370	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002371	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002372	200	14.5	2900	3695
00238336F	LO-BENTOMAT DN	200917LO	00002373	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002374	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002375	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002376	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002377	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002378	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002379	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002380	200	14.5	2900	3485

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002381	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002382	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002383	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002384	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002385	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002386	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002387	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002388	200	14.5	2900	3545
00238336F	LO-BENTOMAT DN	200917LO	00002389	200	14.5	2900	3575
00238336F	LO-BENTOMAT DN	200917LO	00002390	200	14.5	2900	3535
00238336F	LO-BENTOMAT DN	200917LO	00002391	200	14.5	2900	3540
00238336F	LO-BENTOMAT DN	200917LO	00002392	200	14.5	2900	3535
00238336F	LO-BENTOMAT DN	200917LO	00002393	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002394	200	14.5	2900	3560
00238336F	LO-BENTOMAT DN	200917LO	00002395	200	14.5	2900	3550
00238336F	LO-BENTOMAT DN	200917LO	00002396	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002397	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002398	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002399	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002400	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002401	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002402	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LQ	00002403	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002404	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002405	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002406	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002407	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002408	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002409	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002410	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002411	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002412	200	14.5	2900	3515

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002413	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002414	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002415	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002416	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002417	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002418	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002419	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002420	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002421	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002422	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002423	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002424	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002425	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002426	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002427	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002428	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002429	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002430	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002431	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002432	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002433	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002434	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002435	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002436	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002437	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002438	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002439	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002440	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002441	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002442	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002443	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002444	200	14.5	2900	3505

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002445	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002446	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002447	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002448	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002449	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002450	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002451	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002452	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002453	200	14.5	2900	3435
00238336F	LO-BENTOMAT DN	200917LO	00002454	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002455	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002456	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002457	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002458	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002459	200	14.5	2900	3445
00238336F	LO-BENTOMAT DN	200917LO	00002460	200	14.5	2900	3440
00238336F	LO-BENTOMAT DN	200917LO	00002461	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002462	200	14.5	2900	3425
00238336F	LO-BENTOMAT DN	200917LO	00002463	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002464	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002465	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002466	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002467	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002468	200	14.5	2900	3540
00238336F	LO-BENTOMAT DN	200917LO	00002469	200	14.5	2900	3545
00238336F	LO-BENTOMAT DN	200917LO	00002470	200	14.5	2900	3560
00238336F	LO-BENTOMAT DN	200917LO	00002471	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002472	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002473	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002474	200	14.5	2900	3560
00238336F	LO-BENTOMAT DN	200917LO	00002475	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002476	200	14.5	2900	3560

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002477	200	14.5	2900	3550
00238336F	LO-BENTOMAT DN	200917LO	00002478	200	14.5	2900	3580
00238336F	LO-BENTOMAT DN	200917LO	00002479	200	14.5	2900	3560
00238336F	LO-BENTOMAT DN	200917LO	00002480	200	14.5	2900	3595
00238336F	LO-BENTOMAT DN	200917LO	00002481	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002482	200	14.5	2900	3540
00238336F	LO-BENTOMAT DN	200917LO	00002483	200	14.5	2900	3545
00238336F	LO-BENTOMAT DN	200917LO	00002484	200	14.5	2900	3555
00238336F	LO-BENTOMAT DN	200917LO	00002485	200	14.5	2900	3550
00238336F	LO-BENTOMAT DN	200917LO	00002486	200	14.5	2900	2405
00238336F	LO-BENTOMAT DN	200917LO	00002487	200	14.5	2900	3545
00238336F	LO-BENTOMAT DN	200917LO	00002488	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002489	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002490	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002491	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002492	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002493	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002494	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002495	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002496	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002497	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002498	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002499	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002500	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002501	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002502	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002503	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002504	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002505	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002506	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002507	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002508	200	14.5	2900	3475

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002509	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002510	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002511	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002512	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002513	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002514	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002515	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002516	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002517	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002518	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002519	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002520	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002521	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002522	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002523	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002524	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002525	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002526	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002527	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002528	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002529	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002530	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002531	200	14.5	2900	3545
00238336F	LO-BENTOMAT DN	200917LO	00002532	200	14.5	2900	3465
00238336F	LO-BENTOMAT DN	200917LO	00002533	200	14.5	2900	3525
00238336F	LO-BENTOMAT DN	200917LO	00002534	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002535	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002536	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002537	200	14.5	2900	3455
00238336F	LO-BENTOMAT DN	200917LO	00002538	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002539	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002540	200	14.5	2900	3455

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002541	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002542	200	14.5	2900	3505
00238336F	LO-BENTOMAT DN	200917LO	00002543	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002544	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002545	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002546	200	14.5	2900	3485
00238336F	LO-BENTOMAT DN	200917LO	00002547	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002548	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002549	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002550	200	14.5	2900	3500
00238336F	LO-BENTOMAT DN	200917LO	00002551	200	14.5	2900	3520
00238336F	LO-BENTOMAT DN	200917LO	00002552	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002553	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002554	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002555	200	14.5	2900	3460
00238336F	LO-BENTOMAT DN	200917LO	00002556	200	14.5	2900	3450
00238336F	LO-BENTOMAT DN	200917LO	00002557	200	14.5	2900	3490
00238336F	LO-BENTOMAT DN	200917LO	00002558	200	14.5	2900	3480
00238336F	LO-BENTOMAT DN	200917LO	00002559	200	14.5	2900	3475
00238336F	LO-BENTOMAT DN	200917LO	00002560	200	14.5	2900	3470
00238336F	LO-BENTOMAT DN	200917LO	00002561	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002562	200	14.5	2900	3510
00238336F	LO-BENTOMAT DN	200917LO	00002563	200	14.5	2900	3495
00238336F	LO-BENTOMAT DN	200917LO	00002564	200	14.5	2900	3535
00238336F	LO-BENTOMAT DN	200917LO	00002565	200	14.5	2900	3515
00238336F	LO-BENTOMAT DN	200917LO	00002566	200	14.5	2900	3540
00238336F	LO-BENTOMAT DN	200917LO	00002567	200	14.5	2900	3615
00238336F	LO-BENTOMAT DN	200917LO	00002568	200	14.5	2900	3610
00238336F	LO-BENTOMAT DN	200917LO	00002569	200	14.5	2900	3660
00238336F	LO-BENTOMAT DN	200917LO	00002570	200	14.5	2900	3550
00238336F	LO-BENTOMAT DN	200917LO	00002571	200	14.5	2900	3585
00238336F	LO-BENTOMAT DN	200917LO	00002572	200	14.5	2900	3665

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
00238336F	LO-BENTOMAT DN	200917LO	00002573	200	14.5	2900	3630
00238336F	LO-BENTOMAT DN	200917LO	00002574	200	14.5	2900	3650
00238336F	LO-BENTOMAT DN	200917LO	00002575	200	14.5	2900	3645
Totals:				57200	4147	829400	997440
Total Number of Rolls Certified: 286							



GCL MQA TRACKING FORM

Listing of finished and raw materials used to produce certification package number 00238336F

GCL			Geotextiles				Clay
LO-BENTOMAT DN			LO-N/W-WHITE-DN			LO-N/W-BLACK-DN-6 OZ	LO-CG 50-DN
GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002290	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002291	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002292	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002293	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002294	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002295	00002288	200916CV	00001254	00001249	2011211850	042009A
200917LO	00002296	00002288	200916CV	00001275	00001273	2011211850	042009A
200917LO	00002297	00002288	200916CV	00001275	00001273	2011211850	042009A
200917LO	00002298	00002288	200916CV	00001275	00001273	2011211850	042009A
200917LO	00002299	00002288	200916CV	00001275	00001273	2011211850	042009A
200917LO	00002300	00002288	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002301	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002302	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002303	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002304	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002305	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002306	00002301	200914CV	00000973	00000969	2010816962	042009A
200917LO	00002307	00002301	200914CV	00001022	00001021	2010816962	042009A
200917LO	00002308	00002301	200914CV	00001022	00001021	2010816962	042009A
200917LO	00002309	00002301	200914CV	00001022	00001021	2010816962	042009A
200917LO	00002310	00002301	200914CV	00001022	00001021	2011244922	042009A
200917LO	00002311	00002301	200914CV	00001022	00001021	2011244922	042009A
200917LO	00002312	00002301	200914CV	00001039	00001039	2011244922	042009A
200917LO	00002313	00002301	200914CV	00001039	00001039	2011244922	042009A
200917LO	00002314	00002314	200914CV	00001039	00001039	2011244922	042009A
200917LO	00002315	00002314	200914CV	00001039	00001039	2011244922	042009B
200917LO	00002316	00002314	200914CV	00001039	00001039	2011244922	042009B
200917LO	00002317	00002314	200914CV	00000975	00000969	2011244922	042009B
200917LO	00002318	00002314	200914CV	00000975	00000969	2011244922	042009B

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002319	00002314	200914CV	00000975	00000969	2011244922	042009B
200917LO	00002320	00002314	200914CV	00000975	00000969	2011244919	042009B
200917LO	00002321	00002314	200914CV	00000975	00000969	2011244919	042009B
200917LO	00002322	00002314	200914CV	00000975	00000969	2011244919	042009B
200917LO	00002323	00002314	200914CV	00000967	00000962	2011244919	042009B
200917LO	00002324	00002314	200914CV	00000967	00000962	2011244919	042009B
200917LO	00002325	00002314	200914CV	00000967	00000962	2011244919	042009B
200917LO	00002326	00002314	200914CV	00000967	00000962	2011244919	042009B
200917LO	00002327	00002327	200914CV	00000967	00000962	2011244919	042009B
200917LO	00002328	00002327	200914CV	00000976	00000969	2011244919	042009B
200917LO	00002329	00002327	200914CV	00000976	00000969	2011244919	042009B
200917LO	00002330	00002327	200914CV	00000976	00000969	2011244920	042009B
200917LO	00002331	00002327	200914CV	00000976	00000969	2011244920	042009B
200917LO	00002332	00002327	200914CV	00000976	00000969	2011244920	042009B
200917LO	00002333	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002334	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002335	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002336	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002337	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002338	00002327	200914CV	00000968	00000962	2011244920	042009B
200917LO	00002339	00002327	200914CV	00000966	00000962	2011244920	042009B
200917LO	00002340	00002340	200914CV	00000966	00000962	2011244916	042009B
200917LO	00002341	00002340	200914CV	00000966	00000962	2011244916	042009B
200917LO	00002342	00002340	200914CV	00000966	00000962	2011244916	042009B
200917LO	00002343	00002340	200914CV	00000965	00000962	2011244916	042009B
200917LO	00002344	00002340	200914CV	00000965	00000962	2011244916	042009B
200917LO	00002345	00002340	200914CV	00000965	00000962	2011244916	042009B
200917LO	00002346	00002340	200914CV	00000965	00000962	2011244916	042009B
200917LO	00002347	00002340	200914CV	00000965	00000962	2011244916	042009C
200917LO	00002348	00002340	200914CV	00000960	00000952	2011244916	042009C
200917LO	00002349	00002340	200914CV	00000960	00000952	2011244916	042009C
200917LO	00002350	00002340	200914CV	00000960	00000952	2011244923	042009C
200917LO	00002351	00002340	200914CV	00000960	00000952	2011244923	042009C
200917LO	00002352	00002340	200914CV	00000960	00000952	2011244923	042009C
200917LO	00002353	00002353	200914CV	00000960	00000952	2011244923	042009C

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002354	00002353	200914CV	00000959	00000952	2011244923	042009C
200917LO	00002355	00002353	200914CV	00000959	00000952	2011244923	042009C
200917LO	00002356	00002353	200914CV	00000959	00000952	2011244923	042009C
200917LO	00002357	00002353	200914CV	00000959	00000952	2011244923	042009C
200917LO	00002358	00002353	200914CV	00000959	00000952	2011244923	042009C
200917LO	00002359	00002353	200914CV	00000951	00000947	2011244923	042009C
200917LO	00002360	00002353	200914CV	00000951	00000947	2011244924	042009C
200917LO	00002361	00002353	200914CV	00000951	00000947	2011244924	042009C
200917LO	00002362	00002353	200914CV	00000951	00000947	2011244924	042009C
200917LO	00002363	00002353	200914CV	00000951	00000947	2011244924	042009C
200917LO	00002364	00002353	200914CV	00000951	00000947	2011244924	042009C
200917LO	00002365	00002353	200914CV	00000940	00000935	2011244924	042009C
200917LO	00002366	00002366	200914CV	00000940	00000935	2011244924	042009C
200917LO	00002367	00002366	200914CV	00000940	00000935	2011244924	042009C
200917LO	00002368	00002366	200914CV	00000940	00000935	2011244924	042009C
200917LO	00002369	00002366	200914CV	00000940	00000935	2011244924	042009C
200917LO	00002370	00002366	200914CV	00000957	00000952	2011244902	042009C
200917LO	00002371	00002371	200914CV	00000957	00000952	2011244902	042109A
200917LO	00002372	00002371	200914CV	00000957	00000952	2011244902	042109A
200917LO	00002373	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002374	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002375	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002376	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002377	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002378	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002379	00002371	200914CV	00000941	00000935	2011244902	042109A
200917LO	00002380	00002371	200914CV	00000950	00000947	2011244893	042109A
200917LO	00002381	00002371	200914CV	00000950	00000947	2011244893	042109A
200917LO	00002382	00002371	200914CV	00000950	00000947	2011244893	042109A
200917LO	00002383	00002371	200914CV	00000950	00000947	2011244893	042109A
200917LO	00002384	00002384	200833CV	00003694	00003692	2011244893	042109A
200917LO	00002385	00002384	200833CV	00003694	00003692	2011244893	042109A
200917LO	00002386	00002384	200833CV	00003694	00003692	2011244893	042109A
200917LO	00002387	00002384	200833CV	00003694	00003692	2011244893	042109A
200917LO	00002388	00002384	200833CV	00003694	00003692	2011244891	042109A

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002389	00002384	200833CV	00003694	00003692	2011244891	042109A
200917LO	00002390	00002384	2010552070			2011244891	042109A
200917LO	00002391	00002391	2010552070			2011244891	042109A
200917LO	00002392	00002391	2010552070			2011244891	042109A
200917LO	00002393	00002391	2010552070			2011244891	042109A
200917LO	00002394	00002391	200830CV	00003208	00003203	2011244891	042109A
200917LO	00002395	00002391	200830CV	00003208	00003203	2011244891	042109A
200917LO	00002396	00002391	200914CV	00000937	00000935	2011244891	042109A
200917LO	00002397	00002391	200914CV	00000937	00000935	2010774431	042109A
200917LO	00002398	00002391	200914CV	00000937	00000935	2010774431	042109A
200917LO	00002399	00002391	200914CV	00000937	00000935	2010774431	042109A
200917LO	00002400	00002391	200914CV	00000937	00000935	2010774431	042109A
200917LO	00002401	00002391	200914CV	00000937	00000935	2010774431	042109B
200917LO	00002402	00002391	200914CV	00000937	00000935	2010774431	042109B
200917LO	00002403	00002391	200916CV	00001685	00001341	2010774431	042109B
200917LO	00002404	00002404	200916CV	00001285	00001281	2010774431	042109B
200917LO	00002405	00002404	200916CV	00001285	00001281	2010774431	042109B
200917LO	00002406	00002404	200916CV	00001285	00001281	2010750047	042109B
200917LO	00002407	00002404	200916CV	00001285	00001281	2010750047	042109B
200917LO	00002408	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002409	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002410	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002411	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002412	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002413	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002414	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002415	00002404	200914CV	00001029	00001021	2010750047	042109B
200917LO	00002416	00002404	200914CV	00001030	00001021	2010825848	042109B
200917LO	00002417	00002417	200914CV	00001030	00001021	2010825848	042109B
200917LO	00002418	00002417	200914CV	00001030	00001021	2010825848	042109B
200917LO	00002419	00002417	200914CV	00001030	00001021	2010825848	042109B
200917LO	00002420	00002417	200914CV	00000963	00000962	2010825848	042109B
200917LO	00002421	00002417	200914CV	00000963	00000962	2010833983	042109B
200917LO	00002422	00002417	200914CV	00000963	00000962	2010833983	042109B
200917LO	00002423	00002417	200914CV	00000963	00000962	2010833983	042109B

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002424	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002425	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002426	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002427	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002428	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002429	00002417	200916CV	00001279	00001273	2010833983	042109B
200917LO	00002430	00002430	200914CV	00000970	00000969	2010833983	042109B
200917LO	00002431	00002430	200914CV	00000970	00000969	2010774443	042109B
200917LO	00002432	00002430	200914CV	00000970	00000969	2010774443	042109B
200917LO	00002433	00002430	200914CV	00000970	00000969	2010774443	042109B
200917LO	00002434	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002435	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002436	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002437	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002438	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002439	00002430	200914CV	00000964	00000962	2010774443	042109C
200917LO	00002440	00002430	200914CV	00000971	00000969	2010774443	042109C
200917LO	00002441	00002430	200914CV	00000971	00000969	2010835807	042109C
200917LO	00002442	00002430	200914CV	00000971	00000969	2010835807	042109C
200917LO	00002443	00002443	200914CV	00000971	00000969	2010835807	042109C
200917LO	00002444	00002443	200914CV	00000971	00000969	2010835807	042109C
200917LO	00002445	00002443	200914CV	00000971	00000969	2010835807	042109C
200917LO	00002446	00002443	200916CV	00001286	00001281	2010835807	042109C
200917LO	00002447	00002443	200916CV	00001286	00001281	2010835807	042109C
200917LO	00002448	00002443	200916CV	00001286	00001281	2010835807	042109C
200917LO	00002449	00002443	200916CV	00001286	00001281	2010835807	042109C
200917LO	00002450	00002443	200916CV	00001286	00001281	2010835807	042109C
200917LO	00002451	00002443	200916CV	00001290	00001281	2010835807	042109C
200917LO	00002452	00002443	200916CV	00001290	00001281	2010833982	042109C
200917LO	00002453	00002443	200916CV	00001290	00001281	2010833982	042109C
200917LO	00002454	00002443	200916CV	00001290	00001281	2010833982	042109C
200917LO	00002455	00002443	200916CV	00001290	00001281	2010833982	042109C
200917LO	00002456	00002456	200916CV	00001290	00001281	2010833982	042109C
200917LO	00002457	00002456	200916CV	00001278	00001273	2010833982	042109C
200917LO	00002458	00002456	200916CV	00001278	00001273	2010833982	042109C

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002459	00002456	200916CV	00001278	00001273	2010833982	042109C
200917LO	00002460	00002456	200916CV	00001278	00001273	2010833982	042109C
200917LO	00002461	00002456	200916CV	00001278	00001273	2010833982	042109C
200917LO	00002462	00002456	200916CV	00001278	00001273	2010833982	042109C
200917LO	00002463	00002456	200916CV	00001287	00001281	2010833982	042109C
200917LO	00002464	00002456	200916CV	00001287	00001281	2010774440	042109C
200917LO	00002465	00002456	200916CV	00001287	00001281	2010774440	042109C
200917LO	00002466	00002456	200916CV	00001287	00001281	2010774440	042109D
200917LO	00002467	00002456	200914CV	00000972	00000969	2010774440	042109D
200917LO	00002468	00002456	200914CV	00000972	00000969	2010774440	042109D
200917LO	00002469	00002469	200914CV	00000972	00000969	2010774440	042109D
200917LO	00002470	00002469	200914CV	00000972	00000969	2010774440	042109D
200917LO	00002471	00002469	200914CV	00000972	00000969	2010774440	042109D
200917LO	00002472	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002473	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002474	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002475	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002476	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002477	00002469	200916CV	00001289	00001281	2010766156	042109D
200917LO	00002478	00002469	200916CV	00001291	00001291	2010766156	042109D
200917LO	00002479	00002469	200916CV	00001291	00001291	2010766156	042109D
200917LO	00002480	00002469	200916CV	00001291	00001291	2010766156	042109D
200917LO	00002481	00002469	200916CV	00001291	00001291	2010766156	042109D
200917LO	00002482	00002482	200916CV	00001291	00001291	2010766156	042109D
200917LO	00002483	00002482	200916CV	00001291	00001291	2010750076	042109D
200917LO	00002484	00002482	200916CV	00001177	00001169	2010750076	042109D
200917LO	00002485	00002482	200916CV	00001177	00001169	2010750076	042109D
200917LO	00002486	00002486	200916CV	00001177	00001169	2010750076	042109E
200917LO	00002487	00002486	200916CV	00001177	00001169	2010750076	042109E
200917LO	00002488	00002486	200916CV	00001177	00001169	2010750076	042109E
200917LO	00002489	00002486	200916CV	00001177	00001169	2010750076	042109E
200917LO	00002490	00002486	200916CV	00001176	00001169	2010750076	042109E
200917LO	00002491	00002486	200916CV	00001176	00001169	2010750076	042109E
200917LO	00002492	00002486	200916CV	00001176	00001169	2010750076	042109E
200917LO	00002493	00002486	200916CV	00001176	00001169	2010766163	042109E

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002494	00002486	200916CV	00001176	00001169	2010766163	042109E
200917LO	00002495	00002486	200916CV	00001176	00001169	2010766163	042109E
200917LO	00002496	00002486	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002497	00002486	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002498	00002486	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002499	00002499	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002500	00002499	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002501	00002499	200916CV	00001197	00001196	2010766163	042109E
200917LO	00002502	00002499	200915CV	00001069	00001066	2010766163	042109E
200917LO	00002503	00002499	200915CV	00001069	00001066	2010750062	042109E
200917LO	00002504	00002499	200915CV	00001069	00001066	2010750062	042109E
200917LO	00002505	00002499	200915CV	00001069	00001066	2010750062	042109E
200917LO	00002506	00002499	200915CV	00001069	00001066	2010750062	042109E
200917LO	00002507	00002499	200914CV	00000966	00000962	2010750062	042109E
200917LO	00002508	00002499	200914CV	00000996	00000996	2010750062	042109E
200917LO	00002509	00002499	200914CV	00000996	00000996	2010750062	042109E
200917LO	00002510	00002499	200914CV	00000996	00000996	2010750062	042109E
200917LO	00002511	00002499	200914CV	00000996	00000996	2010750062	042109E
200917LO	00002512	00002512	200914CV	00001000	00000996	2010750062	042109E
200917LO	00002513	00002512	200914CV	00001000	00000996	2010750062	042109E
200917LO	00002514	00002512	200914CV	00001000	00000996	2010750062	042109E
200917LO	00002515	00002512	200914CV	00001000	00000996	2011244918	042109E
200917LO	00002516	00002512	200914CV	00001000	00000996	2011244918	042109E
200917LO	00002517	00002512	200914CV	00001000	00000996	2011244918	042109E
200917LO	00002518	00002512	200914CV	00001000	00000996	2011244918	042109F
200917LO	00002519	00002512	200914CV	00000995	00000986	2011244918	042109F
200917LO	00002520	00002512	200914CV	00000995	00000986	2011244918	042109F
200917LO	00002521	00002512	200914CV	00000995	00000986	2011244918	042109F
200917LO	00002522	00002512	200914CV	00000995	00000986	2011244918	042109F
200917LO	00002523	00002512	200914CV	00000995	00000986	2011244918	042109F
200917LO	00002524	00002512	200915CV	00001156	00001152	042409ANW1	042109F
200917LO	00002525	00002525	200915CV	00001156	00001152	042409ANW1	042109F
200917LO	00002526	00002525	200915CV	00001156	00001152	042409ANW1	042109F
200917LO	00002527	00002525	200915CV	00001156	00001152	042409ANW1	042109F
200917LO	00002528	00002525	200915CV	00001156	00001152	042409ANW1	042109F

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002529	00002525	200916CV	00001248	00001242	042409ANW1	042109F
200917LO	00002530	00002525	200916CV	00001248	00001242	2011244917	042109F
200917LO	00002531	00002525	200916CV	00001248	00001242	2011244917	042109F
200917LO	00002532	00002525	200916CV	00001248	00001242	2011244917	042109F
200917LO	00002533	00002525	200916CV	00001248	00001242	2011244917	042109F
200917LO	00002534	00002525	200916CV	00001248	00001242	2011244917	042109F
200917LO	00002535	00002525	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002536	00002525	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002537	00002525	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002538	00002538	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002539	00002538	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002540	00002538	200916CV	00001260	00001259	2011244917	042109F
200917LO	00002541	00002538	200916CV	00001267	00001263	2011244921	042109F
200917LO	00002542	00002538	200916CV	00001267	00001263	2011244921	042109F
200917LO	00002543	00002538	200916CV	00001267	00001263	2011244921	042109F
200917LO	00002544	00002538	200916CV	00001267	00001263	2011244921	042109F
200917LO	00002545	00002538	200916CV	00001259	00001259	2011244921	042109F
200917LO	00002546	00002538	200916CV	00001259	00001259	2011244921	042109F
200917LO	00002547	00002538	200916CV	00001259	00001259	2011244921	042109F
200917LO	00002548	00002538	200916CV	00001259	00001259	2011244921	042109G
200917LO	00002549	00002538	200916CV	00001259	00001259	2011244921	042109G
200917LO	00002550	00002538	200916CV	00001259	00001259	2011244921	042109G
200917LO	00002551	00002538	200916CV	00001252	00001249	2011248392	042109G
200917LO	00002552	00002538	200916CV	00001252	00001249	2011248392	042109G
200917LO	00002553	00002538	200916CV	00001252	00001249	2011248392	042109G
200917LO	00002554	00002538	200916CV	00001252	00001249	2011248392	042109G
200917LO	00002555	00002538	200916CV	00001252	00001249	2011248392	042109G
200917LO	00002556	00002538	200916CV	00001258	00001249	2011248392	042109G
200917LO	00002557	00002538	200916CV	00001258	00001249	2011248392	042109G
200917LO	00002558	00002538	200916CV	00001258	00001249	2011244901	042109G
200917LO	00002559	00002538	200916CV	00001258	00001249	2011244901	042109G
200917LO	00002560	00002538	200916CV	00001258	00001249	2011244901	042109G
200917LO	00002561	00002538	200916CV	00001247	00001242	2011244901	042109G
200917LO	00002562	00002538	200916CV	00001247	00001242	2011244901	042109G
200917LO	00002563	00002538	200916CV	00001247	00001242	2011244901	042109G

GCL Lot #	GCL Roll #	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
200917LO	00002564	00002564	200916CV	00001247	00001242	2011252980	042109G
200917LO	00002565	00002564	200916CV	00001247	00001242	2011252980	042109G
200917LO	00002566	00002564	200916CV	00001247	00001242	2011252980	042109G
200917LO	00002567	00002564	200916CV	00001247	00001242	2011252980	042109G
200917LO	00002568	00002564	200916CV	00001249	00001249	2011252980	042109G
200917LO	00002569	00002564	200916CV	00001249	00001249	2011252980	042109G
200917LO	00002570	00002564	200916CV	00001249	00001249	2011252980	042109G
200917LO	00002571	00002564	200916CV	00001249	00001249	2011252980	042109G
200917LO	00002572	00002564	200916CV	00001249	00001249	2011252980	042109G
200917LO	00002573	00002564	200916CV	00001249	00001249	2011211868	042109G
200917LO	00002574	00002564	200916CV	00001257	00001249	2011211868	042109G
200917LO	00002575	00002564	200916CV	00001257	00001249	2011211868	042109G



GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 00238336F have been tested in our production facility lab.

Product	Lot # Tested	Roll # Tested	Mass Area	Grab Strength	Peel Strength
Standard Test Method:			ASTM D 5993	ASTM D 6768	ASTM D 6496
Standard Specification:			0.75 lb/sq ft MARV	50lbs/in MARV	3.5lbs/in Min
Non-standard specifications were requested for this order as indicated on the attached property sheet					
LO-BENTOMAT DN	200917LO	00002288	0.84	83.2	6.7
LO-BENTOMAT DN	200917LO	00002301	0.96	83.2	7.2
LO-BENTOMAT DN	200917LO	00002314	0.91	83.2	7.3
LO-BENTOMAT DN	200917LO	00002327	0.92	72.1	6.8
LO-BENTOMAT DN	200917LO	00002340	0.84	72.1	6.5
LO-BENTOMAT DN	200917LO	00002353	0.85	72.1	6.3
LO-BENTOMAT DN	200917LO	00002366	0.87	72.1	6.6
LO-BENTOMAT DN	200917LO	00002371	0.82	72.1	6.5
LO-BENTOMAT DN	200917LO	00002384	0.85	75.9	7
LO-BENTOMAT DN	200917LO	00002391	0.86	79.7	7
LO-BENTOMAT DN	200917LO	00002404	0.81	79.7	8.2
LO-BENTOMAT DN	200917LO	00002417	0.85	79.1	9.7
LO-BENTOMAT DN	200917LO	00002430	0.90	79.7	7.4
LO-BENTOMAT DN	200917LO	00002443	0.85	79.7	9.2
LO-BENTOMAT DN	200917LO	00002456	0.80	67.4	6.4
LO-BENTOMAT DN	200917LO	00002469	0.85	67.4	6
LO-BENTOMAT DN	200917LO	00002482	0.82	67.4	7
LO-BENTOMAT DN	200917LO	00002486	0.90	67.4	9
LO-BENTOMAT DN	200917LO	00002499	0.84	67.4	6.8
LO-BENTOMAT DN	200917LO	00002512	0.97	88.1	9.6
LO-BENTOMAT DN	200917LO	00002525	0.87	88.1	10.2
LO-BENTOMAT DN	200917LO	00002538	0.84	88.1	8.6
LO-BENTOMAT DN	200917LO	00002564	0.89	88.1	6

Product	Lot # Tested	Roll # Tested	Moisture
LO-BENTOMAT DN	200917LO	00002288	27.5
LO-BENTOMAT DN	200917LO	00002301	24.5
LO-BENTOMAT DN	200917LO	00002314	25.6
LO-BENTOMAT DN	200917LO	00002327	24.6
LO-BENTOMAT DN	200917LO	00002340	25.1
LO-BENTOMAT DN	200917LO	00002353	25.7
LO-BENTOMAT DN	200917LO	00002366	25.1

LO-BENTOMAT DN	200917LO	00002371	26.7
LO-BENTOMAT DN	200917LO	00002384	25.1
LO-BENTOMAT DN	200917LO	00002391	25.9
LO-BENTOMAT DN	200917LO	00002404	26.9
LO-BENTOMAT DN	200917LO	00002417	25.1
LO-BENTOMAT DN	200917LO	00002430	24.1
LO-BENTOMAT DN	200917LO	00002443	24.9
LO-BENTOMAT DN	200917LO	00002456	25.6
LO-BENTOMAT DN	200917LO	00002469	25.9
LO-BENTOMAT DN	200917LO	00002482	26.5
LO-BENTOMAT DN	200917LO	00002486	24.5
LO-BENTOMAT DN	200917LO	00002499	26.1
LO-BENTOMAT DN	200917LO	00002512	24.2
LO-BENTOMAT DN	200917LO	00002525	26.3
LO-BENTOMAT DN	200917LO	00002538	26.2
LO-BENTOMAT DN	200917LO	00002564	25.4

ASTM test methods and property specifications per CETCO standard unless non-standard specifications were requested.
Any non-standard property specifications requested for this order are noted on the attached GCL property specifications sheet.



BENTONITE CLAY CERTIFICATION

The Bentonite Clay used to produce package 00238336F has been tested by American Colloid Company and yielded the following test results.

Reference	Moist	Swell	Fluid Loss
Test Method:	ASTM D 2216	ASTM D 5890	ASTM D 5891
Specification:	12% Max	24 ml/2g Min	18 ml Max
042009A	10.4	28.0	15.6
042009B	9.6	27.0	16.0
042009C	10.4	26.0	15.2
042109A	10.4	25.0	15.2
042109B	9.6	26.0	17.0
042109C	10.0	28.0	17.0
042109D	10.4	27.0	15.8
042109E	11.2	25.0	15.8
042109F	10.4	27.0	17.0
042109G	10.0	26.0	16.2



GEOTEXTILE TEST RESULTS FOR RAW MATERIAL SUPPLIED BY A CETCO FACILITY

The GCL in certification package number 00238336F was manufactured using these geotextiles:

Material	Lot #	Roll #	Mass Area	Grab Strength
CV-NON-WOVEN	200830CV	00003203	6.9	67.2
CV-NON-WOVEN	200833CV	00003692	7.1	55.9
CV-NON-WOVEN	200914CV	00000935	7.0	49.4
CV-NON-WOVEN	200914CV	00000947	6.9	50.6
CV-NON-WOVEN	200914CV	00000952	6.3	48.7
CV-NON-WOVEN	200914CV	00000962	6.5	44.9
CV-NON-WOVEN	200914CV	00000969	7.0	48.7
CV-NON-WOVEN	200914CV	00000986	6.8	49.6
CV-NON-WOVEN	200914CV	00000996	6.6	47.8
CV-NON-WOVEN	200914CV	00001021	6.6	46.8
CV-NON-WOVEN	200914CV	00001039	6.8	44.1
CV-NON-WOVEN	200915CV	00001066	6.7	44.0
CV-NON-WOVEN	200915CV	00001152	6.5	35.4
CV-NON-WOVEN	200916CV	00001169	6.5	45.6
CV-NON-WOVEN	200916CV	00001196	6.2	40.0
CV-NON-WOVEN	200916CV	00001242	7.6	47.5
CV-NON-WOVEN	200916CV	00001249	6.6	37.3
CV-NON-WOVEN	200916CV	00001259	6.5	35.2
CV-NON-WOVEN	200916CV	00001263	6.2	34.1
CV-NON-WOVEN	200916CV	00001273	7.0	40.0
CV-NON-WOVEN	200916CV	00001281	6.4	32.5
CV-NON-WOVEN	200916CV	00001291	6.6	37.2
CV-NON-WOVEN	200916CV	00001341	6.7	32.3



LINING TECHNOLOGIES

800.527.9948

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GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 00238336F was manufactured with geotextiles which were tested with the following results.

BASE

Material	Roll Number	Mass Area oz/yd ²	Grab Strength lbs
PT	042409ANW1	6.5	234.1
PPX HH65L	2010750047	7.0	178.7
PPX HH65L	2010750062	6.4	183.9
PPX HH65L	2010750076	6.5	185.4
PPX HH65L	2010766156	6.6	177.8
PPX HH65L	2010766163	6.6	180.8
PPX HH65L	2010774431	6.7	165.0
PPX HH65L	2010774440	7.2	182.3
PPX HH65L	2010774443	7.8	169.6
PPX HH65L	2010816962	7.0	179.9
PPX HH65L	2010825848	6.7	221.6
PPX HH65L	2010833982	6.4	203.4
PPX HH65L	2010833983	6.4	203.4
PPX HH65L	2010835807	7.0	197.9
PPX HH65L	2011211850	6.7	186.5
PPX HH65L	2011211868	6.5	179.5
PPX HH65L	2011244891	8.5	185.4
PPX HH65L	2011244893	8.5	185.4
PPX HH65L	2011244901	6.6	191.8
PPX HH65L	2011244902	6.6	191.8
PPX HH65L	2011244916	6.7	224.7
PPX HH65L	2011244917	6.7	224.7
PPX HH65L	2011244918	7.0	251.5
PPX HH65L	2011244919	7.0	251.5
PPX HH65L	2011244920	7.0	251.5
PPX HH65L	2011244921	6.0	150.3
PPX HH65L	2011244922	6.0	150.3
PPX HH65L	2011244923	6.0	150.3
PPX HH65L	2011244924	6.4	175.4
PPX HH65L	2011248392	6.5	193.3
PPX HH65L	2011248392	6.5	193.3
PPX HH65L	2011252980	6.2	198.5

CAP

Material	Roll Number	Mass Area oz/yd2	Grab Strength lbs
PPX 650	2010552070	7.4	85.6

Certifications from our suppliers are on file at our production facility.
 An '**' or 'PT' indicates supplier certifications were unavailable prior to shipping so testing was performed at a CETCO lab.

INDEX FLUX AND PERMEABILITY OF GCL's
TEST RESULTS
 ASTM D-5887 / D-5084



Client : CETCO
 Project Location : Henderson / Landwell
 Sample Number : Roll 2290
 Description : Bentomat DN

Date : 05/06/2009
 Job No. : 09LG1881.01
 Tested By : RL
 Checked By : JB

Permeant Fluid : De-Aired Water

Physical Property Data

	Total Sample		Total Sample
Initial Clay Height (in)	: 0.16	Final Height of Clay (in)	: 0.19
Initial Diameter (in)	: 4.00	Final Diameter of Clay (in)	: 4.00
Initial Wet Weight (g)	: 45.90	Final Wet Weight(Clay) (g)	: 68.20
Wet Density (pcf)	: 86.89	Wet Density (pcf)	: 108.72
Moisture Content %	: 37.00	Moisture Content %	: 103.60
Dry Density (pcf)	: 63.42	Dry Density (pcf)	: 53.40

Test Parameters

Fluid	: De-Aired Water	Average Effective	
Cell Pressure (psi)	: 80.00	Confining Pressure (psi)	: 4
Head Water (psi)	: 77.00	Gradient	: 290.53
Tail Water (psi)	: 75.00	Effective Stress at Base	: 5

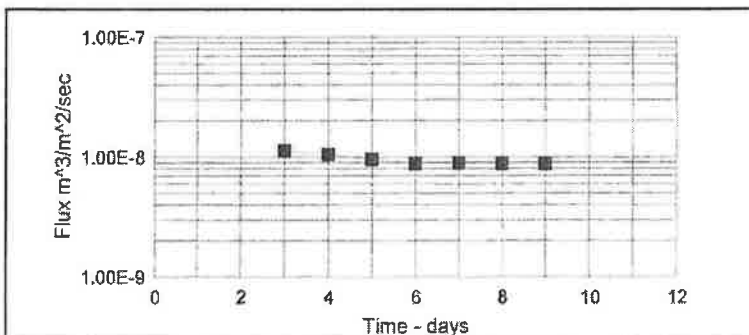
Flux and Permeability Input Data

Minimum Saturation Time is 48 hours

Area, A = 0.00811 m²
 Thickness, t = 0.19 in

Days	Date	Flow cc	Time min	Elapsed Time (sec)	Flux (m ³ /m ²)/sec	k cm/sec
1	04/27/2009	48 hours of hydration per ASTM				
2	04/28/2009					
3	04/29/2009	7.90	1439	86340	1.13E-008	3.89E-009
4	04/30/2009	7.40	1441	86460	1.06E-008	3.63E-009
5	05/01/2009	6.70	1437	86220	9.59E-009	3.30E-009
6	05/02/2009	6.20	1442	86520	8.84E-009	3.04E-009
7	05/03/2009	6.30	1442	86520	8.98E-009	3.09E-009
8	05/04/2009	6.20	1439	86340	8.86E-009	3.05E-009
9	05/05/2009	6.20	1441	86460	8.85E-009	3.04E-009

Average of Last 3 Test Readings : 8.90E-009 3.06E-009



JLT Laboratories, Inc.

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INDEX FLUX AND PERMEABILITY OF GCL's
TEST RESULTS
 ASTM D-5887 / D-5084



Client : CETCO
 Project Location : Henderson / Landwell
 Sample Number : Roll 2358
 Description : Bentomat DN

Date : 05/06/2009
 Job No. : 09LG1881.01
 Tested By : RL
 Checked By : JB

Permeant Fluid : De-Aired Water

Physical Property Data

	Total Sample		Total Sample
Initial Clay Height (in)	: 0.19	Final Height of Clay (in)	: 0.23
Initial Diameter (in)	: 4.00	Final Diameter of Clay (in)	: 4.00
Initial Wet Weight (g)	: 51.60	Final Wet Weight(Clay) (g)	: 81.10
Wet Density (pcf)	: 82.26	Wet Density (pcf)	: 106.80
Moisture Content %	: 35.60	Moisture Content %	: 112.30
Dry Density (pcf)	: 60.66	Dry Density (pcf)	: 50.31

Test Parameters

Fluid	: De-Aired Water	Average Effective	
Cell Pressure (psi)	: 80.00	Confining Pressure (psi)	: 4
Head Water (psi)	: 77.00	Gradient	: 240.00
Tail Water (psi)	: 75.00	Effective Stress at Base	: 5

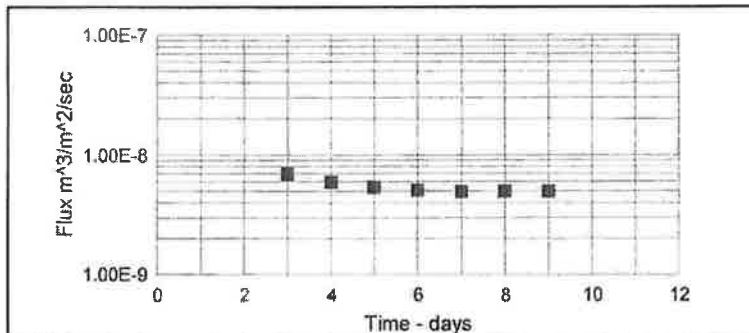
Flux and Permeability Input Data

Minimum Saturation Time is 48 hours

Area, A = 0.00811 m²
 Thickness, t = 0.23 in

Days	Date	Flow cc	Time min	Elapsed Time (sec)	Flux (m ³ /m ² /sec)	k cm/sec
1	04/27/2009	48 hours of hydration per ASTM				
2	04/28/2009					
3	04/29/2009	4.90	1439	86340	7.00E-009	2.92E-009
4	04/30/2009	4.20	1441	86460	5.99E-009	2.50E-009
5	05/01/2009	3.80	1437	86220	5.44E-009	2.27E-009
6	05/02/2009	3.60	1442	86520	5.13E-009	2.14E-009
7	05/03/2009	3.50	1442	86520	4.99E-009	2.08E-009
8	05/04/2009	3.50	1439	86340	5.00E-009	2.08E-009
9	05/05/2009	3.50	1441	86460	4.99E-009	2.08E-009

Average of Last 3 Test Readings : 4.99E-009 2.08E-009



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INDEX FLUX AND PERMEABILITY OF GCL's
TEST RESULTS
 ASTM D-5887 / D-5084



Client : CETCO
 Project Location : Henderson / Landwell
 Sample Number : Roll 2436
 Description : Bentomat DN

Date : 05/06/2009
 Job No. : 09LG1881.01
 Tested By : RL
 Checked By : JB

Permeant Fluid : De-Aired Water

Physical Property Data

	Total Sample		Total Sample
Initial Clay Height (in)	: 0.20	Final Height of Clay (in)	: 0.23
Initial Diameter (in)	: 4.00	Final Diameter of Clay (in)	: 4.00
Initial Wet Weight (g)	: 56.00	Final Wet Weight(Clay) (g)	: 81.30
Wet Density (pcf)	: 84.81	Wet Density (pcf)	: 107.06
Moisture Content %	: 43.50	Moisture Content %	: 108.50
Dry Density (pcf)	: 59.10	Dry Density (pcf)	: 51.35

Test Parameters

Fluid	: De-Aired Water	Average Effective	
Cell Pressure (psi)	: 80.00	Confining Pressure (psi)	: 4
Head Water (psi)	: 77.00	Gradient	: 240.00
Tail Water (psi)	: 75.00	Effective Stress at Base	: 5

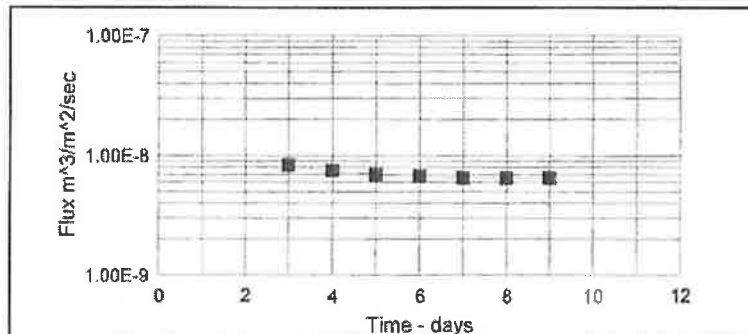
Flux and Permeability Input Data

Minimum Saturation Time is 48 hours

Area, A = 0.00811 m²
 Thickness, t = 0.23 in

Days	Date	Flow cc	Time min	Elapsed Time (sec)	Flux (m ³ /m ² /sec)	k cm/sec
1	04/27/2009	48 hours of hydration per ASTM				
2	04/28/2009					
3	04/29/2009	5.80	1439	86340	8.43E-009	3.51E-009
4	04/30/2009	5.30	1441	86460	7.56E-009	3.15E-009
5	05/01/2009	4.80	1437	86220	7.01E-009	2.92E-009
6	05/02/2009	4.80	1442	86520	6.84E-009	2.85E-009
7	05/03/2009	4.60	1442	86520	6.56E-009	2.73E-009
8	05/04/2009	4.60	1439	86340	6.57E-009	2.74E-009
9	05/05/2009	4.60	1441	86460	6.56E-009	2.73E-009

Average of Last 3 Test Readings : 6.56E-009 2.74E-009



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INDEX FLUX AND PERMEABILITY OF GCL's
TEST RESULTS
 ASTM D-5887 / D-5084



Client : CETCO
 Project Location : Henderson / Landwell
 Sample Number : Roll 2494 Lot: 200917LO
 Description : Bentomat DN

Date : 05/06/2009
 Job No. : 09LG1881.01
 Tested By : RL
 Checked By : JB

Permeant Fluid : De-Aired Water

Physical Property Data

	Total Sample		Total Sample
Initial Clay Height (in)	: 0.17	Final Height of Clay (in)	: 0.23
Initial Diameter (in)	: 4.00	Final Diameter of Clay (in)	: 4.00
Initial Wet Weight (g)	: 58.60	Final Wet Weight(Clay) (g)	: 87.80
Wet Density (pcf)	: 104.41	Wet Density (pcf)	: 115.62
Moisture Content %	: 41.20	Moisture Content %	: 111.60
Dry Density (pcf)	: 73.94	Dry Density (pcf)	: 54.64

Test Parameters

Fluid	:	De-Aired Water	Average Effective	
Cell Pressure (psi)	:	80.00	Confining Pressure (psi)	: 4
Head Water (psi)	:	77.00	Gradient	: 240.00
Tail Water (psi)	:	75.00	Effective Stress at Base	: 5

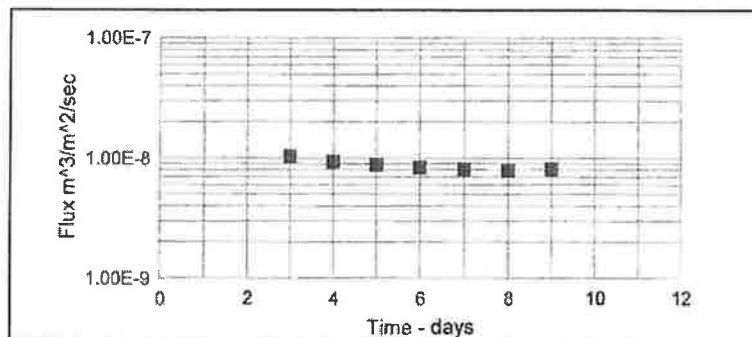
Flux and Permeability Input Data

Minimum Saturation Time is 48 hours

Area, A = 0.00811 m²
 Thickness, t = 0.23 in

Days	Date	Flow cc	Time min	Elapsed Time (sec)	Flux (m ³ /m ²)/sec	k cm/sec
1	04/27/2009	48 hours of hydration per ASTM				
2	04/28/2009					
3	04/29/2009	7.30	1440	86400	1.04E-008	4.34E-009
4	04/30/2009	6.80	1442	86520	9.41E-009	3.92E-009
5	05/01/2009	6.20	1439	86340	8.86E-009	3.60E-009
6	05/02/2009	5.90	1441	86480	8.42E-009	3.51E-009
7	05/03/2009	5.70	1441	86460	8.13E-009	3.39E-009
8	05/04/2009	5.60	1440	86400	8.00E-009	3.33E-009
9	05/05/2009	5.70	1442	86520	8.13E-009	3.39E-009

Average of Last 3 Test Readings : 8.08E-009 3.37E-009



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INDEX FLUX AND PERMEABILITY OF GCL's
TEST RESULTS
 ASTM D-5887 / D-5084



Client : CETCO
 Project Location : Henderson / Landwell
 Sample Number : Roll 2562 Lot: 200917LO
 Description : Bentomat DN

Date : 05/06/2009
 Job No. : 09LG1881.01
 Tested By : RL
 Checked By : JB

Permeant Fluid : De-Aired Water

Physical Property Data

	Total Sample		Total Sample
Initial Clay Height (in)	: 0.15	Final Height of Clay (in)	: 0.21
Initial Diameter (in)	: 4.00	Final Diameter of Clay (in)	: 4.00
Initial Wet Weight (g)	: 43.70	Final Wet Weight(Clay) (g)	: 70.50
Wet Density (pcf)	: 88.24	Wet Density (pcf)	: 101.68
Moisture Content %	: 31.20	Moisture Content %	: 108.70
Dry Density (pcf)	: 67.26	Dry Density (pcf)	: 48.72

Test Parameters

Fluid	: De-Aired Water	Average Effective	
Cell Pressure (psi)	: 80.00	Confining Pressure (psi)	: 4
Head Water (psi)	: 77.00	Gradient	: 262.86
Tail Water (psi)	: 75.00	Effective Stress at Base	: 5

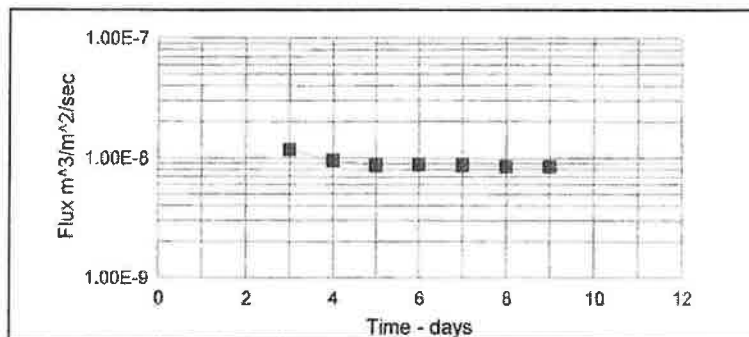
Flux and Permeability Input Data

Minimum Saturation Time is 48 hours

Area, A = 0.00811 m²
 Thickness, l = 0.21 in

Days	Date	Flow cc	Time min	Elapsed Time (sec)	Flux (m ³ /m ² /sec)	k cm/sec
1	04/27/2009	48 hours of hydration per ASTM				
2	04/28/2009					
3	04/29/2009	8.20	1437	86220	1.17E-008	4.46E-009
4	04/30/2009	6.70	1442	86520	9.55E-009	3.63E-009
5	05/01/2009	6.10	1439	86340	8.72E-009	3.32E-009
6	05/02/2009	6.20	1438	86280	8.86E-009	3.37E-009
7	05/03/2009	6.10	1441	86460	8.70E-009	3.31E-009
8	05/04/2009	6.00	1440	86400	8.57E-009	3.26E-009
9	05/05/2009	6.00	1438	86280	8.59E-009	3.26E-009


Average of Last 3 Test Readings : 8.62E-009 3.28E-009



JLT Laboratories, Inc.

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**Contractor's Stamp**

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	GCL MQC Certificates (BMI-South Allocation and 2nd Portion of CAMU Closure Allocation)
Submittal Number:	02772-004M
Specification Section:	Section 02772, Part 2.03
Drawing Number (s):	8, 10, 14, 16, 19, 21, 23, 25, 27, 29, 31, 33, 35-36, 38-45
Page Number:	02772-4 and 02772-5
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	5/12/2009

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By:  Date: 5/13/09
BRC Initials: LCF

BASIC REMEDIATION COMPANY



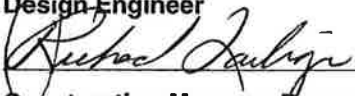


875 West Warm Springs Road
Henderson, Nevada 89011
Tel (702) 567-0400 · Fax (702) 567-0475

SUBMITTAL TRANSMITTAL COVER SHEET

TO: Mr. Erik Gehringer
ADDRESS: ENTACT Environmental Services
Henderson, Nevada 89011

Date: 01/05/2009	Job No.: 6389
Project Name	
BRC Eastside Common Areas Soils Remediation	

Submittal I.D. No.: 02773-004G	Revision No.: - N/A	Date Submittal Rec'd by BRC: 12/11/2009
Specification Section(s): 02273-1.05B Geocomposite Submittals		
Submittal Subject: Remaining 270-2-6 Geocomposite MQC Certificates for BMI-North, CAMU and BMI-South		
Notations: <input checked="" type="checkbox"/> No Exception Taken <input type="checkbox"/> Correct as Noted <input type="checkbox"/> Rejected <input type="checkbox"/> Revise and Resubmit <input type="checkbox"/> Submit Specified Items		
Review Comments:		
Comment	Reference	Comment
<p>Review of this submittal does not relieve the Contractor from their responsibility for deviations from the Contract Documents nor from their responsibility for errors or omissions in the submittal. Contractor is, and BRC is not, responsible for matters relating to fabrication, shipping, handling, storage, assembly, installation, construction (including safety), and coordination for performing the Work</p>		
 Design Engineer		 BRC Project Manager
Date		Date
 Construction Manager Representative		Lee Farris, P.E.
Date		1/5/09
Distribution: <input checked="" type="checkbox"/> File		

SKAPS Industries**Engineered Synthetic
Products, Inc.**

October 21, 2008
Environmental Specialties International, Inc.
7943 Pecue Lane-Suite A
Baton Rouge, LA 70809

Ref. : Landwell / Basic Remediation, NV
Customer P.O. # 9158
Transnet 270-2-6

We certify that the Transnet 270-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet³				
Mass per Unit Area	ASTM D 5261	lbs/ft ²	0.197	Minimum
Thickness	ASTM D 5199	mil	200	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	75	Minimum
Melt Flow	ASTM D 1238 ²	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm ³	0.935	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	1.0	MARV ⁵
Transmissivity ¹	ASTM D 4716	m ² /sec	5.0 x 10 ⁻⁴	MARV
Geotextile^{3 & 4}				
Fabric Weight	ASTM D 5261	oz/yd ²	6.0	MARV
Grab Strength	ASTM D 4632	lbs	130	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Tear Strength	ASTM D 4533	lbs	40	MARV
Puncture Resistance	ASTM D 4833	lbs	40	MARV
Mullen Burst	ASTM D 3786	psi	210	MARV
Permittivity	ASTM D 4491	sec ⁻¹	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.

2 Condition 190/2.16

3 Geotextile and Geonet properties are prior to lamination.

4 Geotextile data is provided by the supplier.

5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

☒ No Exception Taken ☐ Correct As Noted
☐ Revise And Resubmit ☐ Submit Specified Item ☐ Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By [Signature] Date _____
BRC Initials [Signature]

BASIC REMEDIATION COMPANY

Sincerely,
Nilay Patel
Nilay Patel
QA Manager

SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6****Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
BMI-N → 1	269710433	269710433 - N	2697.622	2697.619			
2	269710434	269710434 - N	2697.622	2697.619			
3	269710435	269710435 - N	2697.629	2697.638			
4	269710436	269710436 - N	2697.629	2697.638			
5	269710437	269710437 - N	2697.629	2697.638			
6	269710438	269710438 - N	2697.629	2697.638			
7	269710439	269710439 - N	2697.629	2697.638			
8	269710440	269710440 - N	2697.629	2697.638			
9	269710441	269710441 - N	2697.629	2697.638			
10	269710442	269710442 - N	2697.641	2697.625			
11	269710443	269710443 - N	2697.641	2697.625			
12	269710444	269710444 - N	2697.641	2697.625			
13	269710445	269710445 - N	2697.641	2697.625			
14	269710446	269710446 - N	2697.641	2697.625			
15	269710447	269710447 - N	2697.641	2697.625			
16	269710448	269710448 - N	2697.641	2697.625			
17	269710449	269710449 - N	2697.626	2697.644			
18	269710450	269710450 - N	2697.626	2697.644			
19	269710451	269710451 - N	2697.626	2697.644			
20	269710452	269710452 - N	2697.626	2697.644			
21	269710453	269710453 - N	2697.626	2697.644			
22	269710454	269710454 - N	2697.626	2697.644			
23	269710455	269710455 - N	2697.626	2697.644	1.39	2.29	6.33 x 10 ⁻⁴
24	269710456	269710456 - N	2697.637	2697.632			
25	269710457	269710457 - N	2697.637	2697.632			
26	269710458	269710458 - N	2697.637	2697.632			
27	269710459	269710459 - N	2697.637	2697.632			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710433 - N	26676-6	0.9555					
269710434 - N	26676-6	0.9555					
269710435 - N	26676-6	0.9555					
269710436 - N	26676-6	0.9555					
269710437 - N	26676-6	0.9555					
269710438 - N	26676-6	0.9555					
269710439 - N	26676-6	0.9555					
269710440 - N	26715-1	0.9552	0.244	262	2.69	89	
269710441 - N	26715-1	0.9552					
269710442 - N	26715-1	0.9552					
269710443 - N	26715-1	0.9552					
269710444 - N	26715-1	0.9552					
269710445 - N	26715-1	0.9552					
269710446 - N	26715-1	0.9552					
269710447 - N	26715-1	0.9552					
269710448 - N	26715-1	0.9552					
269710449 - N	26715-1	0.9552					
269710450 - N	26715-1	0.9552	0.252	267	2.27	94	
269710451 - N	26715-1	0.9552					
269710452 - N	26715-1	0.9552					
269710453 - N	26715-1	0.9552					
269710454 - N	26715-1	0.9552					
269710455 - N	26715-1	0.9552					
269710456 - N	26715-1	0.9552					
269710457 - N	26715-1	0.9552					
269710458 - N	26715-1	0.9552					
269710459 - N	26715-1	0.9552					

BMI N



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710460	269710460 - N	2697.637	2697.632			
2	269710461	269710461 - N	2697.637	2697.632			
3	269710462	269710462 - N	2697.637	2697.632			
4	269710463	269710463 - N	2697.627	2697.640			
5	269710464	269710464 - N	2697.627	2697.640			
6	269710465	269710465 - N	2697.627	2697.640			
7	269710466	269710466 - N	2697.627	2697.640			
8	269710467	269710467 - N	2697.627	2697.640			
9	269710468	269710468 - N	2697.627	2697.640			
10	269710469	269710469 - N	2697.627	2697.640			
11	269710470	269710470 - N	2697.645	2697.630			
12	269710471	269710471 - N	2697.645	2697.630			
13	269710472	269710472 - N	2697.645	2697.630			
14	269710473	269710473 - N	2697.645	2697.630			
15	269710474	269710474 - N	2697.645	2697.630			
16	269710475	269710475 - N	2697.645	2697.630			
17	269710476	269710476 - N	2697.645	2697.630			
18	269710477	269710477 - N	2697.633	2697.648			
19	269710478	269710478 - N	2697.633	2697.648			
20	269710479	269710479 - N	2697.633	2697.648			
21	269710480	269710480 - N	2697.633	2697.648			
22	269710481	269710481 - N	2697.633	2697.648			
23	269710482	269710482 - N	2697.633	2697.648			
24	269710483	269710483 - N	2697.633	2697.648			
25	269710484	269710484 - N	2697.643	2697.636			
26	269710485	269710485 - N	2697.643	2697.636			
27	269710486	269710486 - N	2697.643	2697.636			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6****Project : Landwell / Basic Remediation, NV**

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710460 - N	26715-1	0.9552	0.246	260	2.54	92	
269710461 - N	26715-1	0.9552					
269710462 - N	26715-1	0.9552					
269710463 - N	26715-1	0.9552					
269710464 - N	26715-1	0.9552					
269710465 - N	26715-1	0.9552					
269710466 - N	26715-1	0.9552					
269710467 - N	26715-1	0.9552					
269710468 - N	26715-1	0.9552					
269710469 - N	26715-1	0.9552					
269710470 - N	26715-1	0.9552	0.250	269	2.31	96	
269710471 - N	26715-1	0.9552					
269710472 - N	26715-1	0.9552					
269710473 - N	26715-1	0.9552					
269710474 - N	26715-1	0.9552					
269710475 - N	26715-1	0.9552					
269710476 - N	26715-1	0.9552					
269710477 - N	26715-1	0.9552					
269710478 - N	26715-1	0.9552					
269710479 - N	26715-1	0.9552					
269710480 - N	26715-1	0.9552	0.242	256	2.61	93	
269710481 - N	26715-1	0.9552					
269710482 - N	26715-1	0.9552					
269710483 - N	26715-1	0.9552					
269710484 - N	26715-1	0.9552					
269710485 - N	26715-1	0.9552					
269710486 - N	26715-1	0.9552					

BMI N



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710487	269710487 - N	2697.643	2697.636			
2	269710488	269710488 - N	2697.643	2697.636			
3	269710489	269710489 - N	2697.643	2697.636			
4	269710490	269710490 - N	2697.643	2697.636	1.56	2.59	6.57 x 10 ⁻⁴
5	269710491	269710491 - N	2697.631	2697.639			
6	269710492	269710492 - N	2697.631	2697.639			
7	269710493	269710493 - N	2697.631	2697.639			
8	269710494	269710494 - N	2697.631	2697.639			
9	269710495	269710495 - N	2697.631	2697.639			
10	269710496	269710496 - N	2697.631	2697.639			
11	269710497	269710497 - N	2697.631	2697.639			
12	269710498	269710498 - N	2697.647	2697.628			
13	269710499	269710499 - N	2697.647	2697.628			
14	269710500	269710500 - N	2697.647	2697.628			
15	269710501	269710501 - N	2697.647	2697.628			
16	269710502	269710502 - N	2697.647	2697.628			
17	269710503	269710503 - N	2697.647	2697.628			
18	269710504	269710504 - N	2697.647	2697.628			
19	269710505	269710505 - N	2697.635	2697.651			
20	269710506	269710506 - N	2697.635	2697.651			
21	269710507	269710507 - N	2697.635	2697.651			
22	269710508	269710508 - N	2697.635	2697.651			
23	269710509	269710509 - N	2697.635	2697.651			
24	269710510	269710510 - N	2697.635	2697.651			
25	269710511	269710511 - N	2697.635	2697.651			
26	269710512	269710512 - N	2697.649	2697.642			
27	269710513	269710513 - N	2697.649	2697.642			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6****Project : Landwell / Basic Remediation, NV**

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710487 - N	26715-1	0.9552					
269710488 - N	26715-1	0.9552					
269710489 - N	26715-1	0.9552					
269710490 - N	26715-1	0.9552	0.257	265	2.24	95	
269710491 - N	26715-1	0.9552					
269710492 - N	26715-1	0.9552					
269710493 - N	26715-1	0.9552					
269710494 - N	26715-1	0.9552					
269710495 - N	26715-1	0.9552					
269710496 - N	26715-1	0.9552					
269710497 - N	26715-1	0.9552					
269710498 - N	26715-1	0.9552					
269710499 - N	26715-1	0.9552					
269710500 - N	26715-1	0.9552	0.240	261	2.56	88	
269710501 - N	26715-1	0.9552					
269710502 - N	26715-1	0.9552					
269710503 - N	26715-1	0.9552					
269710504 - N	26715-1	0.9552					
269710505 - N	26715-1	0.9552					
269710506 - N	26715-1	0.9552					
269710507 - N	26715-1	0.9552					
269710508 - N	26715-1	0.9552					
269710509 - N	26715-1	0.9552					
269710510 - N	26715-1	0.9552	0.255	266	2.37	91	
269710511 - N	26715-1	0.9552					
269710512 - N	26715-1	0.9552					
269710513 - N	26715-1	0.9552					

BMI N



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710514	269710514 - N	2697.649	2697.642			
2	269710515	269710515 - N	2697.649	2697.642			
3	269710516	269710516 - N	2697.649	2697.642			
4	269710517	269710517 - N	2697.649	2697.642			
5	269710518	269710518 - N	2697.649	2697.642			
6	269710519	269710519 - N	2697.634	2697.650			
7	269710520	269710520 - N	2697.634	2697.650			
8	269710521	269710521 - N	2697.634	2697.650			
9	269710522	269710522 - N	2697.634	2697.650			
10	269710523	269710523 - N	2697.634	2697.650			
11	269710524	269710524 - N	2697.634	2697.650			
12	269710525	269710525 - N	2697.634	2697.650	1.45	2.41	6.25 x 10 ⁻⁴
13	269710526	269710526 - N	2697.665	2697.646			
14	269710527	269710527 - N	2697.665	2697.646			
15	269710528	269710528 - N	2697.665	2697.646			
16	269710529	269710529 - N	2697.665	2697.646			
17	269710530	269710530 - N	2697.665	2697.646			
18	269710531	269710531 - N	2697.665	2697.646			
19	269710532	269710532 - N	2697.665	2697.646			
20	269710533	269710533 - N	2697.652	2697.662			
21	269710534	269710534 - N	2697.652	2697.662			
22	269710535	269710535 - N	2697.652	2697.662			
23	269710536	269710536 - N	2697.652	2697.662			
24	269710537	269710537 - N	2697.652	2697.662			
25	269710538	269710538 - N	2697.652	2697.662			
26	269710539	269710539 - N	2697.652	2697.662			
27	269710540	269710540 - N	2697.669	2697.655			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6****Project : Landwell / Basic Remediation, NV**

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710514 - N	26715-1	0.9552					
269710515 - N	26715-1	0.9552					
269710516 - N	26715-1	0.9552					
269710517 - N	26715-1	0.9552					
269710518 - N	26715-1	0.9552					
269710519 - N	26715-1	0.9552					
269710520 - N	26715-1	0.9552	0.241	259	2.65	89	
269710521 - N	26715-1	0.9552					
269710522 - N	26715-1	0.9552					
269710523 - N	26715-1	0.9552					
269710524 - N	26715-1	0.9552					
269710525 - N	26715-1	0.9552					
269710526 - N	26715-1	0.9552					
269710527 - N	26715-1	0.9552					
269710528 - N	26715-1	0.9552					
269710529 - N	26715-1	0.9552					
269710530 - N	26715-1	0.9552	0.253	263	2.23	94	
269710531 - N	26715-1	0.9552					
269710532 - N	26715-1	0.9552					
269710533 - N	26715-1	0.9552					
269710534 - N	26715-1	0.9552					
269710535 - N	26715-1	0.9552					
269710536 - N	26715-1	0.9552					
269710537 - N	26715-1	0.9552					
269710538 - N	26715-1	0.9552					
269710539 - N	26715-1	0.9552					
269710540 - N	26715-1	0.9552	0.245	257	2.58	90	

BMI N



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710541	269710541 - N	2697.669	2697.655			
2	269710542	269710542 - N	2697.669	2697.655			
3	269710543	269710543 - N	2697.669	2697.655			
4	269710544	269710544 - N	2697.669	2697.655			
5	269710545	269710545 - N	2697.669	2697.655			
6	269710546	269710546 - N	2697.669	2697.655			
7	269710547	269710547 - N	2697.661	2697.676			
8	269710548	269710548 - N	2697.661	2697.676			
9	269710549	269710549 - N	2697.661	2697.676			
10	269710550	269710550 - N	2697.661	2697.676			
11	269710551	269710551 - N	2697.661	2697.676			
12	269710552	269710552 - N	2697.661	2697.676			
13	269710553	269710553 - N	2697.661	2697.676			
14	269710554	269710554 - N	2697.673	2697.653			
15	269710555	269710555 - N	2697.673	2697.653			
16	269710556	269710556 - N	2697.673	2697.653			
17	269710557	269710557 - N	2697.673	2697.653			
18	269710558	269710558 - N	2697.673	2697.653			
19	269710559	269710559 - N	2697.673	2697.653			
20	269710560	269710560 - N	2697.673	2697.653	1.64	2.72	6.64 x 10 ⁻⁴
21	269710561	269710561 - N	2697.656	2697.670			
22	269710562	269710562 - N	2697.656	2697.670			
23	269710563	269710563 - N	2697.656	2697.670			
24	269710564	269710564 - N	2697.656	2697.670			
25	269710565	269710565 - N	2697.656	2697.670			
26	269710566	269710566 - N	2697.656	2697.670			
27	269710567	269710567 - N	2697.656	2697.670			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710541 - N	26715-1	0.9552					
269710542 - N	26715-1	0.9552					
269710543 - N	26715-1	0.9552					
269710544 - N	26715-1	0.9552					
269710545 - N	26715-1	0.9552					
269710546 - N	26715-1	0.9552					
269710547 - N	26715-1	0.9552					
269710548 - N	26715-1	0.9552					
269710549 - N	26715-1	0.9552					
269710550 - N	26715-1	0.9552	0.256	264	2.39	92	
269710551 - N	26715-1	0.9552					
269710552 - N	26715-1	0.9552					
269710553 - N	26715-1	0.9552					
269710554 - N	26715-1	0.9552					
269710555 - N	26715-1	0.9552					
269710556 - N	26715-1	0.9552					
269710557 - N	26715-1	0.9552					
269710558 - N	26715-1	0.9552					
269710559 - N	26715-1	0.9552					
269710560 - N	26715-1	0.9552	0.243	258	2.63	88	
269710561 - N	26715-1	0.9552					
269710562 - N	26715-1	0.9552					
269710563 - N	26715-1	0.9552					
269710564 - N	26715-1	0.9552					
269710565 - N	26715-1	0.9552					
269710566 - N	26715-1	0.9552					
269710567 - N	26715-1	0.9552					

BMI N



Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710568	269710568 - N	2697.675	2697.658			
2	269710569	269710569 - N	2697.675	2697.658			
3	269710570	269710570 - N	2697.675	2697.658			
4	269710571	269710571 - N	2697.675	2697.658			
5	269710572	269710572 - N	2697.675	2697.658			
6	269710573	269710573 - N	2697.675	2697.658			
7	269710574	269710574 - N	2697.675	2697.658			
8	269710575	269710575 - N	2697.663	2697.666			
9	269710576	269710576 - N	2697.663	2697.666			
10	269710577	269710577 - N	2697.663	2697.666			
11	269710578	269710578 - N	2697.663	2697.666			
12	269710579	269710579 - N	2697.663	2697.666			
13	269710580	269710580 - N	2697.663	2697.666			
14	269710581	269710581 - N	2697.663	2697.666			
15	269710582	269710582 - N	2697.671	2697.660			
16	269710583	269710583 - N	2697.671	2697.660			
17	269710584	269710584 - N	2697.671	2697.660			
18	269710585	269710585 - N	2697.671	2697.660			
19	269710586	269710586 - N	2697.671	2697.660			
20	269710587	269710587 - N	2697.671	2697.660			
21	269710588	269710588 - N	2697.671	2697.660			
22	269710589	269710589 - N	2697.654	2697.678			
23	269710590	269710590 - N	2697.654	2697.678			
24	269710591	269710591 - N	2697.654	2697.678			
25	269710592	269710592 - N	2697.654	2697.678			
26	269710593	269710593 - N	2697.654	2697.678			
27	269710594	269710594 - N	2697.654	2697.678			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710568 - N	26715-1	0.9552					
269710569 - N	26715-1	0.9552					
269710570 - N	26715-1	0.9552	0.249	268	2.47	96	
269710571 - N	26715-1	0.9552					
269710572 - N	26715-1	0.9552					
269710573 - N	26715-1	0.9552					
269710574 - N	26715-1	0.9552					
269710575 - N	26715-1	0.9552					
269710576 - N	26715-1	0.9552					
269710577 - N	26715-1	0.9552					
269710578 - N	26715-1	0.9552					
269710579 - N	26715-1	0.9552					
269710580 - N	26715-1	0.9552	0.244	260	2.60	93	
269710581 - N	26715-1	0.9552					
269710582 - N	26715-1	0.9552					
269710583 - N	26715-1	0.9552					
269710584 - N	26715-1	0.9552					
269710585 - N	26715-1	0.9552					
269710586 - N	26715-1	0.9552					
269710587 - N	26715-1	0.9552					
269710588 - N	26715-1	0.9552					
269710589 - N	26715-1	0.9552					
269710590 - N	26715-1	0.9552	0.251	267	2.35	95	
269710591 - N	26715-1	0.9552					
269710592 - N	26715-1	0.9552					
269710593 - N	26715-1	0.9552					
269710594 - N	26715-1	0.9552					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710595	269710595 - N	2697.654	2697.678	1.37	2.27	6.43 x 10 ⁻⁴
2	269710596	269710596 - N	2697.667	2697.664			
3	269710597	269710597 - N	2697.667	2697.664			
4	269710598	269710598 - N	2697.667	2697.664			
5	269710599	269710599 - N	2697.667	2697.664			
6	269710600	269710600 - N	2697.667	2697.664			
7	269710601	269710601 - N	2697.667	2697.664			
8	269710602	269710602 - N	2697.667	2697.664			
9	269710603	269710603 - N	2697.659	2697.674			
10	269710604	269710604 - N	2697.659	2697.674			
11	269710605	269710605 - N	2697.659	2697.674			
12	269710606	269710606 - N	2697.659	2697.674			
13	269710607	269710607 - N	2697.659	2697.674			
14	269710608	269710608 - N	2697.659	2697.674			
15	269710609	269710609 - N	2697.659	2697.674			
16	269710610	269710610 - N	2697.677	2697.668			
17	269710611	269710611 - N	2697.677	2697.668			
18	269710612	269710612 - N	2697.677	2697.668			
19	269710613	269710613 - N	2697.677	2697.668			
20	269710614	269710614 - N	2697.677	2697.668			
21	269710615	269710615 - N	2697.677	2697.668			
22	269710616	269710616 - N	2697.677	2697.668			
23	269710617	269710617 - N	2697.657	2697.672			
24	269710618	269710618 - N	2697.657	2697.672			
25	269710619	269710619 - N	2697.657	2697.672			
26	269710620	269710620 - N	2697.657	2697.672			
27	269710621	269710621 - N	2697.657	2697.672			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710595 - N	26715-1	0.9552					
269710596 - N	26715-1	0.9552					
269710597 - N	26715-1	0.9552					
269710598 - N	26715-1	0.9552					
269710599 - N	26715-1	0.9552					
269710600 - N	26715-1	0.9552	0.242	262	2.73	91	
269710601 - N	26715-1	0.9552					
269710602 - N	26715-1	0.9552					
269710603 - N	26715-1	0.9552					
269710604 - N	26715-1	0.9552					
269710605 - N	26715-1	0.9552					
269710606 - N	26715-1	0.9552					
269710607 - N	26715-1	0.9552					
269710608 - N	26715-1	0.9552					
269710609 - N	26715-1	0.9552					
269710610 - N	26715-1	0.9552	0.248	269	2.43	94	
269710611 - N	26715-1	0.9552					
269710612 - N	26715-1	0.9552					
269710613 - N	26715-1	0.9552					
269710614 - N	26715-1	0.9552					
269710615 - N	26715-1	0.9552					
269710616 - N	26715-1	0.9552					
269710617 - N	26715-1	0.9552					
269710618 - N	26715-1	0.9552					
269710619 - N	26715-1	0.9552					
269710620 - N	26715-1	0.9552	0.240	259	2.59	89	
269710621 - N	26715-1	0.9552					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710622	269710622 - N	2697.657	2697.672			
2	269710623	269710623 - N	2697.657	2697.672			
3	269710624	269710624 - N	2697.690	2697.682			
4	269710625	269710625 - N	2697.690	2697.682			
5	269710626	269710626 - N	2697.690	2697.682			
6	269710627	269710627 - N	2697.690	2697.682			
7	269710628	269710628 - N	2697.690	2697.682			
8	269710629	269710629 - N	2697.690	2697.682			
9	269710630	269710630 - N	2697.690	2697.682	1.58	2.54	6.59 x 10 ⁻⁴
10	269710631	269710631 - N	2697.679	2697.695			
11	269710632	269710632 - N	2697.679	2697.695			
12	269710633	269710633 - N	2697.679	2697.695			
13	269710634	269710634 - N	2697.679	2697.695			
14	269710635	269710635 - N	2697.679	2697.695			
15	269710636	269710636 - N	2697.679	2697.695			
16	269710637	269710637 - N	2697.679	2697.695			
17	269710638	269710638 - N	2697.698	2697.686			
18	269710639	269710639 - N	2697.698	2697.686			
19	269710640	269710640 - N	2697.698	2697.686			
20	269710641	269710641 - N	2697.698	2697.686			
21	269710642	269710642 - N	2697.698	2697.686			
22	269710643	269710643 - N	2697.698	2697.686			
23	269710644	269710644 - N	2697.698	2697.686			
24	269710645	269710645 - N	2697.683	2697.701			
25	269710646	269710646 - N	2697.683	2697.701			
26	269710647	269710647 - N	2697.683	2697.701			
27	269710648	269710648 - N	2697.683	2697.701			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

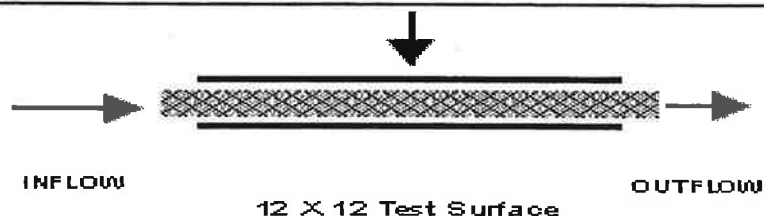
Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710622 - N	26715-1	0.9552					
269710623 - N	26715-1	0.9552					
269710624 - N	26715-1	0.9552					
269710625 - N	26715-1	0.9552					
269710626 - N	26715-1	0.9552					
269710627 - N	26715-1	0.9552					
269710628 - N	26715-1	0.9552					
269710629 - N	26715-1	0.9552					
269710630 - N	26715-1	0.9552	0.254	265	2.32	92	
269710631 - N	26715-1	0.9552					
269710632 - N	26715-1	0.9552					
269710633 - N	26715-1	0.9552					
269710634 - N	26715-1	0.9552					
269710635 - N	26715-1	0.9552					
269710636 - N	26715-1	0.9552					
269710637 - N	26715-1	0.9552					
269710638 - N	26715-1	0.9552					
269710639 - N	26715-1	0.9552					
269710640 - N	26715-1	0.9552	0.247	256	2.74	90	
269710641 - N	26715-1	0.9552					
269710642 - N	26715-1	0.9552					
269710643 - N	26715-1	0.9552					
269710644 - N	26715-1	0.9552					
269710645 - N	26715-1	0.9552					
269710646 - N	26715-1	0.9552					
269710647 - N	26715-1	0.9552					
269710648 - N	26715-1	0.9552					

CAMU
CLOSURES



Client: Environmental Specialties International, Inc.
Project: Landwell / Basic Remediation, NV
Product: TN270-2-6

Job # 2697

Test Configuration:**Test Information:**

Boundary Conditions: Sand
Geocomposite
Liner

Normal Load: 300 psf
Gradient: 0.1 ft
Seating Time: 24 hours
Flow Direction: MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m ² /sec
			24 hours
269710455	300	0.1	6.33×10^{-4}
269710490			6.57×10^{-4}
269710525			6.25×10^{-4}
269710560			6.64×10^{-4}
269710595			6.43×10^{-4}
269710630			6.59×10^{-4}



POLYETHYLENE RESIN CERTIFICATION

Customer Name : Environmental Specialties International, Inc.
Project Name : Landwell / Basic Remediation, NV
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN270-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymers Inc	Formosa, TX	HDPE	26715-1	Density	ASTM D 1505	gm/cc	0.949	0.950
				Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.15	0.15

(a) Condition 190/2.16

* Data from SKAPS Quality Control





Engineered Synthetic
Products, Inc.

Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL #	FABRIC ROLL #	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	MULLEN psi	AOS us sieve	PERM- ITY sec ⁻¹
269710455	2697.626 2697.644	6.58 6.29	169 163	73 67	178 175	80 75	73 72	80 82	100 98	334 331	70 70	1.78 1.78
269710490	2697.643 2697.636	6.29 6.67	163 167	67 71	175 180	75 82	72 76	82 85	98 96	331 336	70 70	1.78 1.78
269710525	2697.634 2697.650	6.33 6.31	161 160	69 65	173 171	77 79	76 74	85 87	96 95	336 338	70 70	1.78 1.82
269710560	2697.673 2697.653	6.39 6.31	164 160	66 65	172 171	78 79	77 74	89 87	97 95	340 338	70 70	1.82 1.82
269710595	2697.654 2697.678	6.31 6.63	160 166	65 75	171 178	79 85	74 77	87 89	95 97	338 340	70 70	1.82 1.82
269710630	2697.690 2697.682	6.35 6.41	165 163	67 68	173 170	75 79	80 73	86 80	95 100	337 333	70 70	1.82 1.82

October 21, 2008
Environmental Specialties International, Inc.
7943 Pecue Lane-Suite A
Baton Rouge, LA 70809

Ref. : Landwell / Basic Remediation, NV
Customer P.O. # 9158
Transnet 270-2-6

We certify that the Transnet 270-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet³				
Mass per Unit Area	ASTM D 5261	lbs/ft ²	0.197	Minimum
Thickness	ASTM D 5199	mil	200	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	75	Minimum
Melt Flow	ASTM D 1238 ²	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm ³	0.935	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	1.0	MARV ⁵
Transmissivity ¹	ASTM D 4716	m ² /sec	5.0 x 10 ⁻⁴	MARV
Geotextile^{3 & 4}				
Fabric Weight	ASTM D 5261	oz/yd ²	6.0	MARV
Grab Strength	ASTM D 4632	lbs	130	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Tear Strength	ASTM D 4533	lbs	40	MARV
Puncture Resistance	ASTM D 4833	lbs	40	MARV
Mullen Burst	ASTM D 3786	psi	210	MARV
Permittivity	ASTM D 4491	sec ⁻¹	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

- 1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.
- 2 Condition 190/2.16
- 3 Geotextile and Geonet properties are prior to lamination.
- 4 Geotextile data is provided by the supplier.
- 5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710649	269710649 - N	2697.683	2697.701			
2	269710650	269710650 - N	2697.683	2697.701			
3	269710651	269710651 - N	2697.683	2697.701			
4	269710652	269710652 - N	2697.696	2697.689			
5	269710653	269710653 - N	2697.696	2697.689			
6	269710654	269710654 - N	2697.696	2697.689			
7	269710655	269710655 - N	2697.696	2697.689			
8	269710656	269710656 - N	2697.696	2697.689			
9	269710657	269710657 - N	2697.696	2697.689			
10	269710658	269710658 - N	2697.696	2697.689			
11	269710659	269710659 - N	2697.681	2697.703			
12	269710660	269710660 - N	2697.681	2697.703			
13	269710661	269710661 - N	2697.681	2697.703			
14	269710662	269710662 - N	2697.681	2697.703			
15	269710663	269710663 - N	2697.681	2697.703			
16	269710664	269710664 - N	2697.681	2697.703			
17	269710665	269710665 - N	2697.681	2697.703	1.43	2.30	6.29 x 10 ⁻⁴
18	269710666	269710666 - N	2697.700	2697.691			
19	269710667	269710667 - N	2697.700	2697.691			
20	269710668	269710668 - N	2697.700	2697.691			
21	269710669	269710669 - N	2697.700	2697.691			
22	269710670	269710670 - N	2697.700	2697.691			
23	269710671	269710671 - N	2697.700	2697.691			
24	269710672	269710672 - N	2697.700	2697.691			
25	269710673	269710673 - N	2697.687	2697.705			
26	269710674	269710674 - N	2697.687	2697.705			
27	269710675	269710675 - N	2697.687	2697.705			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710649 - N	26715-1	0.9552					
269710650 - N	26676-15	0.9542	0.250	266	2.41	93	
269710651 - N	26676-15	0.9542					
269710652 - N	26676-15	0.9542					
269710653 - N	26676-15	0.9542					
269710654 - N	26676-15	0.9542					
269710655 - N	26676-15	0.9542					
269710656 - N	26676-15	0.9542					
269710657 - N	26676-15	0.9542					
269710658 - N	26676-15	0.9542					
269710659 - N	26676-15	0.9542					
269710660 - N	26676-15	0.9542	0.241	261	2.66	88	
269710661 - N	26676-15	0.9542					
269710662 - N	26676-15	0.9542					
269710663 - N	26676-15	0.9542					
269710664 - N	26676-15	0.9542					
269710665 - N	26676-15	0.9542					
269710666 - N	26676-15	0.9542					
269710667 - N	26676-15	0.9542					
269710668 - N	26676-15	0.9542					
269710669 - N	26676-15	0.9542					
269710670 - N	26676-15	0.9542	0.257	264	2.34	95	
269710671 - N	26676-15	0.9542					
269710672 - N	26676-15	0.9542					
269710673 - N	26676-15	0.9542					
269710674 - N	26676-15	0.9542					
269710675 - N	26676-15	0.9542					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710676	269710676 - N	2697.687	2697.705			
2	269710677	269710677 - N	2697.687	2697.705			
3	269710678	269710678 - N	2697.687	2697.705			
4	269710679	269710679 - N	2697.687	2697.705			
5	269710680	269710680 - N	2697.702	2697.680			
6	269710681	269710681 - N	2697.702	2697.680			
7	269710682	269710682 - N	2697.702	2697.680			
8	269710683	269710683 - N	2697.702	2697.680			
9	269710684	269710684 - N	2697.702	2697.680			
10	269710685	269710685 - N	2697.702	2697.680			
11	269710686	269710686 - N	2697.702	2697.680			
12	269710687	269710687 - N	2697.685	2697.699			
13	269710688	269710688 - N	2697.685	2697.699			
14	269710689	269710689 - N	2697.685	2697.699			
15	269710690	269710690 - N	2697.685	2697.699			
16	269710691	269710691 - N	2697.685	2697.699			
17	269710692	269710692 - N	2697.685	2697.699			
18	269710693	269710693 - N	2697.685	2697.699			
19	269710694	269710694 - N	2697.694	2697.684			
20	269710695	269710695 - N	2697.694	2697.684			
21	269710696	269710696 - N	2697.694	2697.684			
22	269710697	269710697 - N	2697.694	2697.684			
23	269710698	269710698 - N	2697.694	2697.684			
24	269710699	269710699 - N	2697.694	2697.684			
25	269710700	269710700 - N	2697.694	2697.684	1.66	2.67	6.66 x 10 ⁻⁴
26	269710701	269710701 - N	2697.688	2697.697			
27	269710702	269710702 - N	2697.688	2697.697			

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* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710676 - N	26676-15	0.9542					
269710677 - N	26676-15	0.9542					
269710678 - N	26676-15	0.9542					
269710679 - N	26676-15	0.9542					
269710680 - N	26676-15	0.9542	0.245	258	2.76	91	
269710681 - N	26676-15	0.9542					
269710682 - N	26676-15	0.9542					
269710683 - N	26676-15	0.9542					
269710684 - N	26676-15	0.9542					
269710685 - N	26676-15	0.9542					
269710686 - N	26676-15	0.9542					
269710687 - N	26676-15	0.9542					
269710688 - N	26676-15	0.9542					
269710689 - N	26676-15	0.9542					
269710690 - N	26676-15	0.9542	0.252	263	2.46	94	
269710691 - N	26676-15	0.9542					
269710692 - N	26676-15	0.9542					
269710693 - N	26676-15	0.9542					
269710694 - N	26676-15	0.9542					
269710695 - N	26676-15	0.9542					
269710696 - N	26676-15	0.9542					
269710697 - N	26676-15	0.9542					
269710698 - N	26676-15	0.9542					
269710699 - N	26676-15	0.9542					
269710700 - N	26676-15	0.9542	0.243	257	2.64	89	
269710701 - N	26676-15	0.9542					
269710702 - N	26676-15	0.9542					

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Product : TN270-2-6**Project : Landwell / Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710703	269710703 - N	2697.688	2697.697			
2	269710704	269710704 - N	2697.688	2697.697			
3	269710705	269710705 - N	2697.688	2697.697			
4	269710706	269710706 - N	2697.688	2697.697			
5	269710707	269710707 - N	2697.688	2697.697			
6	269710708	269710708 - N	2697.704	2697.692			
7	269710709	269710709 - N	2697.704	2697.692			
8	269710710	269710710 - N	2697.704	2697.692			
9	269710711	269710711 - N	2697.704	2697.692			
10	269710712	269710712 - N	2697.704	2697.692			
11	269710713	269710713 - N	2697.704	2697.692			
12	269710714	269710714 - N	2697.704	2697.692			
13	269710715	269710715 - N	2697.693	2697.716			
14	269710716	269710716 - N	2697.693	2697.716			
15	269710717	269710717 - N	2697.693	2697.716			
16	269710718	269710718 - N	2697.693	2697.716			
17	269710719	269710719 - N	2697.693	2697.716			
18	269710720	269710720 - N	2697.693	2697.716			
19	269710721	269710721 - N	2697.693	2697.716			
20	269710722	269710722 - N	2697.712	2697.709			
21	269710723	269710723 - N	2697.712	2697.709			
22	269710724	269710724 - N	2697.712	2697.709			
23	269710725	269710725 - N	2697.712	2697.709			
24	269710726	269710726 - N	2697.712	2697.709			
25	269710727	269710727 - N	2697.712	2697.709			
26	269710728	269710728 - N	2697.712	2697.709			
27	269710729	269710729 - N	2697.706	2697.715			

* Transmissivity measured using water at $21 \pm 2^{\circ}\text{C}$ ($70 \pm 4^{\circ}\text{F}$) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710703 - N	26676-15	0.9542					
269710704 - N	26676-15	0.9542					
269710705 - N	26676-15	0.9542					
269710706 - N	26676-15	0.9542					
269710707 - N	26676-15	0.9542					
269710708 - N	26676-15	0.9542					
269710709 - N	26676-15	0.9542					
269710710 - N	26676-15	0.9542	0.256	268	2.30	92	
269710711 - N	26676-15	0.9542					
269710712 - N	26676-15	0.9542					
269710713 - N	26676-15	0.9542					
269710714 - N	26676-15	0.9542					
269710715 - N	26676-15	0.9542					
269710716 - N	26676-15	0.9542					
269710717 - N	26676-15	0.9542					
269710718 - N	26676-15	0.9542					
269710719 - N	26676-15	0.9542					
269710720 - N	26676-15	0.9542	0.246	260	2.75	88	
269710721 - N	26676-15	0.9542					
269710722 - N	26676-15	0.9542					
269710723 - N	26676-15	0.9542					
269710724 - N	26676-15	0.9542					
269710725 - N	26676-15	0.9542					
269710726 - N	26676-15	0.9542					
269710727 - N	26676-15	0.9542					
269710728 - N	26676-15	0.9542					
269710729 - N	26676-15	0.9542					

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Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

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Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710730	269710730 - N	2697.706	2697.715			
2	269710731	269710731 - N	2697.706	2697.715			
3	269710732	269710732 - N	2697.706	2697.715			
4	269710733	269710733 - N	2697.706	2697.715			
5	269710734	269710734 - N	2697.706	2697.715			
6	269710735	269710735 - N	2697.706	2697.715	1.49	2.35	6.41 x 10 ⁻⁴
7	269710736	269710736 - N	2697.710	2697.707			
8	269710737	269710737 - N	2697.710	2697.707			
9	269710738	269710738 - N	2697.710	2697.707			
10	269710739	269710739 - N	2697.710	2697.707			
11	269710740	269710740 - N	2697.710	2697.707			
12	269710741	269710741 - N	2697.710	2697.707			
13	269710742	269710742 - N	2697.710	2697.707			
14	269710743	269710743 - N	2697.708	2697.713			
15	269710744	269710744 - N	2697.708	2697.713			
16	269710745	269710745 - N	2697.708	2697.713			
17	269710746	269710746 - N	2697.708	2697.713			
18	269710747	269710747 - N	2697.708	2697.713			
19	269710748	269710748 - N	2697.708	2697.713			
20	269710749	269710749 - N	2697.708	2697.713			
21	269710750	269710750 - N	2697.714	2697.711			
22	269710751	269710751 - N	2697.714	2697.711			
23	269710752	269710752 - N	2697.714	2697.711			
24	269710753	269710753 - N	2697.714	2697.711			
25	269710754	269710754 - N	2697.714	2697.711			
26	269710755	269710755 - N	2697.714	2697.711			
27	269710756	269710756 - N	2697.714	2697.711			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell / Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

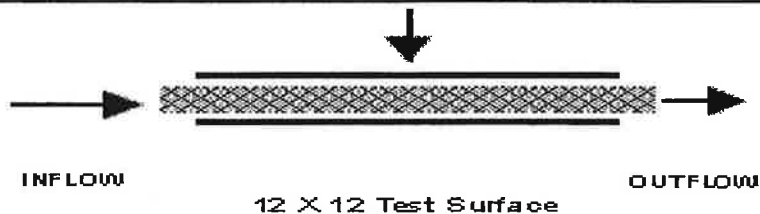
Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710730 - N	26676-15	0.9542	0.249	265	2.44	96	
269710731 - N	26676-15	0.9542					
269710732 - N	26676-15	0.9542					
269710733 - N	26676-15	0.9542					
269710734 - N	26676-15	0.9542					
269710735 - N	26676-15	0.9542					
269710736 - N	26676-15	0.9542					
269710737 - N	26676-15	0.9542					
269710738 - N	26676-15	0.9542					
269710739 - N	26676-15	0.9542					
269710740 - N	26676-15	0.9542	0.244	262	2.55	93	
269710741 - N	26676-15	0.9542					
269710742 - N	26676-15	0.9542					
269710743 - N	26676-15	0.9542					
269710744 - N	26676-15	0.9542					
269710745 - N	26676-15	0.9542					
269710746 - N	26676-15	0.9542					
269710747 - N	26676-15	0.9542					
269710748 - N	26676-15	0.9542					
269710749 - N	26676-15	0.9542					
269710750 - N	26676-15	0.9542	0.255	269	2.40	95	
269710751 - N	26676-15	0.9542					
269710752 - N	26676-15	0.9542					
269710753 - N	26676-15	0.9542					
269710754 - N	26676-15	0.9542					
269710755 - N	26676-15	0.9542					
269710756 - N	26676-15	0.9542					

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Client: Environmental Specialties International, Inc.
Project: Landwell / Basic Remediation, NV
Product: TN270-2-6

Job # 2697

Test Configuration:**Test Information:**

Boundary Conditions: Sand
Geocomposite
Liner

Normal Load: 300 psf
Gradient: 0.1 ft
Seating Time: 24 hours
Flow Direction: MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m ² /sec
			24 hours
269710665	300	0.1	6.29×10^{-4}
269710700			6.66×10^{-4}
269710735			6.41×10^{-4}



POLYETHYLENE RESIN CERTIFICATION

Customer Name :

Project Name :

Geocomposite Manufacturer :

Geocomposite Production Plant :

Geocomposite Brand Name :

Environmental Specialties International, Inc.
Landwell / Basic Remediation, NV
SKAPS Industries
Commerce, GA
TN270-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
New South Polymers Inc	Formosa, TX	HDPE	26676-15	Density	ASTM D 1505	gm/cc	0.949	0.949
				Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.15	0.15

(a) Condition 190/2.16

* Data from SKAPS Quality Control





Engineered Synthetic
Products, Inc.

Product : TN270-2-6

Project : Landwell / Basic Remediation, NV

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	MULLEN psi	AOS us sieve	PERM- ITY sec ⁻¹
269710665	2697.681	6.41	163	68	170	79	73	80	100	333	70	1.82
	2697.703	6.27	161	69	172	77	75	83	98	334	70	1.76
269710700	2697.694	6.35	165	67	173	75	80	86	95	337	70	1.82
	2697.684	6.41	163	68	170	79	73	80	100	333	70	1.82
269710735	2697.706	6.60	170	74	176	84	75	83	98	334	70	1.76
	2697.715	6.65	168	72	180	85	78	88	96	339	70	1.76

December 8, 2008
Environmental Specialties International, Inc.
7943 Pecue Lane-Suite A
Baton Rouge, LA 70809

Ref. : Landwell/Basic Remediation, NV
Customer P.O. # 9158
Transnet 270-2-6

We certify that the Transnet 270-2-6 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet³				
Mass per Unit Area	ASTM D 5261	lbs/ft ²	0.197	Minimum
Thickness	ASTM D 5199	mil	200	Minimum
Carbon Black	ASTM D 4218	%	2.0 - 3.0	Range
Tensile Strength	ASTM D 5035	lbs/in	75	Minimum
Melt Flow	ASTM D 1238 ²	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm ³	0.935	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	1.0	MARV ⁵
Transmissivity ¹	ASTM D 4716	m ² /sec	5.0 x 10 ⁻⁴	MARV
Geotextile^{3 & 4}				
Fabric Weight	ASTM D 5261	oz/yd ²	6.0	MARV
Grab Strength	ASTM D 4632	lbs	130	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Tear Strength	ASTM D 4533	lbs	40	MARV
Puncture Resistance	ASTM D 4833	lbs	40	MARV
Mullen Burst	ASTM D 3786	psi	210	MARV
Permittivity	ASTM D 4491	sec ⁻¹	0.5	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

- 1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.
- 2 Condition 190/2.16
- 3 Geotextile and Geonet properties are prior to lamination.
- 4 Geotextile data is provided by the supplier.
- 5 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710757	269710757 - N	2697.722	2697.735			
2	269710758	269710758 - N	2697.722	2697.735			
3	269710759	269710759 - N	2697.722	2697.735			
4	269710760	269710760 - N	2697.722	2697.735			
5	269710761	269710761 - N	2697.722	2697.735			
6	269710762	269710762 - N	2697.722	2697.735			
7	269710763	269710763 - N	2697.722	2697.735			
8	269710764	269710764 - N	2697.739	2697.726			
9	269710765	269710765 - N	2697.739	2697.726			
10	269710766	269710766 - N	2697.739	2697.726			
11	269710767	269710767 - N	2697.739	2697.726			
12	269710768	269710768 - N	2697.739	2697.726			
13	269710769	269710769 - N	2697.739	2697.726			
14	269710770	269710770 - N	2697.739	2697.726	1.25	2.02	6.19 x 10 ⁻⁴
15	269710771	269710771 - N	2697.718	2697.743			
16	269710772	269710772 - N	2697.718	2697.743			
17	269710773	269710773 - N	2697.718	2697.743			
18	269710774	269710774 - N	2697.718	2697.743			
19	269710775	269710775 - N	2697.718	2697.743			
20	269710776	269710776 - N	2697.718	2697.743			
21	269710777	269710777 - N	2697.718	2697.743			
22	269710778	269710778 - N	2697.742	2697.720			
23	269710779	269710779 - N	2697.742	2697.720			
24	269710780	269710780 - N	2697.742	2697.720			
25	269710781	269710781 - N	2697.742	2697.720			
26	269710782	269710782 - N	2697.742	2697.720			
27	269710783	269710783 - N	2697.742	2697.720			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710757 - N	26676-15	0.9542					
269710758 - N	26676-15	0.9542					
269710759 - N	26676-15	0.9542					
269710760 - N	FPAX950119	0.9542	0.242	258	2.24	89	
269710761 - N	FPAX950119	0.9542					
269710762 - N	FPAX950119	0.9542					
269710763 - N	FPAX950119	0.9542					
269710764 - N	FPAX950119	0.9542					
269710765 - N	FPAX950119	0.9542					
269710766 - N	FPAX950119	0.9542					
269710767 - N	FPAX950119	0.9542					
269710768 - N	FPAX950119	0.9542					
269710769 - N	FPAX950119	0.9542					
269710770 - N	FPAX950119	0.9551	0.253	268	2.78	93	
269710771 - N	FPAX950119	0.9551					
269710772 - N	FPAX950119	0.9551					
269710773 - N	FPAX950119	0.9551					
269710774 - N	FPAX950119	0.9551					
269710775 - N	FPAX950119	0.9551					
269710776 - N	FPAX950119	0.9551					
269710777 - N	FPAX950119	0.9551					
269710778 - N	FPAX950119	0.9551					
269710779 - N	FPAX950119	0.9551					
269710780 - N	FPAX950119	0.9551	0.245	256	2.27	91	
269710781 - N	FPAX950119	0.9551					
269710782 - N	FPAX950119	0.9551					
269710783 - N	FPAX950119	0.9551					

CAMU
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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710784	269710784 - N	2697.742	2697.720			
2	269710785	269710785 - N	2697.727	2697.741			
3	269710786	269710786 - N	2697.727	2697.741			
4	269710787	269710787 - N	2697.727	2697.741			
5	269710788	269710788 - N	2697.727	2697.741			
6	269710789	269710789 - N	2697.727	2697.741			
7	269710790	269710790 - N	2697.727	2697.741			
8	269710791	269710791 - N	2697.727	2697.741			
9	269710792	269710792 - N	2697.732	2697.723			
10	269710793	269710793 - N	2697.732	2697.723			
11	269710794	269710794 - N	2697.732	2697.723			
12	269710795	269710795 - N	2697.732	2697.723			
13	269710796	269710796 - N	2697.732	2697.723			
14	269710797	269710797 - N	2697.732	2697.723			
15	269710798	269710798 - N	2697.732	2697.723			
16	269710799	269710799 - N	2697.717	2697.738			
17	269710800	269710800 - N	2697.717	2697.738			
18	269710801	269710801 - N	2697.717	2697.738			
19	269710802	269710802 - N	2697.717	2697.738			
20	269710803	269710803 - N	2697.717	2697.738			
21	269710804	269710804 - N	2697.717	2697.738			
22	269710805	269710805 - N	2697.717	2697.738	1.76	2.79	6.68 x 10 ⁻¹
23	269710806	269710806 - N	2697.737	2697.719			
24	269710807	269710807 - N	2697.737	2697.719			
25	269710808	269710808 - N	2697.737	2697.719			
26	269710809	269710809 - N	2697.737	2697.719			
27	269710810	269710810 - N	2697.737	2697.719			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710784 - N	FPAX950119	0.9551					
269710785 - N	FPAX950119	0.9551					
269710786 - N	FPAX950119	0.9551					
269710787 - N	FPAX950119	0.9551					
269710788 - N	FPAX950119	0.9551					
269710789 - N	FPAX950119	0.9551					
269710790 - N	FPAX950119	0.9551	0.250	266	2.74	96	
269710791 - N	FPAX950119	0.9551					
269710792 - N	FPAX950119	0.9551					
269710793 - N	FPAX950119	0.9551					
269710794 - N	FPAX950119	0.9551					
269710795 - N	FPAX950119	0.9551					
269710796 - N	FPAX950119	0.9551					
269710797 - N	FPAX950119	0.9551					
269710798 - N	FPAX950119	0.9551					
269710799 - N	FPAX950119	0.9551					
269710800 - N	FPAX950119	0.9551	0.241	259	2.31	88	
269710801 - N	FPAX950119	0.9551					
269710802 - N	FPAX950119	0.9551					
269710803 - N	FPAX950119	0.9551					
269710804 - N	FPAX950119	0.9551					
269710805 - N	FPAX950119	0.9558					
269710806 - N	FPAX950119	0.9558					
269710807 - N	FPAX950119	0.9558					
269710808 - N	FPAX950119	0.9558					
269710809 - N	FPAX950119	0.9558					
269710810 - N	FPAX950119	0.9558	0.257	264	2.71	94	

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710811	269710811 - N	2697.737	2697.719			
2	269710812	269710812 - N	2697.737	2697.719			
3	269710813	269710813 - N	2697.729	2697.731			
4	269710814	269710814 - N	2697.729	2697.731			
5	269710815	269710815 - N	2697.729	2697.731			
6	269710816	269710816 - N	2697.729	2697.731			
7	269710817	269710817 - N	2697.729	2697.731			
8	269710818	269710818 - N	2697.729	2697.731			
9	269710819	269710819 - N	2697.729	2697.731			
10	269710820	269710820 - N	2697.733	2697.725			
11	269710821	269710821 - N	2697.733	2697.725			
12	269710822	269710822 - N	2697.733	2697.725			
13	269710823	269710823 - N	2697.733	2697.725			
14	269710824	269710824 - N	2697.733	2697.725			
15	269710825	269710825 - N	2697.733	2697.725			
16	269710826	269710826 - N	2697.733	2697.725			
17	269710827	269710827 - N	2697.721	2697.736			
18	269710828	269710828 - N	2697.721	2697.736			
19	269710829	269710829 - N	2697.721	2697.736			
20	269710830	269710830 - N	2697.721	2697.736			
21	269710831	269710831 - N	2697.721	2697.736			
22	269710832	269710832 - N	2697.721	2697.736			
23	269710833	269710833 - N	2697.721	2697.736			
24	269710834	269710834 - N	2697.740	2697.728			
25	269710835	269710835 - N	2697.740	2697.728			
26	269710836	269710836 - N	2697.740	2697.728			
27	269710837	269710837 - N	2697.740	2697.728			

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* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710811 - N	FPAX950119	0.9558					
269710812 - N	FPAX950119	0.9558					
269710813 - N	FPAX950119	0.9558					
269710814 - N	FPAX950119	0.9558					
269710815 - N	FPAX950119	0.9558					
269710816 - N	FPAX950119	0.9558					
269710817 - N	FPAX950119	0.9558					
269710818 - N	FPAX950119	0.9558					
269710819 - N	FPAX950119	0.9558					
269710820 - N	FPAX950119	0.9558	0.243	257	2.34	92	
269710821 - N	FPAX950119	0.9558					
269710822 - N	FPAX950119	0.9558					
269710823 - N	FPAX950119	0.9558					
269710824 - N	FPAX950119	0.9558					
269710825 - N	FPAX950119	0.9558					
269710826 - N	FPAX950119	0.9558					
269710827 - N	FPAX950119	0.9558					
269710828 - N	FPAX950119	0.9558					
269710829 - N	FPAX950119	0.9558					
269710830 - N	FPAX950119	0.9558	0.254	269	2.66	95	
269710831 - N	FPAX950119	0.9558					
269710832 - N	FPAX950119	0.9558					
269710833 - N	FPAX950119	0.9558					
269710834 - N	FPAX950119	0.9558					
269710835 - N	FPAX950119	0.9558					
269710836 - N	FPAX950119	0.9558					
269710837 - N	FPAX950119	0.9558					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710838	269710838 - N	2697.740	2697.728			
2	269710839	269710839 - N	2697.740	2697.728			
3	269710840	269710840 - N	2697.740	2697.728	1.32	2.07	6.22 x 10 ⁻⁴
4	269710841	269710841 - N	2697.724	2697.761			
5	269710842	269710842 - N	2697.724	2697.761			
6	269710843	269710843 - N	2697.724	2697.761			
7	269710844	269710844 - N	2697.724	2697.761			
8	269710845	269710845 - N	2697.724	2697.761			
9	269710846	269710846 - N	2697.724	2697.761			
10	269710847	269710847 - N	2697.724	2697.761			
11	269710848	269710848 - N	2697.746	2697.734			
12	269710849	269710849 - N	2697.746	2697.734			
13	269710850	269710850 - N	2697.746	2697.734			
14	269710851	269710851 - N	2697.746	2697.734			
15	269710852	269710852 - N	2697.746	2697.734			
16	269710853	269710853 - N	2697.746	2697.734			
17	269710854	269710854 - N	2697.746	2697.734			
18	269710855	269710855 - N	2697.730	2697.768			
19	269710856	269710856 - N	2697.730	2697.768			
20	269710857	269710857 - N	2697.730	2697.768			
21	269710858	269710858 - N	2697.730	2697.768			
22	269710859	269710859 - N	2697.730	2697.768			
23	269710860	269710860 - N	2697.730	2697.768			
24	269710861	269710861 - N	2697.730	2697.768			
25	269710862	269710862 - N	2697.764	2697.747			
26	269710863	269710863 - N	2697.764	2697.747			
27	269710864	269710864 - N	2697.764	2697.747			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710838 - N	FPAX950119	0.9558					
269710839 - N	FPAX950119	0.9558					
269710840 - N	FPAX950119	0.9553	0.246	260	2.39	90	
269710841 - N	FPAX950119	0.9553					
269710842 - N	FPAX950119	0.9553					
269710843 - N	FPAX950119	0.9553					
269710844 - N	FPAX950119	0.9553					
269710845 - N	FPAX950119	0.9553					
269710846 - N	FPAX950119	0.9553					
269710847 - N	FPAX950119	0.9553					
269710848 - N	FPAX950119	0.9553					
269710849 - N	FPAX950119	0.9553					
269710850 - N	FPAX950119	0.9553	0.252	265	2.62	93	
269710851 - N	FPAX950119	0.9553					
269710852 - N	FPAX950119	0.9553					
269710853 - N	FPAX950119	0.9553					
269710854 - N	FPAX950119	0.9553					
269710855 - N	FPAX950119	0.9553					
269710856 - N	FPAX950119	0.9553					
269710857 - N	FPAX950119	0.9553					
269710858 - N	FPAX950119	0.9553					
269710859 - N	FPAX950119	0.9553					
269710860 - N	FPAX950119	0.9553	0.249	262	2.42	88	
269710861 - N	FPAX950119	0.9553					
269710862 - N	FPAX950119	0.9553					
269710863 - N	FPAX950119	0.9553					
269710864 - N	FPAX950119	0.9553					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710865	269710865 - N	2697.764	2697.747			
2	269710866	269710866 - N	2697.764	2697.747			
3	269710867	269710867 - N	2697.764	2697.747			
4	269710868	269710868 - N	2697.764	2697.747			
5	269710869	269710869 - N	2697.744	2697.758			
6	269710870	269710870 - N	2697.744	2697.758			
7	269710871	269710871 - N	2697.744	2697.758			
8	269710872	269710872 - N	2697.744	2697.758			
9	269710873	269710873 - N	2697.744	2697.758			
10	269710874	269710874 - N	2697.744	2697.758			
11	269710875	269710875 - N	2697.744	2697.758	1.57	2.71	6.63 x 10 ⁻⁴
12	269710876	269710876 - N	2697.769	2697.752			
13	269710877	269710877 - N	2697.769	2697.752			
14	269710878	269710878 - N	2697.769	2697.752			
15	269710879	269710879 - N	2697.769	2697.752			
16	269710880	269710880 - N	2697.769	2697.752			
17	269710881	269710881 - N	2697.769	2697.752			
18	269710882	269710882 - N	2697.769	2697.752			
19	269710883	269710883 - N	2697.751	2697.765			
20	269710884	269710884 - N	2697.751	2697.765			
21	269710885	269710885 - N	2697.751	2697.765			
22	269710886	269710886 - N	2697.751	2697.765			
23	269710887	269710887 - N	2697.751	2697.765			
24	269710888	269710888 - N	2697.751	2697.765			
25	269710889	269710889 - N	2697.751	2697.765			
26	269710890	269710890 - N	2697.762	2697.745			
27	269710891	269710891 - N	2697.762	2697.745			

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* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710865 - N	FPAX950119	0.9553					
269710866 - N	FPAX950119	0.9553					
269710867 - N	FPAX950119	0.9553					
269710868 - N	FPAX950119	0.9553					
269710869 - N	FPAX950119	0.9553					
269710870 - N	FPAX950119	0.9553	0.255	268	2.59	96	
269710871 - N	FPAX950119	0.9553					
269710872 - N	FPAX950119	0.9553					
269710873 - N	FPAX950119	0.9553					
269710874 - N	FPAX950119	0.9553					
269710875 - N	FPAX950119	0.9556					
269710876 - N	FPAX950119	0.9556					
269710877 - N	FPAX950119	0.9556					
269710878 - N	FPAX950119	0.9556					
269710879 - N	FPAX950119	0.9556					
269710880 - N	FPAX950119	0.9556	0.240	256	2.23	91	
269710881 - N	FPAX950119	0.9556					
269710882 - N	FPAX950119	0.9556					
269710883 - N	FPAX950119	0.9556					
269710884 - N	FPAX950119	0.9556					
269710885 - N	FPAX950119	0.9556					
269710886 - N	FPAX950119	0.9556					
269710887 - N	FPAX950119	0.9556					
269710888 - N	FPAX950119	0.9556					
269710889 - N	FPAX950119	0.9556					
269710890 - N	FPAX950119	0.9556	0.251	263	2.73	94	
269710891 - N	FPAX950119	0.9556					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710892	269710892 - N	2697.762	2697.745			
2	269710893	269710893 - N	2697.762	2697.745			
3	269710894	269710894 - N	2697.762	2697.745			
4	269710895	269710895 - N	2697.762	2697.745			
5	269710896	269710896 - N	2697.762	2697.745			
6	269710897	269710897 - N	2697.749	2697.763			
7	269710898	269710898 - N	2697.749	2697.763			
8	269710899	269710899 - N	2697.749	2697.763			
9	269710900	269710900 - N	2697.749	2697.763			
10	269710901	269710901 - N	2697.749	2697.763			
11	269710902	269710902 - N	2697.749	2697.763			
12	269710903	269710903 - N	2697.749	2697.763			
13	269710904	269710904 - N	2697.766	2697.750			
14	269710905	269710905 - N	2697.766	2697.750			
15	269710906	269710906 - N	2697.766	2697.750			
16	269710907	269710907 - N	2697.766	2697.750			
17	269710908	269710908 - N	2697.766	2697.750			
18	269710909	269710909 - N	2697.766	2697.750			
19	269710910	269710910 - N	2697.766	2697.750	1.41	2.13	6.27 x 10 ⁻⁴
20	269710911	269710911 - N	2697.754	2697.767			
21	269710912	269710912 - N	2697.754	2697.767			
22	269710913	269710913 - N	2697.754	2697.767			
23	269710914	269710914 - N	2697.754	2697.767			
24	269710915	269710915 - N	2697.754	2697.767			
25	269710916	269710916 - N	2697.754	2697.767			
26	269710917	269710917 - N	2697.754	2697.767			
27	269710918	269710918 - N	2697.770	2697.755			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710892 - N	FPAX950119	0.9556					
269710893 - N	FPAX950119	0.9556					
269710894 - N	FPAX950119	0.9556					
269710895 - N	FPAX950119	0.9556					
269710896 - N	FPAX950119	0.9556					
269710897 - N	FPAX950119	0.9556					
269710898 - N	FPAX950119	0.9556					
269710899 - N	FPAX950119	0.9556					
269710900 - N	FPAX950119	0.9556	0.247	259	2.25	89	
269710901 - N	FPAX950119	0.9556					
269710902 - N	FPAX950119	0.9556					
269710903 - N	FPAX950119	0.9556					
269710904 - N	FPAX950119	0.9556					
269710905 - N	FPAX950119	0.9556					
269710906 - N	FPAX950119	0.9556					
269710907 - N	FPAX950119	0.9556					
269710908 - N	FPAX950119	0.9556					
269710909 - N	FPAX950119	0.9556					
269710910 - N	FPAX950119	0.9550	0.256	261	2.79	92	
269710911 - N	FPAX950119	0.9550					
269710912 - N	FPAX950119	0.9550					
269710913 - N	FPAX950119	0.9550					
269710914 - N	FPAX950119	0.9550					
269710915 - N	FPAX950119	0.9550					
269710916 - N	FPAX950119	0.9550					
269710917 - N	FPAX950119	0.9550					
269710918 - N	FPAX950119	0.9550					

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Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710919	269710919 - N	2697.770	2697.755			
2	269710920	269710920 - N	2697.770	2697.755			
3	269710921	269710921 - N	2697.770	2697.755			
4	269710922	269710922 - N	2697.770	2697.755			
5	269710923	269710923 - N	2697.770	2697.755			
6	269710924	269710924 - N	2697.770	2697.755			
7	269710925	269710925 - N	2697.756	2697.760			
8	269710926	269710926 - N	2697.756	2697.760			
9	269710927	269710927 - N	2697.756	2697.760			
10	269710928	269710928 - N	2697.756	2697.760			
11	269710929	269710929 - N	2697.756	2697.760			
12	269710930	269710930 - N	2697.756	2697.760			
13	269710931	269710931 - N	2697.756	2697.760			
14	269710932	269710932 - N	2697.759	2697.753			
15	269710933	269710933 - N	2697.759	2697.753			
16	269710934	269710934 - N	2697.759	2697.753			
17	269710935	269710935 - N	2697.759	2697.753			
18	269710936	269710936 - N	2697.759	2697.753			
19	269710937	269710937 - N	2697.759	2697.753			
20	269710938	269710938 - N	2697.759	2697.753			
21	269710939	269710939 - N	2697.748	2697.789			
22	269710940	269710940 - N	2697.748	2697.789			
23	269710941	269710941 - N	2697.748	2697.789			
24	269710942	269710942 - N	2697.748	2697.789			
25	269710943	269710943 - N	2697.748	2697.789			
26	269710944	269710944 - N	2697.748	2697.789			
27	269710945	269710945 - N	2697.748	2697.789	1.52	2.66	6.58 x 10 ⁻⁴

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710919 - N	FPAX950119	0.9550					
269710920 - N	FPAX950119	0.9550	0.244	257	2.29	90	
269710921 - N	FPAX950119	0.9550					
269710922 - N	FPAX950119	0.9550					
269710923 - N	FPAX950119	0.9550					
269710924 - N	FPAX950119	0.9550					
269710925 - N	FPAX950119	0.9550					
269710926 - N	FPAX950119	0.9550					
269710927 - N	FPAX950119	0.9550					
269710928 - N	FPAX950119	0.9550					
269710929 - N	FPAX950119	0.9550					
269710930 - N	FPAX950119	0.9550	0.253	267	2.77	95	
269710931 - N	FPAX950119	0.9550					
269710932 - N	FPAX950119	0.9550					
269710933 - N	FPAX950119	0.9550					
269710934 - N	FPAX950119	0.9550					
269710935 - N	FPAX950119	0.9550					
269710936 - N	FPAX950119	0.9550					
269710937 - N	FPAX950119	0.9550					
269710938 - N	FPAX950119	0.9550					
269710939 - N	FPAX950119	0.9550					
269710940 - N	FPAX950119	0.9550	0.249	260	2.32	88	
269710941 - N	FPAX950119	0.9550					
269710942 - N	FPAX950119	0.9550					
269710943 - N	FPAX950119	0.9550					
269710944 - N	FPAX950119	0.9550					
269710945 - N	FPAX950119	0.9559					

CAMU
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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710946	269710946 - N	2697.792	2697.775			
2	269710947	269710947 - N	2697.792	2697.775			
3	269710948	269710948 - N	2697.792	2697.775			
4	269710949	269710949 - N	2697.792	2697.775			
5	269710950	269710950 - N	2697.792	2697.775			
6	269710951	269710951 - N	2697.792	2697.775			
7	269710952	269710952 - N	2697.792	2697.775			
8	269710953	269710953 - N	2697.757	2697.786			
9	269710954	269710954 - N	2697.757	2697.786			
10	269710955	269710955 - N	2697.757	2697.786			
11	269710956	269710956 - N	2697.757	2697.786			
12	269710957	269710957 - N	2697.757	2697.786			
13	269710958	269710958 - N	2697.757	2697.786			
14	269710959	269710959 - N	2697.757	2697.786			
15	269710960	269710960 - N	2697.795	2697.778			
16	269710961	269710961 - N	2697.795	2697.778			
17	269710962	269710962 - N	2697.795	2697.778			
18	269710963	269710963 - N	2697.795	2697.778			
19	269710964	269710964 - N	2697.795	2697.778			
20	269710965	269710965 - N	2697.795	2697.778			
21	269710966	269710966 - N	2697.795	2697.778			
22	269710967	269710967 - N	2697.773	2697.793			
23	269710968	269710968 - N	2697.773	2697.793			
24	269710969	269710969 - N	2697.773	2697.793			
25	269710970	269710970 - N	2697.773	2697.793			
26	269710971	269710971 - N	2697.773	2697.793			
27	269710972	269710972 - N	2697.773	2697.793			

CAMU
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* Transmissivity measured using water at $21 \pm 2^{\circ}\text{C}$ ($70 \pm 4^{\circ}\text{F}$) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries

Engineered Synthetic
Products, Inc.

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710946 - N	FPAX950119	0.9559					
269710947 - N	FPAX950119	0.9559					
269710948 - N	FPAX950119	0.9559					
269710949 - N	FPAX950119	0.9559					
269710950 - N	FPAX950119	0.9559	0.257	264	2.73	93	
269710951 - N	FPAX950119	0.9559					
269710952 - N	FPAX950119	0.9559					
269710953 - N	FPAX950119	0.9559					
269710954 - N	FPAX950119	0.9559					
269710955 - N	FPAX950119	0.9559					
269710956 - N	FPAX950119	0.9559					
269710957 - N	FPAX950119	0.9559					
269710958 - N	FPAX950119	0.9559					
269710959 - N	FPAX950119	0.9559					
269710960 - N	FPAX950119	0.9559	0.241	262	2.35	91	
269710961 - N	FPAX950119	0.9559					
269710962 - N	FPAX950119	0.9559					
269710963 - N	FPAX950119	0.9559					
269710964 - N	FPAX950119	0.9559					
269710965 - N	FPAX950119	0.9559					
269710966 - N	FPAX950119	0.9559					
269710967 - N	FPAX950119	0.9559					
269710968 - N	FPAX950119	0.9559					
269710969 - N	FPAX950119	0.9559					
269710970 - N	FPAX950119	0.9559	0.250	269	2.70	96	
269710971 - N	FPAX950119	0.9559					
269710972 - N	FPAX950119	0.9559					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269710973	269710973 - N	2697.773	2697.793			
2	269710974	269710974 - N	2697.787	2697.781			
3	269710975	269710975 - N	2697.787	2697.781			
4	269710976	269710976 - N	2697.787	2697.781			
5	269710977	269710977 - N	2697.787	2697.781			
6	269710978	269710978 - N	2697.787	2697.781			
7	269710979	269710979 - N	2697.787	2697.781			
8	269710980	269710980 - N	2697.787	2697.781	1.29	2.17	6.18 x 10 ⁻⁷
9	269710981	269710981 - N	2697.771	2697.791			
10	269710982	269710982 - N	2697.771	2697.791			
11	269710983	269710983 - N	2697.771	2697.791			
12	269710984	269710984 - N	2697.771	2697.791			
13	269710985	269710985 - N	2697.771	2697.791			
14	269710986	269710986 - N	2697.771	2697.791			
15	269710987	269710987 - N	2697.771	2697.791			
16	269710988	269710988 - N	2697.796	2697.783			
17	269710989	269710989 - N	2697.796	2697.783			
18	269710990	269710990 - N	2697.796	2697.783			
19	269710991	269710991 - N	2697.796	2697.783			
20	269710992	269710992 - N	2697.796	2697.783			
21	269710993	269710993 - N	2697.796	2697.783			
22	269710994	269710994 - N	2697.796	2697.783			
23	269710995	269710995 - N	2697.779	2697.797			
24	269710996	269710996 - N	2697.779	2697.797			
25	269710997	269710997 - N	2697.779	2697.797			
26	269710998	269710998 - N	2697.779	2697.797			
27	269710999	269710999 - N	2697.779	2697.797			

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* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269710973 - N	FPAX950119	0.9559					
269710974 - N	FPAX950119	0.9559					
269710975 - N	FPAX950119	0.9559					
269710976 - N	FPAX950119	0.9559					
269710977 - N	FPAX950119	0.9559					
269710978 - N	FPAX950119	0.9559					
269710979 - N	FPAX950119	0.9559					
269710980 - N	FPAX200256	0.9554	0.244	258	2.38	89	
269710981 - N	FPAX200256	0.9554					
269710982 - N	FPAX200256	0.9554					
269710983 - N	FPAX200256	0.9554					
269710984 - N	FPAX200256	0.9554					
269710985 - N	FPAX200256	0.9554					
269710986 - N	FPAX200256	0.9554					
269710987 - N	FPAX200256	0.9554					
269710988 - N	FPAX200256	0.9554					
269710989 - N	FPAX200256	0.9554					
269710990 - N	FPAX200256	0.9554	0.252	266	2.68	94	
269710991 - N	FPAX200256	0.9554					
269710992 - N	FPAX200256	0.9554					
269710993 - N	FPAX200256	0.9554					
269710994 - N	FPAX200256	0.9554					
269710995 - N	FPAX200256	0.9554					
269710996 - N	FPAX200256	0.9554					
269710997 - N	FPAX200256	0.9554					
269710998 - N	FPAX200256	0.9554					
269710999 - N	FPAX200256	0.9554					

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CLOSURE

Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711000	269711000 - N	2697.779	2697.797			
2	269711001	269711001 - N	2697.779	2697.797			
3	269711002	269711002 - N	2697.790	2697.774			
4	269711003	269711003 - N	2697.790	2697.774			
5	269711004	269711004 - N	2697.790	2697.774			
6	269711005	269711005 - N	2697.790	2697.774			
7	269711006	269711006 - N	2697.790	2697.774			
8	269711007	269711007 - N	2697.790	2697.774			
9	269711008	269711008 - N	2697.790	2697.774			
10	269711009	269711009 - N	2697.776	2697.788			
11	269711010	269711010 - N	2697.776	2697.788			
12	269711011	269711011 - N	2697.776	2697.788			
13	269711012	269711012 - N	2697.776	2697.788			
14	269711013	269711013 - N	2697.776	2697.788			
15	269711014	269711014 - N	2697.776	2697.788			
16	269711015	269711015 - N	2697.776	2697.788	1.63	2.62	6.31 x 10 ⁻⁴
17	269711016	269711016 - N	2697.785	2697.780			
18	269711017	269711017 - N	2697.785	2697.780			
19	269711018	269711018 - N	2697.785	2697.780			
20	269711019	269711019 - N	2697.785	2697.780			
21	269711020	269711020 - N	2697.785	2697.780			
22	269711021	269711021 - N	2697.785	2697.780			
23	269711022	269711022 - N	2697.785	2697.780			
24	269711023	269711023 - N	2697.772	2697.794			
25	269711024	269711024 - N	2697.772	2697.794			
26	269711025	269711025 - N	2697.772	2697.794			
27	269711026	269711026 - N	2697.772	2697.794			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711000 - N	FPAX200256	0.9554	0.246	256	2.41	92	
269711001 - N	FPAX200256	0.9554					
269711002 - N	FPAX200256	0.9554					
269711003 - N	FPAX200256	0.9554					
269711004 - N	FPAX200256	0.9554					
269711005 - N	FPAX200256	0.9554					
269711006 - N	FPAX200256	0.9554					
269711007 - N	FPAX200256	0.9554					
269711008 - N	FPAX200256	0.9554					
269711009 - N	FPAX200256	0.9554					
269711010 - N	FPAX200256	0.9554	0.254	261	2.65	95	
269711011 - N	FPAX200256	0.9554					
269711012 - N	FPAX200256	0.9554					
269711013 - N	FPAX200256	0.9554					
269711014 - N	FPAX200256	0.9554					
269711015 - N	FPAX200256	0.9557					
269711016 - N	FPAX200256	0.9557					
269711017 - N	FPAX200256	0.9557					
269711018 - N	FPAX200256	0.9557					
269711019 - N	FPAX200256	0.9557					
269711020 - N	FPAX200256	0.9557	0.249	259	2.44	90	
269711021 - N	FPAX200256	0.9557					
269711022 - N	FPAX200256	0.9557					
269711023 - N	FPAX200256	0.9557					
269711024 - N	FPAX200256	0.9557					
269711025 - N	FPAX200256	0.9557					
269711026 - N	FPAX200256	0.9557					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711027	269711027 - N	2697.772	2697.794			
2	269711028	269711028 - N	2697.772	2697.794			
3	269711029	269711029 - N	2697.772	2697.794			
4	269711030	269711030 - N	2697.819	2697.784			
5	269711031	269711031 - N	2697.819	2697.784			
6	269711032	269711032 - N	2697.819	2697.784			
7	269711033	269711033 - N	2697.819	2697.784			
8	269711034	269711034 - N	2697.819	2697.784			
9	269711035	269711035 - N	2697.819	2697.784			
10	269711036	269711036 - N	2697.819	2697.784			
11	269711037	269711037 - N	2697.777	2697.821			
12	269711038	269711038 - N	2697.777	2697.821			
13	269711039	269711039 - N	2697.777	2697.821			
14	269711040	269711040 - N	2697.777	2697.821			
15	269711041	269711041 - N	2697.777	2697.821			
16	269711042	269711042 - N	2697.777	2697.821			
17	269711043	269711043 - N	2697.777	2697.821			
18	269711044	269711044 - N	2697.816	2697.798			
19	269711045	269711045 - N	2697.816	2697.798			
20	269711046	269711046 - N	2697.816	2697.798			
21	269711047	269711047 - N	2697.816	2697.798			
22	269711048	269711048 - N	2697.816	2697.798			
23	269711049	269711049 - N	2697.816	2697.798			
24	269711050	269711050 - N	2697.816	2697.798	1.33	2.21	6.54 x 10 ⁻⁴
25	269711051	269711051 - N	2697.782	2697.813			
26	269711052	269711052 - N	2697.782	2697.813			
27	269711053	269711053 - N	2697.782	2697.813			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711027 - N	FPAX200256	0.9557					
269711028 - N	FPAX200256	0.9557					
269711029 - N	FPAX200256	0.9557					
269711030 - N	FPAX200256	0.9557	0.251	263	2.61	93	
269711031 - N	FPAX200256	0.9557					
269711032 - N	FPAX200256	0.9557					
269711033 - N	FPAX200256	0.9557					
269711034 - N	FPAX200256	0.9557					
269711035 - N	FPAX200256	0.9557					
269711036 - N	FPAX200256	0.9557					
269711037 - N	FPAX200256	0.9557					
269711038 - N	FPAX200256	0.9557					
269711039 - N	FPAX200256	0.9557					
269711040 - N	FPAX200256	0.9557	0.243	257	2.47	88	
269711041 - N	FPAX200256	0.9557					
269711042 - N	FPAX200256	0.9557					
269711043 - N	FPAX200256	0.9557					
269711044 - N	FPAX200256	0.9557					
269711045 - N	FPAX200256	0.9557					
269711046 - N	FPAX200256	0.9557					
269711047 - N	FPAX200256	0.9557					
269711048 - N	FPAX200256	0.9557					
269711049 - N	FPAX200256	0.9557					
269711050 - N	FPAX200256	0.9552	0.256	265	2.58	96	
269711051 - N	FPAX200256	0.9552					
269711052 - N	FPAX200256	0.9552					
269711053 - N	FPAX200256	0.9552					

CAMU
CLOSURE

Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711054	269711054 - N	2697.782	2697.813			
2	269711055	269711055 - N	2697.782	2697.813			
3	269711056	269711056 - N	2697.782	2697.813			
4	269711057	269711057 - N	2697.782	2697.813			
5	269711058	269711058 - N	2697.812	2697.808			
6	269711059	269711059 - N	2697.812	2697.808			
7	269711060	269711060 - N	2697.812	2697.808			
8	269711061	269711061 - N	2697.812	2697.808			
9	269711062	269711062 - N	2697.812	2697.808			
10	269711063	269711063 - N	2697.812	2697.808			
11	269711064	269711064 - N	2697.812	2697.808			
12	269711065	269711065 - N	2697.802	2697.817			
13	269711066	269711066 - N	2697.802	2697.817			
14	269711067	269711067 - N	2697.802	2697.817			
15	269711068	269711068 - N	2697.802	2697.817			
16	269711069	269711069 - N	2697.802	2697.817			
17	269711070	269711070 - N	2697.802	2697.817			
18	269711071	269711071 - N	2697.802	2697.817			
19	269711072	269711072 - N	2697.822	2697.801			
20	269711073	269711073 - N	2697.822	2697.801			
21	269711074	269711074 - N	2697.822	2697.801			
22	269711075	269711075 - N	2697.822	2697.801			
23	269711076	269711076 - N	2697.822	2697.801			
24	269711077	269711077 - N	2697.822	2697.801			
25	269711078	269711078 - N	2697.822	2697.801			
26	269711079	269711079 - N	2697.807	2697.814			
27	269711080	269711080 - N	2697.807	2697.814			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711054 - N	FPAX200256	0.9552					
269711055 - N	FPAX200256	0.9552					
269711056 - N	FPAX200256	0.9552					
269711057 - N	FPAX200256	0.9552					
269711058 - N	FPAX200256	0.9552					
269711059 - N	FPAX200256	0.9552					
269711060 - N	FPAX200256	0.9552	0.245	260	2.50	90	
269711061 - N	FPAX200256	0.9552					
269711062 - N	FPAX200256	0.9552					
269711063 - N	FPAX200256	0.9552					
269711064 - N	FPAX200256	0.9552					
269711065 - N	FPAX200256	0.9552					
269711066 - N	FPAX200256	0.9552					
269711067 - N	FPAX200256	0.9552					
269711068 - N	FPAX200256	0.9552					
269711069 - N	FPAX200256	0.9552					
269711070 - N	FPAX200256	0.9552	0.251	268	2.55	94	
269711071 - N	FPAX200256	0.9552					
269711072 - N	FPAX200256	0.9552					
269711073 - N	FPAX200256	0.9552					
269711074 - N	FPAX200256	0.9552					
269711075 - N	FPAX200256	0.9552					
269711076 - N	FPAX200256	0.9552					
269711077 - N	FPAX200256	0.9552					
269711078 - N	FPAX200256	0.9552					
269711079 - N	FPAX200256	0.9552					
269711080 - N	FPAX200256	0.9552	0.247	262	2.52	92	

CAMU
CLOSURE

Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711081	269711081 - N	2697.807	2697.814			
2	269711082	269711082 - N	2697.807	2697.814			
3	269711083	269711083 - N	2697.807	2697.814			
4	269711084	269711084 - N	2697.807	2697.814			
5	269711085	269711085 - N	2697.807	2697.814	1.47	2.58	6.35 x 10 ⁻⁴
6	269711086	269711086 - N	2697.815	2697.806			
7	269711087	269711087 - N	2697.815	2697.806			
8	269711088	269711088 - N	2697.815	2697.806			
9	269711089	269711089 - N	2697.815	2697.806			
10	269711090	269711090 - N	2697.815	2697.806			
11	269711091	269711091 - N	2697.815	2697.806			
12	269711092	269711092 - N	2697.815	2697.806			
13	269711093	269711093 - N	2697.804	2697.820			
14	269711094	269711094 - N	2697.804	2697.820			
15	269711095	269711095 - N	2697.804	2697.820			
16	269711096	269711096 - N	2697.804	2697.820			
17	269711097	269711097 - N	2697.804	2697.820			
18	269711098	269711098 - N	2697.804	2697.820			
19	269711099	269711099 - N	2697.804	2697.820			
20	269711100	269711100 - N	2697.823	2697.800			
21	269711101	269711101 - N	2697.823	2697.800			
22	269711102	269711102 - N	2697.823	2697.800			
23	269711103	269711103 - N	2697.823	2697.800			
24	269711104	269711104 - N	2697.823	2697.800			
25	269711105	269711105 - N	2697.823	2697.800			
26	269711106	269711106 - N	2697.823	2697.800			
27	269711107	269711107 - N	2697.799	2697.811			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711081 - N	FPAX200256	0.9552					
269711082 - N	FPAX200256	0.9552					
269711083 - N	FPAX200256	0.9552					
269711084 - N	FPAX200256	0.9552					
269711085 - N	FPAX200256	0.9560					
269711086 - N	FPAX200256	0.9560					
269711087 - N	FPAX200256	0.9560					
269711088 - N	FPAX200256	0.9560					
269711089 - N	FPAX200256	0.9560					
269711090 - N	FPAX200256	0.9560	0.255	264	2.62	95	
269711091 - N	FPAX200256	0.9560					
269711092 - N	FPAX200256	0.9560					
269711093 - N	FPAX200256	0.9560					
269711094 - N	FPAX200256	0.9560					
269711095 - N	FPAX200256	0.9560					
269711096 - N	FPAX200256	0.9560					
269711097 - N	FPAX200256	0.9560					
269711098 - N	FPAX200256	0.9560					
269711099 - N	FPAX200256	0.9560					
269711100 - N	FPAX200256	0.9560	0.240	260	2.26	89	
269711101 - N	FPAX200256	0.9560					
269711102 - N	FPAX200256	0.9560					
269711103 - N	FPAX200256	0.9560					
269711104 - N	FPAX200256	0.9560					
269711105 - N	FPAX200256	0.9560					
269711106 - N	FPAX200256	0.9560					
269711107 - N	FPAX200256	0.9560					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711108	269711108 - N	2697.799	2697.811			
2	269711109	269711109 - N	2697.799	2697.811			
3	269711110	269711110 - N	2697.799	2697.811			
4	269711111	269711111 - N	2697.799	2697.811			
5	269711112	269711112 - N	2697.799	2697.811			
6	269711113	269711113 - N	2697.799	2697.811			
7	269711114	269711114 - N	2697.818	2697.803			
8	269711115	269711115 - N	2697.818	2697.803			
9	269711116	269711116 - N	2697.818	2697.803			
10	269711117	269711117 - N	2697.818	2697.803			
11	269711118	269711118 - N	2697.818	2697.803			
12	269711119	269711119 - N	2697.818	2697.803			
13	269711120	269711120 - N	2697.818	2697.803	1.24	2.28	6.51 x 10 ⁻⁴
14	269711121	269711121 - N	2697.809	2697.843			
15	269711122	269711122 - N	2697.809	2697.843			
16	269711123	269711123 - N	2697.809	2697.843			
17	269711124	269711124 - N	2697.809	2697.843			
18	269711125	269711125 - N	2697.809	2697.843			
19	269711126	269711126 - N	2697.809	2697.843			
20	269711127	269711127 - N	2697.809	2697.843			
21	269711128	269711128 - N	2697.824	2697.810			
22	269711129	269711129 - N	2697.824	2697.810			
23	269711130	269711130 - N	2697.824	2697.810			
24	269711131	269711131 - N	2697.824	2697.810			
25	269711132	269711132 - N	2697.824	2697.810			
26	269711133	269711133 - N	2697.824	2697.810			
27	269711134	269711134 - N	2697.824	2697.810			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711108 - N	FPAX200256	0.9560					
269711109 - N	FPAX200256	0.9560					
269711110 - N	FPAX200256	0.9560	0.257	267	2.59	93	
269711111 - N	FPAX200256	0.9560					
269711112 - N	FPAX200256	0.9560					
269711113 - N	FPAX200256	0.9560					
269711114 - N	FPAX200256	0.9560					
269711115 - N	FPAX200256	0.9560					
269711116 - N	FPAX200256	0.9560					
269711117 - N	FPAX200256	0.9560					
269711118 - N	FPAX200256	0.9560					
269711119 - N	FPAX200256	0.9560					
269711120 - N	FPAX200256	0.9555	0.244	257	2.30	91	
269711121 - N	FPAX200256	0.9555					
269711122 - N	FPAX200256	0.9555					
269711123 - N	FPAX200256	0.9555					
269711124 - N	FPAX200256	0.9555					
269711125 - N	FPAX200256	0.9555					
269711126 - N	FPAX200256	0.9555					
269711127 - N	FPAX200256	0.9555					
269711128 - N	FPAX200256	0.9555					
269711129 - N	FPAX200256	0.9555					
269711130 - N	FPAX200256	0.9555	0.252	265	2.63	96	
269711131 - N	FPAX200256	0.9555					
269711132 - N	FPAX200256	0.9555					
269711133 - N	FPAX200256	0.9555					
269711134 - N	FPAX200256	0.9555					

CAMU
CLOSURE

Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711135	269711135 - N	2697.805	2697.840			
2	269711136	269711136 - N	2697.805	2697.840			
3	269711137	269711137 - N	2697.805	2697.840			
4	269711138	269711138 - N	2697.805	2697.840			
5	269711139	269711139 - N	2697.805	2697.840			
6	269711140	269711140 - N	2697.805	2697.840			
7	269711141	269711141 - N	2697.805	2697.840			
8	269711142	269711142 - N	2697.845	2697.825			
9	269711143	269711143 - N	2697.845	2697.825			
10	269711144	269711144 - N	2697.845	2697.825			
11	269711145	269711145 - N	2697.845	2697.825			
12	269711146	269711146 - N	2697.845	2697.825			
13	269711147	269711147 - N	2697.845	2697.825			
14	269711148	269711148 - N	2697.845	2697.825			
15	269711149	269711149 - N	2697.829	2697.849			
16	269711150	269711150 - N	2697.829	2697.849			
17	269711151	269711151 - N	2697.829	2697.849			
18	269711152	269711152 - N	2697.829	2697.849			
19	269711153	269711153 - N	2697.829	2697.849			
20	269711154	269711154 - N	2697.829	2697.849			
21	269711155	269711155 - N	2697.829	2697.849	1.77	2.55	6.41 x 10 ⁻⁴
22	269711156	269711156 - N	2697.848	2697.832			
23	269711157	269711157 - N	2697.848	2697.832			
24	269711158	269711158 - N	2697.848	2697.832			
25	269711159	269711159 - N	2697.848	2697.832			
26	269711160	269711160 - N	2697.848	2697.832			
27	269711161	269711161 - N	2697.848	2697.832			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711135 - N	FPAX200256	0.9555					
269711136 - N	FPAX200256	0.9555					
269711137 - N	FPAX200256	0.9555					
269711138 - N	FPAX200256	0.9555					
269711139 - N	FPAX200256	0.9555					
269711140 - N	FPAX200256	0.9555	0.248	260	2.33	88	
269711141 - N	FPAX200256	0.9555					
269711142 - N	FPAX200256	0.9555					
269711143 - N	FPAX200256	0.9555					
269711144 - N	FPAX200256	0.9555					
269711145 - N	FPAX200256	0.9555					
269711146 - N	FPAX200256	0.9555					
269711147 - N	FPAX200256	0.9555					
269711148 - N	FPAX200256	0.9555					
269711149 - N	FPAX200256	0.9555					
269711150 - N	FPAX200256	0.9555	0.256	269	2.69	92	
269711151 - N	FPAX200256	0.9555					
269711152 - N	FPAX200256	0.9555					
269711153 - N	FPAX200256	0.9555					
269711154 - N	FPAX200256	0.9555					
269711155 - N	FPAX200256	0.9558					
269711156 - N	FPAX200256	0.9558					
269711157 - N	FPAX200256	0.9558					
269711158 - N	FPAX200256	0.9558					
269711159 - N	FPAX200256	0.9558					
269711160 - N	FPAX200256	0.9558	0.250	262	2.38	90	
269711161 - N	FPAX200256	0.9558					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711162	269711162 - N	2697.848	2697.832			
2	269711163	269711163 - N	2697.826	2697.846			
3	269711164	269711164 - N	2697.826	2697.846			
4	269711165	269711165 - N	2697.826	2697.846			
5	269711166	269711166 - N	2697.826	2697.846			
6	269711167	269711167 - N	2697.826	2697.846			
7	269711168	269711168 - N	2697.826	2697.846			
8	269711169	269711169 - N	2697.826	2697.846			
9	269711170	269711170 - N	2697.850	2697.830			
10	269711171	269711171 - N	2697.850	2697.830			
11	269711172	269711172 - N	2697.850	2697.830			
12	269711173	269711173 - N	2697.850	2697.830			
13	269711174	269711174 - N	2697.850	2697.830			
14	269711175	269711175 - N	2697.850	2697.830			
15	269711176	269711176 - N	2697.850	2697.830			
16	269711177	269711177 - N	2697.833	2697.851			
17	269711178	269711178 - N	2697.833	2697.851			
18	269711179	269711179 - N	2697.833	2697.851			
19	269711180	269711180 - N	2697.833	2697.851			
20	269711181	269711181 - N	2697.833	2697.851			
21	269711182	269711182 - N	2697.833	2697.851			
22	269711183	269711183 - N	2697.833	2697.851			
23	269711184	269711184 - N	2697.841	2697.827			
24	269711185	269711185 - N	2697.841	2697.827			
25	269711186	269711186 - N	2697.841	2697.827			
26	269711187	269711187 - N	2697.841	2697.827			
27	269711188	269711188 - N	2697.841	2697.827			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711162 - N	FPAX200256	0.9558					
269711163 - N	FPAX200256	0.9558					
269711164 - N	FPAX200256	0.9558					
269711165 - N	FPAX200256	0.9558					
269711166 - N	FPAX200256	0.9558					
269711167 - N	FPAX200256	0.9558					
269711168 - N	FPAX200256	0.9558					
269711169 - N	FPAX200256	0.9558					
269711170 - N	FPAX200256	0.9558	0.253	267	2.74	94	
269711171 - N	FPAX200256	0.9558					
269711172 - N	FPAX200256	0.9558					
269711173 - N	FPAX200256	0.9558					
269711174 - N	FPAX200256	0.9558					
269711175 - N	FPAX200256	0.9558					
269711176 - N	FPAX200256	0.9558					
269711177 - N	FPAX200256	0.9558					
269711178 - N	FPAX200256	0.9558					
269711179 - N	FPAX200256	0.9558					
269711180 - N	FPAX200256	0.9558	0.242	257	2.40	89	
269711181 - N	FPAX200256	0.9558					
269711182 - N	FPAX200256	0.9558					
269711183 - N	FPAX200256	0.9558					
269711184 - N	FPAX200256	0.9558					
269711185 - N	FPAX200256	0.9558					
269711186 - N	FPAX200256	0.9558					
269711187 - N	FPAX200256	0.9558					
269711188 - N	FPAX200256	0.9558					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711189	269711189 - N	2697.841	2697.827			
2	269711190	269711190 - N	2697.841	2697.827	1.36	2.32	6.48 x 10 ⁻⁴
3	269711191	269711191 - N	2697.835	2697.839			
4	269711192	269711192 - N	2697.835	2697.839			
5	269711193	269711193 - N	2697.835	2697.839			
6	269711194	269711194 - N	2697.835	2697.839			
7	269711195	269711195 - N	2697.835	2697.839			
8	269711196	269711196 - N	2697.835	2697.839			
9	269711197	269711197 - N	2697.835	2697.839			
10	269711198	269711198 - N	2697.847	2697.836			
11	269711199	269711199 - N	2697.847	2697.836			
12	269711200	269711200 - N	2697.847	2697.836			
13	269711201	269711201 - N	2697.847	2697.836			
14	269711202	269711202 - N	2697.847	2697.836			
15	269711203	269711203 - N	2697.847	2697.836			
16	269711204	269711204 - N	2697.847	2697.836			
17	269711205	269711205 - N	2697.837	2697.842			
18	269711206	269711206 - N	2697.837	2697.842			
19	269711207	269711207 - N	2697.837	2697.842			
20	269711208	269711208 - N	2697.837	2697.842			
21	269711209	269711209 - N	2697.837	2697.842			
22	269711210	269711210 - N	2697.837	2697.842			
23	269711211	269711211 - N	2697.837	2697.842			
24	269711212	269711212 - N	2697.844	2697.834			
25	269711213	269711213 - N	2697.844	2697.834			
26	269711214	269711214 - N	2697.844	2697.834			
27	269711215	269711215 - N	2697.844	2697.834			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711189 - N	FPAX200256	0.9558					
269711190 - N	27561	0.9553	0.255	266	2.76	95	
269711191 - N	27561	0.9553					
269711192 - N	27561	0.9553					
269711193 - N	27561	0.9553					
269711194 - N	27561	0.9553					
269711195 - N	27561	0.9553					
269711196 - N	27561	0.9553					
269711197 - N	27561	0.9553					
269711198 - N	27561	0.9553					
269711199 - N	27561	0.9553					
269711200 - N	27561	0.9553	0.247	259	2.43	91	
269711201 - N	27561	0.9553					
269711202 - N	27561	0.9553					
269711203 - N	27561	0.9553					
269711204 - N	27561	0.9553					
269711205 - N	27561	0.9553					
269711206 - N	27561	0.9553					
269711207 - N	27561	0.9553					
269711208 - N	27561	0.9553					
269711209 - N	27561	0.9553					
269711210 - N	27561	0.9553	0.257	264	2.71	93	
269711211 - N	27561	0.9553					
269711212 - N	27561	0.9553					
269711213 - N	27561	0.9553					
269711214 - N	27561	0.9553					
269711215 - N	27561	0.9553					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711216	269711216 - N	2697.844	2697.834			
2	269711217	269711217 - N	2697.844	2697.834			
3	269711218	269711218 - N	2697.844	2697.834			
4	269711219	269711219 - N	2697.831	2697.868			
5	269711220	269711220 - N	2697.831	2697.868			
6	269711221	269711221 - N	2697.831	2697.868			
7	269711222	269711222 - N	2697.831	2697.868			
8	269711223	269711223 - N	2697.831	2697.868			
9	269711224	269711224 - N	2697.831	2697.868			
10	269711225	269711225 - N	2697.831	2697.868	1.71	2.51	6.44 x 10 ⁻⁴
11	269711226	269711226 - N	2697.871	2697.838			
12	269711227	269711227 - N	2697.871	2697.838			
13	269711228	269711228 - N	2697.871	2697.838			
14	269711229	269711229 - N	2697.871	2697.838			
15	269711230	269711230 - N	2697.871	2697.838			
16	269711231	269711231 - N	2697.871	2697.838			
17	269711232	269711232 - N	2697.871	2697.838			
18	269711233	269711233 - N	2697.828	2697.876			
19	269711234	269711234 - N	2697.828	2697.876			
20	269711235	269711235 - N	2697.828	2697.876			
21	269711236	269711236 - N	2697.828	2697.876			
22	269711237	269711237 - N	2697.828	2697.876			
23	269711238	269711238 - N	2697.828	2697.876			
24	269711239	269711239 - N	2697.828	2697.876			
25	269711240	269711240 - N	2697.875	2697.855			
26	269711241	269711241 - N	2697.875	2697.855			
27	269711242	269711242 - N	2697.875	2697.855			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711216 - N	27561	0.9553					
269711217 - N	27561	0.9553					
269711218 - N	27561	0.9553					
269711219 - N	27561	0.9553					
269711220 - N	27561	0.9553	0.241	262	2.49	88	
269711221 - N	27561	0.9553					
269711222 - N	27561	0.9553					
269711223 - N	27561	0.9553					
269711224 - N	27561	0.9553					
269711225 - N	27561	0.9561					
269711226 - N	27561	0.9561					
269711227 - N	27561	0.9561					
269711228 - N	27561	0.9561					
269711229 - N	27561	0.9561					
269711230 - N	27561	0.9561	0.250	268	2.77	96	
269711231 - N	27561	0.9561					
269711232 - N	27561	0.9561					
269711233 - N	27561	0.9561					
269711234 - N	27561	0.9561					
269711235 - N	27561	0.9561					
269711236 - N	27561	0.9561					
269711237 - N	27561	0.9561					
269711238 - N	27561	0.9561					
269711239 - N	27561	0.9561					
269711240 - N	27561	0.9561	0.244	259	2.52	90	
269711241 - N	27561	0.9561					
269711242 - N	27561	0.9561					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711243	269711243 - N	2697.875	2697.855			
2	269711244	269711244 - N	2697.875	2697.855			
3	269711245	269711245 - N	2697.875	2697.855			
4	269711246	269711246 - N	2697.875	2697.855			
5	269711247	269711247 - N	2697.858	2697.872			
6	269711248	269711248 - N	2697.858	2697.872			
7	269711249	269711249 - N	2697.858	2697.872			
8	269711250	269711250 - N	2697.858	2697.872			
9	269711251	269711251 - N	2697.858	2697.872			
10	269711252	269711252 - N	2697.858	2697.872			
11	269711253	269711253 - N	2697.858	2697.872			
12	269711254	269711254 - N	2697.867	2697.852			
13	269711255	269711255 - N	2697.867	2697.852			
14	269711256	269711256 - N	2697.867	2697.852			
15	269711257	269711257 - N	2697.867	2697.852			
16	269711258	269711258 - N	2697.867	2697.852			
17	269711259	269711259 - N	2697.867	2697.852			
18	269711260	269711260 - N	2697.867	2697.852	1.44	2.39	6.69 x 10 ⁻⁴
19	269711261	269711261 - N	2697.860	2697.870			
20	269711262	269711262 - N	2697.860	2697.870			
21	269711263	269711263 - N	2697.860	2697.870			
22	269711264	269711264 - N	2697.860	2697.870			
23	269711265	269711265 - N	2697.860	2697.870			
24	269711266	269711266 - N	2697.860	2697.870			
25	269711267	269711267 - N	2697.860	2697.870			
26	269711268	269711268 - N	2697.873	2697.859			
27	269711269	269711269 - N	2697.873	2697.859			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711243 - N	27561	0.9561					
269711244 - N	27561	0.9561					
269711245 - N	27561	0.9561					
269711246 - N	27561	0.9561					
269711247 - N	27561	0.9561					
269711248 - N	27561	0.9561					
269711249 - N	27561	0.9561					
269711250 - N	27561	0.9561	0.247	266	2.70	94	
269711251 - N	27561	0.9561					
269711252 - N	27561	0.9561					
269711253 - N	27561	0.9561					
269711254 - N	27561	0.9561					
269711255 - N	27561	0.9561					
269711256 - N	27561	0.9561					
269711257 - N	27561	0.9561					
269711258 - N	27561	0.9561					
269711259 - N	27561	0.9561					
269711260 - N	27561	0.9556	0.240	256	2.56	92	
269711261 - N	27561	0.9556					
269711262 - N	27561	0.9556					
269711263 - N	27561	0.9556					
269711264 - N	27561	0.9556					
269711265 - N	27561	0.9556					
269711266 - N	27561	0.9556					
269711267 - N	27561	0.9556					
269711268 - N	27561	0.9556					
269711269 - N	27561	0.9556					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711270	269711270 - N	2697.873	2697.859			
2	269711271	269711271 - N	2697.873	2697.859			
3	269711272	269711272 - N	2697.873	2697.859			
4	269711273	269711273 - N	2697.873	2697.859			
5	269711274	269711274 - N	2697.873	2697.859			
6	269711275	269711275 - N	2697.856	2697.866			
7	269711276	269711276 - N	2697.856	2697.866			
8	269711277	269711277 - N	2697.856	2697.866			
9	269711278	269711278 - N	2697.856	2697.866			
10	269711279	269711279 - N	2697.856	2697.866			
11	269711280	269711280 - N	2697.856	2697.866			
12	269711281	269711281 - N	2697.856	2697.866			
13	269711282	269711282 - N	2697.877	2697.862			
14	269711283	269711283 - N	2697.877	2697.862			
15	269711284	269711284 - N	2697.877	2697.862			
16	269711285	269711285 - N	2697.877	2697.862			
17	269711286	269711286 - N	2697.877	2697.862			
18	269711287	269711287 - N	2697.877	2697.862			
19	269711288	269711288 - N	2697.877	2697.862			
20	269711289	269711289 - N	2697.853	2697.874			
21	269711290	269711290 - N	2697.853	2697.874			
22	269711291	269711291 - N	2697.853	2697.874			
23	269711292	269711292 - N	2697.853	2697.874			
24	269711293	269711293 - N	2697.853	2697.874			
25	269711294	269711294 - N	2697.853	2697.874			
26	269711295	269711295 - N	2697.853	2697.874	1.65	2.47	6.20 x 10 ⁻¹
27	269711296	269711296 - N	2697.869	2697.857			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711270 - N	27561	0.9556	0.253	269	2.61	95	
269711271 - N	27561	0.9556					
269711272 - N	27561	0.9556					
269711273 - N	27561	0.9556					
269711274 - N	27561	0.9556					
269711275 - N	27561	0.9556					
269711276 - N	27561	0.9556					
269711277 - N	27561	0.9556					
269711278 - N	27561	0.9556					
269711279 - N	27561	0.9556					
269711280 - N	27561	0.9556	0.245	258	2.27	89	
269711281 - N	27561	0.9556					
269711282 - N	27561	0.9556					
269711283 - N	27561	0.9556					
269711284 - N	27561	0.9556					
269711285 - N	27561	0.9556					
269711286 - N	27561	0.9556					
269711287 - N	27561	0.9556					
269711288 - N	27561	0.9556					
269711289 - N	27561	0.9556					
269711290 - N	27561	0.9556	0.256	267	2.67	96	
269711291 - N	27561	0.9556					
269711292 - N	27561	0.9556					
269711293 - N	27561	0.9556					
269711294 - N	27561	0.9556					
269711295 - N	27561	0.9558					
269711296 - N	27561	0.9558					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711297	269711297 - N	2697.869	2697.857			
2	269711298	269711298 - N	2697.869	2697.857			
3	269711299	269711299 - N	2697.869	2697.857			
4	269711300	269711300 - N	2697.869	2697.857			
5	269711301	269711301 - N	2697.869	2697.857			
6	269711302	269711302 - N	2697.869	2697.857			
7	269711303	269711303 - N	2697.854	2697.897			
8	269711304	269711304 - N	2697.854	2697.897			
9	269711305	269711305 - N	2697.854	2697.897			
10	269711306	269711306 - N	2697.854	2697.897			
11	269711307	269711307 - N	2697.854	2697.897			
12	269711308	269711308 - N	2697.854	2697.897			
13	269711309	269711309 - N	2697.854	2697.897			
14	269711310	269711310 - N	2697.878	2697.864			
15	269711311	269711311 - N	2697.878	2697.864			
16	269711312	269711312 - N	2697.878	2697.864			
17	269711313	269711313 - N	2697.878	2697.864			
18	269711314	269711314 - N	2697.878	2697.864			
19	269711315	269711315 - N	2697.878	2697.864			
20	269711316	269711316 - N	2697.878	2697.864			
21	269711317	269711317 - N	2697.863	2697.901			
22	269711318	269711318 - N	2697.863	2697.901			
23	269711319	269711319 - N	2697.863	2697.901			
24	269711320	269711320 - N	2697.863	2697.901			
25	269711321	269711321 - N	2697.863	2697.901			
26	269711322	269711322 - N	2697.863	2697.901			
27	269711323	269711323 - N	2697.863	2697.901			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.





Engineered Synthetic
Products, Inc.

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711297 - N	27561	0.9558					
269711298 - N	27561	0.9558					
269711299 - N	27561	0.9558					
269711300 - N	27561	0.9558	0.248	260	2.32	91	
269711301 - N	27561	0.9558					
269711302 - N	27561	0.9558					
269711303 - N	27561	0.9558					
269711304 - N	27561	0.9558					
269711305 - N	27561	0.9558					
269711306 - N	27561	0.9558					
269711307 - N	27561	0.9558					
269711308 - N	27561	0.9558					
269711309 - N	27561	0.9558					
269711310 - N	27561	0.9558	0.251	265	2.54	94	
269711311 - N	27561	0.9558					
269711312 - N	27561	0.9558					
269711313 - N	27561	0.9558					
269711314 - N	27561	0.9558					
269711315 - N	27561	0.9558					
269711316 - N	27561	0.9558					
269711317 - N	27561	0.9558					
269711318 - N	27561	0.9558					
269711319 - N	27561	0.9558					
269711320 - N	27561	0.9558	0.243	262	2.35	88	
269711321 - N	27561	0.9558					
269711322 - N	27561	0.9558					
269711323 - N	27561	0.9558					

CAMU
CLOSURE



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711324	269711324 - N	2697.888	2697.865			
2	269711325	269711325 - N	2697.888	2697.865			
3	269711326	269711326 - N	2697.888	2697.865			
4	269711327	269711327 - N	2697.888	2697.865			
5	269711328	269711328 - N	2697.888	2697.865			
6	269711329	269711329 - N	2697.888	2697.865			
7	269711330	269711330 - N	2697.888	2697.865	1.23	2.43	6.53 x 10 ⁻⁴
8	269711331	269711331 - N	2697.861	2697.886			
9	269711332	269711332 - N	2697.861	2697.886			
10	269711333	269711333 - N	2697.861	2697.886			
11	269711334	269711334 - N	2697.861	2697.886			
12	269711335	269711335 - N	2697.861	2697.886			
13	269711336	269711336 - N	2697.861	2697.886			
14	269711337	269711337 - N	2697.861	2697.886			
15	269711338	269711338 - N	2697.891	2697.879			
16	269711339	269711339 - N	2697.891	2697.879			
17	269711340	269711340 - N	2697.891	2697.879			
18	269711341	269711341 - N	2697.891	2697.879			
19	269711342	269711342 - N	2697.891	2697.879			
20	269711343	269711343 - N	2697.891	2697.879			
21	269711344	269711344 - N	2697.891	2697.879			
22	269711345	269711345 - N	2697.880	2697.884			
23	269711346	269711346 - N	2697.880	2697.884			
24	269711347	269711347 - N	2697.880	2697.884			
25	269711348	269711348 - N	2697.880	2697.884			
26	269711349	269711349 - N	2697.880	2697.884			
27	269711350	269711350 - N	2697.880	2697.884			

CAMU
CLOSURE

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711324 - N	27561	0.9558					
269711325 - N	27561	0.9558					
269711326 - N	27561	0.9558					
269711327 - N	27561	0.9558					
269711328 - N	27561	0.9558					
269711329 - N	27561	0.9558					
269711330 - N	27561	0.9552	0.249	268	2.50	92	
269711331 - N	27561	0.9552					
269711332 - N	27561	0.9552					
269711333 - N	27561	0.9552					
269711334 - N	27561	0.9552					
269711335 - N	27561	0.9552					
269711336 - N	27561	0.9552					
269711337 - N	27561	0.9552					
269711338 - N	27561	0.9552					
269711339 - N	27561	0.9552					
269711340 - N	27561	0.9552	0.246	260	2.44	90	
269711341 - N	27561	0.9552					
269711342 - N	27561	0.9552					
269711343 - N	27561	0.9552					
269711344 - N	27561	0.9552					
269711345 - N	27561	0.9552					
269711346 - N	27561	0.9552					
269711347 - N	27561	0.9552					
269711348 - N	27561	0.9552					
269711349 - N	27561	0.9552					
269711350 - N	27561	0.9552	0.252	264	2.57	95	

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711351	269711351 - N	2697.880	2697.884			
2	269711352	269711352 - N	2697.895	2697.881			
3	269711353	269711353 - N	2697.895	2697.881			
4	269711354	269711354 - N	2697.895	2697.881			
5	269711355	269711355 - N	2697.895	2697.881			
6	269711356	269711356 - N	2697.895	2697.881			
7	269711357	269711357 - N	2697.895	2697.881			
8	269711358	269711358 - N	2697.895	2697.881			
9	269711359	269711359 - N	2697.885	2697.890			
10	269711360	269711360 - N	2697.885	2697.890			
11	269711361	269711361 - N	2697.885	2697.890			
12	269711362	269711362 - N	2697.885	2697.890			
13	269711363	269711363 - N	2697.885	2697.890			
14	269711364	269711364 - N	2697.885	2697.890			
15	269711365	269711365 - N	2697.885	2697.890	1.59	2.78	6.27 x 10 ⁻⁴
16	269711366	269711366 - N	2697.889	2697.883			
17	269711367	269711367 - N	2697.889	2697.883			
18	269711368	269711368 - N	2697.889	2697.883			
19	269711369	269711369 - N	2697.889	2697.883			
20	269711370	269711370 - N	2697.889	2697.883			
21	269711371	269711371 - N	2697.889	2697.883			
22	269711372	269711372 - N	2697.889	2697.883			
23	269711373	269711373 - N	2697.882	2697.892			
24	269711374	269711374 - N	2697.882	2697.892			
25	269711375	269711375 - N	2697.882	2697.892			
26	269711376	269711376 - N	2697.882	2697.892			
27	269711377	269711377 - N	2697.882	2697.892			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711351 - N	27561	0.9552					
269711352 - N	27561	0.9552					
269711353 - N	27561	0.9552					
269711354 - N	27561	0.9552					
269711355 - N	27561	0.9552					
269711356 - N	27561	0.9552					
269711357 - N	27561	0.9552					
269711358 - N	27561	0.9552					
269711359 - N	27561	0.9552					
269711360 - N	27561	0.9552	0.248	257	2.36	89	
269711361 - N	27561	0.9552					
269711362 - N	27561	0.9552					
269711363 - N	27561	0.9552					
269711364 - N	27561	0.9552					
269711365 - N	27561	0.9562					
269711366 - N	27561	0.9562					
269711367 - N	27561	0.9562					
269711368 - N	27561	0.9562					
269711369 - N	27561	0.9562					
269711370 - N	27561	0.9562	0.255	267	2.62	93	
269711371 - N	27561	0.9562					
269711372 - N	27561	0.9562					
269711373 - N	27561	0.9562					
269711374 - N	27561	0.9562					
269711375 - N	27561	0.9562					
269711376 - N	27561	0.9562					
269711377 - N	27561	0.9562					

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**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711378	269711378 - N	2697.882	2697.892			
2	269711379	269711379 - N	2697.882	2697.892			
3	269711380	269711380 - N	2697.899	2697.887			
4	269711381	269711381 - N	2697.899	2697.887			
5	269711382	269711382 - N	2697.899	2697.887			
6	269711383	269711383 - N	2697.899	2697.887			
7	269711384	269711384 - N	2697.899	2697.887			
8	269711385	269711385 - N	2697.899	2697.887			
9	269711386	269711386 - N	2697.899	2697.887			
10	269711387	269711387 - N	2697.894	2697.902			
11	269711388	269711388 - N	2697.894	2697.902			
12	269711389	269711389 - N	2697.894	2697.902			
13	269711390	269711390 - N	2697.894	2697.902			
14	269711391	269711391 - N	2697.894	2697.902			
15	269711392	269711392 - N	2697.894	2697.902			
16	269711393	269711393 - N	2697.894	2697.902			
17	269711394	269711394 - N	2697.900	2697.896			
18	269711395	269711395 - N	2697.900	2697.896			
19	269711396	269711396 - N	2697.900	2697.896			
20	269711397	269711397 - N	2697.900	2697.896			
21	269711398	269711398 - N	2697.900	2697.896			
22	269711399	269711399 - N	2697.900	2697.896			
23	269711400	269711400 - N	2697.900	2697.896	1.28	2.04	6.49 x 10 ⁻⁴
24	269711401	269711401 - N	2697.893	2697.903			
25	269711402	269711402 - N	2697.893	2697.903			
26	269711403	269711403 - N	2697.893	2697.903			
27	269711404	269711404 - N	2697.893	2697.903			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711378 - N	27561	0.9562					
269711379 - N	27561	0.9562					
269711380 - N	27561	0.9562	0.241	259	2.24	91	
269711381 - N	27561	0.9562					
269711382 - N	27561	0.9562					
269711383 - N	27561	0.9562					
269711384 - N	27561	0.9562					
269711385 - N	27561	0.9562					
269711386 - N	27561	0.9562					
269711387 - N	27561	0.9562					
269711388 - N	27561	0.9562					
269711389 - N	27561	0.9562					
269711390 - N	27561	0.9562	0.257	263	2.60	96	
269711391 - N	27561	0.9562					
269711392 - N	27561	0.9562					
269711393 - N	27561	0.9562					
269711394 - N	27561	0.9562					
269711395 - N	27561	0.9562					
269711396 - N	27561	0.9562					
269711397 - N	27561	0.9562					
269711398 - N	27561	0.9562					
269711399 - N	27561	0.9562					
269711400 - N	27561	0.9533	0.244	256	2.28	88	
269711401 - N	27561	0.9533					
269711402 - N	27561	0.9533					
269711403 - N	27561	0.9533					
269711404 - N	27561	0.9533					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711405	269711405 - N	2697.893	2697.903			
2	269711406	269711406 - N	2697.893	2697.903			
3	269711407	269711407 - N	2697.893	2697.903			
4	269711408	269711408 - N	2697.912	2697.898			
5	269711409	269711409 - N	2697.912	2697.898			
6	269711410	269711410 - N	2697.912	2697.898			
7	269711411	269711411 - N	2697.912	2697.898			
8	269711412	269711412 - N	2697.912	2697.898			
9	269711413	269711413 - N	2697.912	2697.898			
10	269711414	269711414 - N	2697.912	2697.898			
11	269711415	269711415 - N	2697.904	2697.913			
12	269711416	269711416 - N	2697.904	2697.913			
13	269711417	269711417 - N	2697.904	2697.913			
14	269711418	269711418 - N	2697.904	2697.913			
15	269711419	269711419 - N	2697.904	2697.913			
16	269711420	269711420 - N	2697.904	2697.913			
17	269711421	269711421 - N	2697.904	2697.913			
18	269711422	269711422 - N	2697.915	2697.906			
19	269711423	269711423 - N	2697.915	2697.906			
20	269711424	269711424 - N	2697.915	2697.906			
21	269711425	269711425 - N	2697.915	2697.906			
22	269711426	269711426 - N	2697.915	2697.906			
23	269711427	269711427 - N	2697.915	2697.906			
24	269711428	269711428 - N	2697.915	2697.906			
25	269711429	269711429 - N	2697.905	2697.910			
26	269711430	269711430 - N	2697.905	2697.910			
27	269711431	269711431 - N	2697.905	2697.910			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711405 - N	27561	0.9533					
269711406 - N	27561	0.9533					
269711407 - N	27561	0.9533					
269711408 - N	27561	0.9533					
269711409 - N	27561	0.9533					
269711410 - N	27564	0.9533	0.253	265	2.53	94	
269711411 - N	27564	0.9533					
269711412 - N	27564	0.9533					
269711413 - N	27564	0.9533					
269711414 - N	27564	0.9533					
269711415 - N	27564	0.9533					
269711416 - N	27564	0.9533					
269711417 - N	27564	0.9533					
269711418 - N	27564	0.9533					
269711419 - N	27564	0.9533					
269711420 - N	27564	0.9533	0.246	258	2.31	92	
269711421 - N	27564	0.9533					
269711422 - N	27564	0.9533					
269711423 - N	27564	0.9533					
269711424 - N	27564	0.9533					
269711425 - N	27564	0.9533					
269711426 - N	27564	0.9533					
269711427 - N	27564	0.9533					
269711428 - N	27564	0.9533					
269711429 - N	27564	0.9533					
269711430 - N	27564	0.9533	0.256	269	2.50	95	
269711431 - N	27564	0.9533					

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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711432	269711432 - N	2697.905	2697.910			
2	269711433	269711433 - N	2697.905	2697.910			
3	269711434	269711434 - N	2697.905	2697.910			
4	269711435	269711435 - N	2697.905	2697.910	1.51	2.73	6.32 x 10 ⁻¹
5	269711436	269711436 - N	2697.914	2697.907			
6	269711437	269711437 - N	2697.914	2697.907			
7	269711438	269711438 - N	2697.914	2697.907			
8	269711439	269711439 - N	2697.914	2697.907			
9	269711440	269711440 - N	2697.914	2697.907			
10	269711441	269711441 - N	2697.914	2697.907			
11	269711442	269711442 - N	2697.914	2697.907			
12	269711443	269711443 - N	2697.908	2697.920			
13	269711444	269711444 - N	2697.908	2697.920			
14	269711445	269711445 - N	2697.908	2697.920			
15	269711446	269711446 - N	2697.908	2697.920			
16	269711447	269711447 - N	2697.908	2697.920			
17	269711448	269711448 - N	2697.908	2697.920			
18	269711449	269711449 - N	2697.908	2697.920			
19	269711450	269711450 - N	2697.917	2697.916			
20	269711451	269711451 - N	2697.917	2697.916			
21	269711452	269711452 - N	2697.917	2697.916			
22	269711453	269711453 - N	2697.917	2697.916			
23	269711454	269711454 - N	2697.917	2697.916			
24	269711455	269711455 - N	2697.917	2697.916			
25	269711456	269711456 - N	2697.917	2697.916			
26	269711457	269711457 - N	2697.911	2697.922			
27	269711458	269711458 - N	2697.911	2697.922			

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* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711432 - N	27564	0.9533					
269711433 - N	27564	0.9533					
269711434 - N	27564	0.9533					
269711435 - N	27564	0.9538					
269711436 - N	27564	0.9538					
269711437 - N	27564	0.9538					
269711438 - N	27564	0.9538					
269711439 - N	27564	0.9538					
269711440 - N	27564	0.9538	0.240	261	2.34	89	
269711441 - N	27564	0.9538					
269711442 - N	27564	0.9538					
269711443 - N	27564	0.9538					
269711444 - N	27564	0.9538					
269711445 - N	27564	0.9538					
269711446 - N	27564	0.9538					
269711447 - N	27564	0.9538					
269711448 - N	27564	0.9538					
269711449 - N	27564	0.9538					
269711450 - N	27564	0.9538	0.252	266	2.47	93	
269711451 - N	27564	0.9538					
269711452 - N	27564	0.9538					
269711453 - N	27564	0.9538					
269711454 - N	27564	0.9538					
269711455 - N	27564	0.9538					
269711456 - N	27564	0.9538					
269711457 - N	27564	0.9538					
269711458 - N	27564	0.9538					

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**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

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Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711459	269711459 - N	2697.911	2697.922			
2	269711460	269711460 - N	2697.911	2697.922			
3	269711461	269711461 - N	2697.911	2697.922			
4	269711462	269711462 - N	2697.911	2697.922			
5	269711463	269711463 - N	2697.911	2697.922			
6	269711464	269711464 - N	2697.927	2697.909			
7	269711465	269711465 - N	2697.927	2697.909			
8	269711466	269711466 - N	2697.927	2697.909			
9	269711467	269711467 - N	2697.927	2697.909			
10	269711468	269711468 - N	2697.927	2697.909			
11	269711469	269711469 - N	2697.927	2697.909			
12	269711470	269711470 - N	2697.927	2697.909	1.33	2.11	6.45 x 10 ⁻⁴
13	269711471	269711471 - N	2697.924	2697.928			
14	269711472	269711472 - N	2697.924	2697.928			
15	269711473	269711473 - N	2697.924	2697.928			
16	269711474	269711474 - N	2697.924	2697.928			
17	269711475	269711475 - N	2697.924	2697.928			
18	269711476	269711476 - N	2697.924	2697.928			
19	269711477	269711477 - N	2697.924	2697.928			
20	269711478	269711478 - N	2697.929	2697.919			
21	269711479	269711479 - N	2697.929	2697.919			
22	269711480	269711480 - N	2697.929	2697.919			
23	269711481	269711481 - N	2697.929	2697.919			
24	269711482	269711482 - N	2697.929	2697.919			
25	269711483	269711483 - N	2697.929	2697.919			
26	269711484	269711484 - N	2697.929	2697.919			
27	269711485	269711485 - N	2697.918	2697.926			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711459 - N	27564	0.9538					
269711460 - N	27564	0.9538	0.243	263	2.38	91	
269711461 - N	27564	0.9538					
269711462 - N	27564	0.9538					
269711463 - N	27564	0.9538					
269711464 - N	27564	0.9538					
269711465 - N	27564	0.9538					
269711466 - N	27564	0.9538					
269711467 - N	27564	0.9538					
269711468 - N	27564	0.9538					
269711469 - N	27564	0.9538					
269711470 - N	27564	0.9535	0.250	268	2.43	96	
269711471 - N	27564	0.9535					
269711472 - N	27564	0.9535					
269711473 - N	27564	0.9535					
269711474 - N	27564	0.9535					
269711475 - N	27564	0.9535					
269711476 - N	27564	0.9535					
269711477 - N	27564	0.9535					
269711478 - N	27564	0.9535					
269711479 - N	27564	0.9535					
269711480 - N	27564	0.9535	0.247	260	2.30	90	
269711481 - N	27564	0.9535					
269711482 - N	27564	0.9535					
269711483 - N	27564	0.9535					
269711484 - N	27564	0.9535					
269711485 - N	27564	0.9535					

CAMU
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Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711486	269711486 - N	2697.918	2697.926			
2	269711487	269711487 - N	2697.918	2697.926			
3	269711488	269711488 - N	2697.918	2697.926			
4	269711489	269711489 - N	2697.918	2697.926			
5	269711490	269711490 - N	2697.918	2697.926			
6	269711491	269711491 - N	2697.918	2697.926			
7	269711492	269711492 - N	2697.932	2697.921			
8	269711493	269711493 - N	2697.932	2697.921			
9	269711494	269711494 - N	2697.932	2697.921			
10	269711495	269711495 - N	2697.932	2697.921			
11	269711496	269711496 - N	2697.932	2697.921			
12	269711497	269711497 - N	2697.932	2697.921			
13	269711498	269711498 - N	2697.932	2697.921			
14	269711499	269711499 - N	2697.925	2697.931			
15	269711500	269711500 - N	2697.925	2697.931			
16	269711501	269711501 - N	2697.925	2697.931			
17	269711502	269711502 - N	2697.925	2697.931			
18	269711503	269711503 - N	2697.925	2697.931			
19	269711504	269711504 - N	2697.925	2697.931			
20	269711505	269711505 - N	2697.925	2697.931	1.56	2.67	6.38 x 10 ⁻⁴
21	269711506	269711506 - N	2697.939	2697.923			
22	269711507	269711507 - N	2697.939	2697.923			
23	269711508	269711508 - N	2697.939	2697.923			
24	269711509	269711509 - N	2697.939	2697.923			
25	269711510	269711510 - N	2697.939	2697.923			
26	269711511	269711511 - N	2697.939	2697.923			
27	269711512	269711512 - N	2697.939	2697.923			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711486 - N	27564	0.9535					
269711487 - N	27564	0.9535					
269711488 - N	27564	0.9535					
269711489 - N	27564	0.9535					
269711490 - N	27564	0.9535	0.254	264	2.51	94	
269711491 - N	27564	0.9535					
269711492 - N	27564	0.9535					
269711493 - N	27564	0.9535					
269711494 - N	27564	0.9535					
269711495 - N	27564	0.9535					
269711496 - N	27564	0.9535					
269711497 - N	27564	0.9535					
269711498 - N	27564	0.9535					
269711499 - N	27564	0.9535					
269711500 - N	27564	0.9535	0.244	256	2.34	88	
269711501 - N	27564	0.9535					
269711502 - N	27564	0.9535					
269711503 - N	27564	0.9535					
269711504 - N	27564	0.9535					
269711505 - N	27564	0.9539					
269711506 - N	27564	0.9539					
269711507 - N	27564	0.9539					
269711508 - N	27564	0.9539					
269711509 - N	27564	0.9539					
269711510 - N	27564	0.9539	0.257	262	2.56	92	
269711511 - N	27564	0.9539					
269711512 - N	27564	0.9539					

BMI-S



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711513	269711513 - N	2697.930	2697.942			
2	269711514	269711514 - N	2697.930	2697.942			
3	269711515	269711515 - N	2697.930	2697.942			
4	269711516	269711516 - N	2697.930	2697.942			
5	269711517	269711517 - N	2697.930	2697.942			
6	269711518	269711518 - N	2697.930	2697.942			
7	269711519	269711519 - N	2697.930	2697.942			
8	269711520	269711520 - N	2697.944	2697.934			
9	269711521	269711521 - N	2697.944	2697.934			
10	269711522	269711522 - N	2697.944	2697.934			
11	269711523	269711523 - N	2697.944	2697.934			
12	269711524	269711524 - N	2697.944	2697.934			
13	269711525	269711525 - N	2697.944	2697.934			
14	269711526	269711526 - N	2697.944	2697.934			
15	269711527	269711527 - N	2697.935	2697.945			
16	269711528	269711528 - N	2697.935	2697.945			
17	269711529	269711529 - N	2697.935	2697.945			
18	269711530	269711530 - N	2697.935	2697.945			
19	269711531	269711531 - N	2697.935	2697.945			
20	269711532	269711532 - N	2697.935	2697.945			
21	269711533	269711533 - N	2697.935	2697.945			
22	269711534	269711534 - N	2697.941	2697.937			
23	269711535	269711535 - N	2697.941	2697.937			
24	269711536	269711536 - N	2697.941	2697.937			
25	269711537	269711537 - N	2697.941	2697.937			
26	269711538	269711538 - N	2697.941	2697.937			
27	269711539	269711539 - N	2697.941	2697.937			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711513 - N	27564	0.9539					
269711514 - N	27564	0.9539					
269711515 - N	27564	0.9539					
269711516 - N	27564	0.9539					
269711517 - N	27564	0.9539					
269711518 - N	27564	0.9539					
269711519 - N	27564	0.9539					
269711520 - N	27564	0.9539	0.241	258	2.26	90	
269711521 - N	27564	0.9539					
269711522 - N	27564	0.9539					
269711523 - N	27564	0.9539					
269711524 - N	27564	0.9539					
269711525 - N	27564	0.9539					
269711526 - N	27564	0.9539					
269711527 - N	27564	0.9539					
269711528 - N	27564	0.9539					
269711529 - N	27564	0.9539					
269711530 - N	27564	0.9539	0.253	267	2.59	95	
269711531 - N	27564	0.9539					
269711532 - N	27564	0.9539					
269711533 - N	27564	0.9539					
269711534 - N	27564	0.9539					
269711535 - N	27564	0.9539					
269711536 - N	27564	0.9539					
269711537 - N	27564	0.9539					
269711538 - N	27564	0.9539					
269711539 - N	27564	0.9539					

BMI-S



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711540	269711540 - N	2697.941	2697.937	1.38	2.18	6.62 x 10 ⁻⁴
2	269711541	269711541 - N	2697.933	2697.948			
3	269711542	269711542 - N	2697.933	2697.948			
4	269711543	269711543 - N	2697.933	2697.948			
5	269711544	269711544 - N	2697.933	2697.948			
6	269711545	269711545 - N	2697.933	2697.948			
7	269711546	269711546 - N	2697.933	2697.948			
8	269711547	269711547 - N	2697.933	2697.948			
9	269711548	269711548 - N	2697.950	2697.936			
10	269711549	269711549 - N	2697.950	2697.936			
11	269711550	269711550 - N	2697.950	2697.936			
12	269711551	269711551 - N	2697.950	2697.936			
13	269711552	269711552 - N	2697.950	2697.936			
14	269711553	269711553 - N	2697.950	2697.936			
15	269711554	269711554 - N	2697.950	2697.936			
16	269711555	269711555 - N	2697.943	2697.954			
17	269711556	269711556 - N	2697.943	2697.954			
18	269711557	269711557 - N	2697.943	2697.954			
19	269711558	269711558 - N	2697.943	2697.954			
20	269711559	269711559 - N	2697.943	2697.954			
21	269711560	269711560 - N	2697.943	2697.954			
22	269711561	269711561 - N	2697.943	2697.954			
23	269711562	269711562 - N	2697.947	2697.951			
24	269711563	269711563 - N	2697.947	2697.951			
25	269711564	269711564 - N	2697.947	2697.951			
26	269711565	269711565 - N	2697.947	2697.951			
27	269711566	269711566 - N	2697.947	2697.951			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.





Engineered Synthetic
Products, Inc.

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711540 - N	27564	0.9532	0.245	260	2.23	93	
269711541 - N	27564	0.9532					
269711542 - N	27564	0.9532					
269711543 - N	27564	0.9532					
269711544 - N	27564	0.9532					
269711545 - N	27564	0.9532					
269711546 - N	27564	0.9532					
269711547 - N	27564	0.9532					
269711548 - N	27564	0.9532					
269711549 - N	27564	0.9532					
BMI-S 269711550 - N	27564	0.9532	0.250	264	2.67	96	
269711551 - N	27564	0.9532					
269711552 - N	27564	0.9532					
269711553 - N	27564	0.9532					
269711554 - N	27564	0.9532					
269711555 - N	27564	0.9532					
269711556 - N	27564	0.9532					
269711557 - N	27564	0.9532					
269711558 - N	27564	0.9532					
269711559 - N	27564	0.9532					
269711560 - N	27564	0.9532	0.242	262	2.32	91	
269711561 - N	27564	0.9532					
269711562 - N	27564	0.9532					
269711563 - N	27564	0.9532					
269711564 - N	27564	0.9532					
269711565 - N	27564	0.9532					
269711566 - N	27564	0.9532					



Product : TN270-2-6**Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711567	269711567 - N	2697.947	2697.951			
2	269711568	269711568 - N	2697.947	2697.951			
3	269711569	269711569 - N	2697.938	2697.959			
4	269711570	269711570 - N	2697.938	2697.959			
5	269711571	269711571 - N	2697.938	2697.959			
6	269711572	269711572 - N	2697.938	2697.959			
7	269711573	269711573 - N	2697.938	2697.959			
8	269711574	269711574 - N	2697.938	2697.959			
9	269711575	269711575 - N	2697.938	2697.959	1.46	2.54	6.43 x 10 ⁻¹
10	269711576	269711576 - N	2697.956	2697.952			
11	269711577	269711577 - N	2697.956	2697.952			
12	269711578	269711578 - N	2697.956	2697.952			
13	269711579	269711579 - N	2697.956	2697.952			
14	269711580	269711580 - N	2697.956	2697.952			
15	269711581	269711581 - N	2697.956	2697.952			
16	269711582	269711582 - N	2697.956	2697.952			
17	269711583	269711583 - N	2697.940	2697.963			
18	269711584	269711584 - N	2697.940	2697.963			
19	269711585	269711585 - N	2697.940	2697.963			
20	269711586	269711586 - N	2697.940	2697.963			
21	269711587	269711587 - N	2697.940	2697.963			
22	269711588	269711588 - N	2697.940	2697.963			
23	269711589	269711589 - N	2697.940	2697.963			
24	269711590	269711590 - N	2697.955	2697.953			
25	269711591	269711591 - N	2697.955	2697.953			
26	269711592	269711592 - N	2697.955	2697.953			
27	269711593	269711593 - N	2697.955	2697.953			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711567 - N	27564	0.9532					
269711568 - N	27564	0.9532					
269711569 - N	27564	0.9532					
269711570 - N	27564	0.9532	0.255	269	2.60	94	
269711571 - N	27564	0.9532					
269711572 - N	27564	0.9532					
269711573 - N	27564	0.9532					
269711574 - N	27564	0.9532					
269711575 - N	27564	0.9537					
269711576 - N	27564	0.9537					
269711577 - N	27564	0.9537					
269711578 - N	27564	0.9537					
269711579 - N	27564	0.9537					
269711580 - N	27564	0.9537	0.248	259	2.38	89	
269711581 - N	27564	0.9537					
269711582 - N	27564	0.9537					
269711583 - N	27564	0.9537					
269711584 - N	27564	0.9537					
269711585 - N	27564	0.9537					
269711586 - N	27564	0.9537					
269711587 - N	27564	0.9537					
269711588 - N	27564	0.9537					
269711589 - N	27564	0.9537					
269711590 - N	27564	0.9537	0.251	266	2.53	92	
269711591 - N	27564	0.9537					
269711592 - N	27564	0.9537					
269711593 - N	27564	0.9537					

BMI-S



Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711594	269711594 - N	2697.955	2697.953			
2	269711595	269711595 - N	2697.955	2697.953			
3	269711596	269711596 - N	2697.955	2697.953			
4	269711597	269711597 - N	2697.949	2697.946			
5	269711598	269711598 - N	2697.949	2697.946			
6	269711599	269711599 - N	2697.949	2697.946			
7	269711600	269711600 - N	2697.949	2697.946			
8	269711601	269711601 - N	2697.949	2697.946			
9	269711602	269711602 - N	2697.949	2697.946			
10	269711603	269711603 - N	2697.949	2697.946			
11	269711604	269711604 - N	2697.961	2697.957			
12	269711605	269711605 - N	2697.961	2697.957			
13	269711606	269711606 - N	2697.961	2697.957			
14	269711607	269711607 - N	2697.961	2697.957			
15	269711608	269711608 - N	2697.961	2697.957			
16	269711609	269711609 - N	2697.961	2697.957			
17	269711610	269711610 - N	2697.961	2697.957	1.27	2.22	6.68 x 10 ⁻⁴
18	269711611	269711611 - N	2697.958	2697.964			
19	269711612	269711612 - N	2697.958	2697.964			
20	269711613	269711613 - N	2697.958	2697.964			
21	269711614	269711614 - N	2697.958	2697.964			
22	269711615	269711615 - N	2697.958	2697.964			
23	269711616	269711616 - N	2697.958	2697.964			
24	269711617	269711617 - N	2697.958	2697.964			
25	269711618	269711618 - N	2697.965	2697.960			
26	269711619	269711619 - N	2697.965	2697.960			
27	269711620	269711620 - N	2697.965	2697.960			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6**
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711594 - N	27564	0.9537					
269711595 - N	27564	0.9537					
269711596 - N	27564	0.9537					
269711597 - N	27564	0.9537					
269711598 - N	27564	0.9537					
269711599 - N	27564	0.9537					
269711600 - N	27564	0.9537	0.246	261	2.24	88	
269711601 - N	27564	0.9537					
269711602 - N	27564	0.9537					
269711603 - N	27564	0.9537					
269711604 - N	27564	0.9537					
269711605 - N	27564	0.9537					
269711606 - N	27564	0.9537					
269711607 - N	27564	0.9537					
269711608 - N	27564	0.9537					
269711609 - N	27564	0.9537					
269711610 - N	27564	0.9534	0.256	265	2.76	95	
269711611 - N	27564	0.9534					
269711612 - N	27564	0.9534					
269711613 - N	27564	0.9534					
269711614 - N	27564	0.9534					
269711615 - N	27564	0.9534					
269711616 - N	27564	0.9534					
269711617 - N	27564	0.9534					
269711618 - N	27564	0.9534					
269711619 - N	27564	0.9534					
269711620 - N	27564	0.9534	0.243	257	2.29	91	

BMI-S



SKAPS Industries**Engineered Synthetic
Products, Inc.****Product : TN270-2-6****Project : Landwell/Basic Remediation, NV**

We, the Geocomposite manufacturer, hereby certify the following for the material delivered to the above referenced project :

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity* (m ² /sec)
			Top	Bottom	Minimum	Average	
1	269711621	269711621 - N	2697.965	2697.960			
2	269711622	269711622 - N	2697.965	2697.960			
3	269711623	269711623 - N	2697.965	2697.960			
4	269711624	269711624 - N	2697.965	2697.960			
5	269711625	269711625 - N	2697.962	2697.966			

* Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.1 and a confining pressure of 300 psf between sand & liner after 24 hours.



SKAPS Industries**Engineered Synthetic
Products, Inc.**

Product : TN270-2-6
Project : Landwell/Basic Remediation, NV

We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

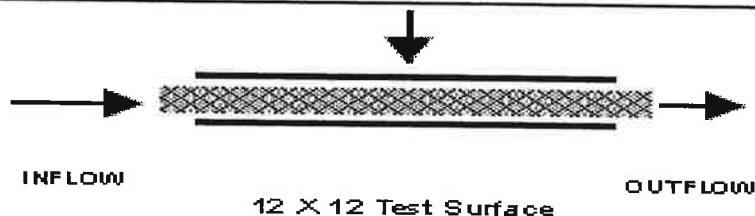
Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft ²)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m ² /sec)
269711621 - N	27564	0.9534					
269711622 - N	27564	0.9534					
269711623 - N	27564	0.9534					
269711624 - N	27564	0.9534					
269711625 - N	27564	0.9534					

BMI-S



Client: Environmental Specialties International, Inc.
Project: Landwell/Basic Remediation, NV
Product: TN270-2-6

Job # 2697

Test Configuration:**Test Information:**

Boundary Conditions: Sand
Geocomposite
Liner

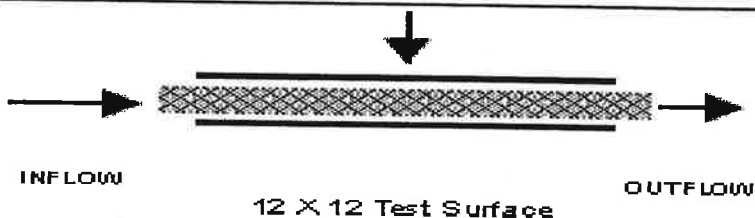
Normal Load: 300 psf
Gradient: 0.1 ft
Seating Time: 24 hours
Flow Direction: MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m ² /sec
			24 hours
269710770	300	0.1	6.19 x 10 ⁻⁴
269710805			6.68 x 10 ⁻⁴
269710840			6.22 x 10 ⁻⁴
269710875			6.63 x 10 ⁻⁴
269710910			6.27 x 10 ⁻⁴
269710945			6.58 x 10 ⁻⁴
269710980			6.18 x 10 ⁻⁴
269711015			6.31 x 10 ⁻⁴
269711050			6.54 x 10 ⁻⁴
269711085			6.35 x 10 ⁻⁴
269711120			6.51 x 10 ⁻⁴
269711155			6.41 x 10 ⁻⁴

Client: Environmental Specialties International, Inc.
Project: Landwell/Basic Remediation, NV
Product: TN270-2-6

Job # 2697

Test Configuration:**Test Information:**

Boundary Conditions: Sand
Geocomposite
Liner

Normal Load: 300 psf
Gradient: 0.1 ft
Seating Time: 24 hours
Flow Direction: MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m ² /sec
			24 hours
269711190	300	0.1	6.48×10^{-4}
269711225			6.44×10^{-4}
269711260			6.69×10^{-4}
269711295			6.20×10^{-4}
269711330			6.53×10^{-4}
269711365			6.27×10^{-4}
269711400			6.49×10^{-4}
269711435			6.32×10^{-4}
269711470			6.45×10^{-4}
269711505			6.38×10^{-4}
269711540			6.62×10^{-4}
269711575			6.43×10^{-4}
269711610			6.68×10^{-4}



POLYETHYLENE RESIN CERTIFICATION

Customer Name :
Project Name :
Geocomposite Manufacturer :
Geocomposite Production Plant :
Geocomposite Brand Name :

Environmental Specialties International, Inc.
Landwell/Basic Remediation, NV
SKAPS Industries
Commerce, GA
TN270-2-6

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
Matrix Polymers	Formosa, TX	HDPE	FPAX950119	Density	ASTM D 1505	gm/cc	0.950	0.950
				Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.05	0.06
			FPAX200256	Density	ASTM D 1505	gm/cc	0.950	0.950
New South Polymers Inc	Chevron, TX		26676-15	Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.05	0.06
				Density	ASTM D 1505	gm/cc	0.949	0.949
			27561	Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.15	0.15
				Density	ASTM D 1505	gm/cc	0.950	0.950
			27561	Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.40	0.36
				Density	ASTM D 1505	gm/cc	0.948	0.948
				Melt Flow Index	ASTM D 1238 ^(a)	gm/10 min	0.42	0.40

(a) Condition 190/2.16

* Data from SKAPS Quality Control





Engineered Synthetic
Products, Inc.

Product : TN270-2-6

Project : Landwell/Basic Remediation, NV

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	MULLEN psi	AOS us sieve	PERM- ITY sec ⁻¹
269710770	2697.739	6.23	162	66	179	79	71	86	98	330	70	1.76
	2697.726	6.54	165	74	175	81	75	81	100	332	70	1.76
269710805	2697.717	6.65	168	72	180	85	78	88	96	339	70	1.76
	2697.738	6.23	162	66	179	79	71	86	98	330	70	1.76
269710840	2697.740	6.38	164	75	173	82	80	89	95	335	70	1.76
	2697.728	6.54	165	74	175	81	75	81	100	332	70	1.76
269710875	2697.744	6.38	164	75	173	82	80	89	95	335	70	1.76
	2697.758	6.34	161	73	174	78	76	84	97	338	70	1.82
269710910	2697.766	6.20	168	70	171	81	74	82	99	333	70	1.82
	2697.750	6.61	166	71	170	85	76	84	97	338	70	1.82
269710945	2697.748	6.45	169	69	177	75	80	89	95	335	70	1.76
	2697.789	6.64	164	68	175	77	72	90	100	331	70	1.82
269710980	2697.787	6.64	164	68	175	77	72	90	100	331	70	1.82
	2697.781	6.42	170	72	179	79	72	90	100	331	70	1.82
269711015	2697.776	6.57	162	65	173	84	79	87	96	336	70	1.82
	2697.788	6.64	164	68	175	77	72	90	100	331	70	1.82
269711050	2697.816	6.41	168	74	171	79	70	88	97	332	70	1.79
	2697.798	6.25	161	66	172	75	77	85	98	339	70	1.82
269711085	2697.807	6.28	165	71	179	85	75	81	95	334	70	1.79
	2697.814	6.54	160	69	173	83	70	88	97	332	70	1.79



Engineered Synthetic
Products, Inc.

Product : TN270-2-6

Project : Landwell/Basic Remediation, NV

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	MULLEN psi	AOS us sieve	PERM- ITY sec ⁻¹
269711120	2697.818	6.41	168	74	171	79	70	88	97	332	70	1.79
	2697.803	6.60	167	73	177	80	75	81	95	334	70	1.79
269711155	2697.829	6.57	166	70	178	76	78	83	99	337	70	1.79
	2697.849	6.59	167	73	179	75	76	80	100	335	70	1.79
269711190	2697.841	6.45	165	75	175	82	76	80	100	335	70	1.79
	2697.827	6.57	166	70	178	76	78	83	99	337	70	1.79
269711225	2697.831	6.22	169	72	180	84	73	86	96	340	70	1.79
	2697.868	6.44	170	74	174	79	71	89	95	331	70	1.75
269711260	2697.867	6.44	170	74	174	79	71	89	95	331	70	1.75
	2697.852	6.70	161	68	173	80	79	84	98	333	70	1.75
269711295	2697.853	6.70	161	68	173	80	79	84	98	333	70	1.75
	2697.874	6.62	163	69	177	81	74	87	99	338	70	1.75
269711330	2697.888	6.21	162	70	178	78	80	82	97	336	70	1.75
	2697.865	6.44	170	74	174	79	71	89	95	331	70	1.75
269711365	2697.885	6.21	162	70	178	78	80	82	97	336	70	1.75
	2697.890	6.33	167	75	175	83	72	85	100	330	70	1.75
269711400	2697.900	6.55	161	73	179	75	77	88	98	334	70	1.81
	2697.896	6.69	164	65	171	80	72	85	100	330	70	1.75
269711435	2697.905	6.40	168	68	176	84	77	88	98	334	70	1.81
	2697.910	6.27	166	71	173	77	75	90	95	339	70	1.81



Engineered Synthetic
Products, Inc.

Product : TN270-2-6


Project : Landwell/Basic Remediation, NV

We, the Geocomposite Manufacturer, hereby certify the following for the material delivered to the above referenced project :

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	MULLEN psi	AOS us sieve	PERM- ITY sec ⁻¹
269711470	2697.927	6.61	165	74	175	85	70	83	99	332	70	1.81
	2697.909	6.40	168	68	176	84	77	88	98	334	70	1.81
269711505	2697.925	6.61	165	74	175	85	70	83	99	332	70	1.81
	2697.931	6.57	167	72	180	76	78	81	97	337	70	1.81
269711540	2697.941	6.68	169	67	174	78	74	86	100	335	70	1.81
	2697.937	6.30	162	70	177	83	78	81	97	337	70	1.81
269711575	2697.938	6.30	162	70	177	83	78	81	97	337	70	1.81
	2697.959	6.54	166	73	179	76	71	84	98	340	70	1.77
269711610	2697.961	6.30	168	68	173	82	80	89	95	332	70	1.77
	2697.957	6.54	166	73	179	76	71	84	98	340	70	1.77



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	TBD
Submittal Summary:	Remaining 270-2-6 Geocomposite MQC Certificates for BMI-North, CAMU, and BMI South Closures
Submittal Number:	02773-004G
Specification Section:	Section 02773-2, Part 1.05, Subpart B
Drawing Number (s):	8, 10, 14, 16, 19, 21, 23, 25, 27, 29, 31, 33, 35-36, 38-45
Page Number:	02773-2
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	12/11/2008

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

<input checked="" type="checkbox"/> No Exception Taken	<input type="checkbox"/> Correct As Noted
<input type="checkbox"/> Revise And Resubmit	<input type="checkbox"/> Submit Specified Item <input type="checkbox"/> Rejected

The review of these drawings is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications nor departures therefrom, nor shall they relieve the contractor from responsibility for all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing the work in a safe manner.

Checked By  Date 1/5/09
BRC Initials

BASIC REMEDIATION COMPANY

APPENDIX C

Earthworks

APPENDIX C-1

Particle Size Analysis, Atterberg Limits, Soil
Classification, and Modified Proctor Test Results



Excel Geotechnical Testing, Inc.

"Excellence in Testing"

941 Forrest Street, Roswell, Georgia 30075

Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRC - CAMU

Project No: 327

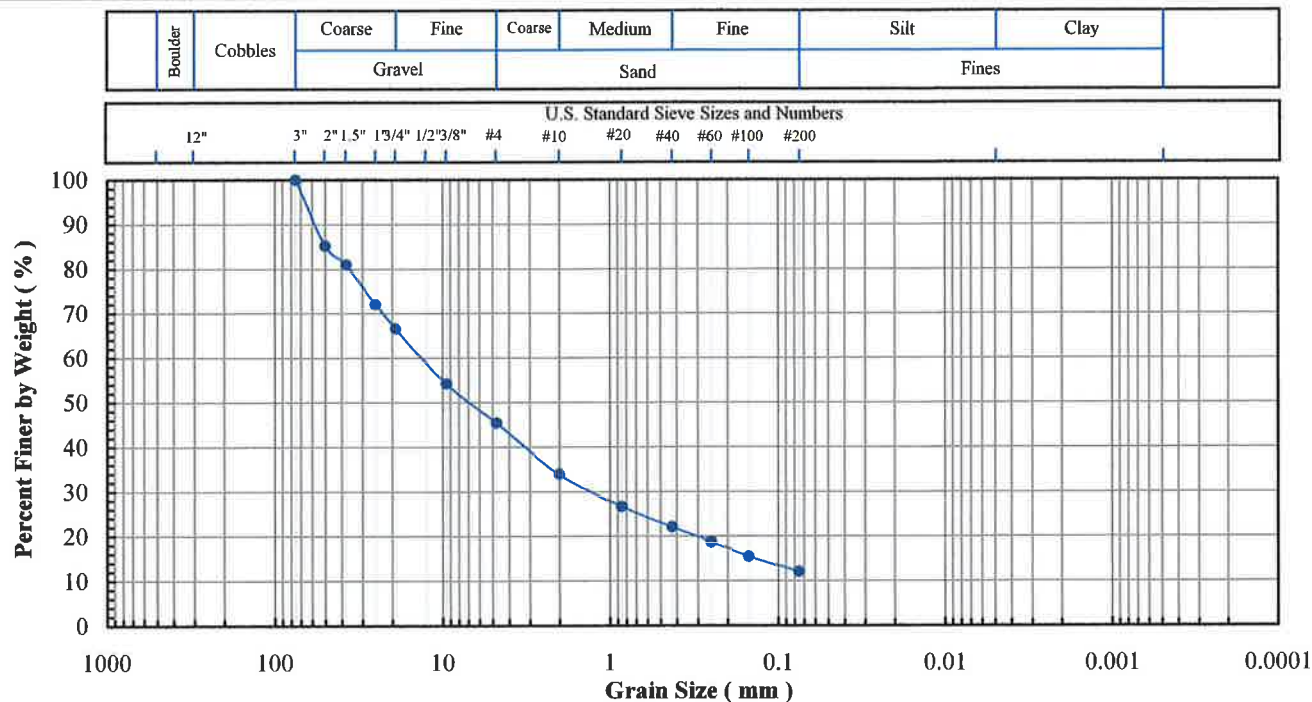
Client Sample ID: CS-06

Lab Sample No: H057

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



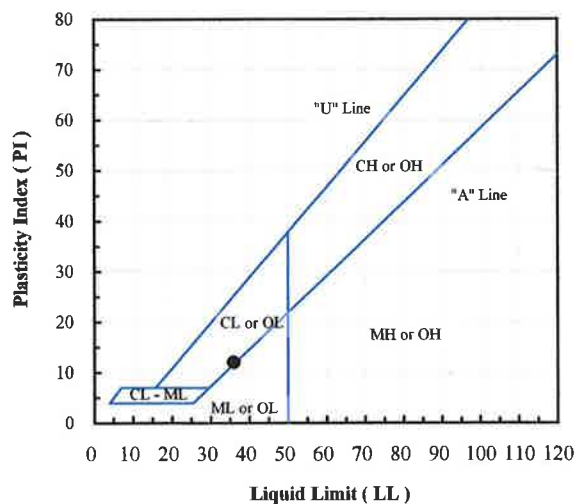
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	85.2
1.5"	37.5	81.0
1"	25	72.1
3/4"	19	66.7
3/8"	9.5	54.3
#4	4.75	45.4
#10	2.00	34.0
#20	0.850	26.7
#40	0.425	22.1
#60	0.250	18.9
#100	0.150	15.7
#200	0.075	12.1

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	54.6
Sand (%):	33.3
Fines (%):	12.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	

Specific Gravity (-):	
-----------------------	--



Client Sample ID.	Lab Sample No.	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
CS-06	H057	7.7	12.1	36	24	12	GC - Clayey gravel with sand

Note(s):

Engineering classification is based on the assumption that the fines are either CL or CH.

Sample contained some hard soil particles which could not be broken down utilizing ASTM standard procedural effort.



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Project No: 327

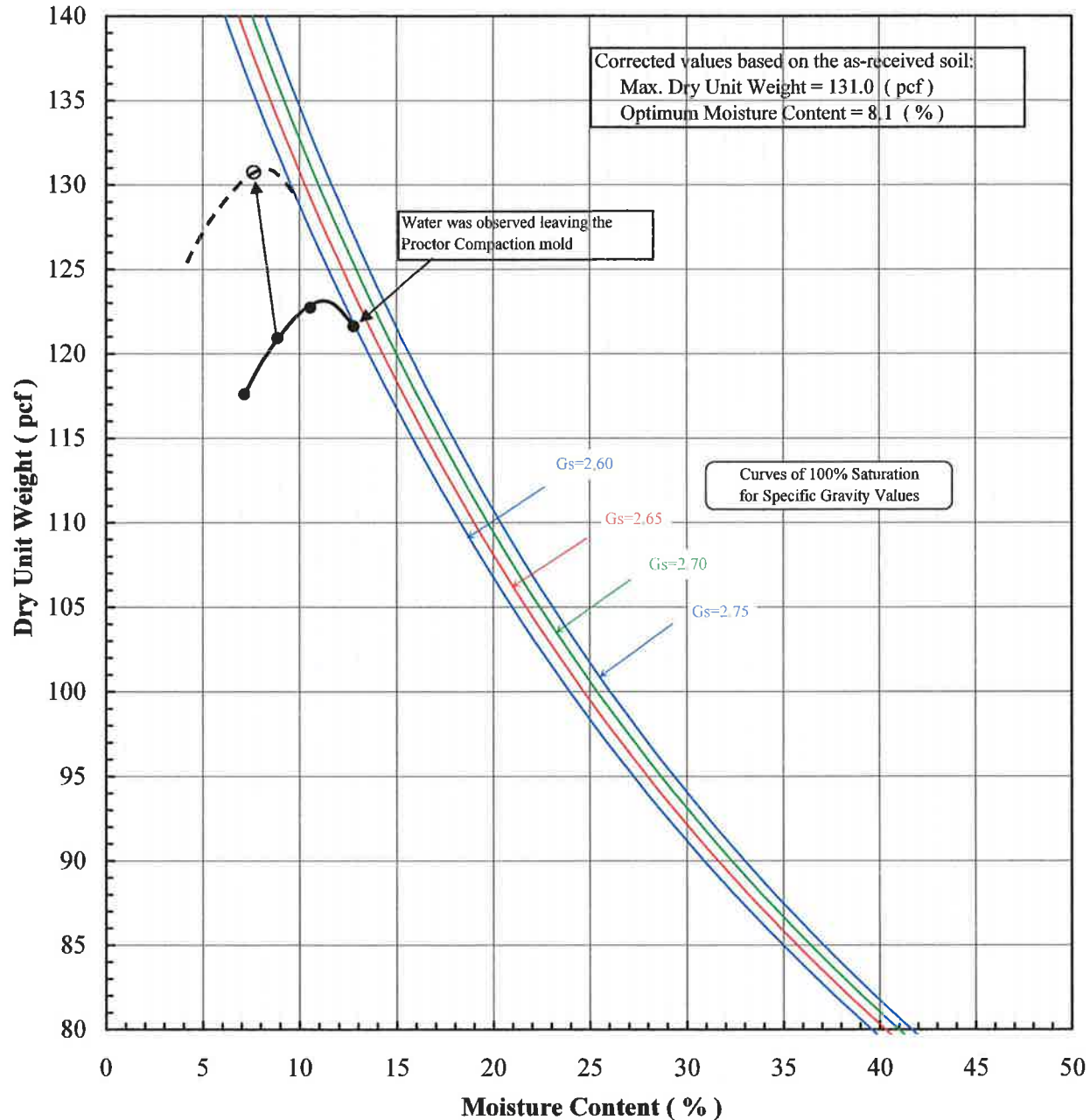
Client Sample ID: CS-06

Lab Sample No: H057

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
CS-06	H057	123.1	11.2	

Note(s):

Only particles smaller than 1.0 in. were used.

An assumed specific gravity of 2.70 was used for oversize-particles-fraction correction (i.e., particles larger than 1.0 in.)



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Project No: 327

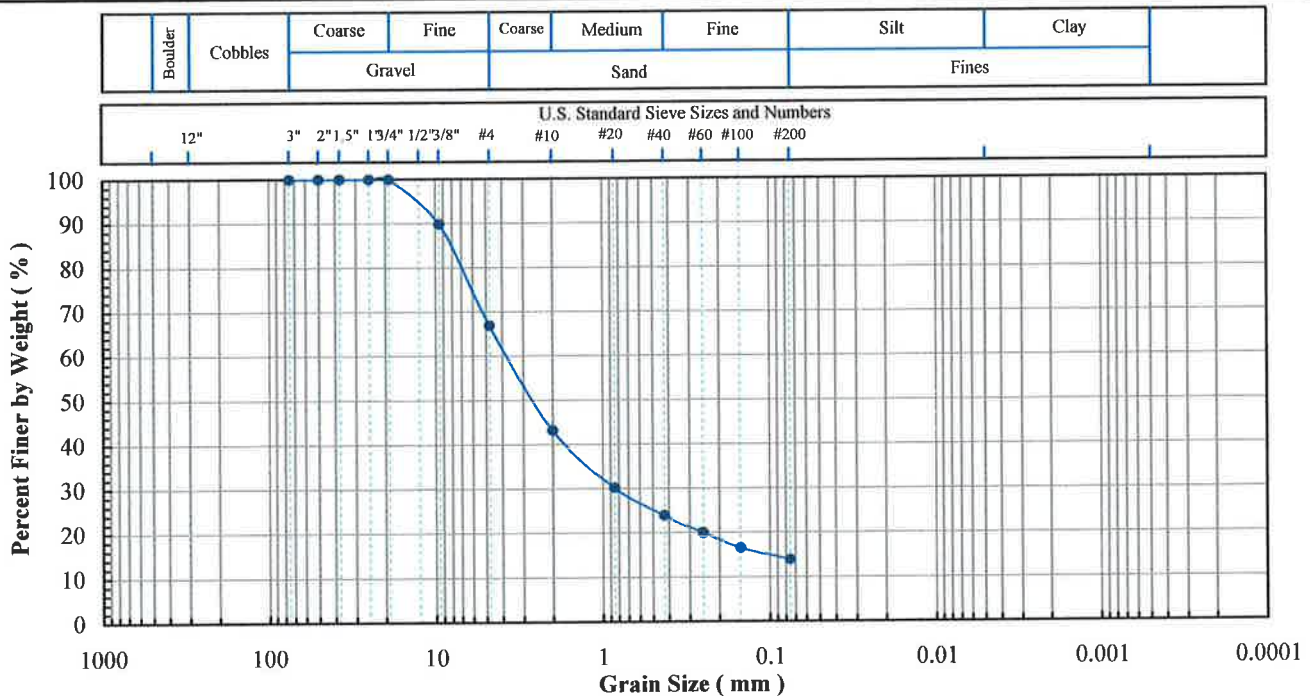
Client Sample ID: CS-16

Lab Sample No: K082

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



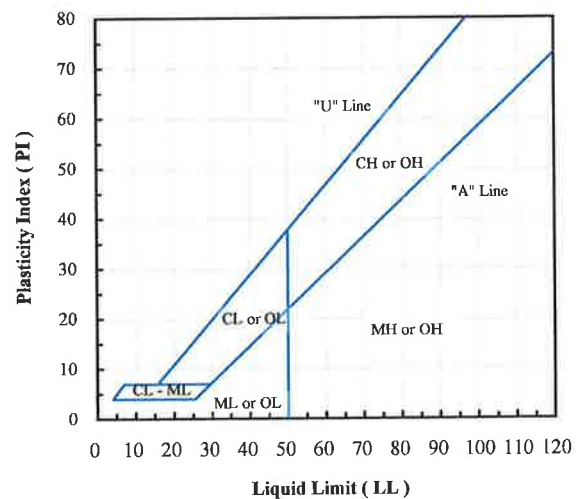
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	89.9
#4	4.75	66.9
#10	2.00	43.2
#20	0.850	30.2
#40	0.425	24.0
#60	0.250	20.1
#100	0.150	16.8
#200	0.075	13.9

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	33.1
Sand (%):	53.0
Fines (%):	13.9
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	

Specific Gravity (-):	
-----------------------	--



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
CS-16	K082	1.1	13.9	NP	NP	NP	SM - Silty sand with gravel

Note(s):

Engineering classification is based on the assumption that the fines are either ML or MH.



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"Excellence in Testing"

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Project Name: BRCC - CAMU

Project No: 327

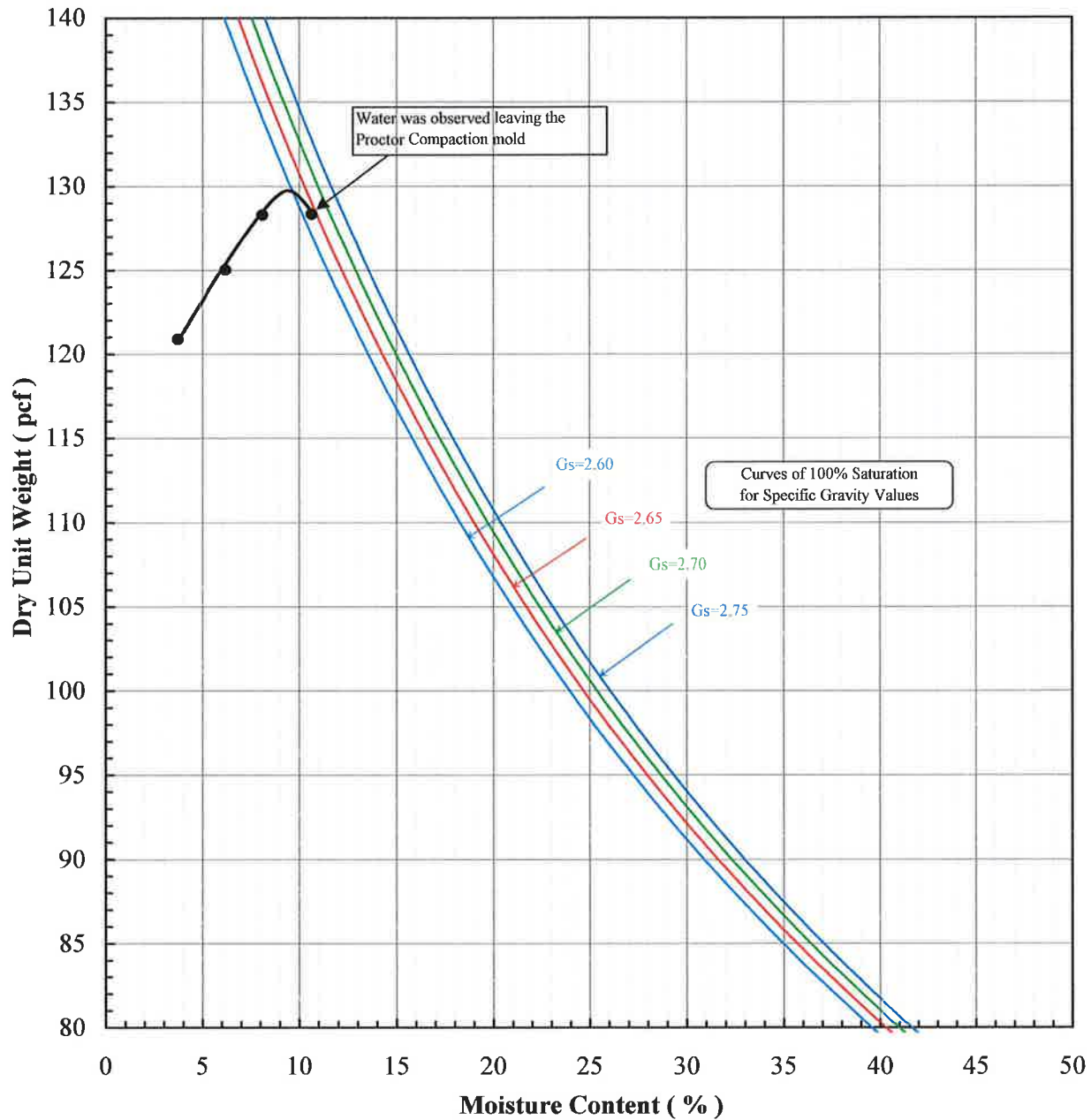
Client Sample ID CS-16

Lab Sample No: K082

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
CS-16	K082	129.7	9.3	

Note(s):



Excel Geotechnical Testing, Inc.

"Excellence in Testing"

941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRC - CAMU

Project No: 327

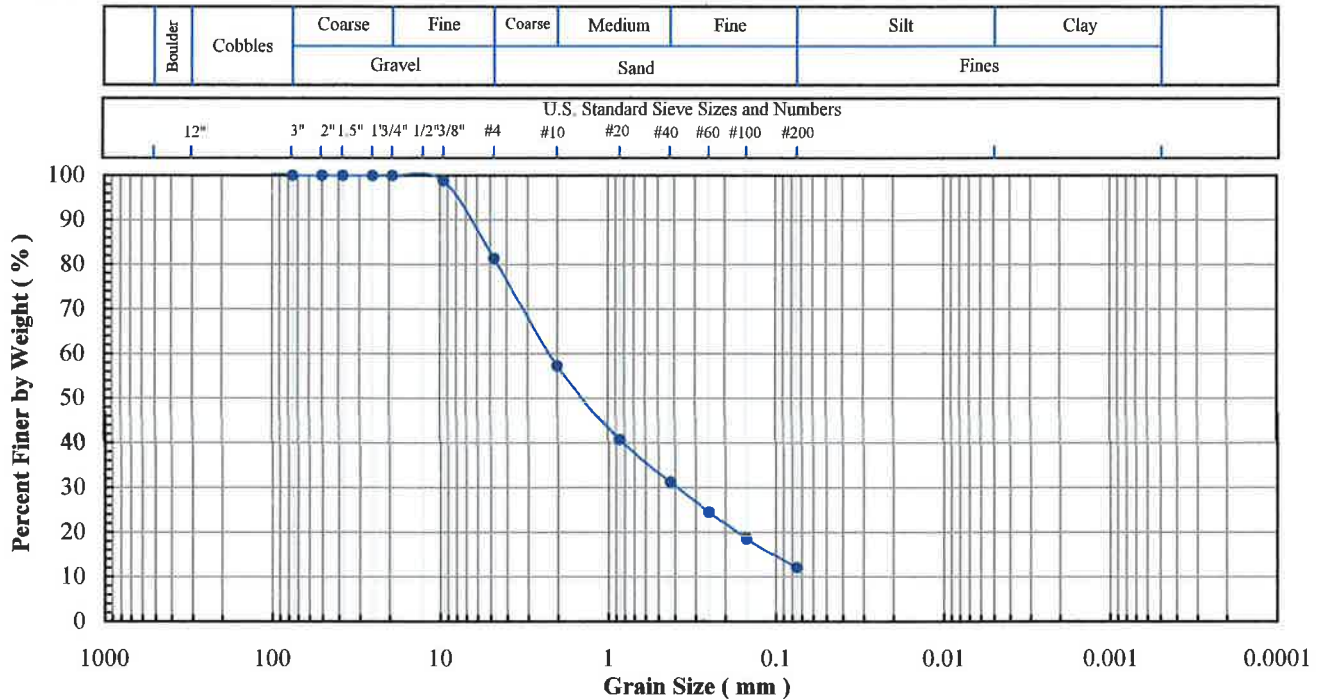
Client Sample ID: CS-29

Lab Sample No: D073

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



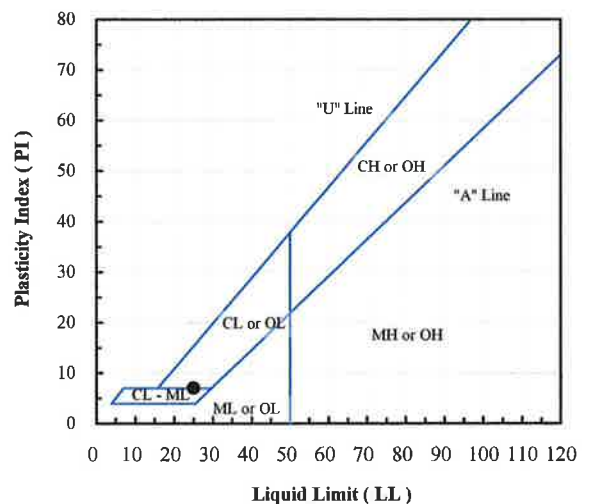
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	98.8
#4	4.75	81.4
#10	2.00	57.3
#20	0.850	40.7
#40	0.425	31.2
#60	0.250	24.7
#100	0.150	18.7
#200	0.075	12.1

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	18.6
Sand (%):	69.3
Fines (%):	12.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	

Specific Gravity (-):	
-----------------------	--



Client Sample ID.	Lab Sample No.	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
CS-29	D073	6.5	12.1	25	18	7	SC - Clayey sand with gravel

Note(s):

Engineering classification is based on the assumption that the fines are either CL or CH.



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"Excellence in Testing"

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Project Name: BRCC - CAMU

Project No: 327

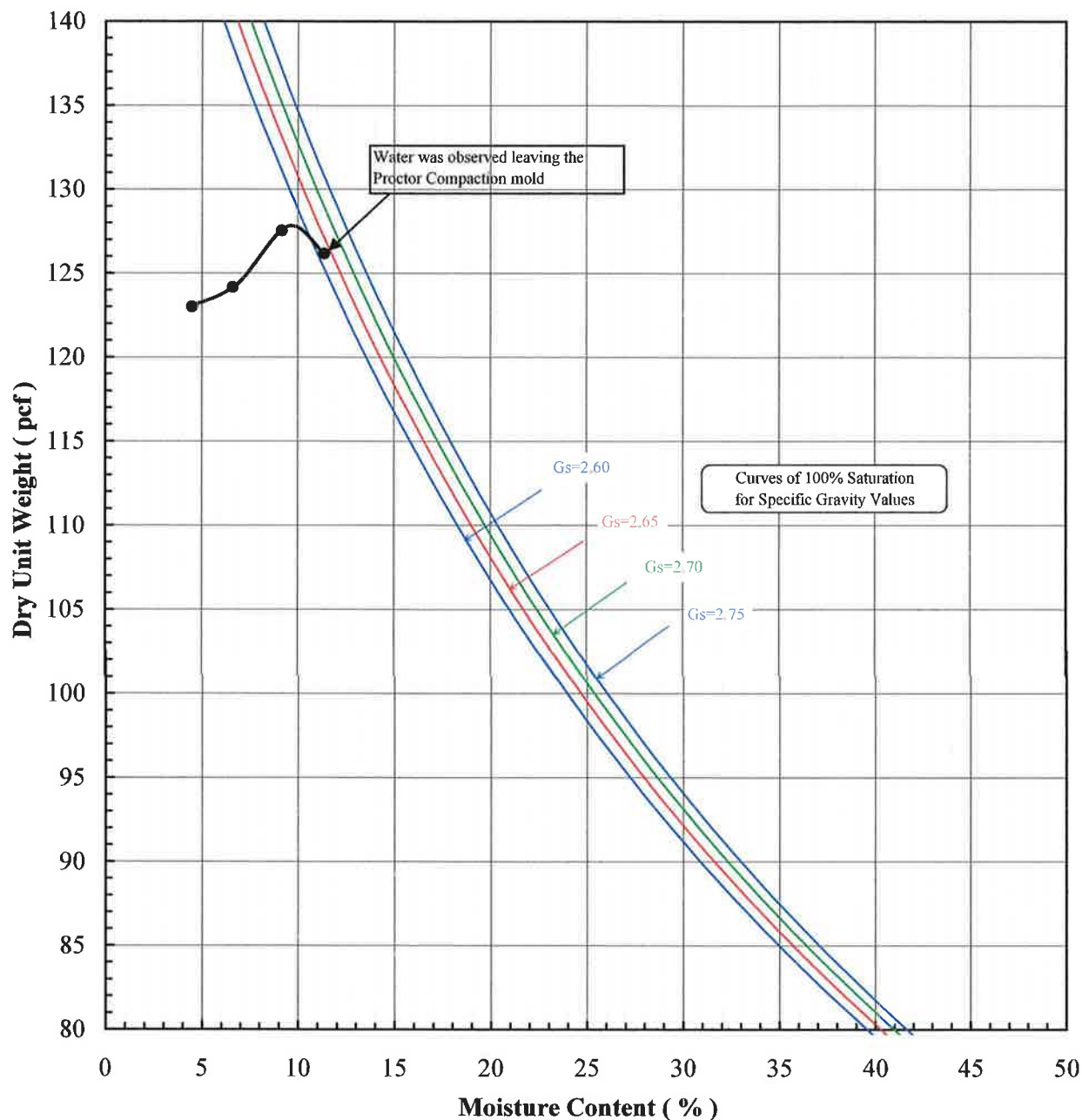
Client Sample ID: CS-29

Lab Sample No: D073

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
CS-29	D073	127.9	9.6	

Note(s):



Excel Geotechnical Testing, Inc.

"Excellence in Testing"

941 Forrest Street, Roswell, Georgia 30075

Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRC - CAMU

Project No: 327

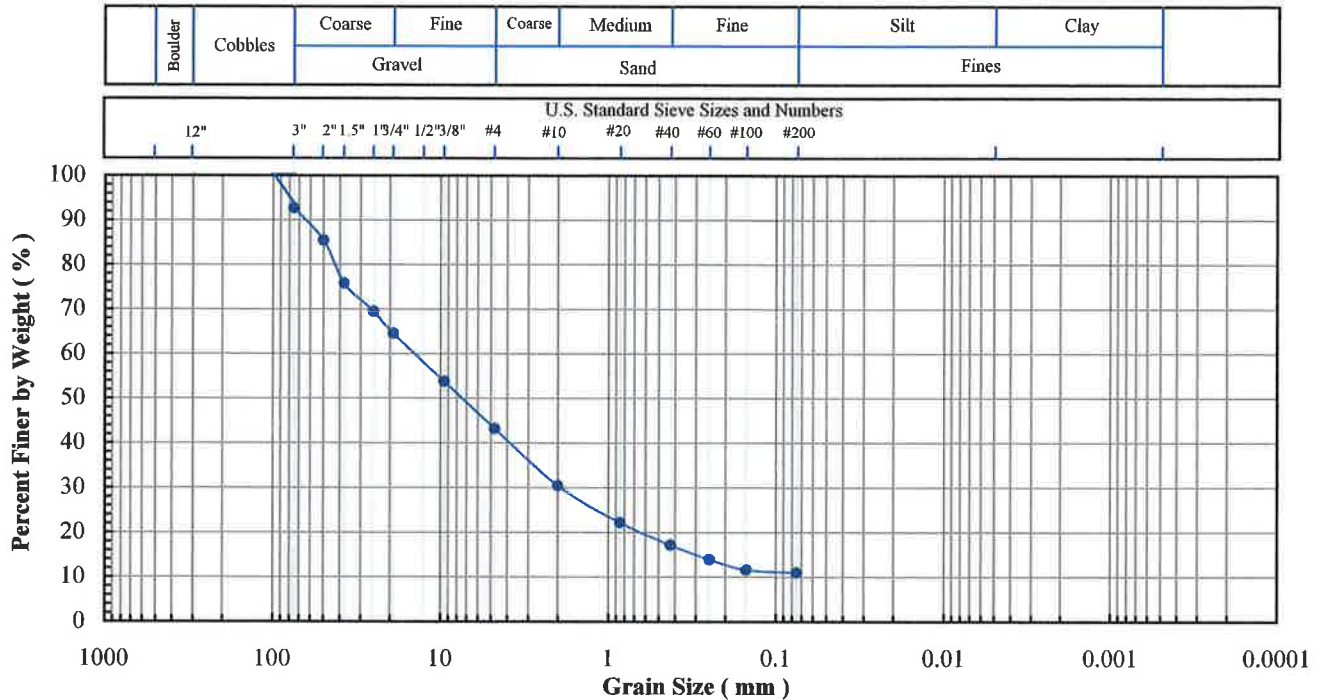
Client Sample ID: CS-30

Lab Sample No: D134

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



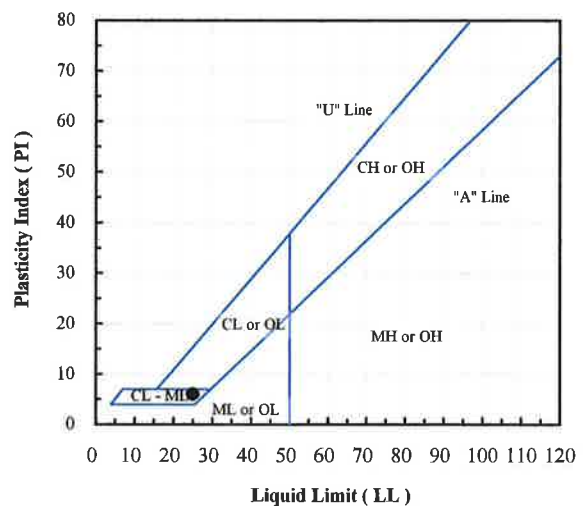
Sieve No.	Size (mm)	% Finer
3"	75	92.7
2"	50	85.5
1.5"	37.5	75.8
1"	25	69.5
3/4"	19	64.6
3/8"	9.5	53.8
#4	4.75	43.2
#10	2.00	30.5
#20	0.850	22.2
#40	0.425	17.2
#60	0.250	14.0
#100	0.150	11.7
#200	0.075	11.0

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	56.8
Sand (%):	32.2
Fines (%):	11.0
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	241.7
Coeff. Curv. (Cc):	2.6

Specific Gravity (-):	
-------------------------	--



Client Sample ID.	Lab Sample No.	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
CS-30	D134	4.9	11.0	25	19	6	GW-SM - Well-graded gravel with silt and sand

Note(s):

Engineering classification is based on the assumption that the fines are either CL or CH.



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"Excellence in Testing"

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Project Name: BRCC - CAMU

Project No: 327

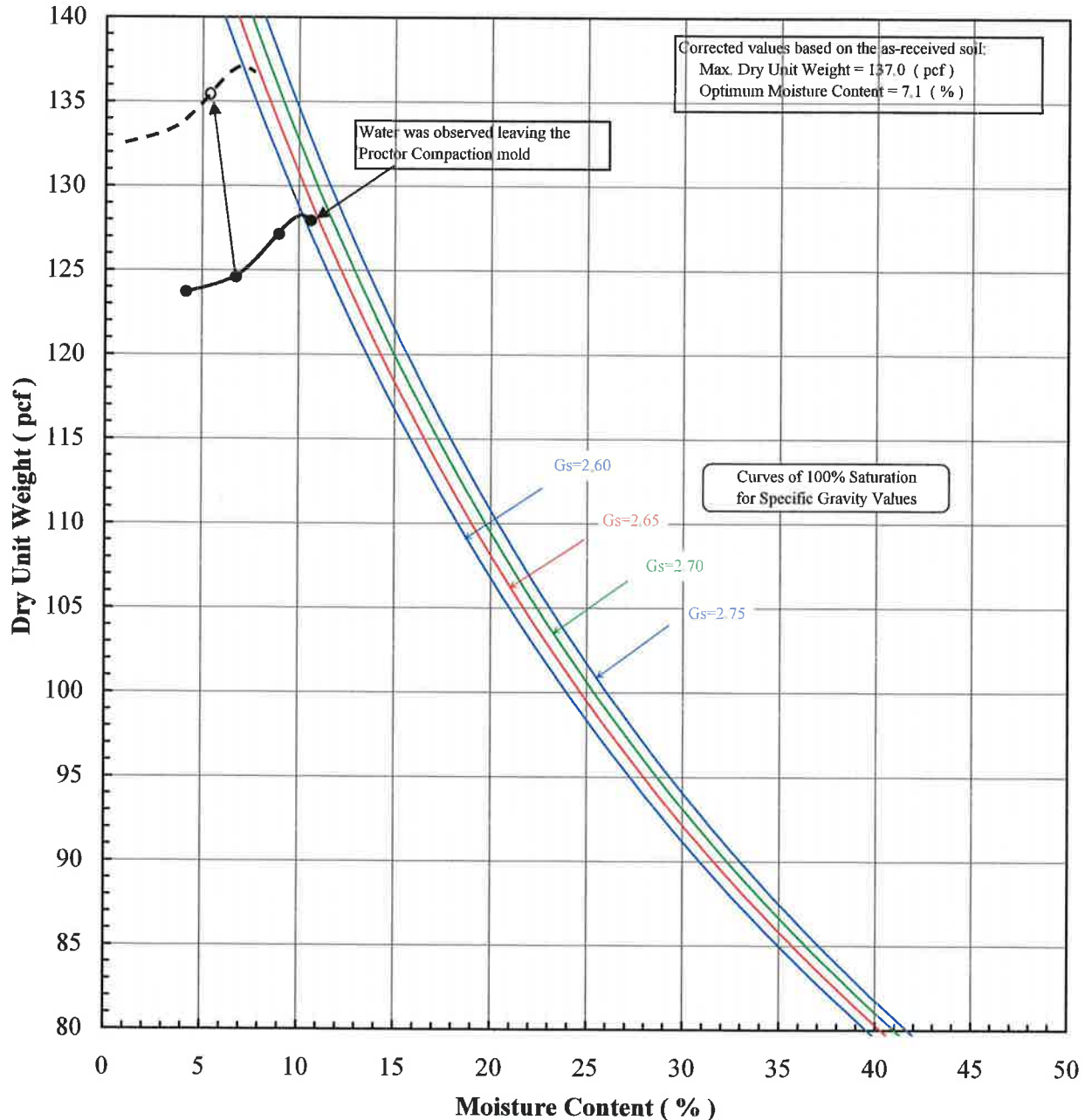
Client Sample ID: CS-30

Lab Sample No: D134

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
CS-30	D134	128.2	10.1	

Note(s):

Only particles passed through 1.0 in. Sieve were used.

More than 30% retained on 3/4 in. Sieve, Proctor test (including method B) may not be applicable for this soil.



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Project Name: BRC - CAMU

Project No: 327

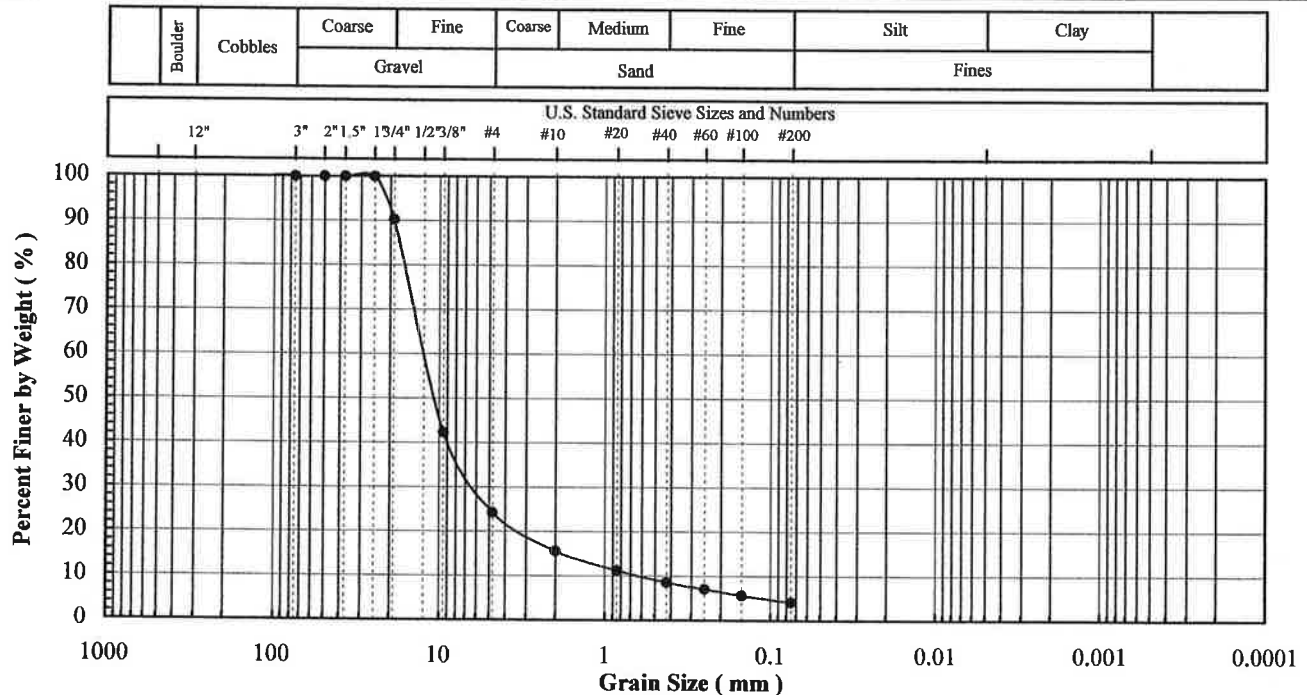
Client Sample ID: RB-01

Lab Sample No: C032

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



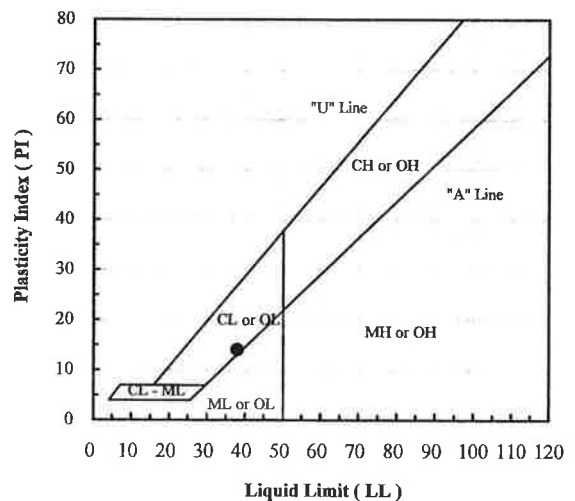
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	90.3
3/8"	9.5	42.4
#4	4.75	24.3
#10	2.00	15.7
#20	0.850	11.3
#40	0.425	8.6
#60	0.250	7.1
#100	0.150	5.7
#200	0.075	4.2

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	75.7
Sand (%):	20.1
Fines (%):	4.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	20.0
Coeff. Curv. (Cc):	5.0

Specific Gravity (-):	
-----------------------	--



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
RB-01	C032	2.0	4.2	38	24	14	GP - Poorly graded gravel with sand

Note(s):



Excel Geotechnical Testing, Inc.

"Excellence in Testing"

941 Forrest Street, Roswell, Georgia 30075

Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRCC - CAMU

Project No: 327

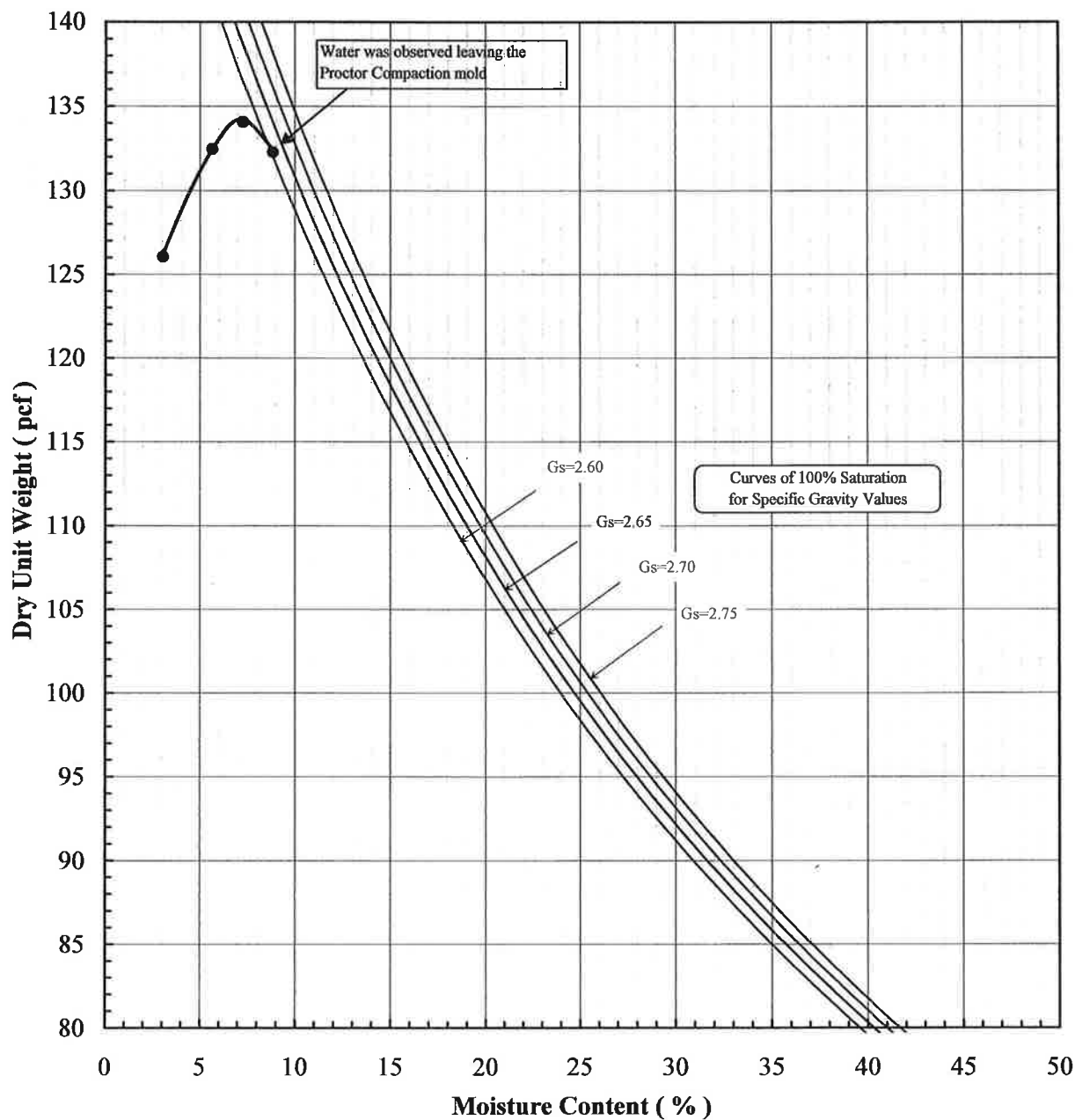
Client Sample ID RB-01

Lab Sample No: C032

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
RB-01	C032	134.2	7.2	

Note(s):



Excel Geotechnical Testing, Inc.

"Excellence in Testing"

941 Forrest Street, Roswell, Georgia 30075

Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRC - CAMU

Project No: 327

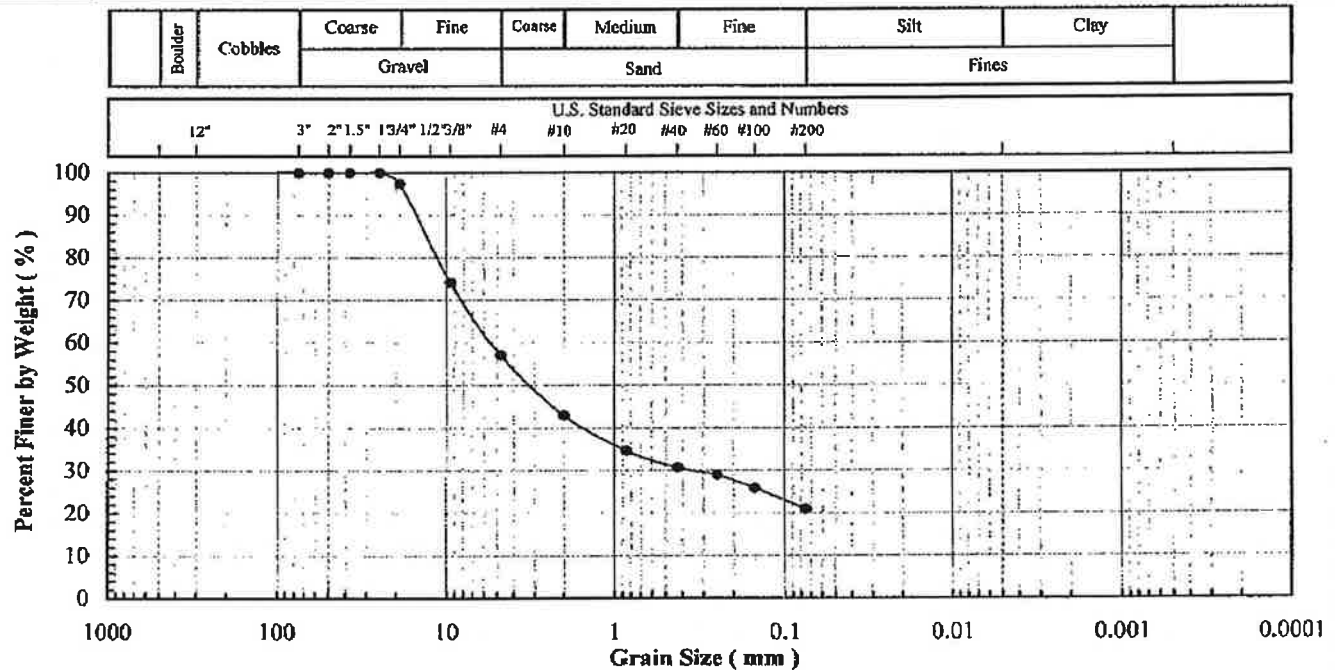
Client Sample ID: RB-02

Lab Sample No: D001

ASTM D 2216, D 1140,
D 422, D 854, C136

SOIL INDEX PROPERTIES

Moisture Content, Grain Size, Atterberg
Limits, Classification



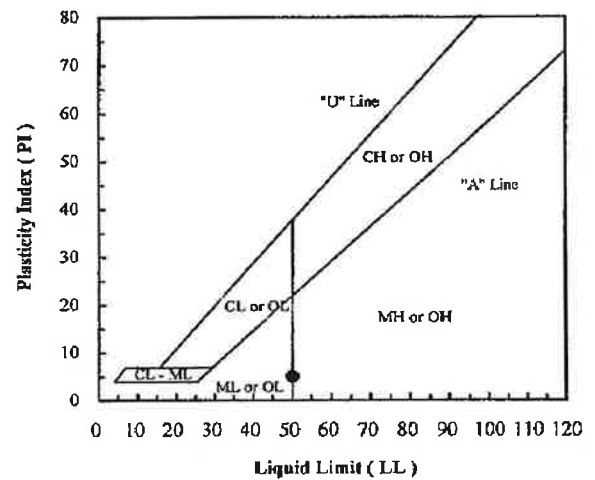
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	97.4
3/8"	9.5	74.2
#4	4.75	57.1
#10	2.00	43.0
#20	0.850	34.7
#40	0.425	30.7
#60	0.250	29.0
#100	0.150	25.9
#200	0.075	20.9

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	42.9
Sand (%):	36.2
Fines (%):	20.9
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	

Specific Gravity (-):



Client Sample ID.	Lab Sample No.	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits			Engineering Classification
				LL (-)	PL (-)	PI (-)	
RB-02	D001	9.8	20.9	50	45	5	GM - Silty gravel with sand

Note(s):

Engineering classification is based on the assumption that the fines are either ML or MH.



Excel Geotechnical Testing, Inc.
"Excellence in Testing"

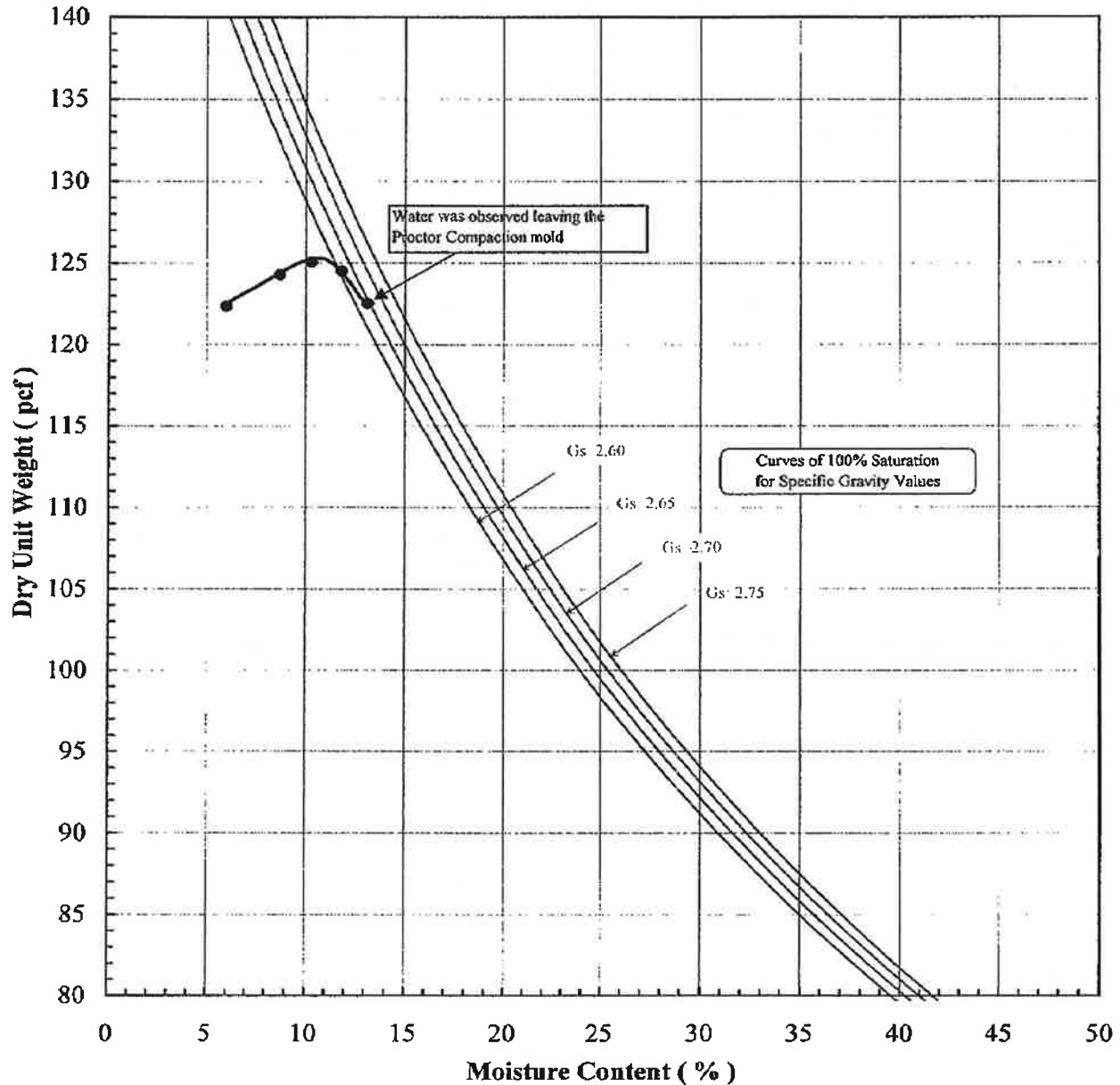
941 Forrest Street, Roswell, Georgia 30075
 Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name: BRCC - CAMU
Project No: 327
Client Sample ID: RB-02
Lab Sample No: D001

ASTM D 1557

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Modified - Method B



Client/Site Sample ID.	Lab Sample No.	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
RB-02	D001	125.3	10.7	

Note(s):

APPENDIX C-2

Field Nuclear Density/Moisture Test Results

Field Nuclear Moisture/Density Test Log

Project: S BMI Landfill Location: Henderson, NV Description: Type II Road Base Aggregate		ProjNo: SC0313 TaskNo: 09/03		Moisture Range: -4 - 4	
Proctor Type: ASTM D 1557		Percent Compaction: 90		Lift Thickness (Compacted - Loose): 12 - 12	
Soil Type: 1 Type II		Gauge Type: 3440		Correction Factor: 0	
Series: 1 Type II Aggregate		Gauge Serial No: 28051			

ID	Location	Date	Probe Depth	Lift No.	Lab			Field				QA ID	Retest No	Retest Result	
					Sample No	OMC (%)	Max Dry Unit Wt (PCF)	Field MC	Correct MC	Wet Unit Wt (PCF)	Dry Unit Wt (PCF)				Percent Compact (%)
1-001	S BMI Liner Cover	5/7/2010	10	1	RB-02	10.7	125.3	7.9	7.9	123.9	114.8	91.6	P	GM	
1-002	S BMI Liner Cover	5/7/2010	10	1	RB-02	10.7	125.3	8.9	8.9	122.3	112.3	89.6	P	GM	
1-003	S BMI Liner Cover	5/7/2010	10	1	RB-02	10.7	125.3	8.2	8.2	122.7	113.4	90.5	P	GM	
1-004	E SW Channel	5/7/2010	4	1	RB-02	10.7	125.3	7.6	7.6	129.9	120.7	96.3*	P	GM	

*Per DCN-45, 90% compaction is required when aggregate is directly overlying geosynthetic liner system. 1-004 was performed in the stormwater channel above subgrade; therefore, the required compaction is 95%.

APPENDIX C-3

Sand Cone Test Results

FIELD SAND CONE DENSITY TEST

(ASTM D 1556)

PROJECT: BRC CAMU

LOCATION: Henderson, NV

PROJECT NO.: SC0313

TASK NO.: 03

DESCRIPTION: Road Base

DATE: 7 day 5 month 2010 year

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: ☐ FILL ☐ SUBGRADE ☐ SUBBASE ☐ CLAY ☒ OTHER: Type II
 % COMPACTION: 95 MOISTURE CONTENT RANGE: - 4 to + 4 of OPT.
 TEST LOCATION: East Southwest Channel TEST NO.: 36

FIELD TEST DATA - ASTM D 1556

QA ID: CL

A	BULK UNIT WT. OF SAND ¹	(pcf)	81.38	H	WT. OF WET SOIL & TARE FROM HOLE	(lbs)	5.94
B	INITIAL WT. OF SAND & JAR	(lbs)	13.68	I	TARE NUMBER		
C	FINAL WT. OF SAND & JAR	(lbs)	6.87	J	WT. OF TARE	(lbs)	0.02
D	WT. OF SAND IN FUNNEL & HOLE (=B-C)	(lbs)	6.81	K	WT OF WET SOIL FROM HOLE (=H-J)	(lbs)	5.92
E	WT. OF SAND IN FUNNEL ²	(lbs)	3.1	L	WET UNIT WT. (=K/G)	(pcf)	129.9
F	WT. OF SAND IN HOLE (=D-E)	(lbs)	3.71	M	DRY UNIT WT. (=L/[1+(U/100)])	(pcf)	120.1
G	VOLUME OF HOLE (=F/A)	(ft ³)	0.04559	N	PERCENT COMPACTION (=M/V)	(%)	95.9

NOTES

- (1) USE CALIBRATION FORM
- (2) THE WEIGHT OF SAND IN FUNNEL (E) IS OBTAINED BY WEIGHING THE SAND, A MINIMUM OF THREE TIMES, IN THE APPARATUS BEFORE AND AFTER THE APPARATUS HAS BEEN TURNED OVER ON THE BASE PLATE ALONG A FLAT SURFACE WITH THE SAND BEING EXPENDED.

FIELD MOISTURE CONTENT - ASTM D 2216

QA ID: CL

O	TARE NUMBER		S	WT. OF WATER (=Q-R)	(g)	140	
P	WT. OF TARE	(g)	415	T	WT. OF DRY SOIL (=R-P)	(g)	1725
Q	WT. OF WET SOIL & TARE	(g)	2280	U	MOISTURE CONTENT (= [S/T]x100)	(%)	8.1
R	WT. OF DRY SOIL & TARE	(g)	2140				

PROCTOR TEST DATA

RB-02

MAXIMUM DRY UNIT WT. [V]: 125.3 (pcf)

OPTIMUM MOISTURE CONTENT: 10.7 (%)

COMPARISON WITH NUCLEAR MOISTURE/DENSITY GAUGE - ASTM D 6938

QA ID: CL

W	FIELD DENSITY TEST (FDT) NUMBER	1-004	Z	FDT DRY UNIT WT.	(pcf)	120.7
X	FDT WET UNIT WT.	(pcf)	129.9	AA	DELTA DRY UNIT WT. (=M-Z)	-0.6
Y	FDT MOISTURE CONTENT	(%)	7.6	BB	DELTA MOISTURE CONTENT (=U-Y)	0.5

COMMENTS

APPENDIX C-4

Moisture Content Test Results

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOIL

(ASTM D 2216/D4643)

PROJECT: BRC CAMU

LOCATION: S BMI Landfill

PROJECT NO.: SC0313

TASK NO.: 09-03

DESCRIPTION: Final Cover

DATE: 20 day 3 month 2010 year

MATERIAL TYPE: 1" minus

OVEN METHOD (ASTM D2216):

Recommended Mass of Moist Sample Weight

QA ID: VH

100% PASSING THE NO. 10 (2-mm) SIEVE	20 grams
100% PASSING THE NO. 4 (4.75-mm) SIEVE	100 grams
100% PASSING THE NO. 3/8-in. (9.5-mm) SIEVE	500 grams
100% PASSING THE NO 3/4-in. (19-mm) SIEVE	2.5 kilograms

A	SAMPLE NUMBER:	1	2			
B	TARE NUMBER:	A	B			
C	WT. OF TARE	415.0	415.0			
D	WT. OF WET SOIL & TARE	2500.0	2500.0			
E	WT. OF DRY SOIL & TARE	2350.0	2360.0			
F	WT. OF WATER = D-E	150.0	140.0	0.0	0.0	0.0
G	WT. OF DRY SOIL = E-C	1935.0	1945.0	0.0	0.0	0.0
H	MOISTURE CONTENT = (F/G) * 100 %	7.8	7.2	#DIV/0!	#DIV/0!	#DIV/0!
I	NUCLEAR DENSITY GAUGE READING:					
J	DELTA MOISTURE = H-I %	7.8	7.2	#DIV/0!	#DIV/0!	#DIV/0!
K	FDT NUMBER					

MICROWAVE METHOD (ASTM D4643):

Recommended Mass of Moist Sample Weight

QA ID: _____

90% PASSING THE NO. 10 (2-mm) SIEVE	100 to 200 grams
90% PASSING THE NO. 4 (4.75-mm) SIEVE	200 to 500 grams
90% PASSING THE NO 3/4-in. (19-mm) SIEVE	500 to 1000 grams

INITIAL SETTING TO BE AT 3.0 MINUTES, CONTINUE DRYING SAMPLE AT 1.0 MINUTE SETTING UNTIL MOISTURE CONTENT VARIATION BETWEEN SETTINGS IS LESS THAN 0.1%

L	SAMPLE NUMBER:					
M	TARE NUMBER:					
N	WT. OF TARE					
O	WT. OF WET SOIL & TARE					
P	WT. OF DRY SOIL & TARE					
Q	WT. OF WATER = O-P	0	0	0	0	0
R	WT. OF DRY SOIL = P-N	0	0	0	0	0
S	MOISTURE CONTENT = (Q/R) * 100	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T	NUCLEAR DENSITY GAUGE READING:					
U	DELTA MOISTURE = S-T %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
V	FDT NUMBER					

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOIL

(ASTM D 2216/D4643)

PROJECT: BRC CAMU

LOCATION: S BMI Landfill

PROJECT NO.: SC0313

TASK NO.: 09-03

DESCRIPTION: Final Cover

DATE: 23 day 3 month 2010 year

MATERIAL TYPE: Engineered Fill i.e. Screened Material

OVEN METHOD (ASTM D2216):		Recommended Mass of Moist Sample Weight			QA ID: <u>VH</u>	
100% PASSING THE NO. 10 (2-mm) SIEVE		20 grams				
100% PASSING THE NO. 4 (4.75-mm) SIEVE		100 grams				
100% PASSING THE NO. 3/8-in. (9.5-mm) SIEVE		500 grams				
100% PASSING THE NO 3/4-in. (19-mm) SIEVE		2.5 kilograms				
A	SAMPLE NUMBER:	<u>3</u>				
B	TARE NUMBER:	<u>A</u>				
C	WT. OF TARE	<u>415.0</u>				
D	WT. OF WET SOIL & TARE	<u>2500.0</u>				
E	WT. OF DRY SOIL & TARE	<u>2340.0</u>				
F	WT. OF WATER = D-E	<u>160.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
G	WT. OF DRY SOIL = E-C	<u>1925.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
H	MOISTURE CONTENT = (F/G) * 100 %	<u>8.3</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>
I	NUCLEAR DENSITY GAUGE READING:					
J	DELTA MOISTURE = H-I %	<u>8.3</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>	<u>#DIV/0!</u>
K	FDT NUMBER					

MICROWAVE METHOD (ASTM D4643):		Recommended Mass of Moist Sample Weight			QA ID: _____	
90% PASSING THE NO. 10 (2-mm) SIEVE		100 to 200 grams				
90% PASSING THE NO. 4 (4.75-mm) SIEVE		200 to 500 grams				
90% PASSING THE NO 3/4-in. (19-mm) SIEVE		500 to 1000 grams				
INITIAL SETTING TO BE AT 3.0 MINUTES, CONTINUE DRYING SAMPLE AT 1.0 MINUTE SETTING UNTIL MOISTURE CONTENT VARIATION BETWEEN SETTINGS IS LESS THAN 0.1%						
L	SAMPLE NUMBER:					
M	TARE NUMBER:					
N	WT. OF TARE					
O	WT. OF WET SOIL & TARE					
P	WT. OF DRY SOIL & TARE					
Q	WT. OF WATER = O-P	0	0	0	0	0
R	WT. OF DRY SOIL = P-N	0	0	0	0	0
S	MOISTURE CONTENT = (Q/R) * 100	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T	NUCLEAR DENSITY GAUGE READING:					
U	DELTA MOISTURE = S-T %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
V	FDT NUMBER					

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOIL

(ASTM D 2216/D4643)

PROJECT: BRC CAMU

LOCATION: S BMI Landfill

PROJECT NO.: SC0313

TASK NO.: 09-03

DESCRIPTION: Final Cover

DATE: 14 day 4 month 2010 year

MATERIAL TYPE: Engineered Fill i.e. Screened Material

OVEN METHOD (ASTM D2216):		Recommended Mass of Moist Sample Weight		QA ID: <u>VH</u>	
100% PASSING THE NO. 10 (2-mm) SIEVE		20 grams			
100% PASSING THE NO. 4 (4.75-mm) SIEVE		100 grams			
100% PASSING THE NO. 3/8-in. (9.5-mm) SIEVE		500 grams			
100% PASSING THE NO 3/4-in. (19-mm) SIEVE		2.5 kilograms			
A	SAMPLE NUMBER:	4	5		
B	TARE NUMBER:	A	B		
C	WT. OF TARE	415.0	415.0		
D	WT. OF WET SOIL & TARE	2395.0	2250.0		
E	WT. OF DRY SOIL & TARE	2233.0	2097.0		
F	WT. OF WATER = D-E	162.0	153.0	0.0	0.0
G	WT. OF DRY SOIL = E-C	1818.0	1682.0	0.0	0.0
H	MOISTURE CONTENT = (F/G) * 100 %	8.9	9.1	#DIV/0!	#DIV/0!
I	NUCLEAR DENSITY GAUGE READING:				
J	DELTA MOISTURE = H-I %	8.9	9.1	#DIV/0!	#DIV/0!
K	FDT NUMBER				

MICROWAVE METHOD (ASTM D4643):		Recommended Mass of Moist Sample Weight			QA ID: _____	
90% PASSING THE NO. 10 (2-mm) SIEVE		100 to 200 grams				
90% PASSING THE NO. 4 (4.75-mm) SIEVE		200 to 500 grams				
90% PASSING THE NO 3/4-in. (19-mm) SIEVE		500 to 1000 grams				
INITIAL SETTING TO BE AT 3.0 MINUTES, CONTINUE DRYING SAMPLE AT 1.0 MINUTE SETTING UNTIL MOISTURE CONTENT VARIATION BETWEEN SETTINGS IS LESS THAN 0.1%						
L	SAMPLE NUMBER:					
M	TARE NUMBER:					
N	WT. OF TARE					
O	WT. OF WET SOIL & TARE					
P	WT. OF DRY SOIL & TARE					
Q	WT. OF WATER = O-P	0	0	0	0	0
R	WT. OF DRY SOIL = P-N	0	0	0	0	0
S	MOISTURE CONTENT = (Q/R) * 100	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T	NUCLEAR DENSITY GAUGE READING:					
U	DELTA MOISTURE = S-T %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
V	FDT NUMBER					

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOIL

(ASTM D 2216/D4643)

PROJECT: BRC CAMU

LOCATION: S BMI Landfill

PROJECT NO.: SC0313

TASK NO.: 09-03

DESCRIPTION: Final Cover

DATE: 17 day 4 month 2010 year

MATERIAL TYPE: Engineered Fill i.e. Screened Material

OVEN METHOD (ASTM D2216):		Recommended Mass of Moist Sample Weight		QA ID: <u>VH</u>	
100% PASSING THE NO. 10 (2-mm) SIEVE		20 grams			
100% PASSING THE NO. 4 (4.75-mm) SIEVE		100 grams			
100% PASSING THE NO. 3/8-in. (9.5-mm) SIEVE		500 grams			
100% PASSING THE NO 3/4-in. (19-mm) SIEVE		2.5 kilograms			
A	SAMPLE NUMBER:	6	7		
B	TARE NUMBER:	A	B		
C	WT. OF TARE	415.0	415.0		
D	WT. OF WET SOIL & TARE	2285.0	2165.0		
E	WT. OF DRY SOIL & TARE	2145.0	2035.0		
F	WT. OF WATER = D-E	140.0	130.0	0.0	0.0
G	WT. OF DRY SOIL = E-C	1730.0	1620.0	0.0	0.0
H	MOISTURE CONTENT = (F/G) * 100 %	8.1	8.0	#DIV/0!	#DIV/0!
I	NUCLEAR DENSITY GAUGE READING:				
J	DELTA MOISTURE = H-I %	8.1	8.0	#DIV/0!	#DIV/0!
K	FDT NUMBER				

MICROWAVE METHOD (ASTM D4643):		Recommended Mass of Moist Sample Weight			QA ID: _____	
90% PASSING THE NO. 10 (2-mm) SIEVE		100 to 200 grams				
90% PASSING THE NO. 4 (4.75-mm) SIEVE		200 to 500 grams				
90% PASSING THE NO 3/4-in. (19-mm) SIEVE		500 to 1000 grams				
INITIAL SETTING TO BE AT 3.0 MINUTES, CONTINUE DRYING SAMPLE AT 1.0 MINUTE SETTING UNTIL MOISTURE CONTENT VARIATION BETWEEN SETTINGS IS LESS THAN 0.1%						
L	SAMPLE NUMBER:					
M	TARE NUMBER:					
N	WT. OF TARE					
O	WT. OF WET SOIL & TARE					
P	WT. OF DRY SOIL & TARE					
Q	WT. OF WATER = O-P	0	0	0	0	0
R	WT. OF DRY SOIL = P-N	0	0	0	0	0
S	MOISTURE CONTENT = (Q/R) * 100	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T	NUCLEAR DENSITY GAUGE READING:					
U	DELTA MOISTURE = S-T %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
V	FDT NUMBER					

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOIL

(ASTM D 2216/D4643)

PROJECT: BRC CAMU

LOCATION: S BMI Landfill

PROJECT NO.: SC0313

TASK NO.: 09-03

DESCRIPTION: Final Cover

DATE: 28 day 4 month 2010 year

MATERIAL TYPE: Engineered Fill i.e. Screened Material

OVEN METHOD (ASTM D2216):		Recommended Mass of Moist Sample Weight			QA ID: <u>VH</u>	
100% PASSING THE NO. 10 (2-mm) SIEVE		20 grams				
100% PASSING THE NO. 4 (4.75-mm) SIEVE		100 grams				
100% PASSING THE NO. 3/8-in. (9.5-mm) SIEVE		500 grams				
100% PASSING THE NO 3/4-in. (19-mm) SIEVE		2.5 kilograms				
A	SAMPLE NUMBER:	8				
B	TARE NUMBER:	A				
C	WT. OF TARE	415.0				
D	WT. OF WET SOIL & TARE	2430.0				
E	WT. OF DRY SOIL & TARE	2295.0				
F	WT. OF WATER = D-E	135.0	0.0	0.0	0.0	0.0
G	WT. OF DRY SOIL = E-C	1880.0	0.0	0.0	0.0	0.0
H	MOISTURE CONTENT = (F/G) * 100 %	7.2	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
I	NUCLEAR DENSITY GAUGE READING:					
J	DELTA MOISTURE = H-I %	7.2	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
K	FDT NUMBER					

MICROWAVE METHOD (ASTM D4643):		Recommended Mass of Moist Sample Weight			QA ID: _____	
90% PASSING THE NO. 10 (2-mm) SIEVE		100 to 200 grams				
90% PASSING THE NO. 4 (4.75-mm) SIEVE		200 to 500 grams				
90% PASSING THE NO 3/4-in. (19-mm) SIEVE		500 to 1000 grams				
INITIAL SETTING TO BE AT 3.0 MINUTES, CONTINUE DRYING SAMPLE AT 1.0 MINUTE SETTING UNTIL MOISTURE CONTENT VARIATION BETWEEN SETTINGS IS LESS THAN 0.1%						
L	SAMPLE NUMBER:					
M	TARE NUMBER:					
N	WT. OF TARE					
O	WT. OF WET SOIL & TARE					
P	WT. OF DRY SOIL & TARE					
Q	WT. OF WATER = O-P	0	0	0	0	0
R	WT. OF DRY SOIL = P-N	0	0	0	0	0
S	MOISTURE CONTENT = (Q/R) * 100	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T	NUCLEAR DENSITY GAUGE READING:					
U	DELTA MOISTURE = S-T %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
V	FDT NUMBER					

APPENDIX D

Geosynthetic Clay Liner

APPENDIX D-1

Material Inventory Logs

Summary of GCL Inventory, MQA/MQC, and Conformance Test Data

BRC CAMU

Henderson, Nevada

GCL Lot No.	GCL Roll No.	Clay lot No.	Area (SF)	Manufacturer Quality Control Testing				CQA Conformance Testing				Approved
				Bentonite	Bentonite	Index	Moisture	Mass per	Moisture	Index	Cover	Material meets requirements of specifications
				Swell Index ²	Fluid Loss ²	Flux	Content	unit area	Content	Flux	Interface Shear	
				24.0	18.0	1.00E-08	25% (30%)	0.75	30	1.00E-08	20	
				minimum	maximum	maximum	maximum		percent			
				mL/2g	mL	m ³ /m ² -2	%	lb/sq. ft	maximum	m ³ /m ² -2	degrees	
				NS	NS	1/200,000 ^a	1/100,000 ^a	1/100,000 ^a	NS	1/400,000 ^a	1/400,000 ^a	
200917LO	00002290	042009A	2,900	28.0	15.6	8.90E-09						Y
200917LO	00002291	042009A	2,900	28.0	15.6							Y
200917LO	00002292	042009A	2,900	28.0	15.6							Y
200917LO	00002293	042009A	2,900	28.0	15.6			0.89	23.6	3.3E-09		Y
200917LO	00002294	042009A	2,900	28.0	15.6							Y
200917LO	00002295	042009A	2,900	28.0	15.6						33	Y
200917LO	00002296	042009A	2,900	28.0	15.6							Y
200917LO	00002297	042009A	2,900	28.0	15.6							Y
200917LO	00002298	042009A	2,900	28.0	15.6							Y
200917LO	00002299	042009A	2,900	28.0	15.6							Y
200917LO	00002300	042009A	2,900	28.0	15.6							Y
200917LO	00002301	042009A	2,900	28.0	15.6		24.5					Y
200917LO	00002302	042009A	2,900	28.0	15.6							Y
200917LO	00002303	042009A	2,900	28.0	15.6							Y
200917LO	00002304	042009A	2,900	28.0	15.6							Y
200917LO	00002305	042009A	2,900	28.0	15.6							Y
200917LO	00002306	042009A	2,900	28.0	15.6							Y
200917LO	00002307	042009A	2,900	28.0	15.6							Y
200917LO	00002308	042009A	2,900	28.0	15.6							Y
200917LO	00002309	042009A	2,900	28.0	15.6							Y
200917LO	00002310	042009A	2,900	28.0	15.6							Y
200917LO	00002311	042009A	2,900	28.0	15.6							Y
200917LO	00002312	042009A	2,900	28.0	15.6							Y
200917LO	00002313	042009A	2,900	28.0	15.6							Y
200917LO	00002314	042009A	2,900	28.0	15.6		25.6					Y
200917LO	00002315	042009B	2,900	27.0	16.0							Y
200917LO	00002316	042009B	2,900	27.0	16.0							Y
200917LO	00002317	042009B	2,900	27.0	16.0							Y
200917LO	00002318	042009B	2,900	27.0	16.0							Y
200917LO	00002319	042009B	2,900	27.0	16.0							Y
200917LO	00002320	042009B	2,900	27.0	16.0							Y
200917LO	00002321	042009B	2,900	27.0	16.0							Y
200917LO	00002322	042009B	2,900	27.0	16.0							Y
200917LO	00002323	042009B	2,900	27.0	16.0							Y
200917LO	00002324	042009B	2,900	27.0	16.0							Y
200917LO	00002325	042009B	2,900	27.0	16.0							Y
200917LO	00002326	042009B	2,900	27.0	16.0							Y
200917LO	00002327	042009B	2,900	27.0	16.0		24.6	0.86	24.7			Y
200917LO	00002328	042009B	2,900	27.0	16.0							Y
200917LO	00002329	042009B	2,900	27.0	16.0							Y
200917LO	00002330	042009B	2,900	27.0	16.0							Y
200917LO	00002331	042009B	2,900	27.0	16.0							Y
200917LO	00002332	042009B	2,900	27.0	16.0							Y
200917LO	00002333	042009B	2,900	27.0	16.0							Y
200917LO	00002334	042009B	2,900	27.0	16.0							Y
200917LO	00002335	042009B	2,900	27.0	16.0							Y
200917LO	00002336	042009B	2,900	27.0	16.0							Y

Summary of GCL Inventory, MQA/MQC, and Conformance Test Data

BRC CAMU

Henderson, Nevada

GCL Lot No.	GCL Roll No.	Clay lot No.	Area (SF)	Manufacturer Quality Control Testing				CQA Conformance Testing				Approved
				Bentonite	Bentonite	Index	Moisture	Mass per	Moisture	Index	Cover	Material meets requirements of specifications
				Swell Index ²	Fluid Loss ²	Flux	Content	unit area	Content	Flux	Interface Shear	
				24.0	18.0	1.00E-08	25% (30%)	0.75	30	1.00E-08	20	
				minimum	maximum	maximum	maximum		percent			
				mL/2g	mL	m ³ /m ² -2	%	lb/sq. ft	maximum	m ³ /m ² -2	degrees	
				NS	NS	1/200,000 ^a	1/100,000 ^a	1/100,000 ^a	NS	1/400,000 ^a	1/400,000 ^a	
200917LO	00002337	042009B	2,900	27.0	16.0							Y
200917LO	00002338	042009B	2,900	27.0	16.0							Y
200917LO	00002339	042009B	2,900	27.0	16.0							Y
200917LO	00002340	042009B	2,900	27.0	16.0		25.1					Y
200917LO	00002341	042009B	2,900	27.0	16.0							Y
200917LO	00002342	042009B	2,900	27.0	16.0							Y
200917LO	00002343	042009B	2,900	27.0	16.0							Y
200917LO	00002344	042009B	2,900	27.0	16.0							Y
200917LO	00002345	042009B	2,900	27.0	16.0							Y
200917LO	00002346	042009B	2,900	27.0	16.0							Y
200917LO	00002347	042009C	2,900	26.0	15.2							Y
200917LO	00002348	042009C	2,900	26.0	15.2							Y
200917LO	00002349	042009C	2,900	26.0	15.2							Y
200917LO	00002350	042009C	2,900	26.0	15.2							Y
200917LO	00002351	042009C	2,900	26.0	15.2							Y
200917LO	00002352	042009C	2,900	26.0	15.2							Y
200917LO	00002353	042009C	2,900	26.0	15.2		25.7					Y
200917LO	00002354	042009C	2,900	26.0	15.2							Y
200917LO	00002355	042009C	2,900	26.0	15.2							Y
200917LO	00002356	042009C	2,900	26.0	15.2							Y
200917LO	00002357	042009C	2,900	26.0	15.2							Y
200917LO	00002358	042009C	2,900	26.0	15.2	4.99E-09						Y
200917LO	00002359	042009C	2,900	26.0	15.2							Y
200917LO	00002360	042009C	2,900	26.0	15.2							Y
200917LO	00002361	042009C	2,900	26.0	15.2			0.87	22.0			Y
200917LO	00002362	042009C	2,900	26.0	15.2							Y
200917LO	00002363	042009C	2,900	26.0	15.2							Y
200917LO	00002364	042009C	2,900	26.0	15.2							Y
200917LO	00002365	042009C	2,900	26.0	15.2							Y
200917LO	00002366	042009C	2,900	26.0	15.2		25.1					Y
200917LO	00002367	042009C	2,900	26.0	15.2							Y
200917LO	00002368	042009C	2,900	26.0	15.2							Y
200917LO	00002369	042009C	2,900	26.0	15.2							Y
200917LO	00002370	042009C	2,900	26.0	15.2							Y
200917LO	00002371	042109A	2,900	25.0	15.2		26.7					Y
200917LO	00002372	042109A	2,900	25.0	15.2							Y
200917LO	00002373	042109A	2,900	25.0	15.2							Y
200917LO	00002374	042109A	2,900	25.0	15.2							Y
200917LO	00002375	042109A	2,900	25.0	15.2							Y
200917LO	00002376	042109A	2,900	25.0	15.2							Y
200917LO	00002377	042109A	2,900	25.0	15.2							Y
200917LO	00002378	042109A	2,900	25.0	15.2							Y
200917LO	00002379	042109A	2,900	25.0	15.2							Y
200917LO	00002380	042109A	2,900	25.0	15.2							Y
200917LO	00002381	042109A	2,900	25.0	15.2							Y
200917LO	00002382	042109A	2,900	25.0	15.2							Y
200917LO	00002383	042109A	2,900	25.0	15.2							Y

Summary of GCL Inventory, MQA/MQC, and Conformance Test Data

BRC CAMU

Henderson, Nevada

GCL Lot No.	GCL Roll No.	Clay lot No.	Area (SF)	Manufacturer Quality Control Testing				CQA Conformance Testing				Approved
				Bentonite	Bentonite	Index	Moisture	Mass per	Moisture	Index	Cover	Material meets requirements of specifications
				Swell Index ²	Fluid Loss ²	Flux	Content	unit area	Content	Flux	Interface Shear	
				24.0	18.0	1.00E-08	25% (30%)	0.75	30	1.00E-08	20	
				minimum	maximum	maximum	maximum		percent			
				mL/2g	mL	m ³ /m ² -2	%	lb/sq. ft	maximum	m ³ /m ² -2	degrees	
				NS	NS	1/200,000 ^a	1/100,000 ^a	1/100,000 ^a	NS	1/400,000 ^a	1/400,000 ^a	
200917LO	00002384	042109A	2,900	25.0	15.2		25.1					Y
200917LO	00002385	042109A	2,900	25.0	15.2							Y
200917LO	00002386	042109A	2,900	25.0	15.2							Y
200917LO	00002387	042109A	2,900	25.0	15.2							Y
200917LO	00002388	042109A	2,900	25.0	15.2							Y
200917LO	00002389	042109A	2,900	25.0	15.2							Y
200917LO	00002390	042109A	2,900	25.0	15.2							Y
200917LO	00002391	042109A	2,900	25.0	15.2		25.9					Y
200917LO	00002392	042109A	2,900	25.0	15.2							Y
200917LO	00002393	042109A	2,900	25.0	15.2							Y
200917LO	00002394	042109A	2,900	25.0	15.2							Y
200917LO	00002395	042109A	2,900	25.0	15.2			0.86	24.2			Y
200917LO	00002396	042109A	2,900	25.0	15.2							Y
200917LO	00002397	042109A	2,900	25.0	15.2							Y
200917LO	00002398	042109A	2,900	25.0	15.2							Y
200917LO	00002399	042109A	2,900	25.0	15.2							Y
200917LO	00002400	042109A	2,900	25.0	15.2							Y
200917LO	00002401	042109B	2,900	26.0	17.0							Y
200917LO	00002402	042109B	2,900	26.0	17.0							Y
200917LO	00002403	042109B	2,900	26.0	17.0							Y
200917LO	00002404	042109B	2,900	26.0	17.0		26.9					Y
200917LO	00002405	042109B	2,900	26.0	17.0							Y
200917LO	00002406	042109B	2,900	26.0	17.0							Y
200917LO	00002407	042109B	2,900	26.0	17.0							Y
200917LO	00002408	042109B	2,900	26.0	17.0							Y
200917LO	00002409	042109B	2,900	26.0	17.0							Y
200917LO	00002410	042109B	2,900	26.0	17.0							Y
200917LO	00002411	042109B	2,900	26.0	17.0							Y
200917LO	00002412	042109B	2,900	26.0	17.0							Y
200917LO	00002413	042109B	2,900	26.0	17.0							Y
200917LO	00002414	042109B	2,900	26.0	17.0							Y
200917LO	00002415	042109B	2,900	26.0	17.0							Y
200917LO	00002416	042109B	2,900	26.0	17.0							Y
200917LO	00002417	042109B	2,900	26.0	17.0		25.1					Y
200917LO	00002418	042109B	2,900	26.0	17.0							Y
200917LO	00002419	042109B	2,900	26.0	17.0							Y
Cover Manufactured Area (SF):				130	130	2	11	4	4	1	1	
				2,900	2,900	188,500	34,273	94,250	94,250	377,000	377,000	

Note:

NS - Not Specified

APPENDIX D-2
CQA Conformance Results



GCL TEST RESULTS

TRI Client: Geosyntec Consultants
Project: Camu Landwell Basic Remediation - Henderson, NV

Material: Bentomat DN GCL
Sample Identification: 2293
TRI Log #: E2325-23-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Bentonite - Mass/Unit Area (ASTM D 5993, result @ 0% M.C.)													
Bentonite mass/unit area (lbs/ft ²)	0.80	0.88	0.84	1.03	0.92						0.89	0.09	0.75 min
Moisture Content (%)	22.1	23.1	24.5	24.2	24.1						23.6	1.0	30 max
Index Flux (ASTM D 5887)													
Index Flux (m ³ /m ² /sec)	3.3E-09										3.3E-09		1.0E-8 max
Hydraulic Conductivity (cm/sec)	3.6E-09										3.6E-09		

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GCL TEST RESULTS

TRI Client: Geosyntec Consultants
Project: Camu Landwell Basic Remediation - Henderson, NV

Material: Bentomat DN GCL
Sample Identification: 2327
TRI Log #: E2325-23-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Bentonite - Mass/Unit Area (ASTM D 5993, result @ 0% M.C.)													
Bentonite mass/unit area (lbs/ft ²)	0.84	0.74	0.87	0.93	0.90						0.86	0.07	0.75 min
Moisture Content (%)	23.1	25.0	25.3	25.6	24.3						24.7	1.0	30 max

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GCL TEST RESULTS

TRI Client: Geosyntec Consultants
Project: Camu Landwell Basic Remediation - Henderson, NV

Material: Bentomat DN GCL
Bentonite - Mass/Unit Area (ASTM D 5993, result @ 0% M.C.)
TRI Log #: E2325-24-04

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Sample Identification: 2361													
Bentonite mass/unit area (lbs/ft ²)	0.85	0.89	0.93	0.82	0.87						0.87	0.04	0.75 min
Moisture Content (%)	22.4	21.0	22.1	23.5	21.1						22.0	1.0	30 max
Sample Identification: 2395													
Bentonite mass/unit area (lbs/ft ²)	0.97	0.91	0.82	0.73	0.86						0.86	0.09	0.75 min
Moisture Content (%)	23.0	22.0	25.7	24.6	25.8						24.2	1.7	30 max

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

APPENDIX D-3

Sub-grade Acceptance Form

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BHI SOUTH DATE: 05/13/09

PROJECT NUMBER: 07-11-1271

TIME: 14:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # 1
TO PANEL # 05

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Litzgow

TITLE: Field Technician

SIGNATURE: Meghan Litzgow

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Const Manager

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BASIC REMEDIATION BMI SOUTH

DATE: 05/14/09

PROJECT NUMBER: 07-11-1271

TIME: _____

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # 06
TO PANEL # 26

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Robert Derosier

TITLE: EDI

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CARLSON

TITLE: FORD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: CONST MANAGER

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: **BMI SOUTH CLOSURE**

DATE: 05-15-09

PROJECT NUMBER: 07-11-1271

TIME: 06:30

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

From PANEL # (27)
TO PANEL # (48)

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRAN

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Meghan Lithgow

TITLE: Field Technician

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: Michael M. Carlson

TITLE: Field Engineer

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU Closure

DATE: 03/11/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: BMI SOUTH

FROM PANEL # 49
TO PANEL # 74

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CAMON LIDDELL

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: IMELDA M. CAMISAN

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: Assistant CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: BMI South

DATE: 03/12/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:

FROM PANEL # 75
TO PANEL # 87

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Dan Street

TITLE: CQA Site Manager

SIGNATURE: [Signature] 3-12-10

ENTACT REPRESENTATIVE:

NAME: MELHAR M. CARSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Chris White

TITLE: ASSISTANT CM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/01/10

PROJECT NUMBER: 07-11-1271

TIME: 09:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: Phases BMI SOUTH

From PANEL # 88
TO PANEL # 105

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CARON LUDDELL

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MELISSA M. CARSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard Laubinger

TITLE: Cost Manager

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/02/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: Phases PHASE 1

FROM PANEL # 106
TO PANEL # 136 @ #137

ESI REPRESENTATIVE:

NAME: ISMAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: CARON LARSEN

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: MICHAEL M. CHILSON

TITLE: FIELD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: CHRIS WHITE

TITLE: ASSISTANT GM

SIGNATURE: [Signature]

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.

SUBGRADE ACCEPTANCE

PROJECT NAME: CAMU BMI SOUTH

DATE: 04/09/10

PROJECT NUMBER: 07-11-1271

TIME: 07:00

OWNER: BASIC REMEDIATION COMPANY

LOCATION: HENDERSON, NEVADA

I, undersigned a duly appointed representative of Environmental Specialties International, Inc., have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

The certification is based on observations of the subgrade only. No subterranean inspections or tests have been performed by Environmental Specialties International, Inc. and ESI makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. Environmental Specialties International, Inc. accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: BMI SOUTH

From PANEL # 138
TO PANEL # 166

ESI REPRESENTATIVE:

NAME: ISRAEL BUITRON

TITLE: SUPERINTENDENT

SIGNATURE: [Signature]

OWNERS REPRESENTATIVE:

NAME: Camon Liddell

TITLE: SET

SIGNATURE: [Signature]

ENTACT REPRESENTATIVE:

NAME: WILLIAM M. LARSON

TITLE: FOOD ENGINEER

SIGNATURE: [Signature]

SUBMITTED TO WESTON SOLUTIONS

NAME: Richard L. Langer

TITLE: Const Manager

SIGNATURE: [Signature]

APPENDIX D-4

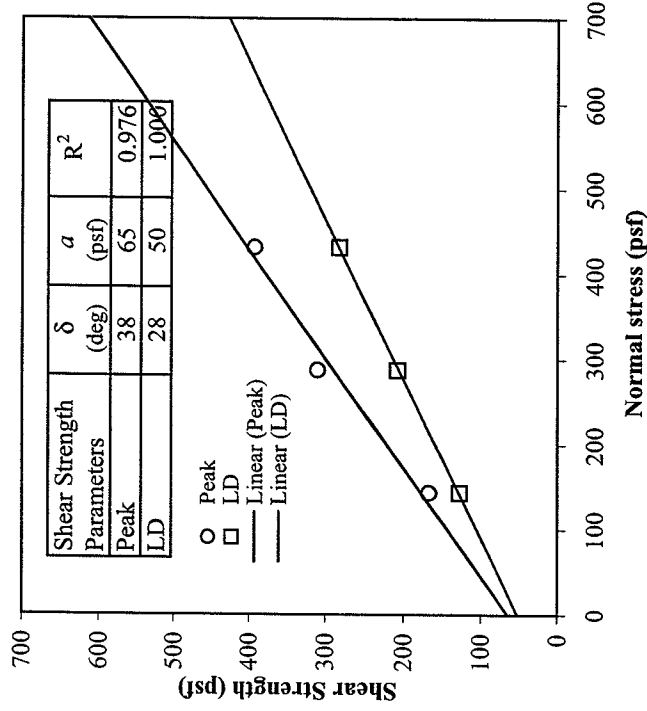
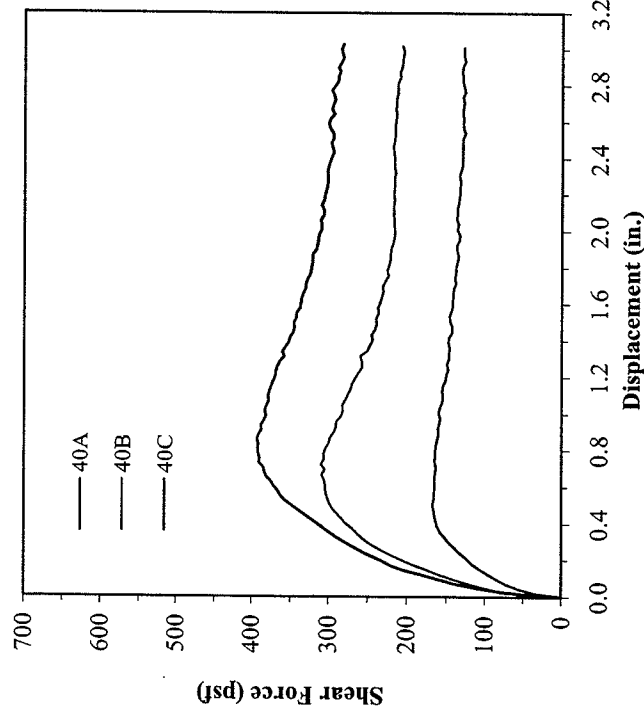
Interface Shear Strength Test Results

GEOSYNTEC CONSULTANTS - BRC EASTSIDE REMEDIATION **INTERFACE DIRECT SHEAR TESTING (ASTM D 5321)**

Upper Shear Box: Cover soil lightly compacted/

Agru 60-mil Microspike HDPE geomembrane # 952222 clamped to upper shear box with short spike (dull) side down/
 Hydrated Bentomat DN GCL (Lot #200917LO/Roll #2295) clamped to lower shear box with black geotextile side down/

Lower Shear Box: Subgrade soil compacted to approximately 90% of max modified Proctor density at optimum moisture content



Test No.	Shear Box Size (in. x in.)	Normal Stress (psf)	Shear Rate (in./min)	GCL Soaking		Consolidation ⁽¹⁾		Subgrade Soil			Cover Soil			GCL		Shear Stress		Failure Mode
				Stress (psf)	Time (hour)	Stress (psf)	Time (hour)	γ_d (pcf)	ω_i (%)	ω_f (%)	γ_d (pcf)	ω_i (%)	ω_f (%)	ω_i (%)	ω_f (%)	τ_p (psf)	τ_{LD} (psf)	
40A	12 x 12	144	0.04	240	48	144	24	115.1	7.7	-	-	-	-	-	152.6	167	128	(2)
40B	12 x 12	288	0.04	240	48	288	24	114.9	7.9	-	-	-	-	-	128.2	310	207	(2)
40C	12 x 12	432	0.04	240	48	432	24	114.5	8.3	-	-	-	-	-	118.2	392	282	(2)

NOTES:

- (1) Consolidation of entire sandwich.
- (2) Shear failure occurred at the interface between the short-spike side of geomembrane and white geotextile side of GCL.

DATE OF REPORT: 5/8/2009



SGI TESTING SERVICES, LLC

FIGURE NO. C-40
 PROJECT NO. SGI8021
 DOCUMENT NO.
 FILE NO.

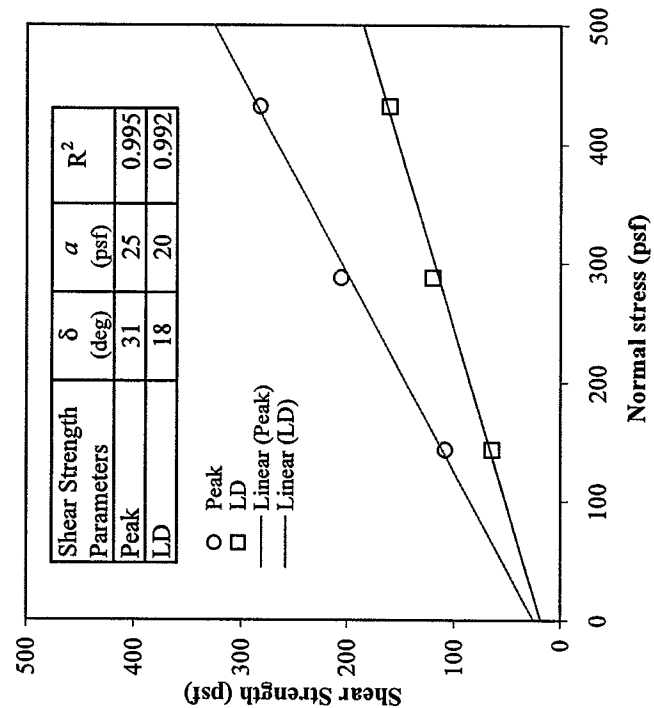
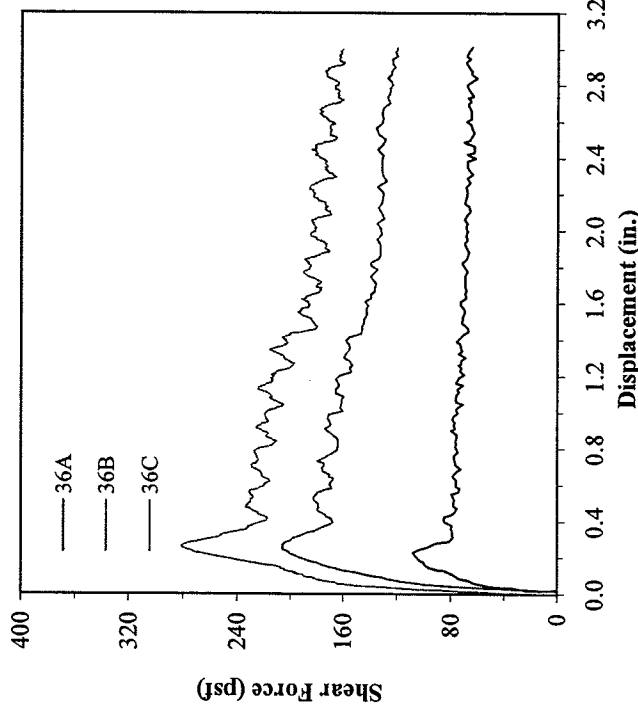
GEOSYNTEC CONSULTANTS - LRC EASTSIDE REMEDIATION INTERFACE DIRECT SHEAR TESTING (ASTM D 5321)

Upper Shear Box: Cover soil lightly compacted at as-received moisture content

SKAPS TN-270-2-6 geocomposite # 269711545 clamped to upper shear box/

Agru 60-mil Microspike HDPE geomembrane # 952222 with long spike side up clamped to lower shear box

Lower Shear Box: Subgrade soil compacted to approximately 90% of max modified Proctor density at optimum moisture content



Test No.	Shear Box Size (in. x in.)	Normal Stress (psf)	Shear Rate (in./min)	GCL Soaking		Consolidation		Subgrade Soil			Cover Soil			GCL		Shear Stress		Failure Mode
				Stress (psf)	Time (hour)	Stress (psf)	Time (hour)	γ_d (pcf)	ω_i (%)	ω_f (%)	γ_d (pcf)	ω_i (%)	ω_f (%)	ω_i (%)	ω_f (%)	τ_p (psf)	τ_{LD} (psf)	
36A	12 x 12	144	0.04					115.0	7.8	7.7	-	-	-	-	-	108	64	(1)
36B	12 x 12	288	0.04					114.4	8.4	8.0	-	-	-	-	-	205	120	(1)
36C	12 x 12	432	0.04					114.9	7.9	7.6	-	-	-	-	-	281	160	(1)

NOTES:

(1) Shear failure occurred at the interface between the geocomposite and long spike side of Microspike geomembrane.

DATE OF REPORT: 2/20/2009

FIGURE NO. C-36

PROJECT NO. SGI8021

DOCUMENT NO.

FILE NO.



SGI TESTING SERVICES, LLC

APPENDIX E

60-mil HDPE Geomembrane

APPENDIX E-1

Material Inventory Logs

Summary of Geomembrane Inventory, MQA/MQC, and Conformance Test Data
BRC CAMU
Henderson, Nevada

Roll No.	Resin Batch No. (Lot #)	Length	Width	Area	Manufacturer Quality Control Testing											CQA Conformance Testing										Approved
					Min. Thick. 54.0 mil	Avg. Thick. 60.0 mil	Yield Strength 126 ppi	Break Strength 90 ppi	Density 0.940 minimum g/cc	Carbon Content 2 - 3 %	Yield Elongation 12 percent	Elongation @ Break 100 percent	Tear Resistance 42 lb	Puncture Resistance 90 lb	Carbon Disp. (min 80%) CAT 1-2 100% CAT 1, 2, 3 1/ 50,000 ft ²	Thickness		min Density 0.94 g/cc	Carbon Content 2 - 3 %	Carbon Disp. (min 80%) CAT 1-2 100% CAT 1, 2, 3 1/ 100,000 ft ²	Yield Strength ¹ 126 ppi	Break Strength ¹ 90 ppi	Yield Elongation ¹ 12 percent	Elongation @ Break ¹ 100 percent	Material meets requirements in specifications	
					1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	1/ 50,000 ft ²	Average 60	Minimum 54											
															mil											
942108-08	7181023	410.1	23.0	9432.3	61	62	162	175	0.946	2.28	14.57	464	62.381	138.7	10											Y
942110-08	7181023	410.1	23.0	9432.3	59	61	153	155	0.946	2.29	14.27	436.5	59.478	132.96	10											Y
942111-08	7181023	410.1	23.0	9432.3	59	62	155	157	0.946	2.29	14.27	436.5	59.478	132.96	10											Y
942112-08	7181023	410.1	23.0	9432.3	61	62	156	158	0.946	2.29	14.27	436.5	59.478	132.96	10											Y
942114-08	7181023	410.1	23.0	9432.3	58	60	149	172	0.946	2.23	16	489.9	63.175	136.41	10	62	61	0.943	2.26	10	159	181	18	469	Y	
942117-08	7181023	410.1	23.0	9432.3	59	61	151	174	0.946	2.23	16	489.9	63.175	136.41	10											Y
942119-08	7181023	410.1	23.0	9432.3	58	60	151	170	0.945	2.15	14.4	469.2	62.096	129.58	10											Y
952118-08	7181327	410.1	23.0	9432.3	60	62	152	178	0.946	2.20	14.03	484.7	67.255	139.36	10											Y
952119-08	7181327	410.1	23.0	9432.3	59	63	162	184	0.945	2.18	15.96	506.6	69.559	143.20	10											Y
952120-08	7181327	410.1	23.0	9432.3	60	62	159	180	0.945	2.18	15.96	506.6	69.559	143.20	10											Y
952121-08	7181327	410.1	23.0	9432.3	59	61	157	178	0.945	2.18	15.96	506.6	69.559	143.20	10											Y
952222-08	7181327	410.1	23.0	9432.3	60	63	161	182	0.945	2.18	15.96	506.6	69.559	143.20	10	66	64	0.94	2.16	10	175	162	17	437	Y	
952223-08	7181327	410.1	23.0	9432.3	60	62	160	181	0.945	2.18	15.96	506.6	69.559	143.20	10											Y
952224-08	7181327	410.1	23.0	9432.3	60	61	157	180	0.946	2.19	15.59	493.0	68.205	139.95	10											Y
952225-08	7181327	410.1	23.0	9432.3	60	62	160	183	0.946	2.19	15.59	493.0	68.205	139.95	10											Y
952226-08	7181327	410.1	23.0	9432.3	59	62	159	182	0.946	2.19	15.59	493.0	68.205	139.95	10											Y
952227-08	7181327	410.1	23.0	9432.3	59	61	156	178	0.946	2.19	15.59	493.0	68.205	139.95	10											Y
952228-08	7181327	410.1	23.0	9432.3	60	62	159	182	0.946	2.19	15.59	493.0	68.205	139.95	10											Y
952229-08	7181327	410.1	23.0	9432.3	61	63	158	187	0.946	2.26	15.42	498.7	68.292	137.44	10											Y
952230-08	7181327	410.1	23.0	9432.3	59	61	153	181	0.946	2.26	15.42	498.7	68.292	137.44	10											Y
952231-08	7181327	410.1	23.0	9432.3	62	63	158	187	0.946	2.26	15.42	498.7	68.292	137.44	10											Y
952232-08	7181327	410.1	23.0	9432.3	61	63	158	187	0.946	2.26	15.42	498.7	68.292	137.44	10											Y
952233-08	7181327	410.1	23.0	9432.3	61	61	155	183	0.946	2.26	15.42	498.7	68.292	137.44	10	66	64	0.941	2.12	10	164	343	17	429	Y	
952234-08	7181327	410.1	23.0	9432.3	60	63	162	179	0.945	2.19	15.70	475.9	69.139	138.48	10											Y
952235-08	7181327	410.1	23.0	9432.3	61	62	160	177	0.945	2.19	15.70	475.9	69.139	138.48	10											Y
952236-08	7181327	410.1	23.0	9432.3	59	61	156	173	0.945	2.19	15.70	475.9	69.139	138.48	10											Y
952237-08	7181327	410.1	23.0	9432.3	60	63	161	178	0.945	2.19	15.70	475.9	69.139	138.48	10											Y
952238-08	7181327	410.1	23.0	9432.3	61	62	160	177	0.945	2.19	15.70	475.9	69.139	138.48	10											Y
952239-08	7181327	410.1	23.0	9432.3	61	62	169	189	0.946	2.20	16.25	490.2	69.585	132.21	10											Y
952240-08	7181327	410.1	23.0	9432.3	60	63	172	193	0.946	2.20	16.25	490.2	69.585	132.21	10											Y
952241-08	7181327	410.1	23.0	9432.3	60	62	170	190	0.946	2.20	16.25	490.2	69.585	132.21	10											Y
952242-08	7181327	410.1	23.0	9432.3	62	63	172	193	0.946	2.20	16.25	490.2	69.585	132.21	10											Y
952243-08	7181327	410.1	23.0	9432.3	61	64	174	195	0.946	2.20	16.25	490.2	69.585	132.21	10											Y
952344-08	7181327	410.1	23.0	9432.3	59	61	161	163	0.946	2.19	15.56	434.1	68.719	142.36	10	66	63	0.94	2.25	10	161	189	16	468	Y	
952345-08	7181327	410.1	23.0	9432.3	59	62	164	166	0.946	2.19	15.56	434.1	68.719	142.36	10											Y
952346-08	7181327	410.1	23.0	9432.3	60	63	165	167	0.946	2.19	15.56	434.1	68.719	142.36	10											Y
952347-08	7181327	410.1	23.0	9432.3	58	61	161	163	0.946	2.19	15.56	434.1	68.719	142.36	10											Y
952348-08	7181327	410.1	23.0	9432.3	61	61	162	164	0.946	2.19	15.56	434.1	68.719	142.36	10											Y
902101-09	7181327	410.1	23.0	9432.3	61	62	159	194	0.946	2.46	15.98	506.4	67.536	139.82	10											Y
902102-09	7181327	410.1	23.0	9432.3	61	62	158	193	0.946	2.46	15.98	506.4	67.536	139.82	10											Y
902103-09	7181327	410.1	23.0	9432.3	61	62	158	193	0.946	2.46	15.98	506.4	67.536	139.82	10											Y
902104-09	7181327	410.1	23.0	9432.3	60	62	158	193	0.946	2.46	15.98	506.4	67.536	139.82	10											Y
902105-09	7181327	410.1	23.0	9432.3	57	60	153	186	0.946	2.46	15.98	506.4	67.536	139.82	10											Y
902106-09	7181327	410.1	23.0	9432.3	60	62	162	173	0.946	2.30	16.49	475.5	67.971	142.74	10	65	62	0.941	2.24	10	157	170	17	456	Y	
902107-09	7181327	410.1	23.0	9432.3	59	62	162	173	0.946	2.30	16.49	475.5	67.971	142.74	10											Y
902108-09	7181327	410.1	23.0	9432.3	61	62	162	173	0.946																	

Notes:
1 and Transverse Directions; lesser of two values displaye

APPENDIX E-2

CQA Conformance Results



GEOMEMBRANE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC Camu - Base Liner

Material: Agru 60 mil Microspike HDPE Geomembrane

Sample Identification: 942114.08

TRI Log #: E2320-26-10

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D 5994)													
Thickness (mils)	61	63	63	62	61	63	63	63	62	62	62 61	1 << min	60 avg 54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.943	0.943	0.943								0.943	0.000	0.940 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.25	2.26									2.26	0.01	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								8 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								2 Cat 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	159	164	164	157	153						159 169	5	126 min
TD Yield Strength (ppi)	166	172	171	162	174							5	126 min
MD Break Strength (ppi)	177	181	211	192	166						185 181	17	90 min
TD Break Strength (ppi)	180	182	177	192	175							7	90 min
MD Yield Elongation (%)	22	22	22	22	22						22 18	0	12 min
TD Yield Elongation (%)	19	17	17	19	19							1	12 min
MD Break Elongation (%)	450	476	508	480	429						469 516	30	100 min
TD Break Elongation (%)	514	511	510	578	466							40	100 min
MD Machine Direction	TD Transverse Direction												

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOMEMBRANE TEST RESULTS

TRI Client: Geosyntec Consultants
Project: BRC Camu - Base Liner

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 952222.08
TRI Log #: E2324-25-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D 5994)													
Thickness (mils)	64	64	66	66	68	68	67	65	65	64	66 64	2 << min	60 avg 54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.940	0.940	0.941								0.940	0.001	0.940 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.16	2.16									2.16	0.00	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								8 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								2 Cat 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	166	181	178	175	177						176 187	6 5	126 min 126 min
TD Yield Strength (ppi)	186	190	182	194	183								
MD Break Strength (ppi)	212	186	188	175	214						195 162	17 16	90 min 90 min
TD Break Strength (ppi)	179	136	165	163	166								
MD Yield Elongation (%)	21	21	21	21	21						21 17	0 0	12 min 12 min
TD Yield Elongation (%)	17	17	17	17	17								
MD Break Elongation (%)	481	405	448	410	483						445 437	37 82	100 min 100 min
TD Break Elongation (%)	504	299	461	434	489								
MD Machine Direction	TD Transverse Direction												

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOMEMBRANE TEST RESULTS

TRI Client: Geosyntec Consultants
Project: BRC Camu - Base Liner

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 952233.08
TRI Log #: E2324-25-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D 5994)													
Thickness (mils)	67	66	67	66	65	67	65	64	67	65	<div>66</div> <div>64</div>	1 << min	60 avg 54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.941	0.941	0.941								<div>0.941</div>	0.000	0.940 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.11	2.13									<div>2.12</div>	0.01	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								8 Cat 1, 2 2 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	162	158	163	170	168						<div>164</div> <div>177</div>	5	126 min
TD Yield Strength (ppi)	171	173	180	182	180						<div>177</div>	5	126 min
MD Break Strength (ppi)	401	310	371	371	409						<div>372</div> <div>343</div>	39	90 min
TD Break Strength (ppi)	310	61	442	430	474						<div>343</div>	170	90 min
MD Yield Elongation (%)	22	22	22	22	22						<div>22</div> <div>17</div>	0	12 min
TD Yield Elongation (%)	17	17	17	17	17						<div>17</div>	0	12 min
MD Break Elongation (%)	501	388	464	464	511						<div>466</div> <div>429</div>	49	100 min
TD Break Elongation (%)	388	76	553	538	593						<div>429</div>	212	100 min
MD Machine Direction	TD Transverse Direction												

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOMEMBRANE TEST RESULTS

TRI Client: Geosyntec Consultants
Project: BRC Camu - Base Liner

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 952344.05
TRI Log #: E2324-25-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D 5994)													
Thickness (mils)	63	63	65	66	66	65	67	67	67	68	66 63	2 << min	60 avg 54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.940	0.940	0.940								0.940	0.000	0.940 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.21	2.28									2.25	0.05	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								8 Cat 1, 2 2 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	162	160	164	159	158						161	2	126 min
TD Yield Strength (ppi)	171	172	171	173	176						173	2	126 min
MD Break Strength (ppi)	200	185	190	178	208						192	12	90 min
TD Break Strength (ppi)	223	205	152	179	184						189	27	90 min
MD Yield Elongation (%)	21	21	21	21	21						21	0	12 min
TD Yield Elongation (%)	16	16	16	16	16						16	0	12 min
MD Break Elongation (%)	484	464	483	441	466						468	17	100 min
TD Break Elongation (%)	619	588	429	534	561						546	73	100 min
MD Machine Direction	TD Transverse Direction												

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOMEMBRANE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC Camu - Base Liner

Material: Agru 60 mil Microspike HDPE Geomembrane

Sample Identification: 902106.09

TRI Log #: E2324-26-06

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D 5994)													
Thickness (mils)	68	65	67	67	66	65	65	65	62	64	65 62	2 << min	60 avg 54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.940	0.941	0.941								0.941	0.001	0.940 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.22	2.26									2.24	0.03	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								8 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								2 Cat 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	147	155	162	162	158						157 169	6 5	126 min 126 min
TD Yield Strength (ppi)	165	167	165	175	173								
MD Break Strength (ppi)	181	179	191	189	215						191 170	14 29	90 min 90 min
TD Break Strength (ppi)	162	190	124	176	198								
MD Yield Elongation (%)	21	21	21	21	21						21 17	0 0	12 min 12 min
TD Yield Elongation (%)	17	17	17	17	17								
MD Break Elongation (%)	473	460	481	454	534						480 456	32 154	100 min 100 min
TD Break Elongation (%)	461	531	195	499	593								
MD Machine Direction	TD Transverse Direction												

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

APPENDIX E-3

Certificate of Tensiometer Calibration

Demtech Services, Inc.
Placerville, California, USA

sent to Ismeal

on 3/30/09
From ESI
By Terry

CALIBRATION CERTIFICATE

Environmental Specialties Int'l

Tensiometer Model:

Pro-Tester T-0100

Device Calibrated:

S-Type load cell

Calibration Apparatus:

Range:

0 - 750 lbs. Tension

Model No:

M2405-750#

Pro-Cal unit, model TC-0100/A

Serial No:

236057

A/D Module Model No:

T-029

A/D Module Serial No:

5008236057

Channel No:

N/A

Dead Weight:

W1

2

W2

152

W3

302

Reference Cell:

R1

2

R2

152

R3

302

Indicator reading with no load:

0

Offset:

4.804459

Scale:

5.044404

Applied Force lbs.

Cell Response:

Deviation Error:

2
52
102
152
202
252
302

2
52
102
152
202
252
302

0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F

Excitation Voltage:

5

V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Matt Roy

Date: 02/25/09

Matthew B.

Demtech Services, Inc.
Placerville, California, USA

CALIBRATION CERTIFICATE

Environmental Specialties Int'l

Tensiometer Model:

Pro-Tester T-0100

Device Calibrated:

S-Type load cell
0 - 750 lbs. Tension

Calibration Apparatus:

Range:

Model No:

M2405-750#

Pro-Cal unit, model TC-0100/A

Serial No:

236082

A/D Module Model No:

T-029

A/D Module Serial No:

5008236082

Channel No:

N/A

Dead Weight:

W1

2

W2

152

W3

302

Reference Cell:

R1

2

R2

152

R3

302

Indicator reading with no load:

0

Offset:

3.011845

Scale:

5.224056

Applied Force lbs.

Cell Response:

Deviation Error:

2
52
102
152
202
252
302

2
52
102
152
202
252
302

0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F

Excitation Voltage:

5

V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Matt Roy

Date:

02/26/09

Matthew B

Demtech Services, Inc.
Placerville, California, USA

CALIBRATION CERTIFICATE

Customer Name: **ESI**

Tensiometer Model: **Pro-Tester T-0100**

Device Calibrated: **S-Type load cell**
Range: **0 - 750 lbs. Tension**

Calibration Apparatus:

Model No: **M2405-750#**

Reference load cell (S/N 204781)

Serial No: **221182**

A/D Module Model No: **T-029**

Dead Weight:

W1 **2**

Reference Cell:

R1 **2**

A/D Module Serial No: **2207221182**

W2 **152**

R2 **152**

Channel No: **N/A**

W3 **302**

R3 **302**

Indicator reading with no load: **0**

Offset: **8.418615**

Scale: **4.797061**

Applied Force lbs.

Cell Response:

Deviation Error:

2
52
102
152
202
252
302

2
52
102
152
202
252
302

0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total Deviation Error (%): **0.00%**

Temperature at time of calibration: **73 degrees F**

Excitation Voltage: **5** V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Calibration Technician:

Dean Cato

Date:

11/3/09

Demtech Services, Inc.
Placerville, California, USA

CALIBRATION CERTIFICATE

Customer Name: ESI

Tensiometer Model: Pro-Tester T-0100

Device Calibrated: S-Type load cell
Range: 0 - 750 lbs. Tension

Model No: M2405-750#

Serial No: 209336

A/D Module Model No: T-029

A/D Module Serial No: 2206209336

Channel No: N/A

Calibration Apparatus:

Reference load cell (S/N 204781)

Dead Weight:

W1	<u>2</u>
W2	<u>152</u>
W3	<u>302</u>

Reference Cell:

R1	<u>2</u>
R2	<u>152</u>
R3	<u>302</u>

Indicator reading with no load: 0

Offset: 9.817717

Scale: 3.641701

Applied Force lbs.

<u>2</u>
<u>52</u>
<u>102</u>
<u>152</u>
<u>202</u>
<u>252</u>
<u>302</u>

Cell Response:

<u>2</u>
<u>52</u>
<u>102</u>
<u>152</u>
<u>202</u>
<u>252</u>
<u>302</u>

Deviation Error:

<u>0.00</u>
<u>0.00</u>
<u>0.00</u>
<u>0.00</u>
<u>0.00</u>
<u>0.00</u>
<u>0.00</u>

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F

Excitation Voltage: 5 V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Calibration Technician:

Dean Cato

Date:

11/3/09

APPENDIX E-4
Trial Seam Logs

APPENDIX E-4A

Fusion Weld

Trial Seam Log - Fusion

Project: <u>South BMI Landfill</u>	ProjNo: <u>SC0313</u>	TaskNo: <u>09/03</u>
Location: <u>Henderson, NV</u>		
Description: <u>Geomembrane Liner System</u>		
Tensiometer Description: Demtech		
Material Type	gml : 1	Peel Inside: 91 ppi
		Shear: 120 ppi
		Peel Outside: 91 ppi

Trial Seam No	Date	Time	Mach ID	Oper ID	Mat Desc	Fusion		Test Results					QA ID
						Wedge • Celsius	Speed ft./Min	Peel In	Peel Out	Shear	Unit ppi/psi	Result	
1-001	5/13/2009	14:28	20831	JC	S/S	850	4.5	126	125	151	ppi	P	ML
1-002	5/13/2009	14:30	20831	JC	T/T	850	3.5	120	118	147	ppi	P	ML
1-003	5/13/2009	14:30	1210	EB	S/S	850	5.5	112	117	147	ppi	P	ML
1-004	5/13/2009	14:25	1210	EB	T/T	850	4.5	114	124	143	ppi	P	ML
1-005	5/14/2009	7:23	20831	JC	S/S	850	4.5	130	128	168	ppi	P	RKD
1-006	5/14/2009	7:25	20831	JC	T/T	850	3.5	129	127	156	ppi	P	RKD
1-007	5/14/2009	7:20	1210	EB	S/S	850	5.5	127	121	168	ppi	P	RKD
1-008	5/14/2009	7:25	1210	EB	T/T	850	4.5	127	134	156	ppi	P	RKD
1-009	5/14/2009	12:17	20831	JC	S/S	850	5.0	127	119	144	ppi	P	ML
1-010	5/14/2009	12:36	20831	JC	T/T	850	4.0	124	119	144	ppi	P	ML
1-011	5/14/2009	12:30	1210	EB	S/S	850	5.5	130	117	145	ppi	P	ML
1-012	5/14/2009	12:25	1210	EB	T/T	850	4.5	118	122	142	ppi	P	ML
1-013	5/15/2009	7:37	20831	JC	S/S	850	5.0	139	125	166	ppi	P	ML
1-014	5/15/2009	7:39	20831	JC	T/T	850	4.0	122	117	145	ppi	P	ML
1-015	5/15/2009	7:10	1210	EB	S/S	850	5.5	126	129	158	ppi	P	ML
1-016	5/15/2009	7:15	1210	EB	T/T	850	4.5	122	121	145	ppi	P	ML
1-017	5/15/2009	12:05	20831	JC	S/S	850	5.0	122	124	148	ppi	P	ML
1-018	5/15/2009	12:00	20831	JC	T/T	850	4.0	127	127	144	ppi	P	ML
1-019	5/15/2009	12:05	1210	EB	S/S	850	5.5	132	124	148	ppi	P	ML
1-020	5/15/2009	12:10	1210	EB	T/T	850	4.5	132	131	143	ppi	P	ML
1-021	5/15/2009	14:00	1210	EB	S/T	850	5.0	117	119	146	ppi	P	ML
1-022	5/15/2009	13:40	20831	JC	S/T	850	4.0	127	121	143	ppi	P	ML
1-023	5/15/2009	15:30	1209	IS	S/S	850	5.5	124	127	143	ppi	P	ML
1-024	5/16/2009	6:00	1210	EB	S/T	850	4.5	123	127	169	ppi	P	RKD
1-025	3/11/2010	7:32	20831	JC	S/S	850	4.5	144	139	203	ppi	P	CL
1-026	3/11/2010	7:35	20831	JC	S/T	850	3.5	157	140	202	ppi	P	CL
1-027	3/11/2010	7:37	20831	JC	T/T	850	3.5	149	135	192	ppi	P	CL
1-028	3/11/2010	8:45	1210	EB	S/S	860	5.5	139	142	199	ppi	P	CL
1-029	3/11/2010	8:35	1210	EB	T/T	860	4.0	163	154	189	ppi	P	CL
1-030	3/11/2010	8:30	1210	EB	S/T	860	4.0	133	141	191	ppi	P	CL
1-031	3/11/2010	13:05	1210	EB	S/S	860	5.5	125	131	170	ppi	P	CL
1-032	3/11/2010	13:00	1210	EB	S/T	860	4.0	134	136	165	ppi	P	CL
1-033	3/11/2010	13:00	1209	LLR	T/T	860	3.5	122	123	161	ppi	P	CL
1-034	3/11/2010	13:15	1208	JC	S/S	860	4.5	129	132	175	ppi	P	CL

Trial Seam Log - Fusion

Project: <u>South BMI Landfill</u>	ProjNo: <u>SC0313</u>	TaskNo: <u>09/03</u>
Location: <u>Henderson, NV</u>		
Description: <u>Geomembrane Liner System</u>		
Tensiometer Description: Demtech		
Material Type	gml : 1	Peel Inside: 91 ppi
		Shear: 120 ppi
		Peel Outside: 91 ppi

Trial Seam No	Date	Time	Mach ID	Oper ID	Mat Desc	Fusion		Test Results					QA ID
						Wedge • Celsius	Speed ft./Min	Peel In	Peel Out	Shear	Unit ppi/psi	Result	
1-035	3/11/2010	13:20	1208	JC	T/T	860	3.5	131	130	167	ppi	P	CL
1-036	3/11/2010	13:12	1209	LLR	S/S	860	4.5	127	123	164	ppi	P	CL
1-037	3/12/2010	7:20	1208	JC	T/T	860	3.5	131	132	184	ppi	P	VH
1-038	3/12/2010	7:56	1209	LL	S/S	860	4.5	127	134	176	ppi	P	VH
1-039	3/12/2010	8:15	1210	EB	S/S	860	5.5	127	131	175	ppi	P	VH
1-040	3/12/2010	8:20	1208	JC	S/S	860	4.5	134	138	180	ppi	P	VH
1-041	3/12/2010	12:00	1210	EB	T/T	860	4.0	121	123	161	ppi	P	VH
1-042	4/1/2010	9:30	1210	EB	S/S	860	5.0	128	128	175	ppi	P	CL
1-043	4/1/2010	9:35	1210	EB	T/S	860	4.0	132	130	173	ppi	P	CL
1-044	4/1/2010	9:40	1210	EB	T/T	860	4.0	130	132	171	ppi	P	CL
1-045	4/1/2010	9:30	1208	JC	S/S	860	4.5	128	128	176	ppi	P	CL
1-046	4/1/2010	13:00	1210	EB	S/S	860	5.5	123	128	162	ppi	P	CL
1-047	4/1/2010	13:05	1210	EB	T/S	860	4.0	123	122	162	ppi	P	CL
1-048	4/1/2010	13:02	1208	JC	T/T	860	3.5	129	125	162	ppi	P	CL
1-049	4/1/2010	13:07	1208	JC	S/S	860	4.5	138	132	159	ppi	P	CL
1-050	4/1/2010	13:07	1210	EB	T/T	860	4.0	130	129	165	ppi	P	CL
1-051	4/2/2010	7:30	1208	JC	T/T	860	3.5	150	141	178	ppi	P	GM
1-052	4/2/2010	7:35	1208	JC	S/S	860	4.5	145	162	199	ppi	P	GM
1-053	4/2/2010	7:50	1210	EB	S/S	860	5.0	128	135	191	ppi	P	GM
1-054	4/2/2010	11:00	1208	JC	S/T	860	3.5	128	131	169	ppi	P	GM
1-055	4/2/2010	11:01	1210	EB	S/T	860	4.0	132	132	166	ppi	P	GM
1-056	4/2/2010	12:40	1210	EB	S/S	860	5.5	124	120	166	ppi	P	GM
1-057	4/2/2010	12:45	1210	EB	S/T	860	4.0	123	116	162	ppi	P	GM
1-058	4/2/2010	12:50	1210	EB	T/T	860	4.0	132	135	156	ppi	P	GM
1-059	4/2/2010	13:00	1208	JC	S/S	860	4.5	129	122	159	ppi	P	GM
1-060	4/2/2010	13:05	1208	JC	T/T	860	3.5	119	125	167	ppi	P	GM
1-061	4/2/2010	13:08	1208	JC	S/T	860	3.5	129	130	169	ppi	P	GM
1-062	4/3/2010	7:10	1210	EB	T/T	860	4.0	135	140	194	ppi	P	GM
1-063	4/3/2010	7:14	1210	EB	S/T	860	4.0	142	148	207	ppi	P	GM
1-064	4/9/2010	8:55	1210	EB	S/T	860	4.0	132	134	173	ppi	P	GM
1-065	4/9/2010	8:50	1210	EB	T/T	860	4.0	123	123	169	ppi	P	GM
1-066	4/9/2010	9:00	1210	EB	S/S	860	5.0	133	131	170	ppi	P	GM
1-067	4/9/2010	8:55	1208	JC	S/S	860	4.5	120	126	165	ppi	P	GM
1-068	4/9/2010	9:00	1208	JC	S/T	860	3.5	128	125	164	ppi	P	GM

Trial Seam Log - Fusion

Project: <u>South BMI Landfill</u>		ProjNo: <u>SC0313</u>	TaskNo: <u>09/03</u>
Location: <u>Henderson, NV</u>			
Description: <u>Geomembrane Liner System</u>			
Tensiometer Description: Demtech			
Material Type	gml : 1	Peel Inside: 91 ppi	Shear: 120 ppi
		Peel Outside: 91 ppi	

Trial Seam No	Date	Time	Mach ID	Oper ID	Mat Desc	Fusion		Test Results					QA ID
						Wedge • Celsius	Speed ft./Min	Peel In	Peel Out	Shear	Unit ppi/psi	Result	
1-069	4/9/2010	9:02	1208	JC	T/T	860	3.5	128	122	166	ppi	P	GM
1-070	4/9/2010	12:55	1210	EB	S/S	860	5.5	125	120	161	ppi	P	GM
1-071	4/9/2010	13:00	1210	EB	T/T	860	4.0	119	118	157	ppi	P	GM
1-072	4/9/2010	13:00	1208	JC	S/S	860	4.5	111	110	149	ppi	P	GM
1-073	4/9/2010	13:05	1208	JC	T/T	860	3.5	115	111	149	ppi	P	GM

APPENDIX E-4B

Extrusion Weld

Trial Seam Log - Extrusion

Project: <u>South BMI Landfill</u> Location: <u>Henderson, NV</u> Description: <u>Geomembrane Liner System</u> Tensiometer Description: Demtech													
ProjNo: <u>SC0313</u> TaskNo: <u>09/03</u>													
Material Type gml : 1 <i>Peel:</i> 78 ppi <i>Shear:</i> 120 ppi													
Trial Seam No	Date	Time	Mach ID	Oper ID	Mat Desc	Extrusion		Test Results				Retest No	QA ID
						Pre heat • Celsius	Barrel • Celsius	Peel	Shear	Unit ppi/psi	Result P/F		
1-001	5/14/2009	8:00	513	BRS	T/T	300	500	117	153	ppi	P		RKD
1-002	5/15/2009	7:05	513	BRS	T/T	300	500	116	143	ppi	P		ML
1-003	5/15/2009	12:14	513	BRS	T/T	300	500	114	140	ppi	P		ML
1-004	5/16/2009	6:10	513	IS	T/T	400	500	125	149	ppi	P		RKD
1-005	5/16/2009	7:30	013	EB	T/T	400	500	125	149	ppi	P		RKD
1-006	3/12/2010	7:30	513	IS	T/T	500	500	146	169	ppi	P		VH
1-007	3/12/2010	12:00	513	IS	T/T	500	500	128	161	ppi	P		VH
1-008	3/12/2010	12:30	013	MB	T/T	350	550	131	160	ppi	P		VH
1-009	4/2/2010	9:00	513	IS	T/T	500	500	137	164	ppi	P		GM
1-010	4/2/2010	13:00	513	IS	T/T	500	500	132	149	ppi	P		GM
1-011	4/3/2010	7:11	513	IS	T/T	500	500	144	180	ppi	P		GM
1-012	4/5/2010	7:20	513	IS	T/T	500	500	133	184	ppi	P		CL
1-013	4/5/2010	13:00	513	IS	T/T	500	500	140	185	ppi	P		CL
1-014	4/6/2010	7:10	513	IS	T/T	500	500	145	181	ppi	P		CL
1-015	4/6/2010	13:40	513	IS	T/T	500	500	134	162	ppi	P		CL
1-016	4/7/2010	7:10	513	IS	T/T	500	500	143	170	ppi	P		CL
1-017	4/7/2010	8:30	13	EB	T/T	400	550	142	166	ppi	P		CL
1-018	4/7/2010	12:35	513	IS	T/T	500	500	125	164	ppi	P		CL
1-019	4/7/2010	12:30	13	EB	T/T	400	550	129	161	ppi	P		CL
1-020	4/9/2010	13:05	513	IS	T/T	500	500	131	145	ppi	P		GM
1-021	4/10/2010	7:00	13	EB	T/T	400	550	152	171	ppi	P		GM
1-022	4/10/2010	7:00	513	IS	T/T	500	500	144	173	ppi	P		GM

APPENDIX E-5

Panel Placement Logs

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
<i>Panel</i>	<i>Batch-Roll</i>	<i>Date</i>	<i>Time</i>	<i>Placement/Location/Comments</i>	<i>Width (ft.)</i>	<i>Length (ft.)</i>	<i>QA ID</i>
1	902101-08	5/13/2009	15:30	E OF & ADJ P-3	22	314	ML
2	902101-08	5/13/2009	15:46	W OF & ADJ TO P-1	22	93	ML
3	902107-08	5/13/2009	16:03	W OF & ADJ TO P-1	22	220	ML
4	902107-08	5/13/2009	16:11	W OF & ADJ TO P-2	22	186	ML
5	902108-08	5/13/2009	16:30	W OF & ADJ TO P-3	22	126	ML
6	902108-08	5/14/2009	8:00	W OF & ADJ TO P-4	22	280	ML
7	952237-08	5/14/2009	8:27	W OF & ADJ TO P-5	22	31	ML
8	952237-08	5/14/2009	8:31	W OF & ADJ TO P-6	22	307	ML
9	952237-08	5/14/2009	8:39	W OF & ADJ TO P-8	22	65	ML
10	952348-08	5/14/2009	8:44	W OF & ADJ TO P-8	22	246	ML
11	952348-08	5/14/2009	8:48	W OF & ADJ TO P-9	22	162	ML
12	952347-08	5/14/2009	9:00	W OF & ADJ TO P-10	22	146	ML
13	952347-08	5/14/2009	9:06	W OF & ADJ TO P-11	22	258	ML
14	952238-08	5/14/2009	9:21	W OF & ADJ TO P-12	22	48	ML
15	952238-08	5/14/2009	0:41	W OF & ADJ TO P-13	22	306	ML
16	952238-08	5/14/2009	12:50	W OF & ADJ TO P-15	22	54	ML
17	952242-08	5/14/2009	13:04	W OF & ADJ TO P-15	22	252	ML
18	952242-08	5/14/2009	13:16	W OF & ADJ TO P-17	22	156	ML
19	952243-08	5/14/2009	13:24	W OF & ADJ TO P-16	22	146	ML
20	952243-08	5/14/2009	13:30	W OF & ADJ TO P-18	22	262	ML
21	952240-08	5/14/2009	14:02	W OF & ADJ TO P-19	22	40	ML
22	952240-08	5/14/2009	14:25	W OF & ADJ TO P-20	22	300	ML
23	952240-08	5/14/2009	15:01	W OF & ADJ TO P-22	22	64	ML
24	902104-08	5/14/2009	15:01	W OF & ADJ TO P-22	22	238	ML
25	902104-08	5/14/2009	15:11	W OF & ADJ TO P-23	22	170	ML
26	952344-08	5/14/2009	15:14	W OF & ADJ TO P-24	22	130	ML
27	952344-08	5/15/2009	7:05	W OF & ADJ TO P-25	22	278	ML
28	952234-08	5/15/2009	7:35	W OF & ADJ TO P-26	22	24	ML
29	952234-08	5/15/2009	7:52	W OF & ADJ TO P-27	22	302	ML
30	952234-08	5/15/2009	8:34	W OF & ADJ TO P-29	22	83	ML
31	902106-08	5/15/2009	9:09	W OF & ADJ TO P-29	22	218	ML

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
32	902102-08	5/15/2009	14:22	N OF & ADJ TO P-33	22	200	RKD
33	902102-08	5/15/2009	14:52	N OF & ADJ TO P-34	22	130	RKD
34	952241-08	5/15/2009	14:39	N OF & ADJ TO P-35	22	184	RKD
35	952241-08	5/15/2009	14:46	N OF & ADJ TO P-36	22	184	RKD
36	902106-08	5/15/2009	15:12	N OF & ADJ TO P-37	22	182	RKD
37	952235-08	5/15/2009	15:14	N OF & ADJ TO P-38	22	176	RKD
38	952235-08	5/15/2009	15:24	N OF & ADJ TO P-39	22	175	RKD
39	902103-08	5/15/2009	15:37	N OF & ADJ TO P-40	22	174	RKD
40	902103-08	5/15/2009	15:48	N OF & ADJ TO P-41	22	170	RKD
41	952236-08	5/15/2009	15:52	N OF & ADJ TO P-42	22	169	RKD
42	952236-08	5/15/2009	16:00	N OF & ADJ TO P-43	22	165	RKD
43	952121-08	5/15/2009	16:12	N OF & ADJ TO P-44	22	154	ML
44	952121-08	5/15/2009	16:28	N OF & ADJ TO P-45	11	154	ML
45	942117-08	5/15/2009	16:30	N OF & ADJ TO P-46	10	155	ML
46	952121-08	5/15/2009	16:45	N OF & ADJ TO P-47	9	136	RKD
47	952119-08	5/15/2009	16:50	N OF & ADJ TO P-48	22	125	RKD
48	952119-08	5/15/2009	16:53	S OF & ADJ TO P-47	5	58	RKD
49	942119-08	3/11/2010	9:30	N OF & ADJ TO P-50	22	171	CL
50	942119-08	3/11/2010	9:45	S OF & ADJ TO P-49	22	146	CL
51	942119-08	3/11/2010	10:15	S OF & ADJ TO P-50	22	55	CL
52	942114-08	3/11/2010	10:20	S OF & ADJ TO P-50	22	58	CL
53	942114-08	3/11/2010	10:30	S OF & ADJ TO P-51	22	71	CL
54	942114-08	3/11/2010	10:40	S OF & ADJ TO P-53	16	37	CL
55	942114-08	3/11/2010	10:45	N OF & ADJ TO P-56	22	140	CL
56	942114-08	3/11/2010	10:50	S OF & ADJ TO P-55	22	66	CL
57	942114-08	3/11/2010	10:55	S OF & ADJ TO P-53	5	16	CL
58	942108-08	3/11/2010	11:05	S OF & ADJ TO P-55	22	60	CL
59	942114-08	3/11/2010	11:10	E OF & ADJ TO P-58	11	34	CL
60	942108-08	3/11/2010	11:20	S OF & ADJ TO P-59	22	138	CL
61	942108-08	3/11/2010	11:15	E OF & ADJ TO P-62	11	38	CL
62	942108-08	3/11/2010	13:00	S OF & ADJ TO P-60	22	118	CL

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
63	942108-08	3/11/2010	13:05	S OF & ADJ TO P-62	22	62	CL
64	942110-08	3/11/2010	13:20	S OF & ADJ TO P-62	22	69	CL
65	942110-08	3/11/2010	13:25	S OF & ADJ TO P-64	22	84	CL
66	942110-08	3/11/2010	13:40	S OF & ADJ TO P-65	11	58	CL
67	942110-08	3/11/2010	14:30	E OF & ADJ TO P-68	22	74	CL
68	942110-08	3/11/2010	14:45	W OF & ADJ TO P-67	22	74	CL
69	902102-08	3/11/2010	15:00	W OF & ADJ TO P-68	22	76	CL
70	942111-08	3/11/2010	15:10	W OF & ADJ TO P-69	22	78	CL
71	942111-08	3/11/2010	15:15	W OF & ADJ TO P-70	22	78	CL
72	942111-08	3/11/2010	15:25	W OF & ADJ TO P-71	22	80	CL
73	942111-08	3/11/2010	15:30	W OF & ADJ TO P-72	22	80	CL
74	942111-08	3/11/2010	15:35	W OF & ADJ TO P-73	22	80	CL
75	952121-08	3/12/2010	8:15	W OF & ADJ TO P-74	22	80	CL
76	952119-08	3/12/2010	8:25	W OF & ADJ TO P-75	22	76	CL
77	942112-08	3/12/2010	8:40	W OF & ADJ TO P-76	22	72	CL
78	942112-08	3/12/2010	8:45	W OF & ADJ TO P-77	22	68	CL
79	942112-08	3/12/2010	8:45	W OF & ADJ TO P-78	22	64	CL
80	942112-08	3/12/2010	8:50	W OF & ADJ TO P-79	22	62	CL
81	942112-08	3/12/2010	8:55	W OF & ADJ TO P-80	22	62	CL
82	942112-08	3/12/2010	8:57	W OF & ADJ TO P-81	22	62	CL
83	952236-08	3/12/2010	9:10	W OF & ADJ TO P-82	22	62	CL
84	902103-08	3/12/2010	9:15	W OF & ADJ TO P-83	22	62	CL
85	942117-08	3/12/2010	9:55	W OF & ADJ TO P-84	22	62	CL
86	942117-08	3/12/2010	10:00	W OF & ADJ TO P-85	22	64	CL
87	942117-08	3/12/2010	10:10	W OF & ADJ TO P-86	22	64	CL
88	952224-08	4/1/2010	10:55	N OF & ADJ TO P-49	11	55	CL
89	942117-08	4/1/2010	10:05	N OF & ADJ TO P-90	20	22	CL
90	952224-08	4/1/2010	10:00	W OF & ADJ TO P-88	22	56	CL
91	952224-08	4/1/2010	9:50	W OF & ADJ TO P-90	22	131	CL
92	952224-08	4/1/2010	9:45	W OF & ADJ TO P-91	22	180	CL
93	928227-08	4/1/2010	9:40	W OF & ADJ TO P-92	22	133	CL

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
<i>Panel</i>	<i>Batch-Roll</i>	<i>Date</i>	<i>Time</i>	<i>Placement/Location/Comments</i>	<i>Width (ft.)</i>	<i>Length (ft.)</i>	<i>QA ID</i>
94	952224-08	4/1/2010	11:00	N OF & ADJ TO P-49	16	21	CL
95	952226-08	4/1/2010	11:30	W OF & ADJ TO P-93	22	133	CL
96	952226-08	4/1/2010	13:00	W OF & ADJ TO P-95	22	133	CL
97	952226-08	4/1/2010	13:10	W OF & ADJ TO P-96	22	133	CL
98	952229-08	4/1/2010	13:30	W OF & ADJ TO P-97	22	133	CL
99	952229-08	4/1/2010	14:00	W OF & ADJ TO P-98	22	133	CL
100	952229-08	4/1/2010	14:10	W OF & ADJ TO P-99	22	133	CL
101	952233-08	4/1/2010	14:30	W OF & ADJ TO P-100	22	133	CL
102	952233-08	4/1/2010	15:00	W OF & ADJ TO P-101	22	133	CL
103	952233-08	4/1/2010	15:10	W OF & ADJ TO P-102	22	133	CL
104	952232-08	4/1/2010	15:15	W OF & ADJ TO P-103	22	133	CL
105	950232-08	4/1/2010	15:30	W OF & ADJ TO P-104	22	133	CL
106	952232-08	4/2/2010	8:00	W OF & ADJ TO P-105	22	133	CL
107	952231-08	4/2/2010	8:15	W OF & ADJ TO P-106	22	133	CL
108	952231-08	4/2/2010	8:25	W OF & ADJ TO P-107	22	134	CL
109	952231-08	4/2/2010	8:35	W OF & ADJ TO P-108	22	134	CL
110	952227-08	4/2/2010	9:00	W OF & ADJ TO P-109	22	133	CL
111	952227-08	4/2/2010	10:10	W OF & ADJ TO P-110	22	132	CL
112	952227-08	4/2/2010	10:15	W OF & ADJ TO P-111	22	130	CL
113	952228-08	4/2/2010	10:25	W OF & ADJ TO P-112	22	104	CL
114	952228-08	4/2/2010	10:30	W OF & ADJ TO P-113	22	102	CL
115	952119-08	4/2/2010	10:55	W OF & ADJ TO P-112	20	22	CL
116	952119-08	4/2/2010	11:00	W OF & ADJ TO P-115	20	22	CL
117	952228-08	4/2/2010	14:25	W OF & ADJ TO P-114	22	96	GM
118	952228-08	4/2/2010	14:28	W OF & ADJ TO P-117	22	90	GM
119	952230-08	4/2/2010	14:42	W OF & ADJ TO P-118	22	92	GM
120	952230-08	4/2/2010	14:45	W OF & ADJ TO P-119	22	96	GM
121	952230-08	4/2/2010	14:58	W OF & ADJ TO P-120	22	102	GM
122	952230-08	4/2/2010	15:01	W OF & ADJ TO P-121	22	102	GM
123	952225-08	4/2/2010	15:10	W OF & ADJ TO P-122	22	82	GM
124	952225-08	4/2/2010	15:15	W OF & ADJ TO P-123	22	60	GM

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
125	952225-08	4/2/2010	15:17	W OF & ADJ TO P-116	20	22	GM
126	952225-08	4/2/2010	15:23	W OF & ADJ TO P-125	20	22	GM
127	952225-08	4/2/2010	15:27	W OF & ADJ TO P-126	20	22	GM
128	952225-08	4/2/2010	15:31	W OF & ADJ TO P-127	20	22	GM
129	952225-08	4/2/2010	15:35	W OF & ADJ TO P-128	20	22	GM
130	952225-08	4/2/2010	15:40	W OF & ADJ TO P-129	20	22	GM
131	952225-08	4/2/2010	15:44	W OF & ADJ TO P-130	20	22	GM
132	952225-08	4/2/2010	15:48	W OF & ADJ TO P-131	20	22	GM
133	952225-08	4/2/2010	15:53	W OF & ADJ TO P-132	4	20	GM
134	952225-08	4/2/2010	15:58	W OF & ADJ TO P-133	20	22	GM
135	952225-08	4/2/2010	16:05	W OF & ADJ TO P-134	20	22	GM
136	952225-08	4/2/2010	16:07	S OF & ADJ TO P-135	11	32	GM
137	928227-08	4/6/2010	14:15	E OF & ADJ TO P-88	16	20	CL
138	942117-08	4/9/2010	9:00	W OF & ADJ TO P-87	7	64	CL
139	952345-08	4/9/2010	9:10	W OF & ADJ TO P-138	22	63	CL
140	952345-08	4/9/2010	9:20	W OF & ADJ TO P-139	22	50	CL
141	952345-08	4/9/2010	9:25	W OF & ADJ TO P-140	22	44	CL
142	952346-08	4/9/2010	9:35	W OF & ADJ TO P-141	3	30	CL
143	952345-08	4/9/2010	9:40	W OF & ADJ TO P-142	22	44	CL
144	952345-08	4/9/2010	9:45	W OF & ADJ TO P-143	22	44	CL
145	952346-08	4/9/2010	10:00	W OF & ADJ TO P-144	9	48	CL
146	952345-08	4/9/2010	10:05	W OF & ADJ TO P-145	22	44	CL
147	952346-08	4/9/2010	10:10	N OF & ADJ TO P-146	22	23	CL
148	952345-08	4/9/2010	10:15	N OF & ADJ TO P-147	22	60	CL
149	952346-08	4/9/2010	10:20	N OF & ADJ TO P-148	22	64	CL
150	952346-08	4/9/2010	10:25	N OF & ADJ TO P-149	22	68	CL
151	952346-08	4/9/2010	10:35	N OF & ADJ TO P-150	22	70	CL
152	952346-08	4/9/2010	11:00	N OF & ADJ TO P-151	22	75	CL
153	952346-08	4/9/2010	11:05	N OF & ADJ TO P-152	22	24	CL
154	952120-08	4/9/2010	11:15	N OF & ADJ TO P-152	22	57	CL
155	952120-08	4/9/2010	13:15	W OF & ADJ TO P-156	10	22	CL

Panel Placement Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System							
Primary / Secondary: Primary				Series: 1		Material Type: gml	
<i>Panel</i>	<i>Batch-Roll</i>	<i>Date</i>	<i>Time</i>	<i>Placement/Location/Comments</i>	<i>Width (ft.)</i>	<i>Length (ft.)</i>	<i>QA ID</i>
156	902105-08	4/9/2010	13:25	N OF & ADJ TO P-154	22	75	CL
157	902105-08	4/9/2010	13:35	N OF & ADJ TO P-156	22	86	CL
158	902105-08	4/9/2010	14:00	N OF & ADJ TO P-157	22	87	CL
159	902105-08	4/9/2010	14:10	N OF & ADJ TO P-158	22	92	CL
160	902105-08	4/9/2010	14:20	N OF & ADJ TO P-159	22	56	CL
161	952120-08	4/9/2010	14:30	N OF & ADJ TO P-159	22	41	CL
162	952120-08	4/9/2010	14:40	N OF & ADJ TO P-161	22	96	CL
163	952120-08	4/9/2010	14:50	N OF & ADJ TO P-162	22	80	CL
164	952120-08	4/9/2010	15:00	N OF & ADJ TO P-163	11	40	CL
165	952120-08	4/9/2010	15:10	N OF & ADJ TO P-163	22	26	CL
166	952227-08	4/9/2010	15:30	N OF & ADJ TO P-165	4	14	CL
Number of Panels: 166				Approx. Area (sq. ft).		359115	

APPENDIX E-6

Production Seam Logs

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
5/13/2009	16:05	20831	JC	850	3.5	F	1-002-003-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/13/2009	16:15	20831	JC	850	4.5	F	1-001-002-000-091	91	ML	0-91	30/30	BRS	P	AT	ML
5/13/2009	16:20	1210	EB	850	5.5	F	1-002-004-000-091	91	ML	0-91	30/30	BRS	P	AT	RKD
5/13/2009	16:29	20831	JC	850	4.5	F	1-001-003-000-217	217	ML	0-217	30/30	BRS	P	AT	ML
5/13/2009	16:33	1210	EB	850	5.5	F	1-003-004-000-093	93	ML	0-93	30/30	BRS	P	AT	RKD
5/13/2009	16:48	1210	EB	850	4.5	F	1-004-005-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/13/2009	16:54	1210	EB	850	5.5	F	1-003-005-000-122	122	ML	0-122	30/30	BRS	P	AT	RKD
5/14/2009	8:20	20831	JC	850	4.5	F	1-004-006-000-185	185	ML	0-185	30/30	BRS	P	AT	ML
5/14/2009	8:30	1210	EB	850	5.5	F	1-006-008-000-277	277	ML	0-277	30/30	BRS	P	AT	ML
5/14/2009	8:49	20831	JC	850	4.5	F	1-005-006-000-093	93	ML	0-93	30/30	BRS	P	AT	ML
5/14/2009	9:06	20831	JC	850	3.5	F	1-006-007-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	9:11	20831	JC	850	4.5	F	1-005-007-000-028	28	ML	0-28	30/30	BRS	P	AT	ML
5/14/2009	9:12	1210	EB	850	5.5	F	1-007-008-000-027	27	ML	0-27	30/30	BRS	P	AT	ML
5/14/2009	9:20	1210	EB	850	4.5	F	1-009-010-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	9:20	20831	JC	850	3.5	F	1-011-012-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	9:30	1210	EB	850	5.5	F	1-008-009-000-063	63	ML	0-63	30/30	BRS	P	AT	ML

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
5/14/2009	9:32	20831	JC	850	4.5	F	1-009-011-000-063	63	ML	0-63	30/30	BRS	P	AT	ML
5/14/2009	9:39	1210	EB	850	5.5	F	1-008-010-000-242	242	ML	0-242	30/30	BRS	P	AT	ML
5/14/2009	9:42	20831	JC	850	4.5	F	1-010-011-000-096	96	ML	0-96	30/30	BRS	P	AT	ML
5/14/2009	9:55	20831	JC	850	4.5	F	1-010-012-000-144	144	ML	0-144	30/30	BRS	P	AT	ML
5/14/2009	10:15	1210	EB	850	5.5	F	1-011-013-000-160	160	ML	0-160	30/30	BRS	P	AT	ML
5/14/2009	10:21	20831	JC	850	3.5	F	1-013-014-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	10:39	1210	EB	850	5.5	F	1-012-013-000-095	95	ML	0-95	30/30	BRS	P	AT	ML
5/14/2009	10:52	1210	EB	850	5.5	F	1-012-014-000-049	49	ML	0-49	30/30	BRS	P	AT	ML
5/14/2009	12:45	20831	JC	850	5.0	F	1-013-015-000-254	254	ML	0-254	30/30	BRS	P	AT	ML
5/14/2009	13:03	1210	EB	850	4.5	F	1-016-017-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	13:15	1210	EB	850	5.5	F	1-015-016-000-053	53	ML	0-53	30/30	BRS	P	AT	ML
5/14/2009	13:20	20831	JC	850	5.0	F	1-014-015-000-047	47	ML	0-47	30/30	BRS	P	AT	ML
5/14/2009	13:23	1210	EB	850	5.5	F	1-015-017-000-248	248	ML	0-248	30/30	BRS	P	AT	ML
5/14/2009	13:36	20831	JC	850	4.0	F	1-018-019-000-022	22	ML	0-22	30/30	BRS	P	AT	ML
5/14/2009	13:48	20831	JC	850	5.0	F	1-016-019-000-053	53	ML	0-53	30/30	BRS	P	AT	ML
5/14/2009	13:55	20831	JC	850	5.0	F	1-017-019-000-091	91	ML	0-91	30/30	BRS	P	AT	ML

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
5/14/2009	14:00	1210	EB	850	4.5	F	1-020-021-000-022	22	ML	0-22	30/30	BRS	P	AT	ML				
5/14/2009	14:07	20831	JC	850	5.0	F	1-017-018-000-155	155	ML	0-155	30/30	BRS	P	AT	ML				
5/14/2009	14:10	1210	EB	850	5.5	F	1-019-021-000-039	39	ML	0-39	30/30	BRS	P	AT	ML				
5/14/2009	14:16	1210	EB	850	5.5	F	1-019-020-000-105	105	ML	0-105	30/30	BRS	P	AT	ML				
5/14/2009	14:30	1210	EB	850	5.5	F	1-018-020-000-154	154	ML	0-154	30/30	BRS	P	AT	ML				
5/14/2009	14:34	20831	JC	850	5.0	F	1-021-022-000-040	40	ML	0-40	30/30	BRS	P	AT	ML				
5/14/2009	14:38	20831	JC	850	5.0	F	1-020-022-000-257	257	ML	0-257	30/30	BRS	P	AT	RKD				
5/14/2009	15:10	1210	EB	850	5.5	F	1-022-024-000-233	233	ML	0-233	30/30	BRS	P	AT	ML				
5/14/2009	15:20	20831	JC	850	4.0	F	1-023-024-000-022	22	ML	0-22	30/30	BRS	P	AT	ML				
5/14/2009	15:25	20831	JC	850	4.0	F	1-025-026-000-022	22	ML	0-22	30/30	BRS	P	AT	ML				
5/14/2009	15:28	20831	JC	850	5.0	F	1-024-026-000-127	127	ML	0-127	30/30	BRS	P	AT	ML				
5/14/2009	15:42	20831	JC	850	5.0	F	1-023-025-000-063	63	ML	0-63	30/30	BRS	P	AT	ML				
5/14/2009	15:43	1210	EB	850	5.5	F	1-022-023-000-063	63	ML	0-63	30/30	BRS	P	AT	ML				
5/14/2009	15:44	20831	JC	850	5.0	F	1-024-025-000-105	105	ML	0-105	30/30	BRS	P	AT	ML				
5/15/2009	8:02	20831	JC	850	4.0	F	1-027-028-000-022	22	ML	0-22	30/30	BRS	P	AT	RKD				
5/15/2009	8:10	20831	JC	850	5.0	F	1-026-027-000-105	105	ML	0-105	30/30	BRS	P	AT	ML				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
5/15/2009	8:12	1210	EB	850	5.5	F	1-027-029-000-271	271	ML	0-271	30/30	BRS	P	AT	ML
5/15/2009	8:26	20831	JC	850	5.0	F	1-026-028-000-023	23	ML	0-23	30/30	BRS	P	AT	ML
5/15/2009	8:30	20831	JC	850	5.0	F	1-025-027-000-167	167	ML	0-167	30/30	BRS	P	AT	ML
5/15/2009	8:50	1210	EB	850	5.5	F	1-028-029-000-023	23	ML	0-023	30/30	BRS	P	AT	ML
5/15/2009	8:55	20831	JC	850	5.0	F	1-029-030-000-080	80	ML	0-080	30/30	BRS	P	AT	ML
5/15/2009	9:00	1210	EB	850	4.5	F	1-030-031-000-022	22	ML	0-22	30/30	BRS	P	AT	RKD
5/15/2009	9:06	20831	JC	850	5.0	F	1-029-031-000-214	214	ML	0-214	30/30	BRS	P	AT	ML
5/15/2009	14:48	20831	JC	850	5.5	F	1-034-035-000-181	181	ML	0-181	30/30	BRS	P	AT	ML
5/15/2009	15:08	1210	EB	850	5.5	F	1-033-034-000-113	113	ML	0-113	30/30	BRS	P	AT	RKD
5/15/2009	15:15	20831	JC	850	5.0	F	1-035-036-000-177	177	ML	0-177	30/30	BRS	P	AT	ML
5/15/2009	15:42	1210	EB	850	5.0	F	1-032-034-000-071	71	ML	0-71	30/30	BRS	P	AT	ML
5/15/2009	15:45	20831	JC	850	5.0	F	1-036-037-000-175	175	ML	0-175	30/30	BRS	P	AT	RKD
5/15/2009	15:46	1209	IS	850	5.5	F	1-037-038-000-171	171	RKD	0-171	30/30	BRS	P	AT	RKD
5/15/2009	15:50	1210	EB	850	5.0	F	1-032-033-000-118	118	ML	0-118	30/30	BRS	P	AT	RKD
5/15/2009	16:13	1209	IS	850	5.5	F	1-040-041-000-164	164	RKD	0-164	30/30	BRS	P	AT	RKD
5/15/2009	16:14	1210	EB	850	5.5	F	1-038-039-000-170	170	RKD	0-170	30/30	BRS	P	AT	RKD

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03							
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1							
Production Seam							Location			Nondestructive Test							
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID		
5/15/2009	16:15	20831	JC	850	5.0	F	1-039-040-000-166	166	RKD	0-166	30/30	BRS	P	AT	RKD		
5/15/2009	16:42	1210	EB	850	5.5	F	1-041-042-000-160	160	RKD	0-160	30/30	BRS	P	AT	RKD		
5/15/2009	16:43	20831	JC	850	5.0	F	1-042-043-000-154	154	RKD	0-154	30/30	BRS	P	AT	RKD		
5/15/2009	16:43	1209	IS	850	5.5	F	1-043-044-000-154	154	RKD	0-154	30/30	BRS	P	AT	RKD		
5/15/2009	17:05	1209	IS	850	5.5	F	1-045-046-000-136	136	RKD	0-136	30/30	BRS	P	AT	RKD		
5/15/2009	17:13	1210	EB	850	5.0	F	1-044-045-000-150	150	RKD	0-150	30/30	BRS	P	AT	RKD		
5/15/2009	17:15	20831	JC	850	5.0	F	1-046-047-000-116	116	RKD	0-116	30/30	BRS	P	AT	RKD		
5/15/2009	17:30	1209	IS	850	5.5	F	1-047-048-000-054	54	RKD	0-54	30/30	BRS	P	AT	RKD		
5/16/2009	6:16	1210	EB	850	4.5	F	1-030-048-000-007	7	RKD	0-7	30/30	BB	P	AT	RKD		
5/16/2009	6:18	1210	EB	850	4.5	F	1-030-047-000-022	22	RKD	0-22	30/30	BB	P	AT	RKD		
5/16/2009	6:21	1210	EB	850	4.5	F	1-030-046-000-002	2	RKD	0-2	PATCH & VT	N/A	N/A	N/A	RKD		
5/16/2009	6:22	1210	EB	850	4.5	F	1-030-045-000-022	22	RKD	0-22	30/30	BB	P	AT	RKD		
5/16/2009	6:26	1210	EB	850	4.5	F	1-030-044-000-003	3	RKD	0-3	PATCH &VT	N/A	N/A	N/A	RKD		
5/16/2009	6:27	1210	EB	850	4.5	F	1-030-043-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	6:32	1210	EB	850	4.5	F	1-031-042-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	6:36	1210	EB	850	4.5	F	1-031-041-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03							
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1							
Production Seam							Location			Nondestructive Test							
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID		
5/16/2009	6:40	1210	EB	850	4.5	F	1-031-040-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	6:44	1210	EB	850	4.5	F	1-031-039-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	6:48	1210	EB	850	4.5	F	1-031-038-000-022	22	RKD	0-22	30/30	BB	P	AT	RKD		
5/16/2009	6:53	1210	EB	850	4.5	F	1-031-037-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	6:56	1210	EB	850	4.5	F	1-031-036-000-022	22	RKD	0-22	30/30	BB	P	AT	RKD		
5/16/2009	7:00	1210	EB	850	4.5	F	1-031-035-000-023	23	RKD	0-23	30/30	BB	P	AT	RKD		
5/16/2009	7:04	1210	EB	850	4.5	F	1-031-034-000-007	7	RKD	0-7	30/30	BB	P	AT	RKD		
5/16/2009	7:06	1210	EB	850	4.5	F	1-031-032-000-024	24	RKD	0-24	30/30	BB	P	AT	RKD		
3/11/2010	10:02	20831	JC	850	4.5	F	1-049-050-000-157	157	CL	0-157	30/30	BRS	P	AT	CL		
3/11/2010	10:12	1210	EB	860	4.0	F	1-051-052-000-022	22	CL	0-22	30/30	BRS	P	AT	CL		
3/11/2010	10:20	1210	EB	860	5.5	F	1-050-052-000-082	82	CL	0-82	30/30	BRS	P	AT	CL		
3/11/2010	10:30	20831	JC	850	4.5	F	1-052-053-000-029	29	CL	0-29	30/30	BRS	P	AT	CL		
3/11/2010	10:33	1210	EB	860	5.5	F	1-050-051-000-045	45	CL	0-45	30/30	BRS	P	AT	CL		
3/11/2010	10:37	20831	JC	850	4.5	F	1-051-053-000-060	60	CL	0-60	30/30	BRS	P	AT	CL		
3/11/2010	10:50	1210	EB	860	4.0	F	1-049-055-000-027	27	CL	0-27	30/30	BRS	P	AT	CL		
3/11/2010	10:57	1210	EB	860	4.0	F	1-050-055-000-027	27	CL	0-27	30/30	BRS	P	AT	CL		

Production Seam Log

Project: South BMI Landfill										ProjNo: SC0313					
Location: Henderson, NV										TaskNo: 09/03					
Description: Geomembrane Liner System															
Material Type gml : 1				Specifications:				Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary				Series: 1											
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
3/11/2010	11:00	20831	JC	850	3.5	F	1-054-057-000-007	7	CL	0-7	30/30	BRS	P	AT	CL
3/11/2010	11:02	1210	EB	860	4.0	F	1-051-055-000-027	27	CL	0-27	30/30	BRS	P	AT	CL
3/11/2010	11:05	20831	JC	850	4.5	F	1-053-057-000-015	15	CL	0-15	30/30	BRS	P	AT	CL
3/11/2010	11:08	1210	EB	860	4.0	F	1-053-055-000-027	27	CL	0-27	30/30	BRS	P	AT	CL
3/11/2010	11:09	20831	JC	850	4.5	F	1-053-054-000-033	33	CL	0-33	30/30	BRS	P	AT	CL
3/11/2010	11:15	1210	EB	860	4.0	F	1-054-055-000-027	27	CL	0-27	30/30	BRS	P	AT	CL
3/11/2010	11:18	20831	JC	850	3.5	F	1-056-058-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/11/2010	11:25	1210	EB	860	5.5	F	1-055-056-000-081	81	CL	0-81	30/30	BRS	P	AT	CL
3/11/2010	11:25	20831	JC	850	3.5	F	1-058-059-000-020	20	CL	0-20	30/30	BRS	P	AT	CL
3/11/2010	11:32	20831	JC	850	4.5	F	1-059-060-000-034	34	CL	0-34	30/30	BRS	P	AT	CL
3/11/2010	11:37	1210	EB	860	5.5	F	1-055-058-000-053	53	CL	0-53	30/30	BRS	P	AT	CL
3/11/2010	11:42	20831	JC	850	4.5	F	1-058-060-000-056	56	CL	0-56	30/30	BRS	P	AT	CL
3/11/2010	11:52	20831	JC	850	4.5	F	1-056-060-000-045	45	CL	0-45	30/30	BRS	P	AT	CL
3/11/2010	13:15	1209	LLR	860	3.5	F	1-061-062-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/11/2010	13:17	1210	EB	860	5.5	F	1-060-061-000-002	2	CL	0-2	30/30	BRS	P	AT	CL
3/11/2010	13:18	1210	EB	860	5.5	F	1-060-062-000-134	134	CL	0-134	30/30	BRS	P	AT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
3/11/2010	13:27	1209	LLR	860	3.5	F	1-063-064-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/11/2010	13:32	1208	JC	860	4.5	F	1-061-063-000-033	33	CL	0-33	30/30	BRS	P	AT	CL
3/11/2010	13:36	1208	JC	860	4.5	F	1-062-063-000-012	12	CL	0-12	30/30	BRS	P	AT	CL
3/11/2010	13:40	1208	JC	860	4.5	F	1-062-064-000-085	85	CL	0-85	30/30	BRS	P	AT	CL
3/11/2010	13:40	1209	LLR	860	4.5	F	1-063-065-000-058	58	CL	0-58	30/30	BRS	P	AT	CL
3/11/2010	13:44	1210	EB	860	5.5	F	1-065-066-000-056	56	CL	0-56	30/30	BRS	P	AT	CL
3/11/2010	13:48	1209	LLR	860	4.5	F	1-064-065-000-049	49	CL	0-49	30/30	BRS	P	AT	CL
3/11/2010	14:00	1210	EB	860	4.0	F	1-001-055-000-042	42	CL	0-42	30/30	BRS	P	AT	CL
3/11/2010	14:09	1210	EB	860	4.0	F	1-001-056-000-043	43	CL	0-43	30/30	BRS	P	AT	CL
3/11/2010	14:18	1210	EB	860	4.0	F	1-001-060-000-041	41	CL	0-41	30/30	BRS	P	AT	CL
3/11/2010	14:27	1210	EB	860	4.0	F	1-001-062-000-042	42	CL	0-42	30/30	BRS	P	AT	CL
3/11/2010	14:36	1210	EB	860	4.0	F	1-001-064-000-042	42	CL	0-42	30/30	BRS	P	AT	CL
3/11/2010	14:45	1210	EB	860	4.0	F	1-001-065-000-021	21	CL	0-21	30/30	BRS	P	AT	CL
3/11/2010	15:00	1210	EB	860	4.0	F	1-065-067-000-021	21	CL	0-21	30/30	BRS	P	AT	CL
3/11/2010	15:02	1208	JC	860	4.5	F	1-067-068-000-072	72	CL	0-72	30/30	BRS	P	AT	CL
3/11/2010	15:05	1210	EB	860	4.0	F	1-066-067-000-043	43	CL	0-43	30/30	BRS	P	AT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
3/11/2010	15:08	1209	LLR	860	4.5	F	1-068-069-000-072	72	CL	0-72	30/30	BRS	P	AT	CL
3/11/2010	15:20	1208	JC	860	4.5	F	1-069-070-000-074	74	CL	0-74	30/30	BRS	P	AT	CL
3/11/2010	15:20	1210	EB	860	5.5	F	1-070-071-000-076	76	CL	0-76	30/30	BRS	P	AT	CL
3/11/2010	15:26	1209	LLR	860	4.5	F	1-071-072-000-076	76	CL	0-76	30/30	BRS	P	AT	CL
3/11/2010	15:34	1208	JC	860	4.5	F	1-072-073-000-078	78	CL	0-78	30/30	BRS	P	AT	CL
3/11/2010	15:37	1210	EB	860	5.5	F	1-073-074-000-078	78	CL	0-78	30/30	BRS	P	AT	CL
3/12/2010	7:36	1208	JC	860	3.5	F	1-001-067-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	7:43	1208	JC	860	3.5	F	1-003-068-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	7:47	1208	JC	860	3.5	F	1-005-069-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	7:52	1208	JC	860	3.5	F	1-007-070-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	7:56	1208	JC	860	3.5	F	1-008-071-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	8:00	1208	JC	860	3.5	F	1-010-072-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	8:04	1208	JC	860	3.5	F	1-012-073-000-022	22	CL	0-22	30/30	BRS	P	AT	CL
3/12/2010	8:30	1210	EB	860	5.5	F	1-074-075-000-078	78	CL	0-78	30/30	BRS	P	AT	CL
3/12/2010	8:32	1208	JC	860	4.5	F	1-075-076-000-074	74	CL	0-74	30/30	BRS	P	AT	CL
3/12/2010	8:45	1209	LLR	860	4.5	F	1-076-077-000-069	69	CL	0-69	30/30	BRS	P	AT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
3/12/2010	8:53	1210	EB	860	5.5	F	1-077-078-000-065	65	CL	0-65	30/30	BRS	P	AT	CL				
3/12/2010	8:58	1208	JC	860	4.5	F	1-078-079-000-060	60	CL	0-60	30/30	BRS	P	AT	CL				
3/12/2010	9:02	1209	LLR	860	4.5	F	1-079-080-000-058	58	CL	0-58	30/30	BRS	P	AT	CL				
3/12/2010	9:10	1210	EB	860	5.5	F	1-080-081-000-059	59	CL	0-59	30/30	BRS	P	AT	CL				
3/12/2010	9:11	1208	JC	860	4.5	F	1-081-082-000-059	59	CL	0-59	30/30	BRS	P	AT	CL				
3/12/2010	9:18	1209	LLR	860	4.5	F	1-082-083-000-059	59	CL	0-59	30/30	BRS	P	AT	CL				
3/12/2010	9:25	1210	EB	860	5.5	F	1-083-084-000-060	60	CL	0-60	30/30	BRS	P	AT	CL				
3/12/2010	10:10	1210	EB	860	5.5	F	1-084-085-000-061	61	CL	0-61	30/30	BRS	P	AT	CL				
3/12/2010	10:14	1209	LLR	860	4.5	F	1-085-086-000-062	62	CL	0-62	30/30	BRS	P	AT	CL				
3/12/2010	10:21	1210	EB	860	5.5	F	1-086-087-000-062	62	CL	0-62	30/30	BRS	P	AT	CL				
3/12/2010	12:19	1210	EB	860	4.0	F	1-014-074-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:24	1210	EB	860	4.0	F	1-015-075-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:29	1210	EB	860	4.0	F	1-017-076-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:34	1210	EB	860	4.0	F	1-018-077-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:39	1210	EB	860	4.0	F	1-020-078-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:43	1210	EB	860	4.0	F	1-022-079-000-022	22	CL	0-22	30/30	TM	P	AT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
3/12/2010	12:47	1210	EB	860	4.0	F	1-023-080-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:51	1210	EB	860	4.0	F	1-025-081-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	12:55	1210	EB	860	4.0	F	1-027-082-000-022	22	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	13:00	1210	EB	860	4.0	F	1-029-083-000-021	21	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	13:04	1210	EB	860	4.0	F	1-029-084-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	VH				
3/12/2010	13:05	1210	EB	860	4.0	F	1-030-084-000-021	21	CL	0-22	30/30	TM	P	AT	CL				
3/12/2010	13:09	1210	EB	860	4.0	F	1-030-085-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	VH				
3/12/2010	13:10	1210	EB	860	4.0	F	1-048-085-000-021	21	CL	0-21	30/30	TM	P	AT	VH				
3/12/2010	13:15	1210	EB	860	4.0	F	1-048-086-000-019	19	CL	0-19	30/30	TM	P	AT	VH				
3/12/2010	13:19	1210	EB	860	4.0	F	1-047-086-000-004	4	CL	0-4	30/30	BRS	P	AT	CL				
4/1/2010	9:55	1210	EB	860	5.0	F	1-092-093-000-128	128	CL	0-128	30/30	BRS	P	AT	CL				
4/1/2010	10:04	1208	JC	860	4.5	F	1-091-092-000-154	154	CL	0-154	30/30	BRS	P	AT	CL				
4/1/2010	10:15	1210	EB	860	5.0	F	1-001-092-000-074	74	CL	0-74	30/30	BRS	P	AT	CL				
4/1/2010	10:35	1210	EB	860	4.0	F	1-089-090-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/1/2010	10:42	1208	JC	860	4.5	F	1-089-091-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/1/2010	10:45	1208	JC	860	4.5	F	1-090-091-000-084	84	CL	0-84	30/30	BRS	P	AT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03							
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1							
Production Seam							Location			Nondestructive Test							
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID		
4/1/2010	11:20	1208	JC	860	4.5	F	1-088-089-000-018	18	CL	0-18	30/30	BRS	P	AT	CL		
4/1/2010	11:24	1208	JC	860	4.5	F	1-088-090-000-034	34	CL	0-34	30/30	BRS	P	AT	CL		
4/1/2010	11:33	1208	JC	860	3.5	F	1-049-094-000-018	18	CL	0-18	30/30	BRS	P	AT	CL		
4/1/2010	11:35	1210	EB	860	4.0	F	1-088-094-000-017	17	CL	0-40	30/30	BRS	P	AT	CL		
4/1/2010	11:40	1208	JC	860	4.5	F	1-093-095-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	11:43	1210	EB	860	4.0	F	1-049-088-000-016	16	CL	0-16	30/30	BRS	P	AT	CL		
4/1/2010	11:46	1210	EB	860	4.0	F	1-049-090-000-056	56	CL	0-56	30/30	BRS	P	AT	CL		
4/1/2010	13:15	1210	EB	860	4.0	F	1-049-091-000-056	56	CL	0-56	30/30	BRS	P	AT	CL		
4/1/2010	13:15	1208	JC	860	4.5	F	1-095-096-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	13:25	1210	EB	860	4.0	F	1-049-092-000-054	54	CL	0-54	30/30	BRS	P	AT	CL		
4/1/2010	13:34	1208	JC	860	4.5	F	1-096-097-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	13:38	1210	EB	860	5.5	F	1-097-098-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	14:20	1208	JC	860	4.5	F	1-098-099-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	14:22	1210	EB	860	5.5	F	1-099-100-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	14:37	1208	JC	860	4.5	F	1-100-101-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		
4/1/2010	14:57	1210	EB	860	5.5	F	1-101-102-000-128	128	CL	0-128	30/30	BRS	P	AT	CL		

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/1/2010	15:16	1210	EB	860	5.5	F	1-103-104-000-128	128	CL	0-128	30/30	BRS	P	AT	CL				
4/1/2010	15:20	1208	JC	860	4.5	F	1-102-103-000-128	128	CL	0-128	30/30	BRS	P	AT	CL				
4/1/2010	16:02	1208	JC	860	4.5	F	1-104-105-000-128	128	CL	0-128	30/30	BRS	P	AT	CL				
4/2/2010	7:50	1208	JC	860	3.5	F	1-021-105-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	7:55	1208	JC	860	3.5	F	1-019-104-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	7:59	1208	JC	860	3.5	F	1-016-103-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:03	1208	JC	860	3.5	F	1-015-102-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:07	1208	JC	860	3.5	F	1-013-101-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:11	1208	JC	860	3.5	F	1-011-100-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:15	1208	JC	860	3.5	F	1-009-099-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:19	1208	JC	860	3.5	F	1-008-098-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:22	1208	JC	860	3.5	F	1-006-097-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:26	1208	JC	860	3.5	F	1-004-096-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:30	1208	JC	860	3.5	F	1-002-095-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	8:30	1210	EB	860	5.0	F	1-105-106-000-128	128	CL	0-128	30/30	BRS	P	AT	CL				
4/2/2010	8:34	1208	JC	860	3.5	F	1-001-093-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
4/2/2010	8:58	1208	JC	860	4.5	F	1-106-107-000-128	128	CL	0-128	30/30	BRS	P	AT	CL
4/2/2010	8:58	1210	EB	860	5.0	F	1-107-108-000-128	128	CL	0-128	30/30	BRS	P	AT	CL
4/2/2010	9:15	1208	JC	860	4.5	F	1-108-109-000-128	128	CL	0-128	30/30	BRS	P	AT	CL
4/2/2010	9:22	1210	EB	860	5.0	F	1-109-110-000-128	128	CL	0-128	30/30	BRS	P	AT	CL
4/2/2010	10:00	513	IS	500	500	E	1-088-TN53-000-001	1	CL	0-1	5 psi	LLR	P	VT	CL
4/2/2010	10:02	513	IS	500	500	E	1-088-TN52-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:06	513	IS	500	500	E	1-089-TN52-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:09	513	IS	500	500	E	1-089-TN51-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:13	513	IS	500	500	E	1-091-TN51-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:16	513	IS	500	500	E	1-091-TN50-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:19	1210	EB	860	5.0	F	1-111-112-000-126	126	CL	0-126	30/30	BRS	P	AT	CL
4/2/2010	10:20	513	IS	500	500	E	1-092-TN50-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:20	1208	JC	860	4.5	F	1-110-111-000-127	127	CL	0-127	30/30	BRS	P	AT	CL
4/2/2010	10:23	513	IS	500	500	E	1-092-TN49-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:27	513	IS	500	500	E	1-093-TN49-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL
4/2/2010	10:31	513	IS	500	500	E	1-093-TN48-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/2/2010	10:35	513	IS	500	500	E	1-095-TN48-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	10:40	513	IS	500	500	E	1-095-TN31-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	10:42	1210	EB	860	5.0	F	1-113-114-000-100	100	CL	0-100	30/30	BRS	P	AT	CL				
4/2/2010	10:43	1208	JC	860	4.5	F	1-112-113-000-102	102	CL	0-102	30/30	BRS	P	AT	CL				
4/2/2010	10:44	513	IS	500	500	E	1-096-TN31-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	10:50	513	IS	500	500	E	1-096-TN30-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	10:55	513	IS	500	500	E	1-097-TN30-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	10:59	513	IS	500	500	E	1-097-TN29-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	11:03	513	IS	500	500	E	1-098-TN29-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	11:05	1208	JC	860	3.5	F	1-112-115-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	11:05	1210	EB	860	4.0	F	1-115-116-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	11:06	513	IS	500	500	E	1-098-TN28-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	11:20	1208	JC	860	3.5	F	1-113-115-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	11:25	1208	JC	860	3.5	F	1-114-116-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/2/2010	13:20	513	IS	500	500	E	1-099-TN28-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/2/2010	13:23	513	IS	500	500	E	1-099-TN27-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03							
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1							
Production Seam							Location			Nondestructive Test							
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID		
4/2/2010	13:27	513	IS	500	500	E	1-100-TN27-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:30	513	IS	500	500	E	1-100-TN14-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:34	513	IS	500	500	E	1-101-TN14-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:37	513	IS	500	500	E	1-101-TN13-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:43	513	IS	500	500	E	1-102-TN13-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:47	513	IS	500	500	E	1-102-TN12-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:52	513	IS	500	500	E	1-103-TN12-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	13:56	513	IS	500	500	E	1-103-TN11-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	14:00	513	IS	500	500	E	1-104-TN11-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	14:04	513	IS	500	500	E	1-104-TN10-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL		
4/2/2010	14:24	1208	JC	860	4.5	F	1-114-117-000-067	67	CL	0-67	30/30	BRS	P	AT	CL		
4/2/2010	14:27	1210	EB	860	5.5	F	1-117-118-000-091	91	CL	0-91	30/30	BRS	P	AT	CL		
4/2/2010	14:32	1208	JC	860	4.5	F	1-114-117-067-096	29	CL	67-96	30/30	BRS	P	AT	CL		
4/2/2010	14:42	1208	JC	860	4.5	F	1-118-119-000-088	88	CL	0-88	30/30	BRS	P	AT	CL		
4/2/2010	14:45	1210	EB	860	5.5	F	1-119-120-000-090	90	CL	0-90	30/30	BRS	P	AT	CL		
4/2/2010	14:58	1208	JC	860	4.5	F	1-120-121-000-094	94	CL	0-94	30/30	BRS	P	AT	CL		

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/2/2010	15:01	1210	EB	860	5.5	F	1-121-122-000-098	98	CL	0-98	30/30	BRS	P	AT	CL				
4/2/2010	15:17	1210	EB	860	5.5	F	1-116-125-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:17	1208	JC	860	4.5	F	1-122-123-000-080	80	CL	0-80	30/30	BRS	P	AT	CL				
4/2/2010	15:23	1210	EB	860	5.5	F	1-125-126-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:27	1210	EB	860	5.5	F	1-126-127-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:30	1208	JC	860	4.5	F	1-123-124-000-060	60	CL	0-60	30/30	BRS	P	AT	CL				
4/2/2010	15:31	1210	EB	860	5.5	F	1-127-128-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:35	1210	EB	860	4.0	F	1-128-129-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:40	1210	EB	860	4.0	F	1-129-130-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:44	1208	JC	860	3.5	F	1-130-131-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:48	1210	EB	860	4.0	F	1-131-132-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:53	1208	JC	860	3.5	F	1-134-135-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	15:58	1210	EB	860	4.0	F	1-133-134-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	16:05	1210	EB	860	4.0	F	1-132-133-000-018	18	CL	0-18	30/30	BRS	P	AT	CL				
4/2/2010	16:07	1208	JC	860	3.5	F	1-124-136-000-017	17	CL	0-17	30/30	BRS	P	AT	CL				
4/2/2010	16:20	1208	JC	860	3.5	F	1-117-125-000-021	21	CL	0-21	30/30	BRS	P	AT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03						
Material Type gml : 1							Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary							Series: 1									
Production Seam							Location			Nondestructive Test						
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID	
4/2/2010	16:24	1208	JC	860	3.5	F	1-117-126-000-002	2	CL	0-2	PATCH&VT	N/A	N/A	N/A	CL	
4/2/2010	16:24	1210	EB	860	4.0	F	1-135-136-000-010	10	CL	0-10	30/30	BRS	P	AT	CL	
4/2/2010	16:25	1208	JC	860	3.5	F	1-118-126-000-020	20	CL	0-20	30/30	BRS	P	AT	CL	
4/2/2010	16:27	1210	EB	860	4.0	F	1-124-135-000-007	7	CL	0-7	30/30	BRS	P	AT	CL	
4/2/2010	16:28	1208	JC	860	3.5	F	1-118-127-000-002	2	CL	0-2	PATCH&VT	N/A	N/A	N/A	CL	
4/2/2010	16:29	1208	JC	860	3.5	F	1-119-127-000-020	20	CL	0-20	30/30	BRS	P	AT	CL	
4/2/2010	16:32	1208	JC	860	3.5	F	1-119-128-000-003	3	CL	0-3	PATCH&VT	N/A	N/A	N/A	CL	
4/2/2010	16:32	1210	EB	860	4.0	F	1-124-134-000-022	22	CL	0-22	30/30	BRS	P	AT	CL	
4/2/2010	16:33	1208	JC	860	3.5	F	1-120-128-000-019	19	CL	0-19	30/30	BRS	P	AT	CL	
4/2/2010	16:36	1208	JC	860	3.5	F	1-120-129-000-004	4	CL	0-4	PATCH&VT	N/A	N/A	N/A	CL	
4/2/2010	16:37	1208	JC	860	3.5	F	1-121-129-000-016	16	CL	0-16	30/30	BRS	P	AT	CL	
4/2/2010	16:40	1208	JC	860	3.5	F	1-121-130-000-007	7	CL	0-7	30/30	BRS	P	AT	CL	
4/2/2010	16:40	1210	EB	860	4.0	F	1-124-132-000-002	2	CL	0-2	PATCH&VT	N/A	N/A	N/A	CL	
4/2/2010	16:41	1210	EB	860	4.0	F	1-123-132-000-013	13	CL	0-13	30/30	BRS	P	AT	CL	
4/2/2010	16:42	1208	JC	860	3.5	F	1-122-130-000-013	13	CL	0-13	30/30	BRS	P	AT	CL	
4/2/2010	16:45	1208	JC	860	3.5	F	1-122-131-000-010	10	CL	0-10	30/30	BRS	P	AT	CL	

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/2/2010	16:48	1210	EB	860	4.0	F	1-123-131-000-011	11	CL	0-11	30/30	BRS	P	AT	CL				
4/3/2010	7:20	1210	EB	860	4.0	F	1-032-121-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	7:24	1210	EB	860	4.0	F	1-032-120-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	7:29	1210	EB	860	4.0	F	1-032-119-000-024	24	CL	0-24	30/30	BRS	P	AT	CL				
4/3/2010	7:34	1210	EB	860	4.0	F	1-032-118-000-024	24	CL	0-24	30/30	BRS	P	AT	CL				
4/3/2010	7:39	1210	EB	860	4.0	F	1-032-117-000-024	24	CL	0-24	30/30	BRS	P	AT	CL				
4/3/2010	7:44	1210	EB	860	4.0	F	1-032-114-000-024	24	CL	0-24	30/30	BRS	P	AT	CL				
4/3/2010	7:49	1210	EB	860	4.0	F	1-032-113-000-024	24	CL	0-24	30/30	BRS	P	AT	CL				
4/3/2010	7:55	1210	EB	860	4.0	F	1-032-112-000-023	23	CL	0-23	30/30	BRS	P	AT	CL				
4/3/2010	8:05	1210	EB	860	4.0	F	1-031-111-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	8:10	1210	EB	860	4.0	F	1-029-110-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	8:15	1210	EB	860	4.0	F	1-028-109-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	8:20	1210	EB	860	4.0	F	1-026-108-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	8:25	1210	EB	860	4.0	F	1-024-107-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	8:30	1210	EB	860	4.0	F	1-022-106-000-022	22	CL	0-22	30/30	BRS	P	AT	CL				
4/3/2010	9:18	513	IS	500	500	E	1-105-TN10-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/3/2010	9:21	513	IS	500	500	E	1-105-TN9-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:25	513	IS	500	500	E	1-106-TN9-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:28	513	IS	500	500	E	1-106-TN8-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:32	513	IS	500	500	E	1-107-TN8-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:36	513	IS	500	500	E	1-107-TN7-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:40	513	IS	500	500	E	1-108-TN7-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:44	513	IS	500	500	E	1-108-TN4-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:48	513	IS	500	500	E	1-109-TN4-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:53	513	IS	500	500	E	1-109-TN3-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	9:57	513	IS	500	500	E	1-110-TN3-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	10:00	513	IS	500	500	E	1-110-TN2-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	10:04	513	IS	500	500	E	1-111-TN2-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	10:08	513	IS	500	500	E	1-111-TN1-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	10:12	513	IS	500	500	E	1-112-TN1-000-011	11	CL	0-11	5 psi	LLR	P	VT	CL				
4/3/2010	10:16	513	IS	500	500	E	1-112-TN5-000-010	10	CL	0-10	5 psi	LLR	P	VT	CL				
4/3/2010	10:20	513	IS	500	500	E	1-115-TN5-000-001	1	CL	0-1	5 psi	LLR	P	VT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
4/3/2010	10:21	513	IS	500	500	E	1-115-TN131-000-018	18	CL	0-18	5 psi	LLR	P	VT	CL
4/3/2010	10:27	513	IS	500	500	E	1-116-TN131-000-005	5	CL	0-5	5 psi	LLR	P	VT	CL
4/3/2010	10:29	513	IS	500	500	E	1-116-TN132-000-017	17	CL	0-17	5 psi	LLR	P	VT	CL
4/3/2010	10:34	513	IS	500	500	E	1-125-TN132-000-005	5	CL	0-5	5 psi	LLR	P	VT	CL
4/3/2010	10:36	513	IS	500	500	E	1-125-TN133-000-017	17	CL	0-17	5 psi	LLR	P	VT	CL
4/3/2010	10:44	513	IS	500	500	E	1-126-TN133-000-005	5	CL	0-5	5 psi	LLR	P	VT	CL
4/3/2010	10:46	513	IS	500	500	E	1-126-TN134-000-017	17	CL	0-17	5 psi	LLR	P	VT	CL
4/3/2010	10:51	513	IS	500	500	E	1-127-TN134-000-001	1	CL	0-1	5 psi	LLR	P	VT	CL
4/3/2010	10:52	513	IS	500	500	E	1-127-TN130-000-021	21	CL	0-21	5 psi	LLR	P	VT	CL
4/3/2010	11:00	513	IS	500	500	E	1-128-TN130-000-003	3	CL	0-3	5 psi	LLR	P	VT	CL
4/3/2010	11:01	513	IS	500	500	E	1-128-TN129-000-019	19	CL	0-19	5 psi	LLR	P	VT	CL
4/3/2010	11:08	513	IS	500	500	E	1-129-TN129-000-003	3	CL	0-3	5 psi	LLR	P	VT	CL
4/3/2010	11:09	513	IS	500	500	E	1-129-TN128-000-019	19	CL	0-19	5 psi	LLR	P	VT	CL
4/5/2010	8:40	513	IS	500	500	E	1-130-TN128-000-006	6	CL	0-6	5 psi	LLR	P	VT	CL
4/5/2010	8:41	513	IS	500	500	E	1-130-TN126-000-001	1	CL	0-1	5 psi	LLR	P	VT	CL
4/5/2010	8:42	513	IS	500	500	E	1-130-TN124-000-016	16	CL	0-16	5 psi	LLR	P	VT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss					
Primary / Secondary: Primary										Series: 1					
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
4/5/2010	8:47	513	IS	500	500	E	1-131-TN124-000-007	7	CL	0-7	5 psi	LLR	P	VT	CL
4/5/2010	8:49	513	IS	500	500	E	1-131-TN121-000-015	15	CL	0-15	5 psi	LLR	P	VT	CL
4/5/2010	8:54	513	IS	500	500	E	1-132-TN121-000-007	7	CL	0-7	5 psi	LLR	P	VT	CL
4/5/2010	8:56	513	IS	500	500	E	1-132-TN120-000-013	13	CL	0-13	5 psi	LLR	P	VT	CL
4/5/2010	9:00	513	IS	500	500	E	1-133-TN120-000-006	6	CL	0-6	5 psi	LLR	P	VT	CL
4/5/2010	9:02	513	IS	500	500	E	1-134-TN120-000-005	5	CL	0-5	5 psi	LLR	P	VT	CL
4/5/2010	9:04	513	IS	500	500	E	1-134-TN119-000-017	17	CL	0-17	5 psi	LLR	P	VT	CL
4/5/2010	9:09	513	IS	500	500	E	1-135-TN119-000-005	5	CL	0-5	5 psi	LLR	P	VT	CL
4/5/2010	9:11	513	IS	500	500	E	1-135-TN118-000-015	15	CL	0-15	5 psi	LLR	P	VT	CL
4/6/2010	14:40	513	IS	500	500	E	1-137-TN53-000-011	1	CL	0-11	5 psi	LLR	P	VT	CL
4/6/2010	14:43	513	IS	500	500	E	1-088-137-000-022	22	CL	0-22	5 psi	LLR	P	VT	CL
4/6/2010	14:50	513	IS	500	500	E	1-094-137-000-010	10	CL	0-10	5 psi	LLR	P	VT	CL
4/9/2010	9:15	1210	EB	860	4.0	F	1-087-138-000-062	62	CL	0-62	30/30	TA	P	AT	CL
4/9/2010	9:25	1208	JC	860	3.5	F	1-138-139-000-062	62	CL	0-62	30/30	TA	P	AT	CL
4/9/2010	9:31	1210	EB	860	5.0	F	1-139-140-000-057	57	CL	0-57	30/30	TA	P	AT	CL
4/9/2010	9:38	1208	JC	860	3.5	F	1-087-139-000-003	3	CL	0-3	PATCH&VT	N/A	N/A	N/A	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03					
Material Type gml : 1							Specifications:			Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss			Vacuum Box: 5 psi for 10 sec.		
Primary / Secondary: Primary							Series: 1								
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
4/9/2010	9:39	1208	JC	860	3.5	F	1-086-139-000-002	2	CL	0-2	PATCH&VT	N/A	N/A	N/A	CL
4/9/2010	9:42	1208	JC	860	3.5	F	1-140-141-000-042	42	CL	0-42	30/30	TA	P	AT	CL
4/9/2010	9:53	1210	EB	860	5.0	F	1-143-144-000-040	40	CL	0-40	30/30	TA	P	AT	CL
4/9/2010	10:12	1210	EB	860	5.0	F	1-145-146-000-046	46	CL	0-46	30/30	TA	P	AT	CL
4/9/2010	10:17	1208	JC	860	3.5	F	1-146-147-000-034	34	CL	0-34	30/30	TA	P	AT	CL
4/9/2010	10:27	1208	JC	860	4.5	F	1-147-148-000-038	38	CL	0-38	30/30	TA	P	AT	CL
4/9/2010	10:28	1210	EB	860	4.0	F	1-144-145-000-043	43	CL	0-43	30/30	TA	P	AT	CL
4/9/2010	10:35	1208	JC	860	3.5	F	1-146-148-000-019	19	CL	0-19	30/30	TA	P	AT	CL
4/9/2010	10:42	1210	EB	860	5.0	F	1-141-142-000-028	28	CL	0-28	30/30	TA	P	AT	CL
4/9/2010	10:42	1208	JC	860	4.5	F	1-148-149-000-060	60	CL	0-60	30/30	TA	P	AT	CL
4/9/2010	10:54	1208	JC	860	4.5	F	1-149-150-000-063	63	CL	0-63	30/30	TA	P	AT	CL
4/9/2010	10:57	1210	EB	860	4.0	F	1-142-143-000-029	29	CL	0-29	30/30	TA	P	AT	CL
4/9/2010	11:04	1210	EB	860	4.0	F	1-141-143-000-007	7	CL	0-7	30/30	TA	P	AT	CL
4/9/2010	11:05	1208	JC	860	4.5	F	1-150-151-000-066	66	CL	0-66	30/30	TA	P	AT	CL
4/9/2010	11:23	1210	EB	860	4.0	F	1-047-139-000-024	24	CL	0-24	30/30	TA	P	AT	CL
4/9/2010	11:28	1210	EB	860	4.0	F	1-047-140-000-022	22	CL	0-22	30/30	TA	P	AT	CL

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03							
Material Type gml : 1										Specifications: Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1							
Production Seam							Location			Nondestructive Test							
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID		
4/9/2010	11:34	1210	EB	860	4.0	F	1-047-141-000-023	23	CL	0-23	30/30	TA	P	AT	CL		
4/9/2010	11:38	1210	EB	860	4.0	F	1-047-143-000-006	6	CL	0-42	30/30	TA	P	AT	CL		
4/9/2010	11:39	1210	EB	860	4.0	F	1-046-143-000-016	16	CL	0-16	30/30	TA	P	AT	CL		
4/9/2010	11:43	1210	EB	860	4.0	F	1-046-144-000-009	9	CL	0-9	30/30	TA	P	AT	CL		
4/9/2010	11:45	1210	EB	860	4.0	F	1-045-144-000-013	13	CL	0-13	30/30	TA	P	AT	CL		
4/9/2010	11:48	1210	EB	860	4.0	F	1-045-145-000-004	4	CL	0-4	PATCH&VT	N/A	N/A	N/A	CL		
4/9/2010	11:49	1210	EB	860	4.0	F	1-045-146-000-011	11	CL	0-11	30/30	TA	P	AT	CL		
4/9/2010	11:52	1210	EB	860	4.0	F	1-044-148-000-021	21	CL	0-21	30/30	TA	P	AT	CL		
4/9/2010	11:55	1210	EB	860	4.0	F	1-043-148-000-001	1	CL	0-1	30/30	TA	P	AT	CL		
4/9/2010	13:15	1210	EB	860	4.0	F	1-043-149-000-022	22	CL	0-22	30/30	TA	P	AT	CL		
4/9/2010	13:19	1210	EB	860	4.0	F	1-042-149-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL		
4/9/2010	13:20	1210	EB	860	4.0	F	1-042-150-000-021	21	CL	0-21	30/30	TA	P	AT	CL		
4/9/2010	13:24	1210	EB	860	4.0	F	1-041-150-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL		
4/9/2010	13:25	1210	EB	860	4.0	F	1-041-151-000-021	21	CL	0-21	30/30	TA	P	AT	CL		
4/9/2010	13:37	1208	JC	860	4.5	F	1-151-152-000-062	62	CL	0-62	30/30	TA	P	AT	CL		
4/9/2010	13:44	1210	EB	860	4.0	F	1-153-154-000-022	22	CL	0-22	30/30	TA	P	AT	CL		

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/9/2010	13:50	1210	EB	860	4.0	F	1-155-156-000-022	22	CL	0-22	30/30	TA	P	AT	CL				
4/9/2010	13:52	1208	JC	860	4.5	F	1-152-154-000-050	50	CL	0-50	30/30	TA	P	AT	CL				
4/9/2010	13:59	1208	JC	860	4.5	F	1-152-153-000-023	23	CL	0-23	30/30	TA	P	AT	CL				
4/9/2010	14:00	1210	EB	860	5.5	F	1-155-157-000-012	12	CL	0-12	30/30	TA	P	AT	CL				
4/9/2010	14:02	1210	EB	860	5.5	F	1-156-157-000-069	69	CL	0-69	30/30	TA	P	AT	CL				
4/9/2010	14:08	1208	JC	860	4.5	F	1-154-155-000-003	3	CL	0-3	30/30	TA	P	AT	CL				
4/9/2010	14:09	1208	JC	860	4.5	F	1-154-156-000-057	57	CL	0-57	30/30	TA	P	AT	CL				
4/9/2010	14:16	1208	JC	860	4.5	F	1-153-156-000-010	10	CL	0-10	30/30	TA	P	AT	CL				
4/9/2010	14:20	1210	EB	860	5.5	F	1-158-159-000-088	88	CL	0-88	30/30	TA	P	AT	CL				
4/9/2010	14:25	1208	JC	860	4.5	F	1-157-158-000-084	84	CL	0-84	30/30	TA	P	AT	CL				
4/9/2010	14:40	1210	EB	860	4.0	F	1-160-161-000-022	22	CL	0-22	30/30	TA	P	AT	CL				
4/9/2010	14:43	1208	JC	860	4.5	F	1-159-161-000-035	35	CL	0-35	30/30	TA	P	AT	CL				
4/9/2010	14:50	1208	JC	860	4.5	F	1-159-160-000-056	56	CL	0-56	30/30	TA	P	AT	CL				
4/9/2010	14:53	1210	EB	860	5.5	F	1-161-162-000-044	44	CL	0-44	30/30	TA	P	AT	CL				
4/9/2010	15:00	1210	EB	860	5.5	F	1-160-162-000-050	50	CL	0-50	30/30	TA	P	AT	CL				
4/9/2010	15:08	1208	JC	860	4.5	F	1-162-163-000-093	93	CL	0-93	30/30	TA	P	AT	CL				

Production Seam Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System										ProjNo: SC0313 TaskNo: 09/03									
Material Type gml : 1										Specifications:		Seam Pressure: 25-30 psi for 5 min. ≤ 3 psi loss				Vacuum Box: 5 psi for 10 sec.			
Primary / Secondary: Primary										Series: 1									
Production Seam							Location			Nondestructive Test									
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID				
4/9/2010	15:16	1210	EB	860	4.0	F	1-164-165-000-020	20	CL	0-20	30/30	TA	P	AT	CL				
4/9/2010	15:25	1208	JC	860	4.5	F	1-163-165-000-024	24	CL	0-24	30/30	TA	P	AT	CL				
4/9/2010	15:30	1208	JC	860	4.5	F	1-163-164-000-034	34	CL	0-34	30/30	TA	P	AT	CL				
4/9/2010	15:37	1210	EB	860	5.5	F	1-151-152-062-070	8	CL	62-70	30/30	TA	P	AT	CL				
4/9/2010	15:40	1210	EB	860	5.5	F	1-153-156-010-018	8	CL	10-18	30/30	TA	P	AT	CL				
4/9/2010	15:40	1208	JC	860	4.5	F	1-165-166-000-012	12	CL	0-12	30/30	TA	P	AT	CL				
4/9/2010	15:52	1208	JC	860	3.5	F	1-136-166-000-012	12	CL	0-12	30/30	TA	P	AT	CL				
4/9/2010	15:55	1210	EB	860	4.0	F	1-040-152-000-021	21	CL	0-21	30/30	TA	P	AT	CL				
4/9/2010	15:58	1208	JC	860	3.5	F	1-124-165-000-004	4	CL	0-4	30/30	TA	P	AT	CL				
4/9/2010	15:59	1210	EB	860	4.0	F	1-039-152-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL				
4/9/2010	15:59	1208	JC	860	3.5	F	1-124-164-000-010	10	CL	0-10	30/30	TA	P	AT	CL				
4/9/2010	16:00	1210	EB	860	4.0	F	1-039-153-000-021	21	CL	0-21	30/30	TA	P	AT	CL				
4/9/2010	16:03	1208	JC	860	3.5	F	1-124-164-010-024	14	CL	10-24	30/30	TA	P	AT	CL				
4/9/2010	16:04	1210	EB	860	4.0	F	1-038-153-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL				
4/9/2010	16:05	1210	EB	860	4.0	F	1-038-156-000-021	21	CL	0-21	30/30	TA	P	AT	CL				
4/9/2010	16:07	1208	JC	860	3.5	F	1-123-164-000-016	16	CL	0-16	30/30	TA	P	AT	CL				

Production Seam Log

Project: South BMI Landfill										ProjNo: SC0313					
Location: Henderson, NV										TaskNo: 09/03					
Description: Geomembrane Liner System															
Material Type gml : 1															
Specifications: Seam Pressure: 25-30 psi for 5 min, ≤ 3 psi loss															
Vacuum Box: 5 psi for 10 sec.															
Primary / Secondary: Primary															
Series: 1															
Production Seam							Location			Nondestructive Test					
Date	Time	Mach. ID	Oper. ID	Temp.	Speed	Ext/Fus:	SeamNo Series-Seam1-Seam2-Begin-End	Length (ft.)	QA ID	Location	Detail	Oper.	Result	Action	QA ID
4/9/2010	16:09	1210	EB	860	4.0	F	1-037-156-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL
4/9/2010	16:10	1210	EB	860	4.0	F	1-037-157-000-021	21	CL	0-21	30/30	TA	P	AT	CL
4/9/2010	16:11	1208	JC	860	3.5	F	1-123-163-000-011	11	CL	0-11	30/30	TA	P	AT	CL
4/9/2010	16:14	1210	EB	860	4.0	F	1-036-157-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL
4/9/2010	16:15	1210	EB	860	4.0	F	1-036-158-000-021	21	CL	0-21	30/30	TA	P	AT	CL
4/9/2010	16:15	1208	JC	860	3.5	F	1-122-163-000-027	27	CL	0-27	30/30	TA	P	AT	CL
4/9/2010	16:19	1210	EB	860	4.0	F	1-035-158-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL
4/9/2010	16:20	1210	EB	860	4.0	F	1-035-159-000-021	21	CL	0-21	30/30	TA	P	AT	CL
4/9/2010	16:23	1208	JC	860	3.5	F	1-034-160-000-020	20	CL	0-20	30/30	TA	P	AT	CL
4/9/2010	16:24	1210	EB	860	4.0	F	1-034-159-000-001	1	CL	0-1	PATCH&VT	N/A	N/A	N/A	CL
4/9/2010	16:26	1208	JC	860	3.5	F	1-033-162-000-022	22	CL	0-22	30/30	TA	P		CL

Total Length Fusion: 18692

Total Length Extrusion: 792

Comments:

APPENDIX E-7

Repair Summary Logs

Repair Summary Log

Project: South BMI Landfill	ProjNo: SC0313	TaskNo: 09/03
Location: Henderson, NV		
Description: <u>Geomembrane Liner System</u>		
Installer: <u>ESI</u>		

Primary / Secondary: Primary	Series: 1
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Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID

5/14/2009	1-001		E	1-2-3				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/14/2009	1-002	1-001	E	1-3		11 N		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/14/2009	1-003		E	3-4-5				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/14/2009	1-004		E	2-3-4				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/14/2009	1-005	1-002	E	2-4		15 S		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-006	1-003	E	4-6		36 S		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-007		E	6-7		2 W		4	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-008		E	4-5-6				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-009		E	5-6-7				3	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-010		E	6-7-8				3	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-011		E	8-9-10				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-012	1-004	E	8-10		67 S		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-013	1-005	E	10-12		46 N		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-014		E	10-11-12				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-015		E	9-10-11				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-016		E	11-12-13				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
5/15/2009	1-017		E	12-13-14				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-018	1-006	E	12-14		30 N		5	3		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-019		E		1-014	6 S	11 W	2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-020		E	13-14-15				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-021		E	15-16-17				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-022	1-010	E	15-17		67 N		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-023		E	17-18-19				3	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-024	1-007	E	18-19		11 W		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-025		E	16-17-19				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-026		E	19-20-21				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-027		E	18-19-20				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-028		E	20-21-22				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-029	1-008	E	22-24		48 S		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-030		E	22-23-24				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-031	1-014	E	22-23		14 S		5	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-032	1-009	E	23-25		9 S		5	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
5/15/2009	1-033		E	23-24-25				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/15/2009	1-034		E	24-25-26				2	2		513	BRS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-035		E	26-27-28				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-036	1-011	E	26-27		5 N		5	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-037		E	25-26-27				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-038	1-015	E	27-29		30 N		5	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-039		E	27-28-29				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-040		E	29-30-31				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-041		E	30-47-48				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-042		E	30-45-46-47				3	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-043		E	30-43-44-45				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-044		E	30-31-42-43				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-045		E	31-41-42				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-046		E	31-40-41				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-047		E	31-39-40				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-048		E	31-38-39				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
5/16/2009	1-049	1-020	E	31-37-38		3 N		7	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-050		E	31-36-37				2	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-051		E	31-35-36				2	2		013	EB	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-052		E	31-34-35				2	2		013	EB	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-053		E	31-32-34				2	2		013	EB	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-054		E	32-33-34				3	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-055		E	33-34		30 W		3	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-056	1-012	E	34-35		100 W		5	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-057	1-017	E	37-38		47 E		5	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-058	1-016	E	38-39		150 W		5	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-059	1-013	E	39-40		50 W		5	2		013	EB	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-060	1-018	E	45-46		47 E		5	2		013	EB	RKD	5/20/2009	JMB	P	VT	RKD
5/16/2009	1-061	1-019	E	R36-27		3 N		5	2		513	IS	RKD	5/16/2009	JMB	P	VT	RKD
5/16/2009	1-062		E	33-34		2 E		3	2		13	EB	RKD	5/20/2009	JMB	P	VT	RKD
3/12/2010	1-063		E	51-52-53				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-064		E	50-51-52				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
3/12/2010	1-065		E	49-50-55				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-066		E	50-51-55				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-067		E	51-53-55				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-068		E	53-57		0 S		2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-069		E	53-54-57				3	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-070		E	53-54-55				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-071		E	1-55-56				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-072	1-021	E	55-56		15 S		5	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-073		E	55-56-58				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-074	1-022	E	56-58		10 E		5	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-075		E	56-58-60				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-076		E		1-058	25 S	4 E	2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-077		E		1-058	31 S	4 E	2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-078		E		1-058	38 S	4 E	2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-079		E		1-058	44 S	4 E	2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-080		E		1-058	52 S	4 E	2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH

Repair Summary Log

Project: South BMI Landfill				ProjNo: SC0313							TaskNo: 09/03								
Location: Henderson, NV																			
Description: <u>Geomembrane Liner System</u>																			
Installer: <u>ESI</u>																			
Primary / Secondary: Primary																		Series: 1	
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing					
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID	
3/12/2010	1-081		E	58-59-60				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-082		E	01-56-60				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-083	1-024	E	01-60		15 S		5	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-084		E	01-60-62				3	3		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-085		E	01-62-64				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-086		E	01-64-65				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-087		E	62-63-64				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-088		E	61-62-63				3	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-089		E	63-64-65				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-090		E	1-65-67				9	4		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-091		E	65-66-67				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-092		E	66-67		3 N		7	5		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-093		E	1-3-67-68				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-094		E	3-5-68-69				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-095	1-023	E	68-69		25 S		5	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	
3/12/2010	1-096		E	5-7-69-70				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH	

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
3/12/2010	1-097		E	7-8-70-71				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-098		E	8-10-71-72				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-099		E	10-12-72-73				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-100	1-025	E	72-73		15 S		5	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-101		E	12-14-73-74				3	3		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-102		E		1-056	13 N	10 E	5	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-103	1-026	E	74-75		20 N		5	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-104	1-027	E	75-76		20 N		5	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-105		E	14-15-74-75				2	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-106		E	15-17-75-76				2	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-107		E	17-18-76-77				2	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-108		E	18-20-77-78				3	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-109		E	20-22-78-79				2	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-110		E	22-23-79-80				2	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-111		E	23-25-80-81				2	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-112	1-029	E	25-81		10 E		5	2		13	MB	CL	3/13/2010	JMB	P	VT	VH

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
3/12/2010	1-113		E	25-27-81-82				3	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-114		E	27-29-82-83				3	2		13	MB	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-115		E	29-30-83-84				3	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-116		E	30-48-84-85				3	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
3/12/2010	1-117		E	48-85-86				3	2		513	IS	CL	3/13/2010	JMB	P	VT	VH
4/9/2010	1-118		E	47-48-86-139				7	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
3/12/2010	1-119	1-028	E	85-86		25 N		5	2		513	IS	GM	3/13/2010	JMB	P	VT	VH
3/12/2010	1-120		E	54-55		0 W		9	3		513	IS	VH	3/13/2010	JMB	P	VT	VH
3/12/2010	1-121		E	60-61-62				2	2		513	IS	VH	3/13/2010	JMB	P	VT	VH
4/6/2010	1-122		E	1-49-55-92				4	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-123		E	49-91-92				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-124		E	49-90-91				2	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-125	1-031	E	49-90		15 S		6	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-126		E	49-88-90				2	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-127		E	49-88-94				2	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/6/2010	1-128		E	49-94		0 E		5	2		513	IS	CL	4/6/2010	LLR	P	VT	CL

Repair Summary Log

<div> <div>Project: South BMI Landfill</div> <div>Location: Henderson, NV</div> <div>Description: <u>Geomembrane Liner System</u></div> <div>Installer: <u>ESI</u></div> </div> <div> <div>ProjNo: SC0313</div> <div>TaskNo: 09/03</div> </div>																		
<div>Primary / Secondary: Primary</div> <div>Series: 1</div>																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
4/6/2010	1-129		E	1-2-93-95				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-130		E	2-4-95-96				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/2/2010	1-131		E	88-89-90				2	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/6/2010	1-132		E	4-6-96-97				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-133		E	6-8-97-98				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/2/2010	1-134		E	89-90-91				2	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/6/2010	1-135		E	8-9-98-99				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/2/2010	1-136	1-030	E	91-92		30 S		6	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-137	1-036	E	9-99		10 E		5	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-138		E	1-92-93				6	4		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-139	1-032	E	96-97		45 S		6	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/2/2010	1-140	1-033	E	99-100		45 S		6	2		513	IS	GM	4/6/2010	LLR	P	VT	CL
4/6/2010	1-141		E	9-11-99-100				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-142		E	11-13-100-101				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-143		E	13-15-101-102				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-144		E	15-16-102-103				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL

Repair Summary Log

Project: South BMI Landfill Location: Henderson, NV Description: <u>Geomembrane Liner System</u> Installer: <u>ESI</u>																		
ProjNo: SC0313 TaskNo: 09/03																		
Primary / Secondary: Primary Series: 1																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
4/6/2010	1-145		E	16-19-103-104				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-146		E	19-21-104-105				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-147		E	21-22-105-106				4	3		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-148		E	22-24-106-107				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-149		E	24-26-107-108				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-150		E	26-28-108-109				4	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-151		E	28-29-109-110				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-152		E	29-31-110-111				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-153		E	31-32-111-112				4	4		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-154		E	32-112-113				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-155		E	32-113-114				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-156		E	32-114-117				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-157		E	32-117-118				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/6/2010	1-158		E	32-118-119				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-159		E	32-119-120				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-160		E	32-120-121				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL

Repair Summary Log

Project: South BMI Landfill Location: Henderson, NV Description: <u>Geomembrane Liner System</u> Installer: <u>ESI</u>																		
ProjNo: SC0313 TaskNo: 09/03																		
Primary / Secondary: Primary Series: 1																		
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID
4/5/2010	1-161	1-039	E	120-121		30 S		5	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-162	1-038	E	119-120		25 S		5	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/3/2010	1-163		E	114-117		67 S		5	5		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/3/2010	1-164	1-037	E	112-113		30 S		6	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-165	1-040	E	113-R164		0 S		5	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/3/2010	1-166	1-035	E	109-110		50 S		5	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/3/2010	1-167	1-034	E	104-105		45 S		6	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-168		E	112-113-115				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-169		E	113-114-115-116				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-170		E	114-116-117-125				3	3		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-171		E	117-118-125-126				4	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-172		E	118-119-126-127				4	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-173		E	119-120-127-128				6	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/10/2010	1-174		E	32-122-162-163				7	6		13	EB	CL	4/10/2010	LLR	P	VT	CL
4/5/2010	1-175		E	120-121-128-129				6	2		513	IS	CL	4/6/2010	LLR	P	VT	CL
4/5/2010	1-176		E	121-129-130				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL

Repair Summary Log

Project: South BMI Landfill				ProjNo: SC0313							TaskNo: 09/03																
Location: Henderson, NV																											
Description: <u>Geomembrane Liner System</u>																											
Installer: <u>ESI</u>																											
Primary / Secondary: Primary																		Series: 1									
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing													
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID									
4/5/2010	1-177		E	121-122-130				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-178		E		1-130	7 E	5 N	2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-179		E	122-130-131				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-180		E	122-123-131				3	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-181		E	123-131-132				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-182		E	123-124-132-134				6	3		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-183		E	124-134-135				2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/5/2010	1-184		E	124-135-136				4	4		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/2/2010	1-185		E	101-102		1 S		2	2		513	IS	CL	4/6/2010	LLR	P	VT	CL									
4/6/2010	1-186		E		1-049	15 S	0 E	3	3		513	IS	CL	4/6/2010	JMB	P	VT	CL									
4/7/2010	1-187	1-041	E	109-TN3		3 W		5	2		513	IS	CL	4/7/2010	JMB	P	VT	CL									
4/7/2010	1-188		E	125-126-TN133				2	2		13	EB	CL	4/7/2010	JMB	P	VT	CL									
4/7/2010	1-189		E	96-97		1 S		2	2		513	IS	CL	4/7/2010	JMB	P	VT	CL									
4/7/2010	1-190		E	89-TN51		6 E		2	2		513	IS	CL	4/7/2010	JMB	P	VT	CL									
4/7/2010	1-191		E	106-TN8-9				2	2		13	EB	CL	4/7/2010	JMB	P	VT	CL									
4/7/2010	1-192		E		1-137	3 S	0 E	5	2		513	IS	CL	4/7/2010	JMB	P	VT	CL									

Repair Summary Log

Project: South BMI Landfill	ProjNo: SC0313	TaskNo: 09/03
Location: Henderson, NV		
Description: <u>Geomembrane Liner System</u>		
Installer: <u>ESI</u>		

Primary / Secondary: Primary	Series: 1
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Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing				
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID

4/7/2010	1-193		E		1-135	2 E	0 N	4	3		513	IS	CL	4/7/2010	JMB	P	VT	CL
4/7/2010	1-194		E	135-136		0 N		6	6		513	IS	CL	4/7/2010	JMB	P	VT	CL
4/9/2010	1-195		E	86-87-138-139				6	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-196		E	47-139-140				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-197		E	47-140-141				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-198		E	47-141-143				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-199		E	141-142-143				5	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-200		E	46-47-143				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-201		E	46-143-144				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-202		E	45-46-144				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-203		E	45-144-145-146				5	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-204		E	146-147		2 E		6	4		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-205		E	152-153-154				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-206		E	146-147-148				3	3		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-207		E	44-45-146-148				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL
4/9/2010	1-208		E	43-44-148-149				4	2		513	IS	CL	4/10/2010	JMB	P	VT	CL

Repair Summary Log

Project: South BMI Landfill				ProjNo: SC0313							TaskNo: 09/03																
Location: Henderson, NV																											
Description: <u>Geomembrane Liner System</u>																											
Installer: <u>ESI</u>																											
Primary / Secondary: Primary																		Series: 1									
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing													
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID									
4/9/2010	1-209		E	42-43-149-150				3	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/9/2010	1-210		E	41-42-150-151				5	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-211	1-042	E	144-145		20 E		6	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-212	1-043	E	146-147		20 E		6	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-213	1-044	E	39-153		11 S		6	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-214	1-045	E	162-163		25 E		6	2		13	EB	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-215		E	40-41-151-152				4	4		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-216		E	151-152		8 W		2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/9/2010	1-217		E	149-150		3 E		6	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-218		E	39-40-152-153				4	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/9/2010	1-219		E	153-154-156				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-220		E	153-156		10 E		2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-221		E	38-39-153-156				4	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/9/2010	1-222		E	154-155-156				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/9/2010	1-223		E	155-156-157				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL									
4/10/2010	1-224		E	36-37-157-158				4	2		13	EB	CL	4/10/2010	JMB	P	VT	CL									

Repair Summary Log

Project: South BMI Landfill				ProjNo: SC0313							TaskNo: 09/03								
Location: Henderson, NV																			
Description: <u>Geomembrane Liner System</u>																			
Installer: <u>ESI</u>																			
Primary / Secondary: Primary																		Series: 1	
Repair Date	Repair ID	DS No	Repair Type	Location				Size			Welder I.D.		QA ID	Non-Destructive Testing					
				Seam	Panel	Distance (ft.)	Offset (ft.)	Length (ft.)	Width (ft.)	Dia. (ft.)	Mach ID	Oper ID		Date	Oper ID	Result (p/f)	Action	QA ID	
4/10/2010	1-225		E	37-38-156-157				4	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-226		E	35-36-158-159				4	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-227		E	34-35-159-160				5	3		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-228		E	159-160-161				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-229		E	160-161-162				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-230		E	33-34-160-162				6	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-231		E	122-123-163				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-232		E	123-163-164				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-233		E	123-124-164				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-234		E	163-164-165				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-235		E	124-164		10 E		2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-236		E	124-164-165				2	2		13	EB	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-237		E	136-165-166				2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-238		E	159-161		7 E		2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL	
4/10/2010	1-239		E	159-161		16 E		2	2		513	IS	CL	4/10/2010	JMB	P	VT	CL	

APPENDIX E-8

Destructive Test Logs and Laboratory Test Results

Destructive Test Log

Project: South BMI Landfill																				
Location: Henderson, NV																				
Description: Geomembrane Liner System																				
Test Reqs:				Fusion:				Peel Inside: <u>91</u>				Peel Outside: <u>91</u>				Shear: <u>120</u>				
				Extrusion:				Peel: <u>78</u>				Shear: <u>120</u>								
Primary / Secondary:				Primary				Series: 1				MaterialType: 1								
Sample Data								Test Data								<i>Re test 1</i>	<i>Re test 2</i>			
<i>Samp No</i>	<i>Weld Type</i>	<i>Track Type</i>	<i>Location</i>		<i>Mach ID</i>	<i>Oper ID</i>	<i>Date Samp</i>	<i>Peel</i>		<i>Shear</i>	<i>Unit ppi/psi</i>	<i>Result (P/F)</i>	<i>QA ID</i>							
			<i>Seam</i>	<i>Dist. (ft.)</i>				<i>Inside</i>	<i>Outside</i>											
1-001	F	2	1-3	10 N	20831	JC	5/13/2009	Lab	129	145	180	ppi	P	DS	-	-				
								Field	142	116	165	PPI	P	RKD						
1-002	F	2	2-4	15 S	1210	EB	5/13/2009	Lab	132	129	197	ppi	P	DS	-	-				
								Field	124	128	164	PPI	P	RKD						
1-003	F	2	4-6	36 S	20831	JC	5/14/2009	Lab	145	145	181	ppi	P	DS	-	-				
								Field	131	120	151	ppi	P	ML						
1-004	F	2	8-10	68 S	1210	EB	5/14/2009	Lab	130	134	182	ppi	P	DS	-	-				
								Field	123	116	165	ppi	P	ML						
1-005	F	2	10-12	47 N	20831	JC	5/14/2009	Lab	127	142	190	ppi	P	DS	-	-				
								Field	137	115	156	ppi	P	ML						
1-006	F	2	12-14	30 N	1210	EB	5/14/2009	Lab	133	130	191	ppi	P	DS	-	-				
								Field	120	119	161	ppi	P	ML						
1-007	F	2	18-19	11 W	20831	JC	5/14/2009	Lab	149	160	175	ppi	P	DS	-	-				
								Field	134	128	149	ppi	P	ML						
1-008	F	2	22-24	48 S	1210	EB	5/14/2009	Lab	122	128	187	ppi	P	DS	-	-				
								Field	109	108	148	ppi	P	ML						
1-009	F	2	23-25	9 S	20831	JC	5/14/2009	Lab	118	133	183	ppi	P	DS	-	-				
								Field	119	107	153	ppi	P	ML						
1-010	F	2	15-17	67 N	1210	EB	5/14/2009	Lab	124	127	184	ppi	P	DS	-	-				
								Field	118	128	168	ppi	P	ML						

Destructive Test Log

Project: South BMI Landfill																			
Location: Henderson, NV																			
Description: Geomembrane Liner System																			
Test Reqs:				Fusion:				Peel Inside: <u>91</u>				Peel Outside: <u>91</u>				Shear: <u>120</u>			
				Extrusion:				Peel: <u>78</u>				Shear: <u>120</u>							
Primary / Secondary:				Primary				Series: 1				MaterialType: 1							
Sample Data								Test Data								<i>Re test 1</i>		<i>Re test 2</i>	
Samp No	Weld Type	Track Type	Location		Mach ID	Oper ID	Date Samp	Peel		Shear	Unit ppi/psi	Result (P/F)	QA ID						
			Seam	Dist. (ft.)				Inside	Outside										
1-011	F	2	26-27	5 N	20831	JC	5/15/2009	Lab	127	142	181	ppi	P	DS	-	-			
								Field	133	122	154	ppi	P	RKD					
1-012	F	2	34-35	100 W	20831	JC	5/15/2009	Lab	122	132	182	ppi	P	DS	-	-			
								Field	124	120	152	ppi	P	RKD					
1-013	F	2	39-40	50 W	20831	JC	5/15/2009	Lab	133	138	178	ppi	P	DS	-	-			
								Field	123	123	157	ppi	P	RKD					
1-014	F	2	22-23	14 S	1210	EB	5/14/2009	Lab	122	124	174	ppi	P	DS	-	-			
								Field	116	111	155	ppi	P	RKD					
1-015	F	2	27-29	32 N	1210	EB	5/15/2009	Lab	136	137	181	ppi	P	DS	-	-			
								Field	116	123	156	ppi	P	RKD					
1-016	F	2	38-39	150 W	1210	EB	5/15/2009	Lab	128	124	182	ppi	P	DS	-	-			
								Field	113	116	151	ppi	P	RKD					
1-017	F	2	37-38	47 E	1209	IS	5/15/2009	Lab	146	131	188	ppi	P	DS	-	-			
								Field	121	128	151	ppi	P	RKD					
1-018	F	2	45-46	47 E	1209	IS	5/15/2009	Lab	127	135	187	ppi	P	DS	-	-			
								Field	119	111	157	ppi	P	RKD					
1-019	E	1	27-R36	3 N	513	IS	5/16/2009	Lab	141	-	171	ppi	P	DS	-	-			
								Field	124	-	148	ppi	P	RKD					
1-020	F	2	31-37	3 N	1210	EB	5/16/2009	Lab	168	139	168	ppi	P	DS	-	-			
								Field	123	133	140	ppi	P	RKD					

Destructive Test Log

Project: South BMI Landfill																			
Location: Henderson, NV																			
Description: Geomembrane Liner System																			
Test Reqs:				Fusion:				Peel Inside: <u>91</u>				Peel Outside: <u>91</u>				Shear: <u>120</u>			
				Extrusion:				Peel: <u>78</u>				Shear: <u>120</u>							
Primary / Secondary:				Primary				Series: 1				MaterialType: 1							
Sample Data								Test Data								<i>Re test</i>	<i>Re test</i>		
<i>Samp No</i>	<i>Weld Type</i>	<i>Track Type</i>	<i>Location</i>		<i>Mach ID</i>	<i>Oper ID</i>	<i>Date Samp</i>	<i>Peel</i>		<i>Shear</i>	<i>Unit ppi/psi</i>	<i>Result (P/F)</i>	<i>QA ID</i>	<i>1</i>	<i>2</i>				
			<i>Seam</i>	<i>Dist. (ft.)</i>				<i>Inside</i>	<i>Outside</i>										
1-021	F	2	55-56	15 S	1210	EB	3/11/2010	Lab	136	137	170	ppi	P	DS	-	-			
								Field	146	142	186	ppi	P	VH					
1-022	F	2	56-58	10 E	20831	JC	3/11/2010	Lab	110	138	161	ppi	P	DS	-	-			
								Field	145	120	178	ppi	P	VH					
1-023	F	2	68-69	25 S	1209	LLR	3/11/2010	Lab	144	125	176	ppi	P	DS	-	-			
								Field	127	133	184	ppi	P	VH					
1-024	F	2	1-60	15 S	1210	EB	3/11/2010	Lab	133	136	160	ppi	P	DS	-	-			
								Field	145	141	176	ppi	P	VH					
1-025	F	2	72-73	15 S	1208	JC	3/11/2010	Lab	129	135	170	ppi	P	DS	-	-			
								Field	150	141	189	ppi	P	VH					
1-026	F	2	74-75	20 N	1210	EB	3/12/2010	Lab	139	141	170	ppi	P	DS	-	-			
								Field	129	129	162	ppi	P	VH					
1-027	F	2	75-76	20 N	1208	JC	3/12/2010	Lab	148	133	183	ppi	P	DS	-	-			
								Field	143	132	174	ppi	P	VH					
1-028	F	2	85-86	25 N	1209	LLR	3/12/2010	Lab	138	123	172	ppi	P	DS	-	-			
								Field	125	134	166	ppi	P	VH					
1-029	F	2	25-81	10 E	1210	EB	3/12/2010	Lab	145	144	168	ppi	P	DS	-	-			
								Field	143	133	167	ppi	P	VH					
1-030	F	2	91-92	30 S	1208	JC	4/1/2010	Lab	145	134	186	ppi	P	DS	-	-			
								Field	148	135	192	ppi	P	GM					

Destructive Test Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System																
Test Reqs: Fusion: Peel Inside: <u>91</u> Peel Outside: <u>91</u> Shear: <u>120</u> Extrusion: Peel: <u>78</u> Shear: <u>120</u>																
Primary / Secondary: Primary Series: 1 MaterialType: 1																
Sample Data								Test Data						<i>Re test 1</i> <i>Re test 2</i>		
Samp No	Weld Type	Track Type	Location		Mach ID	Oper ID	Date Samp	Peel		Shear	Unit ppi/psi	Result (P/F)	QA ID			
			Seam	Dist. (ft.)				Inside	Outside							
1-031	F	2	49-90	15 S	1210	EB	4/1/2010	Lab	148	126	181	ppi	P	DS	-	-
								Field	140	153	193	ppi	P	GM		
1-032	F	2	96-97	45 S	1208	JC	4/1/2010	Lab	137	139	184	ppi	P	DS	-	-
								Field	141	136	191	ppi	P	GM		
1-033	F	2	99-100	45 S	1210	EB	4/1/2010	Lab	127	128	182	ppi	P	DS	-	-
								Field	129	142	195	ppi	P	GM		
1-034	F	2	104-105	45 S	1208	JC	4/1/2010	Lab	137	151	184	ppi	P	DS	-	-
								Field	149	145	186	ppi	P	GM		
1-035	F	2	109-110	50 S	1210	EB	4/2/2010	Lab	131	150	180	ppi	P	DS	-	-
								Field	131	128	168	ppi	P	GM		
1-036	F	2	9-99	10 E	1208	JC	4/2/2010	Lab	132	161	171	ppi	P	DS	-	-
								Field	160	145	170	ppi	P	GM		
1-037	F	2	112-113	30 S	1208	JC	4/2/2010	Lab	140	157	178	ppi	P	DS	-	-
								Field	143	131	163	ppi	P	GM		
1-038	F	2	119-120	25 S	1210	EB	4/2/2010	Lab	136	149	183	ppi	P	DS	-	-
								Field	147	149	206	ppi	P	CL		
1-039	F	2	120-121	30 S	1208	JC	4/2/2010	Lab	145	133	191	ppi	P	DS	-	-
								Field	130	147	205	ppi	P	CL		
1-040	E	1	113-R164	0 S	513	IS	4/3/2010	Lab	116	-	169	ppi	P	DS	-	-
								Field	133	-	192	ppi	P	CL		

Destructive Test Log

Project: South BMI Landfill Location: Henderson, NV Description: Geomembrane Liner System																
Test Reqs: Fusion: Peel Inside: <u>91</u> Peel Outside: <u>91</u> Shear: <u>120</u> Extrusion: Peel: <u>78</u> Shear: <u>120</u>																
Primary / Secondary: Primary Series: 1 MaterialType: 1																
Sample Data								Test Data						<i>Re test</i> <i>1</i> <i>Re test</i> <i>2</i>		
Samp No	Weld Type	Track Type	Location		Mach ID	Oper ID	Date Samp	Peel		Shear	Unit ppi/psi	Result (P/F)	QA ID			
			Seam	Dist. (ft.)				Inside	Outside							
1-041	E	1	109-TN3	3 W	513	IS	4/3/2010	Lab	142	-	161	ppi	P	DS	-	-
								Field	139	-	165	ppi	P	CL		
1-042	F	2	144-145	20 E	1210	EB	4/9/2010	Lab	137	130	186	ppi	P	DS	-	-
								Field	134	131	182	ppi	P	CL		
1-043	F	2	146-147	20 E	1208	JC	4/9/2010	Lab	139	132	185	ppi	P	DS	-	-
								Field	146	132	175	ppi	P	CL		
1-044	F	2	39-153	11 S	1210	EB	4/9/2010	Lab	152	140	165	ppi	P	DS	-	-
								Field	136	141	171	ppi	P	CL		
1-045	F	2	162-163	25 E	1208	JC	4/9/2010	Lab	129	144	183	ppi	P	DS	-	-
								Field	141	130	182	ppi	P	CL		

Comments:



DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-1						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	139	126	121	138	121	Peel A 129	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	144	147	142	148	146	Peel B 145	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	180	180	180	178	181	Shear 180	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-3						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	131	134	142	151	168	Peel A 145	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	148	131	159	127	160	Peel B 145	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	180	180	182	180	182	Shear 181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2326-75-10

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID: DS-002								
Weld: Heat Fusion								
Side A	Peel Strength (ppi)	136	131	132	130	133	Peel A 132	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	132	128	126	130	129	Peel B 129	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	197	192	205	201	192	Shear 197	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-4						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	134	128	130	128	128	Peel A 130	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	139	133	135	130	132	Peel B 134	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	183	182	180	180	184	Shear 182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-5						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	128	126	130	123	129	Peel A 127	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	139	144	139	140	150	Peel B 142	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	189	190	192	190	190	Shear 190	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-6						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	131	144	127	130	131	133	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	131	136	124	131	128	130	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear Strength (ppi)		190	193	188	194	192	191	120 min
Shear Elongation @ Break (%)		>50	>50	>50	>50	>50		
Sample ID:		DS-7						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	154	148	146	147	151	149	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	162	160	159	160	159	160	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear Strength (ppi)		175	178	172	173	177	175	120 min
Shear Elongation @ Break (%)		>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-8						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	120	124	122	121	121	122	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	128	131	129	133	120	128	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	179	184	184	193	193	187	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-9						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	119	117	114	116	124	118	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	135	130	132	134	133	133	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	183	183	183	182	183	183	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-10						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	126	122	125	125	122	Peel A 124	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	130	127	124	124	129	Peel B 127	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	183	188	183	185	183	Shear 184	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-11						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	132	123	128	124	128	Peel A 127	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	142	135	138	156	140	Peel B 142	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	186	182	178	178	181	Shear 181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-12						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	120	118	125	121	128	122	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	134	134	135	131	125	132	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	182	181	182	181	182	182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-13						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	136	135	131	137	127	133	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	134	144	138	145	129	138	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	177	176	174	185	180	178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-14						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	116	123	124	123	124	Peel A 122	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	116	120	132	125	125	Peel B 124	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	176	172	172	173	175	Shear 174	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-15						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	135	133	133	139	138	Peel A 136	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	134	141	135	138	136	Peel B 137	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	181	179	182	181	181	Shear 181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-16						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	127	125	129	129	128	128	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	124	125	120	125	126	124	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	181	185	183	179	181	182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-17						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	114	154	151	156	156	146	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	130	132	132	130	131	131	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	192	186	187	187	190	188	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID:		DS-18						
Weld:		Heat Fusion						
Side A	Peel Strength (ppi)	135	131	125	119	125	Peel A 127	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	138	133	139	136	130	Peel B 135	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	188	187	186	188	187	Shear 187	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:		DS-19						
Weld:		Single Extrusion						
	Peel Strength (ppi)	136	154	138	129	147	Peel 141	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	170	171	172	173	169	Shear 171	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC - CAMU, BMI South

Material: 60 mil HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: E2324-71-07

PARAMETER		TEST REPLICATE NUMBER					MEAN	PROJECT SPEC.
		1	2	3	4	5		
Sample ID: DS-20								
Weld: Heat Fusion								
Side A	Peel Strength (ppi)	168	167	158	175	173	168	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	141	133	140	138	142	139	91 min
	Peel Incursion (%)	<10	<10	<10	<10	<10		
	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	170	169	171	165	167	168	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2535idid

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-21 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	136	139	140	135	130	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	135	144	138	137	133	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	171	170	172	172	164	170
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-22 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	107	115	108	108	110	110
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	140	139	143	136	130	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	161	161	161	163	159	161
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2535idid

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-23 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	142	156	142	138	144
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	127	130	122	128	120	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	176	174	176	178	176	176
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-24 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	131	131	136	133	134	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	134	134	142	133	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	161	159	161	161	160	160
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2535idid

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-25 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	132	127	128	127	130	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	126	137	140	135	137	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	170	169	167	171	172	170
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-26 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	145	132	130	154	139
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	144	142	141	140	137	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	172	170	167	164	175	170
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2535idid

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-27 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	155	150	148	141	147	148
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	133	134	138	129	132	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	190	185	183	176	180	183
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-28 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	137	133	143	140	137	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	129	121	122	125	117	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	178	172	170	171	170	172
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2535idid

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-29 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	141	137	147	156	145	145
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	142	144	146	146	142	144
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	170	167	168	168	168	168
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Geosyntec Consultants
Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: 2604

TEST REPLICATE NUMBER							
PARAMETER	1	2	3	4	5	MEAN	Proj. Spec.
Sample ID: DS-30 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	156	154	130	153	131	145	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	119	122	136	144	150	134	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	187	183	184	184	193	186	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID: DS-31 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	155	150	148	145	141	148	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	130	123	122	128	128	126	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	181	183	178	182	181	181	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: 2604

TEST REPLICATE NUMBER							
PARAMETER	1	2	3	4	5	MEAN	Proj. Spec.
Sample ID: DS-32 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	137	137	139	133	137	137	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	141	139	138	137	140	139	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	189	184	179	183	183	184	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID: DS-33 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	127	128	130	122	128	127	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	126	125	129	129	131	128	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	184	183	182	178	183	182	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: 2604

TEST REPLICATE NUMBER							
PARAMETER	1	2	3	4	5	MEAN	Proj. Spec.
Sample ID: DS-34 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	134	137	141	139	136	137	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	146	155	157	151	145	151	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	187	186	181	182	183	184	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID: DS-35 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	132	135	134	129	126	131	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	155	145	154	143	155	150	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	178	182	178	180	183	180	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log #: 2604

PARAMETER	TEST REPLICATE NUMBER					MEAN	Proj. Spec.
	1	2	3	4	5		
Sample ID: DS-36 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	130	136	132	131	132	132	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	160	163	160	160	161	161	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	165	171	172	172	174	171	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID: DS-37 Weld: Heat Fusion							
Side: A						Peel A	
Peel Strength (ppi)	140	145	133	132	150	140	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side: B						Peel B	
Peel Strength (ppi)	158	144	158	159	164	157	
Peel Incursion (%)	<5	<5	<5	<5	<5		
Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Shear						Shear	
Shear Strength (ppi)	180	178	181	175	177	178	
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2617

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-38 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	143	144	128	130	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	154	131	152	151	159	149
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	183	178	180	184	191	183
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-39 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	142	134	147	153	150	145
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	131	147	117	130	141	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	193	186	192	188	195	191
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60 HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2617

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-40 Weld: Single Extrusion						
Side: Peel						Peel
Peel Strength (ppi)	116	102	128	109	125	116
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	172	170	167	167	168	169
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60 HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2628

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-41 Weld: Single Extrusion						
Side: Peel						Peel
Peel Strength (ppi)	135	139	133	153	148	142
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	161	163	161	161	160	161
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2639

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-42 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	143	129	134	137	141	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	131	129	127	134	129	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	188	188	186	185	183	186
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-43 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	132	148	135	145	134	139
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	137	133	128	131	130	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	188	183	182	179	191	185
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC-CAMU

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

TRI Log#: 2639

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-44 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	153	155	155	145	154	152
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	141	141	140	143	133	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	162	166	168	168	163	165
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-45 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	128	131	127	130	128	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	149	139	146	143	142	144
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	186	183	184	177	186	183
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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APPENDIX F

Geocomposite

APPENDIX F-1

Material Inventory Logs

Summary of Cover 270-2-6 Geocomposite Inventory, MQC Data, and Conformance Testing

BRC CAMU

Henderson, NV

		Manufacturer Quality Control Testing																		CQA			Approved
Geocomposite	Geonet	Geocomposite	Geocomposite	Geonet	Geonet Nominal	Geonet	Geotextile		Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geotextile	Geocomposite	Geocomposite	Geocomposite	Material meets requirements of Technical Specifications	
Roll No.	Roll No.	Peel Strength	Transmissivity	Specific Gravity	Thickness	Carbon Black	Mass per Unit Area		AOS	Permittivity	Grab Strength	Puncture Strength	Mullen Burst	Trapezoidal Tear	A-Peel Strength	B-Peel Strength	Transmissivity						
		Minimum	Minimum	minimum	Minimum		Minimum		Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum						
		1.0	9.20E-05	0.935	200	2-3	6.0		70.00	0.5	130.0	40.0	210.0	40.0	500	500	9.20E-05						
		lb/ft²	m²/s		mils	%	(oz/yd²)		US SIEVE		lb	lb	psi	lb	gm/in	gm/in	(m²/s)						
		1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1/100,000 ft²		1/100,000 ft²	1/100,000 ft²	1/100,000 ft²	1/100,000 ft²	1/100,000 ft²	1/100,000 ft²	1 per 200,000	1 per 200,000	1 per 200,000						
269711448	269711448-N			0.9538																		Y	
269711449	269711449-N			0.9538																		Y	
269711450	269711450-N			0.9538	266	2.47																Y	
269711451	269711451-N			0.9538																		Y	
269711452	269711452-N			0.9538																		Y	
269711453	269711453-N			0.9538																		Y	
269711454	269711454-N			0.9538																		Y	
269711455	269711455-N			0.9538																		Y	
269711456	269711456-N			0.9538																		Y	
269711457	269711457-N			0.9538																		Y	
269711458	269711458-N			0.9538																		Y	
269711459	269711459-N			0.9538																		Y	
269711460	269711460-N			0.9538	263	2.38																Y	
269711461	269711461-N			0.9538																		Y	
269711462	269711462-N			0.9538																		Y	
269711463	269711463-N			0.9538																		Y	
269711464	269711464-N			0.9538																		Y	
269711465	269711465-N			0.9538																		Y	
269711466	269711466-N			0.9538																		Y	
269711467	269711467-N			0.9538																		Y	
269711468	269711468-N			0.9538																		Y	
269711469	269711469-N			0.9538																		Y	
269711470	269711470-N	1.33	6.45E-04	0.9535	268	2.43	6.61	6.40	70	70	1.81	1.81	165	168	99	98	332	334	70	77		Y	
269711471	269711471-N			0.9535																		Y	
269711472	269711472-N			0.9535																		Y	
269711473	269711473-N			0.9535																		Y	
269711474	269711474-N			0.9535																		Y	
269711475	269711475-N			0.9535																		Y	
269711476	269711476-N			0.9535																		Y	
269711477	269711477-N			0.9535																		Y	
269711478	269711478-N			0.9535																		Y	
269711479	269711479-N			0.9535																		Y	
269711480	269711480-N			0.9535	260	2.30																Y	
269711481	269711481-N			0.9535																		Y	
269711482	269711482-N			0.9535																		Y	
269711483	269711483-N			0.9535																		Y	
269711484	269711484-N			0.9535																		Y	
269711485	269711485-N			0.9535																		Y	
269711486	269711486-N			0.9535																		Y	
269711487	269711487-N			0.9535																		Y	
269711488	269711488-N			0.9535																		Y	
269711489	269711489-N			0.9535																		Y	
269711490	269711490-N			0.9535	264	2.51																Y	
269711491	269711491-N			0.9535																		Y	
269711492	269711492-N			0.9535																		Y	
269711493	269711493-N			0.9535																		Y	
269711494	269711494-N			0.9535																		Y	
269711495	269711495-N			0.9535																		Y	
269711496	269711496-N			0.9535																		Y	
269711497	269711497-N			0.9535																		Y	
269711498	269711498-N			0.9535																		Y	
269711499	269711499-N			0.9535																		Y	
269711500	269711500-N			0.9535	256	2.34																Y	
269711501	269711501-N			0.9535																		Y	
269711502	269711502-N			0.9535																		Y	
269711503	269711503-N			0.9535																		Y	
269711504	269711504-N			0.9535																		Y	
269711505	269711505-N	1.56	6.38E-04	0.9539			6.61	6.57	70	70	1.81	1.81	165	167	99	97	332	337	70	78		Y	
269711506	269711506-N			0.9539																		Y	
269711507	269711507-N			0.9539																		Y	
269711508	269711508-N			0.9539																		Y	
269711509	269711509-N			0.9539																		Y	
269711510	269711510-N			0.9539	262	2.56																Y	

Summary of Cover 270-2-6 Geocomposite Inventory, MQC Data, and Conformance Testing

BRC CAMU

Henderson, NV

Manufacturer Quality Control Testing																			CQA			Approved		
Geocomposite	Geonet	Geocomposite	Geocomposite	Geonet	Geonet Nominal	Geonet	Geotextile		Geotextile		Geotextile		Geotextile		Geotextile		Geotextile		Geocomposite	Geocomposite	Geocomposite	Material meets requirements of Technical Specifications		
Roll No.	Roll No.	Peel Strength	Transmissivity	Specific Gravity	Thickness	Carbon Black	Mass per Unit Area		AOS		Permittivity		Grab Strength		Puncture Strength		Mullen Burst		Trapezoidal Tear		A-Peel Strength		B-Peel Strength	Transmissivity
		Minimum	Minimum	minimum	Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum	Minimum
		1.0	9.20E-05	0.935	200	2-3	6.0		70.00		0.5		130.0		40.0		210.0		40.0		500		500	9.20E-05
		lb/ft²	m²/s		mils	%	(oz/yd²)		US SIEVE				lb		lb		psi		lb		gm/in		gm/in	(m²/s)
		1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1 per 200,000	1 per 200,000	1 per 200,000			
269711511	269711511-N			0.9539																		Y		
269711512	269711512-N			0.9539																		Y		
269711513	269711513-N			0.9539																		Y		
269711514	269711514-N			0.9539																		Y		
269711515	269711515-N			0.9539																		Y		
269711516	269711516-N			0.9539																		Y		
269711517	269711517-N			0.9539																2,579	1,961	1.75E-03	Y	
269711518	269711518-N			0.9539																		Y		
269711519	269711519-N			0.9539																		Y		
269711520	269711520-N			0.9539	258	2.26																Y		
269711521	269711521-N			0.9539																		Y		
269711522	269711522-N			0.9539																		Y		
269711523	269711523-N			0.9539																		Y		
269711524	269711524-N			0.9539																		Y		
269711525	269711525-N			0.9539																		Y		
269711526	269711526-N			0.9539																		Y		
269711527	269711527-N			0.9539																		Y		
269711528	269711528-N			0.9539																		Y		
269711529	269711529-N			0.9539																		Y		
269711530	269711530-N			0.9539	267	2.59																Y		
269711531	269711531-N			0.9539																		Y		
269711532	269711532-N			0.9539																		Y		
269711533	269711533-N			0.9539																		Y		
269711534	269711534-N			0.9539																		Y		
269711535	269711535-N			0.9539																		Y		
269711536	269711536-N			0.9539																		Y		
269711537	269711537-N			0.9539																		Y		
269711538	269711538-N			0.9539																		Y		
269711539	269711539-N			0.9539																		Y		
269711540	269711540-N	1.38	6.62E-04	0.9532	260	2.23	6.68	6.30	70	70	1.81	1.81	169	162	100	97	335	337	74	78		Y		
269711541	269711541-N			0.9532																		Y		
269711542	269711542-N			0.9532																		Y		
269711543	269711543-N			0.9532																		Y		
269711544	269711544-N			0.9532																		Y		
269711545	269711545-N			0.9532																		Y		
269711546	269711546-N			0.9532																		Y		
269711547	269711547-N			0.9532																		Y		
269711548	269711548-N			0.9532																		Y		
269711549	269711549-N			0.9532																		Y		
269711550	269711550-N			0.9532	264	2.67																Y		
269711551	269711551-N			0.9532																		Y		
269711552	269711552-N			0.9532																		Y		
269711553	269711553-N			0.9532																		Y		
269711554	269711554-N			0.9532																		Y		
269711555	269711555-N			0.9532																		Y		
269711556	269711556-N			0.9532																		Y		
269711557	269711557-N			0.9532																		Y		
269711558	269711558-N			0.9532																		Y		
269711559	269711559-N			0.9532																		Y		
269711560	269711560-N			0.9532	262	2.32																Y		
269711561	269711561-N			0.9532																		Y		
269711562	269711562-N			0.9532																		Y		
269711563	269711563-N			0.9532																		Y		
269711564	269711564-N			0.9532																		Y		
269711565	269711565-N			0.9532																		Y		
269711566	269711566-N			0.9532																		Y		
269711567	269711567-N			0.9532																		Y		
269711568	269711568-N			0.9532																		Y		
269711569	269711569-N			0.9532																		Y		
269711570	269711570-N			0.9532	269	2.60																Y		
269711571	269711571-N			0.9532																		Y		
269711572	269711572-N			0.9532																		Y		
269711573	269711573-N			0.9532																		Y		

Summary of Cover 270-2-6 Geocomposite Inventory, MQC Data, and Conformance Testing																								
BRC CAMU																								
Henderson, NV																								
Manufacturer Quality Control Testing																				CQA			Approved	
Geocomposite	Geonet	Geocomposite	Geocomposite	Geonet	Geonet Nominal	Geonet	Geotextile		Geotextile		Geotextile		Geotextile		Geotextile		Geotextile		Geocomposite	Geocomposite	Geocomposite	Material meets requirements of Technical Specifications		
Roll No.	Roll No.	Peel Strength	Transmissivity	Specific Gravity	Thickness	Carbon Black	Mass per Unit Area		AOS		Permittivity		Grab Strength		Puncture Strength		Mullen Burst		Trapezoidal Tear		A-Peel Strength		B-Peel Strength	Transmissivity
		Minimum	Minimum	minimum	Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum		Minimum	Minimum
		1.0	9.20E-05	0.935	200	2-3	6.0		70.00		0.5		130.0		40.0		210.0		40.0		500		500	9.20E-05
		lb/ft²	m²/s		mils	%	(oz/yd²)		US SIEVE				lb		lb		psi		lb		gm/in		gm/in	(m²/s)
1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1 per 100,000	1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1/100,000 ft²		1 per 200,000	1 per 200,000	1 per 200,000		
269711574	269711574-N			0.9532																			Y	
269711575	269711575-N	1.46	6.43E-04	0.9537			6.30	6.54	70	70	1.81	1.77	162	166	97	98	337	340	78	71				Y
269711576	269711576-N			0.9537																			Y	
269711577	269711577-N			0.9537																			Y	
269711578	269711578-N			0.9537																			Y	
269711579	269711579-N			0.9537																1,861	2,470	1.86E-03	Y	
269711580	269711580-N			0.9537	259	2.38																	Y	
269711581	269711581-N			0.9537																			Y	
269711582	269711582-N			0.9537																			Y	
269711583	269711583-N			0.9537																			Y	
269711584	269711584-N			0.9537																			Y	
269711585	269711585-N			0.9537																			Y	
269711586	269711586-N			0.9537																			Y	
269711587	269711587-N			0.9537																			Y	
269711588	269711588-N			0.9537																			Y	
269711589	269711589-N			0.9537																			Y	
269711590	269711590-N			0.9537	266	2.53																	Y	
269711591	269711591-N			0.9537																			Y	
269711592	269711592-N			0.9537																			Y	
269711593	269711593-N			0.9537																			Y	
269711594	269711594-N			0.9537																			Y	
269711595	269711595-N			0.9537																			Y	
269711596	269711596-N			0.9537																			Y	
269711597	269711597-N			0.9537																			Y	
269711598	269711598-N			0.9537																			Y	
269711599	269711599-N			0.9537																			Y	
269711600	269711600-N			0.9537	261	2.24																	Y	
269711601	269711601-N			0.9537																			Y	
269711602	269711602-N			0.9537																			Y	
269711603	269711603-N			0.9537																			Y	
269711604	269711604-N			0.9537																			Y	
269711605	269711605-N			0.9537																			Y	
269711606	269711606-N			0.9537																			Y	
269711607	269711607-N			0.9537																			Y	
269711608	269711608-N			0.9537																			Y	
269711609	269711609-N			0.9537																			Y	
269711610	269711610-N	1.27	6.68E-04	0.9534	265	2.76	6.30	6.54	70	70	1.77	1.77	168	166	95	98	332	340	80	71				Y
269711611	269711611-N			0.9534																				

APPENDIX F-2

CQA Conformance Test Results



GEOCOMPOSITE TEST RESULTS

TRI Client: Geosyntec Consultants

Project: BRC CAMU

Material: SKAPS TN270-2-6 Double Sided Geocomposite

Sample Identification: 269711517

TRI Log #: E2324-03-07

PARAMETER	TEST REPLICATE NUMBER					MEAN	DEV.	SPEC.	
1	2	3	4	5	6	7	8	9	10
Hydraulic Transmissivity (ASTM D 4716)									
Direction Tested: Machine Direction									
Normal Load (psf):	300								
Hydraulic Gradient:	0.1								
Test Length (in)	12								
Test Width (in)	12								
Plate / Cover Soil / Sample / Agru 60 mil Microspike HDPE Geomembrane / Plate									
Seat Time									
(hours)	Specimen					1			
0.25	Volume (cc)	598	600	595					
	Time (s)	10.06	10.07	10.07					
	Flow Rate (GPM/ft width)	0.94	0.94	0.94					
	Transmissivity (m^2/s)	1.95E-03	1.95E-03	1.94E-03					
	Test Temp (C)	20.0							
Temp. Corr. Factor	1.000								
1	Volume (cc)	594	591	587					
	Time (s)	10.09	10.06	9.96					
	Flow Rate (GPM/ft width)	0.93	0.93	0.93					
	Transmissivity (m^2/s)	1.93E-03	1.93E-03	1.93E-03					
	Test Temp (C)	20.0							
Temp. Corr. Factor	1.000								
12	Volume (cc)	547	543	543					
	Time (s)	10.09	10.01	10.00					
	Flow Rate (GPM/ft width)	0.86	0.86	0.86					
	Transmissivity (m^2/s)	1.78E-03	1.78E-03	1.78E-03					
	Test Temp (C)	20.0							
Temp. Corr. Factor	1.000								
24	Volume (cc)	535	534	534					
	Time (s)	10.06	10.04	9.96					
	Flow Rate (GPM/ft width)	0.84	0.84	0.85					
	Transmissivity (m^2/s)	1.74E-03	1.74E-03	1.76E-03					
	Test Temp (C)	20.0							
Temp. Corr. Factor	1.000								
Plate / Cover Soil / Sample / Agru 60 mil Microspike HDPE Geomembrane / Plate									
Peel Strength (ASTM D 413, mod.)									
A - MD Average Peel Strength (ppi)	7.8	4.6	4.2	7.5	4.3	5.7	1.8		
A - MD Average Peel Strength (g/in)	3541	2088	1907	3405	1952	2579	821	500 min	
B - MD Average Peel Strength (ppi)	5.3	4.3	3.4	4.8	3.8	4.3	0.8		
B - MD Average Peel Strength (g/in)	2406	1952	1544	2179	1725	1961	345	500 min	
Note: A and B represent a randomly assigned top and bottom of the sample									

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOCOMPOSITE TEST RESULTS

TRI Client: Geosyntec Consultants
Project: BRC CAMU

Material: SKAPS TN270-2-6 Double Sided Geocomposite
Sample Identification: 269711579
TRI Log #: E2324-03-07

TRI Log #: E2324-03-07																MEAN	STD. DEV.	PROJ. SPEC.	
PARAMETER		TEST REPLICATE NUMBER												MEAN	STD. DEV.	PROJ. SPEC.			
		1	2	3	4	5	6	7	8	9	10								
Hydraulic Transmissivity (ASTM D 4716)																			
Direction Tested: Machine Direction																			
Normal Load (psf):		300																	
Hydraulic Gradient:		0.1																	
Test Length (in)		12																	
Test Width (in)		12																	
Plate / Cover Soil / Sample / Agri 60 mil Microspike HDPE Geomembrane / Plate																			
Seat Time																			
(hours)		Specimen 1																	
0.25	Volume (cc)	666 671 665																	
	Time (s)	10.02 10.06 10.09																	
	Flow Rate (GPM/ft width)	1.05 1.06 1.04												1.05	0.01				
	Transmissivity (m^2/s)	2.18E-03 2.19E-03 2.16E-03												2.18E-03	1.34E-05				
	Test Temp (C)	20.0																	
	Temp. Corr. Factor	1.000																	
1	Volume (cc)	638 631 639																	
	Time (s)	10.11 10.01 10.11																	
	Flow Rate (GPM/ft width)	1.00 1.00 1.00												1.00	0.00				
	Transmissivity (m^2/s)	2.07E-03 2.07E-03 2.07E-03												2.07E-03	2.77E-06				
	Test Temp (C)	20.0																	
	Temp. Corr. Factor	1.000																	
12	Volume (cc)	580 576 583																	
	Time (s)	10.13 10.09 10.13																	
	Flow Rate (GPM/ft width)	0.91 0.90 0.91												0.91	0.00				
	Transmissivity (m^2/s)	1.88E-03 1.87E-03 1.89E-03												1.88E-03	7.73E-06				
	Test Temp (C)	20.0																	
	Temp. Corr. Factor	1.000																	
24	Volume (cc)	570 567 569																	
	Time (s)	10.06 10.01 10.00																	
	Flow Rate (GPM/ft width)	0.90 0.90 0.90												0.90	0.00				
	Transmissivity (m^2/s)	1.86E-03 1.86E-03 1.87E-03												1.86E-03	4.71E-06	5.0E-4 min			
	Test Temp (C)	20.0																	
	Temp. Corr. Factor	1.000																	
Peel Strength (ASTM D 413, mod.)																			
A - MD Average Peel Strength (ppi)		3.9	4.9	4.6	4.4	2.7											4.1	0.9	
A - MD Average Peel Strength (g/in)		1771	2225	2088	1998	1226											1861	392	500 min
B - MD Average Peel Strength (ppi)		7.2	4.1	6.6	5.5	3.8											5.4	1.5	
B - MD Average Peel Strength (g/in)		3269	1861	2996	2497	1725											2470	678	500 min
Note: A and B represent a randomly assigned top and bottom of the sample																			
MD Machine Direction TD Transverse Direction																			

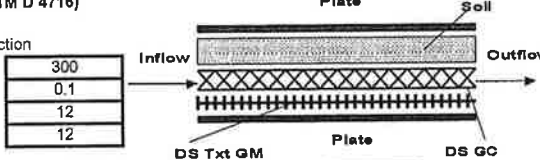
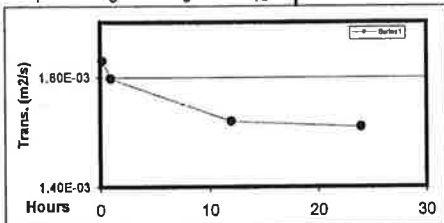
The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.



GEOCOMPOSITE TEST RESULTS

TRI Client: Geosyntec Consultants
Project: BRC CAMU

Material: SKAPS TN270-2-6 Double Sided Geocomposite
Sample Identification: 269711625
TRI Log #: E2324-03-07

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Hydraulic Transmissivity (ASTM D 4716)													
Direction Tested: Machine Direction													
Normal Load (psf):	300												
Hydraulic Gradient:	0.1												
Test Length (in)	12												
Test Width (in)	12												
													
Plate / Cover Soil / Sample / Agru 60 mil Microspike HDPE Geomembrane / Plate													
Soak Time (hours)													
Specimen 1													
0.25	Volume (cc)	569	572	576									
	Time (s)	10.09	10.09	10.16									
	Flow Rate (GPM/ft width)	0.89	0.90	0.90									
	Transmissivity (m^2/s)	1.85E-03	1.86E-03	1.86E-03									
	Test Temp (C)	20.0											
	Temp. Corr. Factor	1.000											
1	Volume (cc)	551	554	550									
	Time (s)	10.06	10.13	10.06									
	Flow Rate (GPM/ft width)	0.87	0.87	0.87									
	Transmissivity (m^2/s)	1.80E-03	1.79E-03	1.79E-03									
	Test Temp (C)	20.0											
	Temp. Corr. Factor	1.000											
12	Volume (cc)	501	499	498									
	Time (s)	10.00	10.00	10.00									
	Flow Rate (GPM/ft width)	0.79	0.79	0.79									
	Transmissivity (m^2/s)	1.64E-03	1.64E-03	1.63E-03									
	Test Temp (C)	20.0											
	Temp. Corr. Factor	1.000											
24	Volume (cc)	494	491	491									
	Time (s)	10.00	9.96	9.98									
	Flow Rate (GPM/ft width)	0.78	0.78	0.78									
	Transmissivity (m^2/s)	1.62E-03	1.62E-03	1.61E-03									
	Test Temp (C)	20.0											
	Temp. Corr. Factor	1.000											
													
Peel Strength (ASTM D 413, mod.)													
A - MD Average Peel Strength (ppi)	6.5	3.2	3.8	4.6	3.9								
A - MD Average Peel Strength (g/in)	2951	1453	1725	2088	1771								
B - MD Average Peel Strength (ppi)	3.7	2.4	2.9	3.0	6.0								
B - MD Average Peel Strength (g/in)	1680	1090	1317	1362	2724								
Note: A and B represent a randomly assigned top and bottom of the sample													
MD Machine Direction TD Transverse Direction													

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

APPENDIX G

Construction Record Drawings



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 3/29/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 399
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:
☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	3/29/10			Submittal - 02200-002TT – BMI-South Final Closure Subgrade As-Built	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

F – FILE

RC - REVIEW & COMMENT

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL ☐ MAIL ☐ OVERNIGHT ☒ HAND DELIVERY ☐ FACSIMILE

COPY TO: Ranajit Sahu, Lee Farris

BY: Michael M. Carlson (630)-330-8237

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



03/29/2010

Attn: Erik Gehringer, Project Manager
ENTACT Environmental Services, LLC
699 South Friendswood Drive
Friendswood, TX. 77546

Re: Corrective Action Management Unit (CAMU), BMI South -- Pre-Liner Sub-Grade As-Built

Mr. Gehringer,

Absolute Boundary & Control Solutions (ABCS) recently collected survey data within the BMI South area of the CAMU to determine the final sub-grade elevations. The attached Report reflects the results of this effort.

It should be noted that this report covers those positions that have been As-built as of 03/27/2010.

If you have any questions or if we can be of further assistance do not hesitate to call.

Sincerely,

Craig A. Givant, PLS
President

(702) 953-7452
(702) 839-9750 fax

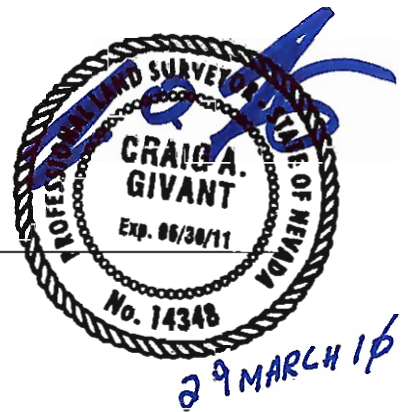
CERTIFICATION PAGE

CAMU – BMI SOUTH
FINAL PRE-LINER SUB-GRADE AS-BUILT
HENDERSON, NV

I, Craig A. Givant, a Professional Land Surveyor registered in the State of Nevada, certify (as defined by Nevada Revised Statutes 625.403) that:

1. This report and any Land Surveying Practices (N.R.S. 625.040) on which it is based were performed directly by me or under my responsible charge (N.R.S. 625.080) in accordance with the Standards and Practices Governing Land Surveyors in the State of Nevada as defined by any applicable sections of the Nevada Revised Statutes (N.R.S.) or the Nevada Administrative Code (N.A.C.).
2. By affixing my official seal and signature below I am confirming that I am a Registered Land Surveyor in the State of Nevada and thereby satisfy the requirements of Section 01050, Part 1.03, Subpart A or the Project Technical Specifications.

Craig A. Givant, PLS
PLS 14348



SURVEY DATA

As required by the project specification Absolute Boundary & Control Solutions (ABCS) utilized field survey methods which resulted in precisions equal to or better than the following:

Horizontal Coordinates: $\pm 1.0'$ (One Foot)

Vertical Coordinates: $\pm 0.10'$ (One Tenth of a Foot)

1. Coordinate Printout of the reduced (measured) coordinates from the Field Collection Efforts.

Point No.	Northing	Easting	Elevation	Description
5015	17209.90	14894.32	1777.43	R-82-PS
5016	17207.52	14894.21	1777.49	R-82-PS
5017	17207.65	14894.98	1777.47	R-82-PS
5018	17048.72	14425.39	1769.73	FINAL-ASB-LIMIT
5019	17045.65	14463.95	1769.29	FINAL-ASB-LIMIT
5020	17042.41	14502.39	1769.94	FINAL-ASB-LIMIT
5021	17039.15	14544.60	1769.92	FINAL-ASB-LIMIT
5022	17034.75	14597.91	1770.37	FINAL-ASB-LIMIT
5023	17025.84	14625.93	1770.14	FINAL-ASB-LIMIT
5024	17014.25	14663.03	1770.47	FINAL-ASB-LIMIT
5025	16998.88	14712.01	1770.89	FINAL-ASB-LIMIT
5026	16998.53	14716.15	1770.97	FINAL-ASB-LIMIT
5027	16995.96	14779.66	1771.58	FINAL-ASB-LIMIT
5028	16994.20	14821.25	1771.43	FINAL-ASB-LIMIT
5029	16992.73	14853.31	1771.57	FINAL-ASB-LIMIT
5030	16990.90	14899.65	1772.07	FINAL-ASB-LIMIT
5031	16989.67	14949.23	1772.17	FINAL-ASB-LIMIT
5032	17027.82	14953.84	1772.61	FINAL-ASB-LIMIT
5033	17074.52	14959.11	1773.86	FINAL-ASB-LIMIT
5034	17116.14	14959.87	1774.65	FINAL-ASB-LIMIT
5035	17143.75	14960.69	1775.01	FINAL-ASB-LIMIT
5036	17174.02	14965.12	1774.57	FINAL-ASB-LIMIT
5037	17206.74	14968.68	1774.18	FINAL-ASB-LIMIT
5038	17235.38	14971.70	1773.88	FINAL-ASB-LIMIT
5039	17273.51	14976.50	1773.19	FINAL-ASB-LIMIT
5040	17317.91	14981.65	1772.13	FINAL-ASB-LIMIT
5041	17341.61	14983.02	1769.97	FINAL-ASB-LIMIT
5042	17385.30	14985.30	1766.81	FINAL-ASB-LIMIT
5043	17420.98	14985.94	1765.33	FINAL-ASB-LIMIT

Point No.	Northing	Easting	Elevation	Description
20004	17533.58	14238.67	1768.18	ASB AT IN
20005	17551.47	14261.96	1768.16	ASB AT IN
20006	17564.05	14289.07	1767.97	ASB AT IN
20007	17566.48	14316.01	1767.88	ASB AT IN
20008	17562.32	14347.40	1767.73	ASB AT IN
20009	17546.79	14397.78	1767.51	ASB AT IN
20010	17527.92	14459.62	1767.24	ASB AT IN
20011	17517.39	14495.47	1767.01	ASB AT IN
20012	17513.15	14559.41	1766.88	ASB AT IN
20013	17509.63	14609.32	1766.73	ASB AT IN
20014	17506.52	14659.41	1766.54	ASB AT IN
20015	17503.57	14709.05	1766.23	ASB AT IN
20016	17500.64	14759.14	1765.88	ASB AT IN
20017	17497.40	14808.75	1765.72	ASB AT IN
20018	17494.47	14858.33	1765.58	ASB AT IN
20019	17491.82	14908.72	1765.39	ASB AT IN
20020	17488.30	14958.15	1765.15	ASB AT IN
20021	17485.24	15000.74	1765.03	ASB AT IN
20022	17460.50	14955.43	1762.57	SPT
20023	17449.43	14957.99	1764.51	SPT
20024	17434.73	14957.81	1765.81	SPT
20025	17396.38	14927.41	1770.55	SPT
20026	17464.54	14907.38	1762.35	SPT
20027	17449.66	14906.63	1765.08	SPT
20028	17415.94	14904.01	1769.65	SPT
20029	17396.94	14903.31	1772.07	SPT
20030	17391.28	14855.65	1774.47	SPT
20031	17415.18	14855.97	1771.54	SPT
20032	17440.00	14855.97	1767.72	SPT
20033	17466.32	14857.48	1762.79	SPT
20034	17469.80	14807.56	1763.27	SPT
20035	17446.83	14805.39	1767.50	SPT
20036	17419.80	14805.04	1771.73	SPT
20037	17399.94	14804.65	1774.50	SPT
20038	17472.34	14757.71	1763.84	SPT
20039	17451.54	14756.23	1767.34	SPT
20040	17423.59	14754.30	1771.62	SPT
20041	17399.52	14753.50	1774.53	SPT
20042	17476.92	14707.64	1763.51	SPT
20043	17457.26	14706.67	1767.12	SPT

Point No.	Northing	Easting	Elevation	Description
20044	17435.23	14705.79	1770.78	SPT
20045	17414.62	14704.09	1773.51	SPT
20046	17394.62	14701.39	1775.20	SPT
20047	17401.86	14650.71	1775.05	SPT
20048	17421.47	14651.92	1773.23	SPT
20049	17448.94	14655.58	1769.29	SPT
20050	17463.07	14656.68	1767.13	SPT
20051	17479.36	14657.69	1763.98	SPT
20052	17482.24	14607.97	1764.10	SPT
20053	17464.70	14607.01	1767.33	SPT
20054	17433.29	14605.87	1771.71	SPT
20055	17414.26	14603.24	1773.94	SPT
20056	17414.36	14552.66	1773.52	SPT
20057	17443.70	14555.08	1770.23	SPT
20058	17462.10	14555.99	1768.16	SPT
20059	17486.04	14557.63	1763.76	SPT
20060	17489.56	14491.17	1764.39	SPT
20061	17470.56	14484.22	1766.74	SPT
20062	17448.04	14479.63	1768.80	SPT
20063	17422.30	14473.32	1771.99	SPT
20064	17441.60	14433.89	1769.95	SPT
20065	17461.23	14440.01	1767.66	SPT
20066	17486.73	14447.77	1765.49	SPT
20067	17501.38	14451.74	1763.92	SPT
20068	17519.70	14390.36	1764.03	SPT
20069	17495.22	14382.65	1766.00	SPT
20070	17469.73	14374.80	1767.62	SPT
20071	17485.23	14327.30	1766.38	SPT
20072	17509.21	14334.07	1765.61	SPT
20073	17535.54	14341.00	1764.24	SPT
20074	17539.25	14315.93	1764.41	SPT
20075	17511.55	14316.25	1765.55	SPT
20076	17489.11	14318.10	1766.26	SPT
20077	17527.43	14277.01	1764.72	SPT
20078	17507.69	14288.69	1765.60	SPT
20079	17486.89	14300.34	1766.12	SPT
20080	17137.60	14319.01	1768.03	SPT
20081	17145.20	14335.28	1768.95	SPT
20082	17127.27	14347.91	1769.96	SPT
20083	17118.65	14340.49	1769.33	SPT

Point No.	Northing	Easting	Elevation	Description
20084	17101.02	14362.42	1770.23	SPT
20085	17087.63	14387.58	1771.31	SPT
20086	17077.01	14370.63	1768.45	SPT
20087	17104.42	14337.88	1767.99	SPT
20088	17141.76	14292.55	1766.79	SPT
20089	17180.01	14284.80	1766.60	SPT
20091	17242.86	14271.32	1766.27	SPT
20092	17320.10	14255.10	1766.00	SPT
20093	17378.40	14243.07	1765.79	SPT
20094	17416.95	14235.20	1765.66	SPT
20095	17439.22	14230.69	1765.54	SPT
20096	17451.57	14229.21	1765.48	SPT
20097	17475.91	14231.02	1765.46	SPT
20098	17498.74	14239.43	1765.31	SPT
20099	17513.35	14251.88	1765.02	SPT
20100	17508.13	14258.54	1765.44	SPT
20101	17181.21	14288.32	1766.77	SPT
20102	17244.94	14275.10	1766.46	SPT
20103	17281.86	14267.57	1766.30	SPT
20104	17321.21	14258.79	1766.12	SPT
20105	17379.63	14246.92	1765.84	SPT
20106	17418.44	14239.86	1765.70	SPT
20107	17440.71	14235.49	1765.67	SPT
20108	17452.36	14234.35	1765.61	SPT
20110	17475.88	14238.30	1765.51	SPT
20111	17496.82	14243.80	1765.44	SPT
41000	17369.29	14903.69	1773.19	SCRAP
41001	17282.21	14898.53	1775.96	SCRAP
41002	17185.01	14892.87	1777.71	SCRAP
41003	17124.20	14888.95	1777.55	SCRAP
41006	17067.92	14863.25	1775.43	DS-1\R-2-PS
41007	17073.25	14863.45	1775.69	DS-1\R-2-PS
41008	17077.14	14874.12	1775.78	P-1
41009	17278.23	14875.73	1776.96	R-1-PS
41010	17280.28	14875.84	1776.94	R-1-PS
41011	17279.31	14874.71	1776.98	R-1-PS
41012	17351.93	14890.05	1774.22	P-1
41013	17370.84	14881.13	1774.11	SCRAP-S
41014	17372.31	14858.69	1775.21	SCRAP-S
41015	17360.48	14858.05	1775.51	DS2\R-5-PS

Point No.	Northing	Easting	Elevation	Description
41016	17355.32	14857.74	1775.66	DS2\R-5-PS
41017	17352.47	14868.26	1775.24	P-02
41018	17281.44	14853.51	1777.57	R-4-PS
41019	17279.39	14853.46	1777.60	R-4-PS
41020	17280.39	14854.37	1777.57	R-4-PS
41021	17268.70	14863.31	1777.39	P-03
41022	17188.67	14848.12	1777.94	R-3-PS
41023	17187.32	14846.93	1777.95	R-3-PS
41024	17186.69	14847.95	1777.95	R-3-PS
41025	17198.24	14837.79	1778.03	P-04
41026	17176.12	14836.15	1778.02	P-05
41030	17093.11	14819.76	1777.00	R-9-PS
41031	17093.80	14818.73	1777.04	R-9-S
41032	17095.25	14813.81	1777.11	R-9-PS
41033	17095.80	14818.84	1777.09	R-9-S
41034	17096.94	14820.01	1777.09	R-9-PS
41035	17089.41	14807.33	1777.03	P-07
41036	17095.36	14797.38	1777.31	R10-PS
41037	17096.33	14798.44	1777.31	R10-PS
41038	17099.39	14797.62	1777.38	R-10-PS
41039	17107.18	14808.91	1777.42	P-06
41040	17187.70	14825.57	1778.17	R-8-PS
41041	17188.54	14826.53	1778.16	R-8-PS
41042	17189.89	14825.71	1778.15	R-8-PS
41043	17332.85	14833.95	1776.96	DS-3\R-6-PS
41044	17337.98	14834.17	1776.82	DS-3\R-6-PS
41045	17373.69	14836.23	1775.86	SCRAP-PS
41046	17375.09	14813.67	1776.16	SCRAP-PS
41047	17356.32	14801.00	1776.81	P-08
41050	17092.65	14762.74	1777.70	P-10
41051	17216.97	14759.69	1778.87	R-14-PS
41052	17217.92	14758.67	1778.88	R-14-PS
41053	17218.99	14759.88	1778.86	R-14-PS
41054	17208.58	14747.37	1778.87	P-12
41055	17226.81	14748.70	1778.95	P-11
41056	17220.11	14737.56	1779.05	R-16-PS
41057	17219.01	14738.56	1779.07	R-16-PS
41058	17218.09	14737.37	1779.05	R-16-PS
41059	17242.80	14783.81	1778.76	DS-04\R12-PS
41060	17247.93	14784.12	1778.75	DS-04\R12-PS

Point No.	Northing	Easting	Elevation	Description
41061	17311.76	14787.69	1778.32	R11-PS
41062	17312.96	14786.64	1778.35	R11-PS
41063	17313.99	14787.81	1778.28	R11-PS
41064	17314.00	14766.37	1778.56	R-15-PS
41065	17312.91	14765.21	1778.57	R-15-PS
41066	17315.03	14765.37	1778.52	R-15-PS
41067	17321.58	14776.76	1778.18	P-09
41069	17353.06	14844.90	1776.15	TEMP-CP
41070	17378.08	14768.72	1775.98	SCRAP-PS
41071	17379.63	14746.28	1775.88	SCRAP-PS
41072	17380.59	14723.86	1775.89	SCRAP-PS
41073	17381.63	14701.30	1776.06	SCRAP-PS
41074	17383.30	14678.97	1776.06	SCRAP-PS
41075	17384.61	14656.68	1775.97	SCRAP-PS
41076	17386.19	14634.53	1775.89	SCRAP-PS
41077	17387.56	14612.07	1775.76	SCRAP-PS
41078	17389.07	14589.43	1775.56	SCRAP-PS
41079	17390.53	14567.12	1775.31	SCRAP-PS
41080	17392.59	14544.65	1775.10	SCRAP-PS
41081	17394.06	14522.35	1774.76	SCRAP-PS
41082	17395.78	14499.76	1774.26	SCRAP
41083	17394.09	14499.65	1774.36	SCRAP
41091	17448.29	14378.49	1769.38	SCRAP
41092	17450.41	14318.30	1766.91	SCRAP-PS
41093	17423.12	14322.69	1767.12	SCRAP-PS
41094	17400.25	14322.78	1767.22	SCRAP-PS
41095	17377.07	14323.93	1767.35	SCRAP-PS
41096	17353.83	14325.73	1767.35	SCRAP-PS
41097	17330.59	14326.54	1767.43	SCRAP-PS
41098	17307.44	14328.41	1767.53	SCRAP-PS
41099	17283.80	14330.03	1767.70	SCRAP-PS
41100	17260.64	14331.38	1767.93	SCRAP-PS
41101	17236.99	14333.51	1767.99	SCRAP-PS
41102	17213.63	14335.14	1768.02	SCRAP-PS
41103	17190.19	14337.54	1768.19	SCRAP-PS
41104	17168.23	14339.52	1768.73	SCRAP-PS
41105	17152.73	14340.53	1769.13	SCRAP
41106	17144.55	14348.78	1769.95	SCRAP-PS
41107	17125.94	14366.46	1771.34	SCRAP-PS
41108	17111.75	14380.52	1772.08	SCRAP

March 29, 2010 – (CAMU) – BMI South, Pre-Liner Sub-Grade As-Built) Task No: 2010.03.29.01.A

Point No.	Northing	Easting	Elevation	Description
41116	17092.68	14572.50	1781.35	SCRAP-PS
41124	17122.66	14754.15	1778.44	DS-5\R-13-PS
41125	17117.52	14753.78	1778.33	DS-5\R-13-PS
41126	17123.39	14731.56	1778.59	R-17-PS
41127	17125.60	14731.76	1778.62	R-17-PS
41128	17124.48	14730.54	1778.61	R-17-PS
41129	17119.03	14719.89	1778.62	R-19
41130	17125.88	14710.27	1778.88	R-20-PS
41131	17127.17	14709.34	1778.93	R-20-PS
41132	17125.03	14709.31	1778.87	R-20-PS
41133	17111.08	14719.01	1778.50	P-14
41134	17092.98	14739.59	1778.04	P-12
41135	17101.35	14695.58	1778.75	P-15
41136	17102.89	14675.33	1778.96	P-17
41137	17110.52	14652.40	1779.29	P-18
41138	17110.04	14629.78	1779.80	P-20
41139	17112.38	14605.55	1780.41	P-22
41140	17113.19	14585.42	1780.85	P-23
41141	17113.73	14562.60	1781.30	P-25
41142	17115.03	14541.22	1781.57	P-27
41143	17116.99	14518.24	1781.77	P-29
41144	17119.43	14495.62	1781.85	P-30
41145	17119.28	14460.66	1781.31	P-47
41146	17132.79	14445.30	1780.17	P-46
41147	17147.00	14458.44	1780.65	P-45
41148	17162.57	14447.07	1779.48	P-44
41149	17176.13	14454.78	1779.47	P-43
41150	17196.54	14460.78	1779.07	P-42
41151	17219.78	14463.01	1778.28	P-41
41152	17242.31	14466.08	1777.49	P-40
41153	17265.59	14467.33	1776.47	P-39
41154	17287.12	14472.08	1775.63	P-38
41155	17309.10	14475.70	1774.78	P-37
41156	17331.64	14477.93	1774.35	P-36
41157	17354.93	14477.62	1774.07	P-33
41158	17371.57	14480.34	1774.25	P-34
41159	17422.68	14361.82	1770.07	P-33
41160	17437.47	14371.51	1770.16	P-32
41161	17376.99	14555.34	1775.75	P-28
41162	17358.41	14554.66	1776.28	P-27

Point No.	Northing	Easting	Elevation	Description
41163	17367.44	14579.65	1776.37	P-26
41164	17366.47	14600.16	1776.61	P-24
41165	17366.80	14623.42	1776.72	P-22
41166	17363.78	14644.39	1776.92	P-21
41167	17330.86	14642.52	1778.37	P-20
41168	17359.06	14667.21	1777.17	P-19
41169	17359.55	14689.08	1777.21	P-16
41170	17315.47	14686.57	1778.88	P-17
41171	17151.18	14688.49	1779.35	DS-10\R-22-PS
41172	17146.16	14688.16	1779.32	DS-10\R-22-PS
41173	17111.34	14730.93	1778.42	DS-06\R-18-PS
41174	17104.78	14730.43	1778.34	DS-06\R-18-PS
41175	17146.18	14688.12	1779.30	DS-10\R-22-PS
41176	17151.20	14688.44	1779.33	DS-10\R-22-PS
41177	17237.13	14670.96	1779.90	R-23-PS
41178	17241.92	14671.25	1779.89	R-23-PS
41179	17239.20	14663.37	1779.98	DS-07\R-24-PS
41180	17239.49	14657.74	1780.05	DS-07\R-24-PS
41181	17239.88	14649.65	1780.11	R-27-PS
41182	17239.05	14648.62	1780.13	R-27-PS
41183	17241.15	14648.74	1780.13	R-27-PS
41184	17328.67	14676.29	1778.45	R-25-PS
41185	17329.85	14677.33	1778.42	R-25-PS
41186	17330.88	14676.40	1778.37	R-25-PS
41187	17328.81	14697.65	1778.51	R-21-PS
41188	17327.76	14698.64	1778.56	R-21-PS
41189	17329.76	14698.74	1778.49	R-21-PS
41190	17343.60	14654.56	1777.86	R-26-PS
41191	17345.84	14654.69	1777.76	R-26-PS
41192	17344.87	14653.47	1777.81	R-26-PS
41193	17345.85	14633.03	1777.76	R-28-PS
41194	17347.09	14632.18	1777.70	R-28-PS
41195	17344.74	14632.12	1777.80	R-28-PS
41196	17137.39	14597.74	1780.55	DS-14\R-31-PS
41197	17142.82	14598.04	1780.53	DS-14\R-31-PS
41198	17153.40	14598.58	1780.61	R-30-PS
41199	17154.46	14597.66	1780.59	R-30-PS
41200	17155.66	14598.81	1780.57	R-30-PS
41201	17155.59	14577.17	1780.95	R-33-PS
41202	17156.69	14576.37	1781.01	R-33-PS

Point No.	Northing	Easting	Elevation	Description
41203	17154.49	14576.28	1780.98	R-33-PS
41204	17148.48	14575.97	1780.96	DS-9\R-32-PS
41205	17143.45	14575.71	1780.97	DS-9\R-32-PS
41206	17259.63	14582.42	1780.33	R-34-PS
41207	17260.97	14581.53	1780.30	R-34-PS
41208	17261.68	14582.55	1780.27	R-34-PS
41209	17335.21	14609.02	1778.15	DS-8\R-29-PS
41210	17340.40	14609.32	1777.95	DS-8\R-29-PS
41211	17365.63	14565.65	1776.28	R-35-PS
41212	17367.83	14565.76	1776.21	R-35-PS
41213	17366.93	14564.75	1776.22	R-35-PS
41214	17367.98	14544.27	1775.89	R-39-PS
41215	17369.08	14543.30	1775.85	R-39-PS
41216	17366.89	14543.27	1775.91	R-39-PS
41217	17268.95	14560.28	1779.81	DS-11\R-36-PS
41218	17263.95	14560.04	1779.98	DS-11\R-36-PS
41219	17264.27	14559.10	1779.98	DS-19\R-62-PS
41220	17268.84	14559.38	1779.83	DS-19\R-62-PS
41221	17263.09	14559.98	1780.04	R-37-PS
41222	17262.02	14561.17	1780.10	R-37-PS
41223	17260.91	14560.06	1780.13	R-37-PS
41224	17130.32	14529.58	1781.64	DS-15\R-38-PS
41225	17125.04	14529.24	1781.67	DS-15\R-38-PS
41226	17178.14	14509.78	1781.51	R-40-PS
41227	17179.30	14508.73	1781.47	R-40-PS
41228	17180.31	14509.94	1781.56	R-40-PS
41230	17370.02	14890.91	1773.77	BMI-S-TOPO
41231	17320.23	14886.97	1775.54	BMI-S-TOPO
41232	17272.52	14884.03	1776.76	BMI-S-TOPO
41233	17225.36	14881.58	1777.41	BMI-S-TOPO
41234	17177.71	14879.21	1777.79	BMI-S-TOPO
41235	17135.20	14876.16	1777.73	BMI-S-TOPO
41236	17084.87	14873.10	1776.15	BMI-S-TOPO
41241	17110.81	14831.66	1777.29	BMI-S-TOPO
41242	17159.02	14834.88	1777.96	BMI-S-TOPO
41243	17209.57	14838.49	1778.06	BMI-S-TOPO
41244	17258.09	14841.90	1778.09	BMI-S-TOPO
41245	17305.84	14843.38	1777.33	BMI-S-TOPO
41246	17352.62	14846.63	1776.09	BMI-S-TOPO
41247	17372.89	14847.48	1775.61	BMI-S-TOPO

Point No.	Northing	Easting	Elevation	Description
41250	17376.08	14802.01	1776.13	BMI-S-TOPO
41251	17331.41	14800.01	1777.66	BMI-S-TOPO
41252	17282.46	14796.53	1778.52	BMI-S-TOPO
41253	17237.08	14793.56	1778.56	BMI-S-TOPO
41254	17191.03	14790.94	1778.46	BMI-S-TOPO
41255	17145.04	14788.47	1778.40	BMI-S-TOPO
41256	17098.38	14785.85	1777.53	BMI-S-TOPO
41261	17123.22	14741.67	1778.48	BMI-S-TOPO
41262	17170.20	14745.41	1778.88	BMI-S-TOPO
41263	17217.26	14748.56	1778.91	BMI-S-TOPO
41264	17265.42	14750.95	1779.06	BMI-S-TOPO
41265	17312.87	14753.97	1778.66	BMI-S-TOPO
41266	17360.23	14756.11	1776.95	BMI-S-TOPO
41267	17378.61	14757.94	1775.94	BMI-S-TOPO
41270	17380.97	14712.71	1775.94	BMI-S-TOPO
41271	17334.09	14709.76	1778.39	BMI-S-TOPO
41272	17287.03	14707.12	1779.35	BMI-S-TOPO
41273	17240.73	14705.09	1779.49	BMI-S-TOPO
41274	17194.30	14701.34	1779.31	BMI-S-TOPO
41275	17148.44	14698.18	1779.21	BMI-S-TOPO
41276	17102.64	14695.91	1778.74	BMI-S-TOPO
41281	17129.49	14653.06	1779.41	BMI-S-TOPO
41282	17177.52	14655.65	1779.67	BMI-S-TOPO
41283	17224.70	14658.83	1779.91	BMI-S-TOPO
41284	17271.06	14661.20	1779.77	BMI-S-TOPO
41285	17318.07	14663.39	1778.82	BMI-S-TOPO
41286	17364.90	14666.98	1776.95	BMI-S-TOPO
41287	17384.02	14668.90	1776.01	BMI-S-TOPO
41290	17386.91	14623.95	1775.77	BMI-S-TOPO
41291	17343.32	14620.73	1777.76	BMI-S-TOPO
41292	17295.44	14618.59	1779.32	BMI-S-TOPO
41293	17248.06	14615.35	1780.24	BMI-S-TOPO
41294	17201.98	14612.70	1780.64	BMI-S-TOPO
41295	17157.85	14609.77	1780.31	BMI-S-TOPO
41296	17112.46	14606.75	1780.38	BMI-S-TOPO
41301	17136.32	14565.12	1781.04	BMI-S-TOPO
41302	17185.15	14567.73	1781.27	BMI-S-TOPO
41303	17232.31	14571.03	1780.91	BMI-S-TOPO
41304	17277.46	14573.37	1779.68	BMI-S-TOPO
41305	17325.68	14576.07	1777.98	BMI-S-TOPO

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Point No.	Northing	Easting	Elevation	Description
41306	17371.53	14578.35	1776.20	BMI-S-TOPO
41307	17389.71	14578.70	1775.43	BMI-S-TOPO
41310	17393.25	14534.23	1774.98	BMI-S-TOPO
41311	17349.95	14531.41	1775.96	BMI-S-TOPO
41312	17303.09	14528.90	1777.67	BMI-S-TOPO
41313	17255.12	14526.18	1779.79	BMI-S-TOPO
41314	17206.68	14523.61	1781.33	BMI-S-TOPO
41315	17160.50	14520.92	1781.58	BMI-S-TOPO
41316	17114.42	14517.81	1781.78	BMI-S-TOPO
41320	17120.63	14479.37	1781.80	BMI-S-TOPO
41321	17168.96	14480.09	1780.90	BMI-S-TOPO
41322	17216.40	14481.66	1779.49	BMI-S-TOPO
41323	17262.57	14482.97	1777.66	BMI-S-TOPO
41324	17306.99	14486.39	1775.52	BMI-S-TOPO
41325	17351.99	14489.52	1774.60	BMI-S-TOPO
41326	17382.40	14492.66	1774.55	BMI-S-TOPO
41329	17404.19	14445.10	1773.40	BMI-S-TOPO
41330	17423.29	14399.83	1771.85	BMI-S-TOPO
41333	17436.13	14375.06	1770.33	BMI-S-TOPO
41334	17443.87	14341.58	1768.10	BMI-S-TOPO
41336	17436.08	14319.49	1767.08	BMI-S-TOPO
41337	17422.90	14365.53	1770.34	BMI-S-TOPO
41338	17406.13	14411.50	1772.71	BMI-S-TOPO
41339	17362.57	14446.50	1772.91	BMI-S-TOPO
41340	17372.29	14401.17	1771.08	BMI-S-TOPO
41341	17381.82	14355.44	1768.62	BMI-S-TOPO
41342	17388.64	14324.74	1767.17	BMI-S-TOPO
41343	17340.60	14326.59	1767.38	BMI-S-TOPO
41344	17331.56	14371.69	1769.13	BMI-S-TOPO
41345	17321.07	14420.60	1771.78	BMI-S-TOPO
41346	17310.91	14461.35	1774.12	BMI-S-TOPO
41347	17266.68	14461.12	1776.00	BMI-S-TOPO
41348	17276.00	14418.18	1772.58	BMI-S-TOPO
41349	17285.90	14374.73	1769.73	BMI-S-TOPO
41350	17295.82	14331.19	1767.49	BMI-S-TOPO
41351	17249.58	14333.76	1767.88	BMI-S-TOPO
41352	17238.55	14379.72	1770.66	BMI-S-TOPO
41353	17228.19	14426.44	1774.98	BMI-S-TOPO
41354	17220.42	14464.88	1778.39	BMI-S-TOPO
41355	17173.21	14465.96	1780.14	BMI-S-TOPO

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Point No.	Northing	Easting	Elevation	Description
41356	17180.50	14427.56	1777.08	BMI-S-TOPO
41357	17190.86	14386.82	1772.33	BMI-S-TOPO
41358	17200.79	14336.29	1768.02	BMI-S-TOPO
41359	17158.39	14340.08	1769.05	BMI-S-TOPO
41360	17151.40	14383.94	1772.89	BMI-S-TOPO
41361	17148.14	14432.62	1778.71	BMI-S-TOPO
41362	17146.86	14454.60	1780.47	BMI-S-TOPO
41363	17121.21	14451.31	1780.69	BMI-S-TOPO
41364	17119.69	14411.87	1776.20	BMI-S-TOPO
41365	17121.06	14382.37	1772.64	BMI-S-TOPO
41366	17107.79	14483.18	1781.90	R-41-PS
41367	17108.87	14482.03	1781.88	R-41-PS
41368	17110.13	14483.27	1781.92	R-41-PS
41369	17130.38	14484.55	1781.77	R-42-PS
41370	17131.49	14483.75	1781.77	R-42-PS
41371	17132.75	14483.77	1781.72	R-42-PS
41372	17133.73	14484.74	1781.72	R-42-PS
41373	17153.87	14485.87	1781.41	R-43-PS
41374	17155.42	14484.87	1781.33	R-43-PS
41375	17157.94	14485.10	1781.32	R-43-PS
41376	17158.75	14486.17	1781.34	R-43-PS
41377	17179.19	14487.39	1780.96	R-44-PS
41378	17180.43	14488.47	1780.97	R-44-PS
41379	17180.64	14486.56	1780.89	R-44-PS
41380	17181.82	14487.50	1780.92	R-44-PS
41381	17201.80	14488.79	1780.40	R-45-PS
41382	17203.43	14487.95	1780.27	R-45-PS
41383	17204.52	14488.96	1780.28	R-45-PS
41384	17224.72	14490.13	1779.67	R-46-PS
41385	17226.15	14489.26	1779.60	R-46-PS
41386	17227.19	14490.29	1779.58	R-46-PS
41387	17247.40	14491.48	1778.84	R-47-PS
41388	17248.90	14490.54	1778.74	R-47-PS
41389	17249.75	14491.63	1778.75	R-47-PS
41390	17259.13	14444.28	1775.30	DS-13\R-59-PS
41391	17260.23	14439.01	1774.88	DS-13\R-59-PS
41392	17140.78	14395.79	1774.46	DS-18\R-60-PS
41393	17140.37	14400.77	1775.06	DS-18\R-60-PS
41394	17269.97	14492.80	1777.86	R-48-PS
41395	17271.53	14491.91	1777.76	R-48-PS

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Point No.	Northing	Easting	Elevation	Description
41396	17272.32	14492.89	1777.77	R-48-PS
41397	17292.89	14494.09	1776.70	R-49-PS
41398	17294.09	14493.06	1776.61	R-49-PS
41399	17295.89	14494.29	1776.54	R-49
41400	17302.33	14494.62	1776.22	DS-20\R-61-PS
41401	17315.34	14495.30	1775.66	R-50-PS
41402	17316.75	14494.42	1775.54	R-50-PS
41403	17317.75	14495.44	1775.55	R-50-PS
41404	17337.98	14496.58	1774.99	R-51-PS
41405	17339.46	14495.70	1774.95	R-51-PS
41406	17340.37	14496.73	1774.99	R-51-PS
41407	17360.96	14497.89	1774.80	R-52-PS
41408	17362.14	14497.02	1774.77	R-52-PS
41409	17363.25	14498.09	1774.80	R-52-PS
41410	17398.55	14434.39	1773.37	R-54-PS
41411	17400.30	14430.46	1773.33	R-54-PS
41412	17399.69	14430.21	1773.30	R-54-PS
41413	17405.40	14404.08	1772.51	R-55-PS
41414	17406.04	14401.19	1772.39	R-55-PS
41415	17383.92	14397.23	1771.46	DS-12\R-56-PS
41416	17382.87	14402.16	1771.67	DS-12\R-56-PS
41417	17319.20	14377.95	1769.52	DS-17\R-57-PS
41418	17320.24	14373.06	1769.31	DS-17\R-57-PS
41419	17302.77	14348.93	1768.24	DS-16\R-58-PS
41420	17303.80	14343.95	1767.98	DS-16\R-58-PS
41421	17368.74	14498.30	1774.80	R-53-PS
41422	17370.22	14497.47	1774.76	R-53-PS
41423	17371.20	14498.41	1774.81	R-53-PS
60002	17006.81	14953.44	1772.69	SCRAP-PS
60005	17089.87	14959.31	1774.07	SCRAP-PS
60009	17171.66	14965.15	1774.63	SCRAP-EXT
60010	17171.60	14963.89	1774.70	EXT
60011	17172.05	14963.43	1774.78	EXT
60012	17175.31	14962.29	1774.89	EXT
60013	17176.06	14962.27	1774.87	EXT
60014	17177.66	14962.42	1774.86	EXT-PS
60015	17180.20	14962.84	1774.77	EXT
60016	17180.51	14963.12	1774.78	EXT
60017	17180.70	14963.53	1774.75	EXT
60025	17449.79	14990.33	1763.41	SCRAP

Point No.	Northing	Easting	Elevation	Description
60026	17453.40	14983.51	1763.62	SCRAP
60027	17388.22	14949.11	1769.02	SCRAP
60028	17347.44	14927.69	1772.76	SCRAP
60029	17294.54	14899.26	1775.71	SCRAP-TIEIN
60030	17293.18	14899.15	1775.78	TIE-IN-PS
60031	17287.90	14908.06	1775.68	P-49
60032	17267.12	14921.81	1775.97	P-50
60033	17270.91	14912.54	1776.03	R-65-PS
60034	17271.01	14911.36	1776.06	R-65-PS
60035	17269.13	14912.44	1776.11	R-65-PS
60036	17268.75	14904.53	1776.17	P-55
60037	17247.63	14924.27	1776.43	R-66-PS
60038	17247.57	14925.46	1776.36	R-66-PS
60039	17245.77	14925.27	1776.41	R-66-PS
60040	17285.64	14945.74	1774.58	R-64-PS
60041	17286.12	14947.21	1774.48	R-64-PS
60042	17287.47	14946.70	1774.45	R-64-PS
60043	17290.19	14958.15	1773.62	P-52
60044	17276.45	14954.33	1774.28	P-51
60045	17276.67	14964.90	1773.71	R-63-PS
60046	17275.02	14965.39	1773.75	R-63-PS
60047	17276.92	14966.40	1773.64	R-63-PS
60048	17269.98	14970.32	1773.56	P-53
60049	17349.88	14979.82	1769.44	PS
60050	17323.86	14965.97	1771.61	PS
60051	17300.23	14953.36	1773.47	PS
60052	17304.36	14930.40	1774.58	PS
60053	17341.93	14950.31	1771.46	PS
60054	17373.26	14966.72	1768.30	PS
60055	17252.43	14896.76	1776.66	R-71-PS
60056	17249.91	14896.63	1776.72	R-71-PS
60057	17249.95	14897.45	1776.70	R-71-PS
60058	17239.48	14903.14	1776.85	DS-21\R-72-PS
60059	17235.05	14905.64	1776.96	DS-21\R-72-PS
60060	17226.76	14901.97	1777.11	P-56
60061	17212.70	14917.90	1777.09	PS
60062	17224.13	14937.14	1776.23	R-67-PS
60063	17224.03	14938.35	1776.12	R-67-PS
60064	17222.32	14938.11	1776.16	R-67-PS
60065	17245.71	14949.83	1775.13	PS

Point No.	Northing	Easting	Elevation	Description
60066	17242.28	14973.30	1773.77	R-68-PS
60067	17240.44	14972.35	1773.87	R-68-PS
60068	17229.37	14966.43	1774.37	R-69-PS
60069	17227.57	14965.47	1774.49	R-69-PS
60070	17226.99	14968.57	1774.24	R-69-PS
60071	17231.57	14971.19	1774.01	P-57
60072	17197.14	14958.92	1775.10	P-54
60073	17200.40	14951.15	1775.61	R-70-PS
60074	17200.35	14950.01	1775.71	R-70-PS
60075	17198.49	14951.11	1775.66	R-70-PS
60076	17180.59	14935.49	1776.68	R-70-PS
60077	17179.22	14935.06	1776.73	R-70-PS
60078	17178.76	14936.55	1776.63	R-70-PS
60079	17156.31	14959.31	1775.11	P-55
60080	17175.17	14927.94	1777.06	DS-22\R-74-PS
60081	17172.80	14923.52	1777.35	DS-22\R-74-PS
60082	17183.96	14919.70	1777.39	R-102
60083	17185.87	14919.31	1777.38	R-102
60084	17184.95	14914.30	1777.55	R-102
60085	17183.23	14914.57	1777.59	R-102
60086	17194.19	14893.20	1777.67	DS-24\R-83-PS
60087	17189.23	14892.91	1777.75	DS-24\R-83-PS
60088	17180.83	14898.97	1777.84	P-60
60089	17168.43	14891.68	1777.92	R-84-PS
60090	17165.78	14891.50	1777.95	R-84-PS
60091	17165.90	14892.29	1777.94	R-84-PS
60092	17169.68	14915.79	1777.73	R-75-PS
60093	17169.33	14917.36	1777.70	R-75-PS
60094	17167.83	14916.80	1777.74	R-75-PS
60095	17147.27	14927.92	1777.15	PS
60096	17149.00	14930.98	1776.98	R-76
60097	17143.07	14934.11	1776.81	R-77
60098	17136.96	14937.65	1776.59	R-78
60099	17130.85	14941.15	1776.32	R-79
60100	17124.65	14944.39	1776.07	R-80
60101	17135.74	14947.68	1775.99	P-58
60102	17119.87	14954.20	1775.25	P-59
60103	17119.53	14943.92	1776.03	R-81-PS
60104	17120.08	14942.54	1776.13	R-81-PS
60105	17118.27	14943.46	1776.01	R-81-PS

Point No.	Northing	Easting	Elevation	Description
60106	17133.67	14899.22	1777.76	P-62
60107	17136.66	14907.99	1777.76	PS
60108	17107.13	14924.05	1776.58	PS
60109	17076.07	14941.05	1774.76	PS
60110	17051.22	14954.66	1773.17	R-?-PS
60111	17049.79	14954.41	1773.16	R-?-PS
60112	17049.16	14955.75	1773.07	R-?-PS
60113	17041.42	14948.52	1773.16	P-61
60114	17050.72	14944.47	1773.61	P-62
60115	17040.80	14937.52	1773.52	R-88-PS
60116	17038.77	14935.75	1773.50	R-88-PS
60117	17040.59	14934.81	1773.61	R-88-PS
60118	17038.79	14923.20	1773.55	P-65
60119	17049.44	14929.88	1774.00	R-87-PS
60120	17049.95	14928.43	1774.06	R-87-PS
60121	17051.33	14928.86	1774.11	R-87-PS
60122	17040.51	14910.39	1773.61	R-89-PS
60123	17038.92	14909.98	1773.55	R-89-PS
60124	17041.38	14908.70	1773.68	R-89-PS
60125	17054.16	14915.44	1774.26	P-64
60126	17126.48	14889.03	1777.60	R-85-PS
60127	17123.95	14889.52	1777.57	R-85-PS
60128	17123.86	14888.85	1777.57	R-85-PS
60129	17083.52	14886.39	1775.95	R-86-PS
60130	17081.50	14886.90	1775.78	R-86-PS
60131	17081.46	14886.26	1775.82	R-86-PS
60132	17068.36	14885.57	1774.93	R-90-PS
60133	17068.35	14884.59	1775.00	R-90-S
60134	17067.71	14884.01	1774.98	R-90-S
60135	17067.51	14888.36	1774.94	R-90-S
60136	17067.01	14888.62	1774.91	R-90-S
60137	17060.08	14886.43	1774.43	R-90-S
60138	17059.35	14885.74	1774.44	R-90-S
60139	17059.45	14884.71	1774.49	R-90-PS
60140	17060.89	14883.55	1774.65	R-90-PS
60141	17041.45	14883.80	1773.72	R-91-PS
60142	17048.98	14891.09	1774.06	P-65
60143	17039.24	14884.31	1773.59	R-91-PS
60144	17039.24	14883.69	1773.60	R-91-PS
60145	17009.42	14889.06	1772.39	P-66

Point No.	Northing	Easting	Elevation	Description
60146	16998.41	14881.55	1772.10	R-92-PS
60147	17005.04	14870.42	1772.14	P-67
60148	17062.64	14863.77	1775.13	R-93-PS
60149	17063.65	14862.97	1775.25	R-93-PS
60150	17061.68	14862.30	1775.01	R-93-PS
60151	17062.93	14861.51	1775.15	R-93-PS
60152	17054.08	14850.56	1774.84	P-68
60153	17035.53	14838.47	1773.89	DS-23\R-95-PS
60154	17040.29	14838.74	1774.22	DS-23\R-95-PS
60155	17064.80	14841.49	1775.76	R-94-PS
60156	17065.84	14840.51	1775.79	R-94-PS
60157	17063.82	14839.84	1775.68	R-94-PS
60158	17065.02	14839.08	1775.72	R-94-PS
60159	17056.43	14828.30	1775.49	P-69
60160	17066.91	14819.09	1776.24	R-96-PS
60161	17066.10	14817.59	1776.21	R-96-PS
60162	17067.98	14818.06	1776.30	R-96-PS
60163	17067.14	14816.62	1776.25	R-96-PS
60164	17058.64	14806.57	1776.03	P-70
60165	17069.19	14796.47	1776.61	R-97-PS
60166	17070.24	14795.63	1776.65	R-97-PS
60167	17068.35	14795.20	1776.56	R-97-PS
60168	17069.43	14794.15	1776.64	R-97-PS
60169	17060.91	14784.26	1776.41	P-71
60170	17071.64	14774.18	1776.93	R-98-PS
60171	17072.93	14773.25	1776.94	R-98-PS
60172	17070.80	14772.93	1776.86	R-98-PS
60173	17071.85	14771.81	1776.96	R-98-PS
60174	17062.56	14761.66	1776.76	P-72
60175	17055.90	14749.75	1776.73	DS-25\R-100-PS
60176	17060.61	14749.92	1777.04	DS-25\R-100-PS
60177	17074.00	14751.66	1777.39	R-99-PS
60178	17073.06	14750.60	1777.39	R-99-PS
60179	17075.12	14750.87	1777.45	R-99-PS
60180	17074.22	14749.54	1777.43	R-99-PS
60181	17064.35	14739.62	1777.40	P-73
60182	17076.48	14729.79	1778.04	R-101-PS
60183	17075.04	14727.95	1778.04	R-101-PS
60184	17076.80	14726.78	1778.14	R-101-PS
60185	17068.41	14716.79	1778.10	P-74

Point No.	Northing	Easting	Elevation	Description
60186	17079.04	14707.28	1778.57	R-105-PS
60187	17078.06	14706.03	1778.49	R-105-PS
60188	17080.11	14706.22	1778.62	R-105-PS
60189	17079.27	14705.00	1778.63	R-105-PS
60190	17070.37	14694.62	1778.35	P-75
60191	17081.53	14685.04	1778.78	R-106-PS
60192	17082.64	14684.08	1778.80	R-106-PS
60193	17080.63	14683.74	1778.70	R-106-PS
60194	17081.74	14682.89	1778.76	R-106-PS
60195	17073.47	14672.69	1778.53	P-76
60196	17083.95	14662.62	1778.91	R-107-PS
60197	17085.16	14661.84	1778.95	R-107-PS
60198	17083.03	14661.69	1778.89	R-107-PS
60199	17084.18	14660.52	1778.91	R-107-PS
60200	17075.61	14651.71	1778.88	P-77
60201	17086.19	14641.16	1779.33	R-108-PS
60202	17087.39	14639.46	1779.42	R-108-PS
60203	17085.32	14639.59	1779.36	R-108-PS
60204	17086.55	14637.83	1779.50	R-108-PS
60205	17077.05	14628.43	1779.51	P-78
60206	17088.55	14618.92	1780.05	R-109-PS
60207	17087.69	14617.59	1780.04	R-109-PS
60208	17089.93	14617.32	1780.14	R-109-PS
60209	17088.90	14615.83	1780.14	R-109-PS
60210	17080.35	14606.66	1780.17	P-79
60211	17090.79	14596.39	1780.77	R-110-PS
60212	17090.04	14595.24	1780.74	R-110-PS
60213	17091.06	14593.91	1780.80	R-110-PS
60214	17092.19	14594.99	1780.79	R-110-PS
60215	17083.05	14584.44	1780.89	P-80
60216	17093.04	14573.75	1781.31	R-111-PS
60217	17092.07	14572.86	1781.35	R-111-PS
60218	17094.24	14572.65	1781.37	R-111-PS
60219	17093.30	14571.60	1781.44	R-111-PS
60220	17094.01	14564.57	1781.53	DS-29\R-112-PS
60221	17094.42	14559.98	1781.57	DS-29\R-112-PS
60222	17085.05	14561.34	1781.20	P-81
60223	17095.26	14551.56	1781.64	R-113-PS
60224	17094.51	14550.73	1781.66	R-113-PS
60225	17096.63	14550.30	1781.71	R-113-PS

Point No.	Northing	Easting	Elevation	Description
60226	17095.52	14549.33	1781.68	R-113-PS
60227	17090.09	14539.78	1781.63	P-82
60228	17097.38	14529.29	1781.78	R-114-PS
60229	17096.39	14528.31	1781.73	R-114-PS
60230	17098.75	14527.66	1781.79	R-114-PS
60231	17097.70	14526.69	1781.77	R-114-PS
60232	17091.30	14517.64	1781.29	P-83
60233	17099.79	14507.74	1781.82	R-115-PS
60234	17099.05	14506.18	1781.82	R-115-PS
60235	17101.14	14505.23	1781.89	R-115-PS
60236	17100.16	14504.03	1781.85	R-115-PS
60237	17093.86	14495.32	1781.26	P-84
60238	17102.26	14485.01	1781.80	R-116-PS
60239	17101.32	14484.05	1781.78	R-116-PS
60240	17103.63	14482.85	1781.86	R-116-PS
60241	17102.65	14481.69	1781.82	R-116-PS
60242	17094.93	14472.96	1781.04	P-85
60243	17104.60	14462.97	1781.26	R-117-PS
60244	17103.82	14461.63	1781.15	R-117-PS
60245	17104.91	14460.42	1781.12	R-117-PS
60246	17106.82	14444.86	1779.79	R?-PS
60247	17107.24	14444.93	1779.83	R?-PS
60248	17107.05	14442.91	1779.64	R?-PS
60249	17107.31	14439.51	1779.27	R?-PS-NOCUT
60250	17096.44	14449.29	1779.47	P-86
60251	17097.82	14428.19	1776.77	P-87
60252	17109.55	14417.44	1776.40	SCRAP
60253	17101.20	14416.61	1775.52	SCRAP
60254	17093.17	14415.86	1774.52	SCRAP
60255	17079.37	14414.74	1772.39	SCRAP
60256	17075.40	14436.94	1773.36	PS
60257	17091.12	14438.21	1776.89	PS
60258	17096.62	14438.65	1778.05	PS
60259	17100.04	14439.01	1778.71	PS
60260	17098.01	14461.20	1780.68	PS
60261	17092.14	14460.71	1779.79	PS
60262	17084.74	14460.23	1777.49	PS
60263	17071.33	14459.17	1773.45	DS-28\R-119-PS
60264	17066.42	14458.76	1772.46	DS-28\R-119-PS
60265	17064.41	14503.64	1774.68	PS

Point No.	Northing	Easting	Elevation	Description
60266	17077.93	14504.56	1778.15	PS
60267	17090.23	14505.57	1780.96	PS
60268	17094.63	14505.90	1781.41	PS
60269	17088.65	14550.36	1781.62	PS
60270	17080.71	14549.60	1780.43	PS
60271	17073.33	14549.15	1778.61	PS
60272	17060.34	14548.17	1775.20	PS
60273	17053.54	14592.82	1774.72	PS
60274	17067.27	14593.70	1778.19	PS
60275	17077.67	14594.61	1780.19	PS
60276	17083.42	14594.84	1780.71	PS
60277	17076.27	14639.03	1779.20	PS
60278	17068.92	14638.63	1778.58	PS
60279	17059.78	14638.03	1776.87	PS
60280	17044.01	14637.00	1773.33	PS
60281	17026.54	14680.54	1771.68	DS-27\R-104-PS
60282	17031.45	14680.93	1772.41	DS-27\R-104-PS
60283	17038.76	14681.21	1773.53	PS
60284	17059.61	14682.61	1777.18	PS
60285	17069.06	14683.22	1778.19	PS
60286	17075.30	14683.48	1778.58	PS
60287	17064.94	14727.48	1777.75	PS
60288	17056.55	14726.98	1777.11	PS
60289	17046.69	14726.65	1775.89	PS
60290	17026.54	14725.54	1773.10	PS
60291	17016.80	14770.18	1773.01	PS
60292	17044.44	14771.56	1775.37	PS
60293	17061.64	14772.44	1776.59	PS
60294	17051.04	14816.76	1775.40	PS
60295	17019.35	14814.97	1773.12	PS
60296	17012.96	14859.78	1772.39	PS
60297	17044.57	14861.50	1774.05	PS
60298	17021.62	14702.83	1772.03	DS-26\R-103-PS
60299	17026.76	14703.12	1772.40	DS-26\R-103-PS
60300	17048.15	14412.26	1769.75	SCRAP-PS
200108	17512.19	14257.49	1765.18	SPT
200109	17507.07	14264.08	1765.54	SPT
200110	17480.89	14287.59	1766.09	SPT
6060001	17433.19	14285.00	1766.57	60001
60500000	17474.47	15000.28	1760.90	500000

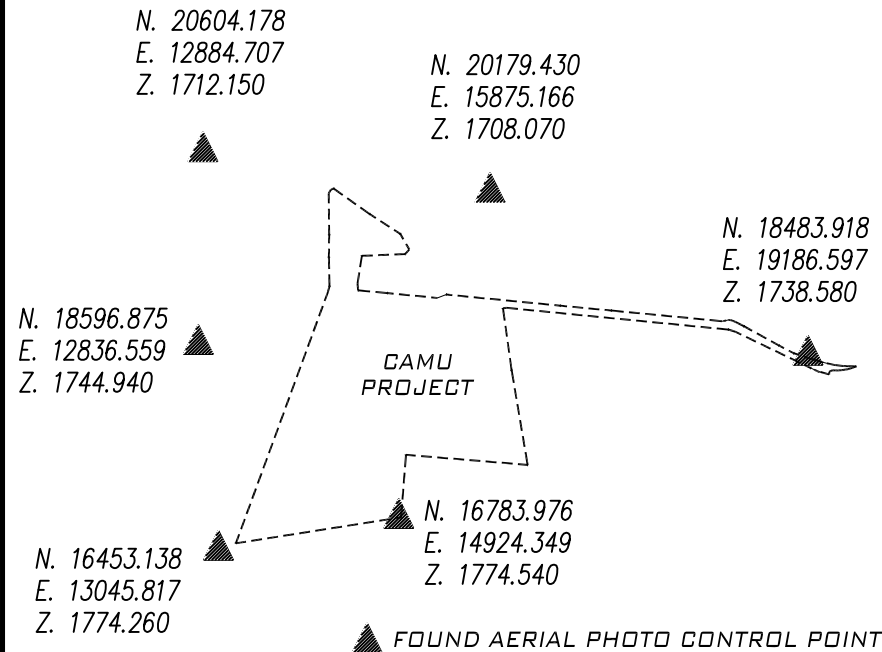
Point No.	Northing	Easting	Elevation	Description
60500004	17505.48	14493.84	1762.88	500004
60500005	17516.91	14456.47	1763.13	500005
60500006	17535.57	14394.72	1763.44	500006
60500007	17550.87	14345.02	1763.61	500007
60500012	17555.00	14315.99	1763.80	500012
60500016	17552.64	14292.67	1763.91	500016
60500019	17542.19	14267.71	1764.05	500019
60500022	17524.19	14245.47	1764.10	500022
60500023	17464.53	14999.59	1760.89	500023
60500027	17495.57	14492.02	1762.92	500027
60500028	17507.17	14453.60	1763.08	500028
60500029	17526.02	14391.78	1763.45	500029
60500030	17541.18	14342.38	1763.67	500030
60500035	17544.96	14315.90	1763.76	500035
60500039	17542.89	14295.24	1763.86	500039
60500042	17533.58	14272.76	1764.03	500042
60500045	17517.44	14252.89	1764.08	500045
60500047	17498.48	14608.70	1762.47	500047
60500049	17492.29	14708.60	1762.03	500049
60500050	17495.46	14658.66	1762.21	500050
60500051	17489.27	14758.47	1761.80	500051
60500052	17486.23	14808.41	1761.61	500052
60500053	17483.25	14858.25	1761.43	500053
60500054	17480.07	14908.14	1761.26	500054
60500055	17477.02	14958.11	1761.06	500055
60500057	17467.15	14957.50	1761.02	500057
60500058	17470.10	14907.58	1761.24	500058
60500059	17473.29	14857.66	1761.41	500059
60500060	17476.33	14807.79	1761.68	500060
60500061	17479.40	14757.78	1761.82	500061
60500062	17482.43	14708.01	1761.99	500062
60500063	17485.50	14658.05	1762.18	500063
60500064	17488.45	14608.08	1762.42	500064
60500065	17491.56	14558.13	1762.60	500065
60500066	17501.60	14558.77	1762.58	500066
60500068	17490.22	14292.68	1765.98	500068
60500069	17469.27	14275.55	1766.02	500069
60500070	17439.26	14252.45	1765.91	500070
60500074	17186.22	14303.24	1767.02	500074
60500075	17249.28	14303.30	1767.01	500075

Point No.	Northing	Easting	Elevation	Description
60500076	17329.24	14303.50	1766.98	500076
60500079	17362.45	14303.05	1767.03	500079

Note: In certain instances the Final Sub-Grade elevation was determined by measuring the grade on top of the installed Geosynthetic liner and reducing this measured elevation by 0.042' to account for the liner thickness. The chart above reflects these “reduced” elevations in any such cases.

PROJECT CONTROL

1" = 2000'



BENCHMARK

CLARK COUNTY BENCHMARK (6C22 2E4), BEING A RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CENTERLINE ISLAND, 4' WEST OF THE NOSE IN THE MIDDLE OF SUNSET ROAD, WEST SIDE OF THE INTERSECTION OF BOULDER HIGHWAY AND SUNSET ROAD.

PUBLISHED ELEVATION - 505.816 METERS = 1659.50 FEET
NAVD 1988 DATUM - PUBLISHED (2003)

BASIS OF BEARINGS

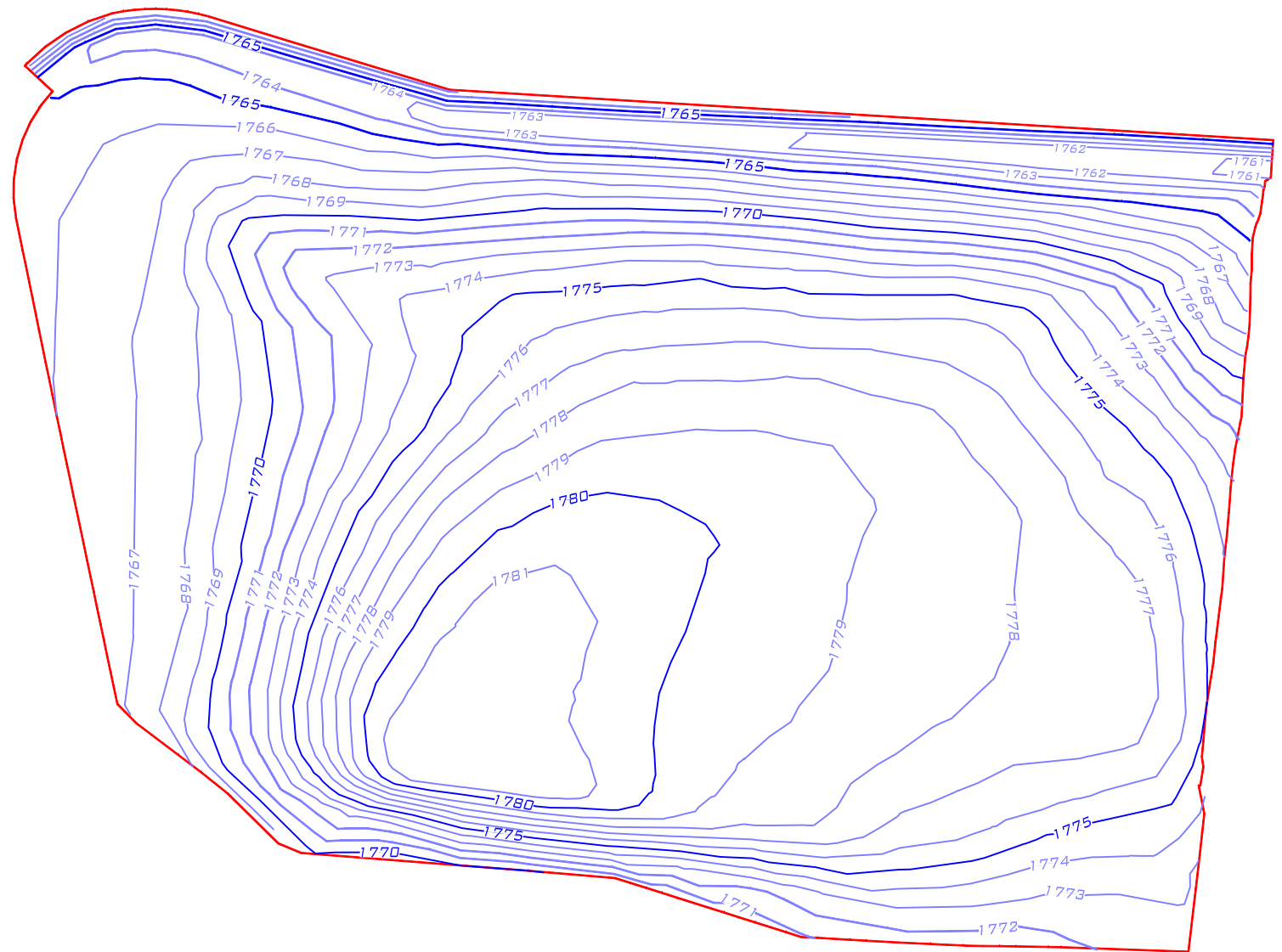
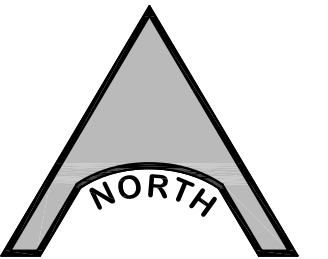
SOUTH 85°36'52" WEST, BEING THE BEARING BETWEEN CLARK COUNTY GIS CONTROL POINTS "CC-GIS 848" AND CC-GIS W51", AS SHOWN ON THE MAP IN FILE 88 OF SURVEYS, PAGE 53, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

COORDINATE SYSTEM

THE COORDINATE SYSTEM AND ASSOCIATED BEARING ROTATION INFORMATION WAS ESTABLISHED AND PROVIDED BY PBS&J.

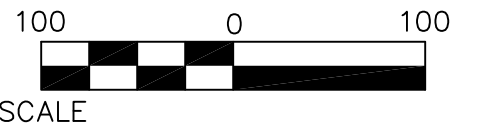
LINE LEGEND


MAJOR CONTOUR
MINOR CONTOUR
BMI SOUTH DESIGN
LINER LIMIT



SURFACE DETAILS


THE SURFACE SHOWN WAS GENERATED BASED UPON AS-BUILT DATA COLLECTED BY ABSOLUTE BOUNDARY & CONTROL SOLUTIONS. DEPICTED IS THE FINAL BMI SOUTH PRE-LINER SUB-GRADE AS-BUILT CONDITIONS



NO.	REVISION	DATE	CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)			ABSOLUTE BOUNDARY & CONTROL SOLUTIONS	Date:	March 29, 2010
△						6440 SKY POINT DRIVE	Drawn:	C. Givant
△						SUITE 140 - PMB 321	Checked:	C. Givant
△						LAS VEGAS, NV. 89131	Task:	2010.03.29.01-A
△						(702) 953-7452		
△					(702) 987-5943 FAX			
					WWW.AB-CS.COM			
			FIELD SURVEY DATE: 5/16/2009, 3/12/2010, 3/16/2010 & 3/27/2010				Sheet No.	1 of 1
			FIELD CREW: C.G., M.C., M.V.		PROJECT # 2008.06.23.01			



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	BMI-South Final Closure Subgrade As-Built
Submittal Number:	02200-002TT
Specification Section:	Section 02200, Part 3.14
Drawing Number (s):	15
Page Number:	02200-10
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	3/29/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.



699 South Friendswood Drive
Suite 101
Friendswood, Texas 77546

TO: Basic Remediation Company
875 West Warm Springs Road
Henderson, NV 89011
TEL#: (702)-568-2888 FAX#: (702)-567-0475
ATTENTION: Lee C. Farris, P.E.

DATE: 4/22/10
JOB NAME: BRC EASTSIDE COMMON AREAS
SOIL REMEDIATION PROJECT
TRANSMITTAL NUMBER: 412
ENTACT PROJECT NUMBER: E-7207

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER VIA _____ THE FOLLOWING ITEMS:

☐ SHOP DRAWINGS ☐ PRINTS ☐ PLANS ☐ SAMPLES ☐ SPECIFICATIONS
☐ CERTIFICATES ☐ REPORTS ☐ TECHNICAL DATA ☐ FORMS ☐ COPY OF LETTER
☐ CHANGE ORDER ☒ SUBMITTALS ☐ RFI

COPIES	DATE	DRAWING NO.	REV.	DESCRIPTION	ACTION (*)
6	4/22/10			Submittal - 02200-002WW – BMI-South Closure - Final HDPE Liner As-Built	RC

ACTION (*)

AR - AS REQUESTED

FA - FOR APPROVAL

F – FILE

RC - REVIEW & COMMENT

COMMENTS: Hard copies will be delivered to BRC this afternoon.

SENT VIA:

☒ E-MAIL ☐ MAIL ☐ OVERNIGHT ☒ HAND DELIVERY ☐ FACSIMILE
COPY TO: Ranajit Sahu, Lee Farris BY: Michael M. Carlson (630)-330-8237

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

**CORRECTIVE ACTION MANAGEMENT UNIT
BMI SOUTH
CLOSURE HDPE LINER AS-BUILT)
HENDERSON, NV**

Prepared for:



ENTACT Environmental Services, LLC
699 South Friendswood Dr.
Suite 101
Friendswood, TX. 77546
(281) 996-9892

Prepared by:



Absolute Boundary & Control Solutions
6440 Sky Point Drive
Suite 140 – PMB 321
Las Vegas, NV 89131
(702) 953-7452

April 21, 2010



4/21/2010

Attn: Erik Gehringer, Project Manager
ENTACT Environmental Services, LLC
699 South Friendswood Drive
Friendswood, TX. 77546

Re: BMI SOUTH – “Closure II” - Closure HDPE Liner As-built

Mr. Gehringer,

This report outlines the results of a Field Survey performed on the Corrective Action Management Unit (CAMU) project and was completed to depict the As-Built information with regard to the HDPE Closure Liner within BMI South. The intent of said report is to provide information such as but not limited to, Data, Calculations, Drawings, Tables, Charts, Electronic Files and other required media to satisfy the Submittal Requirements as outlined in Section 01050 of the Project Technical Specifications, Dated May, 2008.

Absolute Boundary & Control Solutions (ABCS) is pleased you have chosen us to complete these services, and assures you that every attempt has been made to prepare same in a fashion meeting or exceeding the Project Specifications. If however after your review you determine that revisions, clarifications or other modifications are needed, please do not hesitate to bring them to our attention.

In closing, thank you again for the opportunity to serve ENTACT. If you have any questions, comments or concerns, please do not hesitate to contact me.

Sincerely,

Craig A. Givant, PLS
President

(702) 953-7452
(702) 839-9750 fax

CERTIFICATION PAGE

BMI SOUTH
CLOSURE HPDE LINER AS-BUILT
HENDERSON, NV

I, Craig A. Givant, a Professional Land Surveyor registered in the State of Nevada, certify (as defined by Nevada Revised Statutes 625.403) that:

1. This report and any Land Surveying Practices (N.R.S. 625.040) on which it is based were performed directly by me or under my responsible charge (N.R.S. 625.080) in accordance with the Standards and Practices Governing Land Surveyors in the State of Nevada as defined by any applicable sections of the Nevada Revised Statutes (N.R.S.) or the Nevada Administrative Code (N.A.C.).
2. By affixing my official seal and signature below I am confirming that I am a Registered Land Surveyor in the State of Nevada and thereby satisfy the requirements of Section 01050, Part 1.03, Subpart A or the Project Technical Specifications.

Craig A. Givant, PLS
PLS 14348

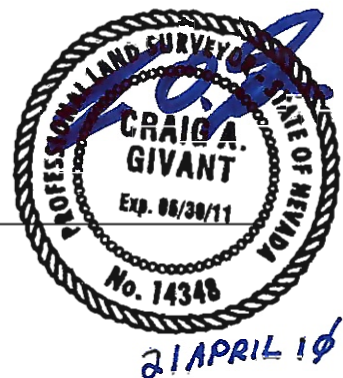


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FIELD NOTES

All Field Data pertaining to the determination of the location of the As-Built Information was collected electronically. Pertinent parameters required to be input into the software and which were obtained by means of human interaction, were verified as correct by performing field checks. These field checks and their resultant accuracies can be viewed within the Electronic Field Notes (Raw Data). The following Raw Data files were used while acquiring the As-Built information. These files have not been printed for inclusion in this report however a Portable Document File (PDF) of each raw data printout is included electronically on the attached Compact Disk (CD). It should be noted that the contents of these Raw Data files may not pertain solely to the report herein presented and may include additional data from other “tasks” performed on the same day.

1. 2010-4-10 (Closure II+BMI-S Liner ASB-Glonas)-TG+MV+MC
2. 2010-4-15 (Closure II Extra Repairs+BMI-South Liner As-Built-R8)-MV+MC
3. 2009-5-15 (BMI-South-IC Liner ASB)-MC+TG
4. 2010-3-17 (BMI-S Liner ASB Limit-Glonass)-MC
5. 2010-3-17 (BMI-S LINER ASB-R8)-MC

SURVEY DATA

Field Survey Methods were employed that resulted in the following precisions:

Horizontal Coordinates: $\pm 1.0'$ (One Foot)

Vertical Coordinates: $\pm 0.10'$ (One Tenth of a Foot)

The data sets utilized for this As-Built consisted of approximately 7,193 survey locations (points) and the printout of same contains 157 pages. A hard copy of this printout is not included hereon; however a portable document file (PDF) titled "Coordinate Printout" is included in the PDF Files directory on the Compact Disk (CD) located in the pocket at the back of this report.

DRAWINGS

The following Measurement Drawings, Topographic Survey Drawings and/or Cross-Section Drawings are attached.

1. **BMI South, Final Geomembrane As-Built, dated 4/21/2010.**

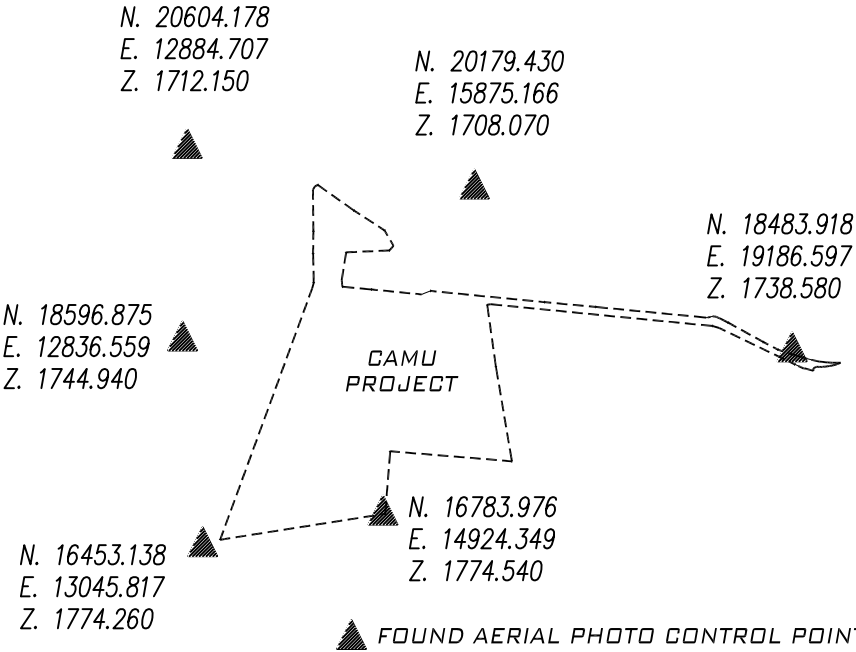
This drawing (Consisting of Thirteen (13) Sheets) depicts the as-built information with regard to the installation of the Closure liner within BMI South. It also contains information regarding the control network utilized and other pertinent survey data. Due to the scale at which this drawing was prepared, the intended correlation representation may not be entirely clear. In ALL cases the Survey Data herein provided takes precedence over any graphical representation(s).

SHEET INDEX

- 1 - SURVEY CONTROL
- 2 - KEY MAP
- 3 THRU 6 - DETAILED LINER AREAS
- 7 THRU 13 - DETAILS OF BMI SOUTH / CLOSURE II INTERFACE

PROJECT CONTROL

1" = 2000'



BENCHMARK

CLARK COUNTY BENCHMARK (6C22 2E4), BEING A RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CENTERLINE ISLAND, 4' WEST OF THE NOSE IN THE MIDDLE OF SUNSET ROAD, WEST SIDE OF THE INTERSECTION OF BOULDER HIGHWAY AND SUNSET ROAD.


PUBLISHED ELEVATION - 505.816 METERS = 1659.50 FEET
NAVD 1988 DATUM - PUBLISHED (2003)

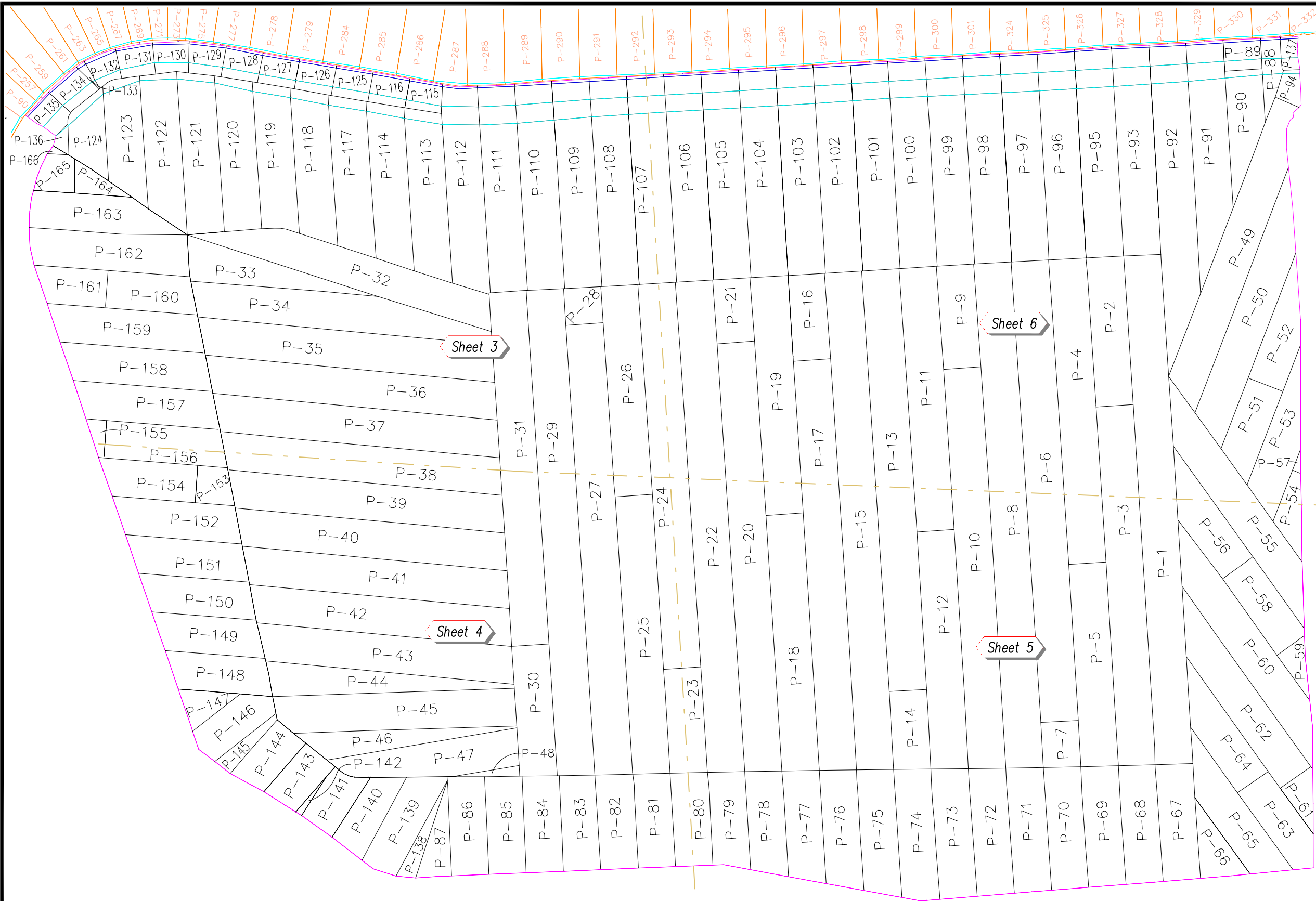
BASIS OF BEARINGS

SOUTH 85°36'52" WEST, BEING THE BEARING BETWEEN CLARK COUNTY GIS CONTROL POINTS "CC-GIS 848" AND CC-GIS W51", AS SHOWN ON THE MAP IN FILE 88 OF SURVEYS, PAGE 53, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

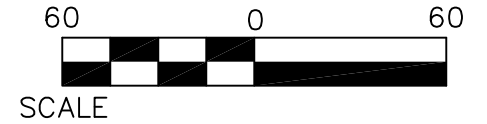
COORDINATE SYSTEM

THE COORDINATE SYSTEM AND ASSOCIATED BEARING ROTATION INFORMATION WAS ESTABLISHED AND PROVIDED BY PBS&J.

NO.	REVISION	DATE	CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU) BMI SOUTH FINAL CLOSURE GEOMEMBRANE AS-BUILT	 <div>ABSOLUTE BOUNDARY & CONTROL SOLUTIONS 6440 SKY POINT DRIVE SUITE 140 - PMB 321 LAS VEGAS, NV. 89131 (702) 953-7452 (702) 987-5943 FAX WWW.AB-CS.COM</div>	Date:	April 21, 2010
△					Drawn:	C. Givant
△					Checked:	C. Givant
△					Task:	2010.04.15.01
△					Sheet No. 1 of 13	
FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010) FIELD CREW: C.G / M.C. / M.V.			JOB # 2008-06-23-01			



KEY MAP



SYMBOL LEGEND

Sheet X DETAIL SHEET DESIGNATOR

NO.	REVISION	DATE
△		
△		
△		
△		

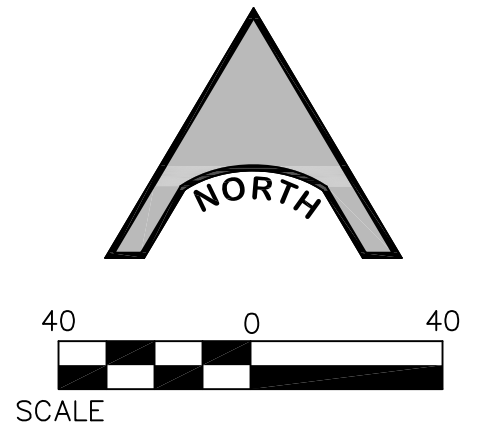
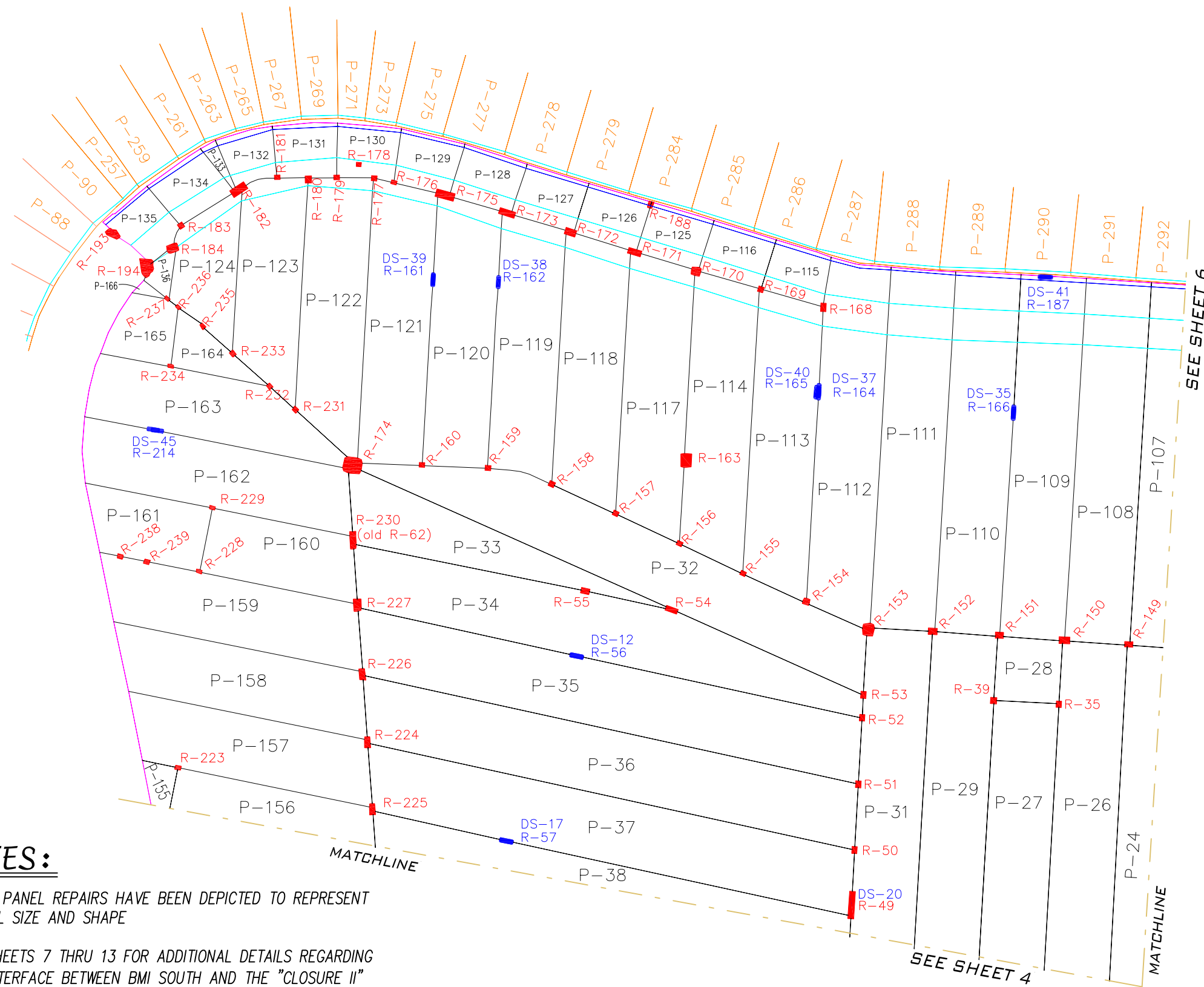
CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)
BMI SOUTH FINAL CLOSURE
GEOMEMBRANE AS-BUILT

FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010)
FIELD CREW: C.G / M.C. / M.V.

JOB # 2008-06-23-01

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Drawn:	C. Givant
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Sheet No. 2 of 13	



SYMBOL LEGEND

- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER "CLOSURE II" REPORT

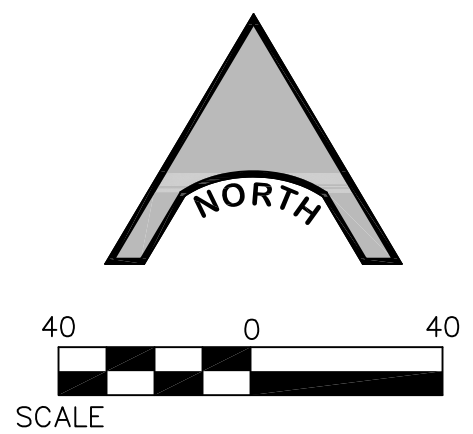
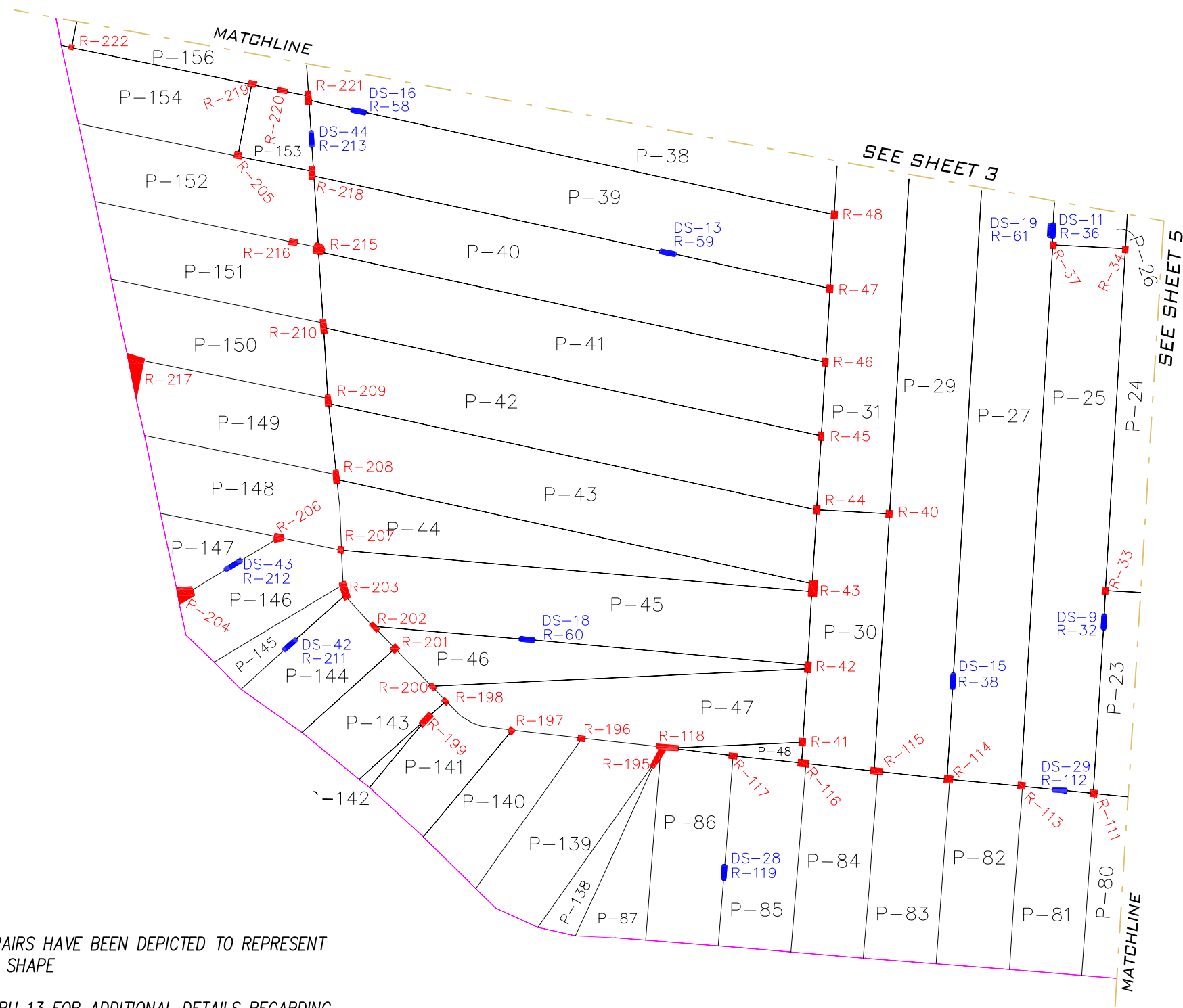
LINE LEGEND

- LINER PANELS
- TOE OF SLOPE
- SLOPE BREAK
- HDPE LINER LIMIT

NOTES:

- 1) LARGE PANEL REPAIRS HAVE BEEN DEPICTED TO REPRESENT ACTUAL SIZE AND SHAPE
- 2) SEE SHEETS 7 THRU 13 FOR ADDITIONAL DETAILS REGARDING THE INTERFACE BETWEEN BMI SOUTH AND THE "CLOSURE II" AREA.

NO.	REVISION	DATE	CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU) BMI SOUTH FINAL CLOSURE GEOMEMBRANE AS-BUILT		ABSOLUTE BOUNDARY & CONTROL SOLUTIONS 6440 SKY POINT DRIVE SUITE 140 - PMB 321 LAS VEGAS, NV. 89131 (702) 953-7452 (702) 987-5943 FAX WWW.AB-CS.COM		Date:	April 21, 2010
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			FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010) FIELD CREW: C.G. / M.C. / M.V.		JOB # 2008-06-23-01			



SYMBOL LEGEND


- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER "CLOSURE II" REPORT

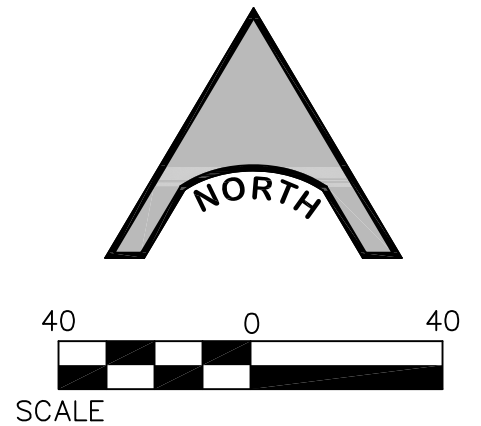
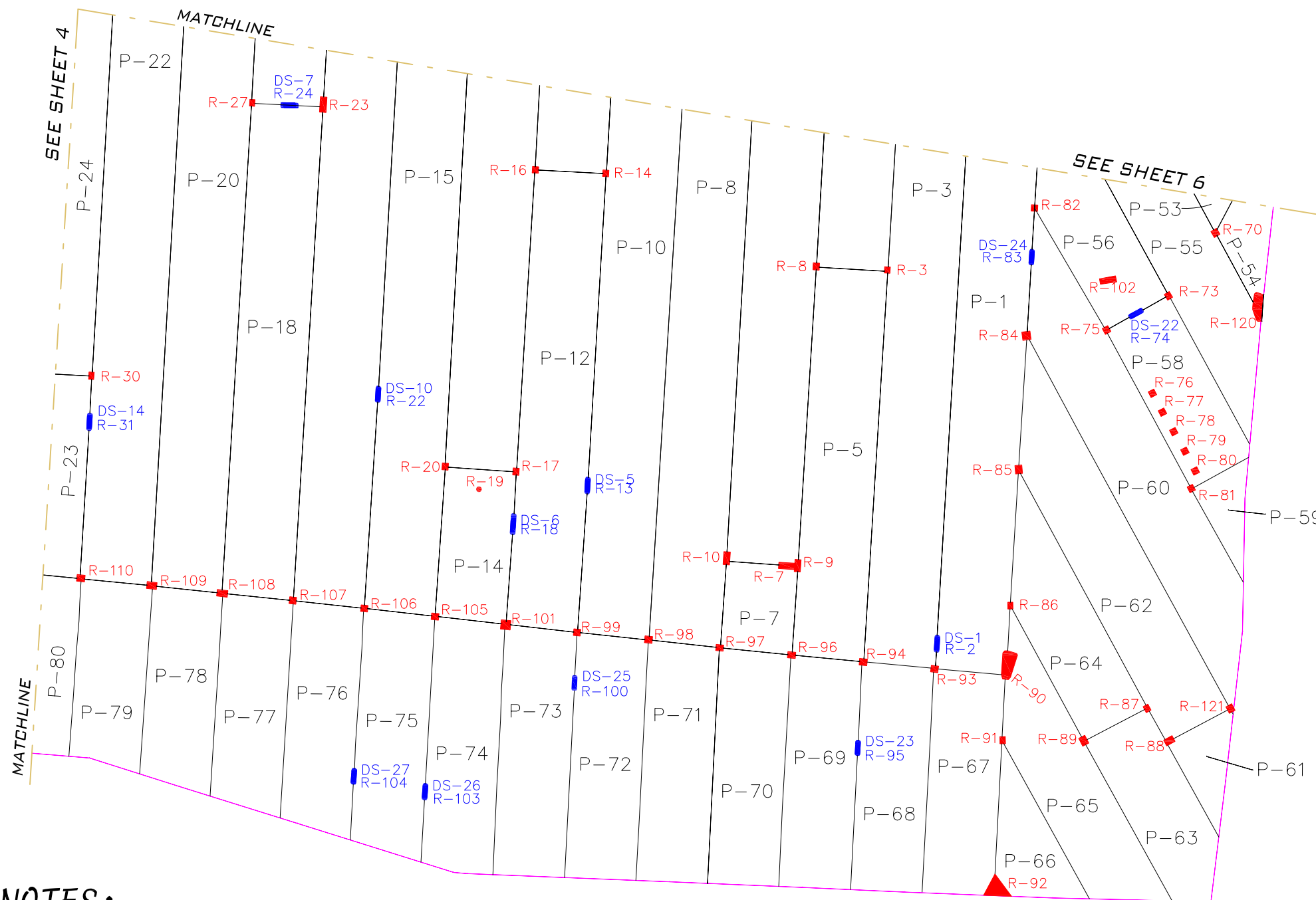
LINE LEGEND

- LINER PANELS
- TOE OF SLOPE
- SLOPE BREAK
- HDPE LINER LIMIT

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△			<i>BMI SOUTH FINAL CLOSURE GEOMEMBRANE AS-BUILT</i>			Drawn:	C. Givant
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△						Task:	2010.04.15.01
△			FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010) FIELD CREW: C.G. / M.C. / M.V.			Sheet No. 4 of 13	
△			JOB # 2008-06-23-01				



SYMBOL LEGEND

- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER "CLOSURE II" REPORT

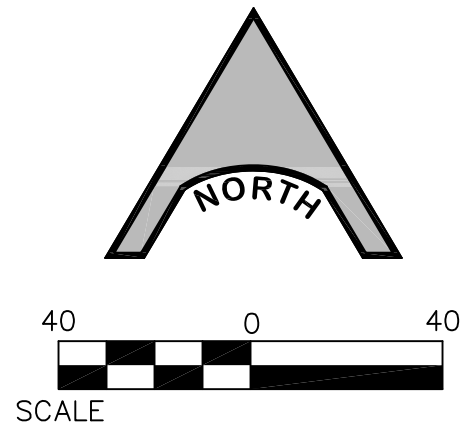
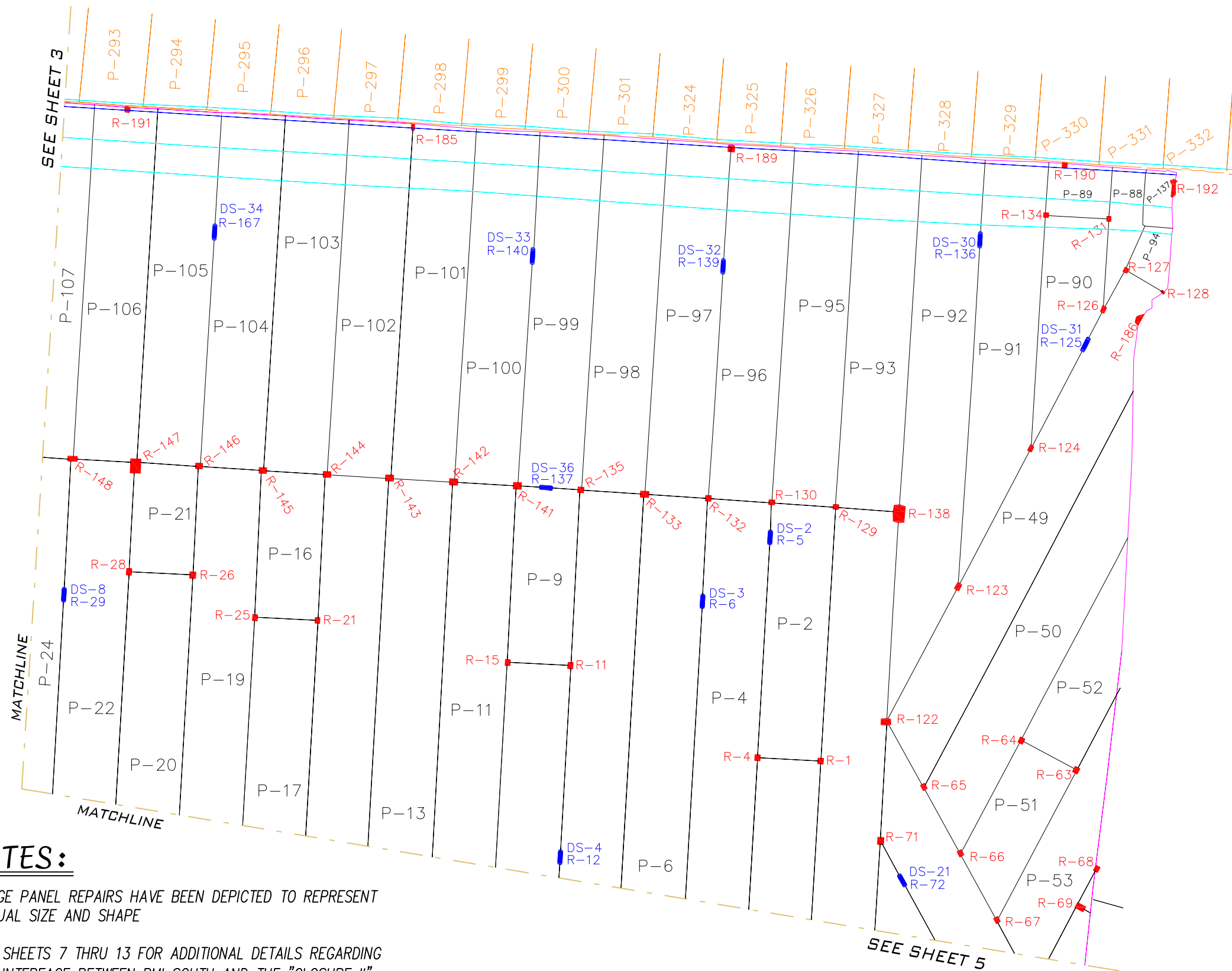
LINE LEGEND

- LINER PANELS _____
- TOE OF SLOPE _____
- SLOPE BREAK _____
- HDPE LINER LIMIT _____

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△						Checked:	C. Givant
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			FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010) FIELD CREW: C.G. / M.C. / M.V.		JOB # 2008-06-23-01		



SYMBOL LEGEND


- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX
—R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER "CLOSURE II" REPORT

LINE LEGEND

- ____ LINER PANELS
- ____ TOE OF SLOPE
- ____ SLOPE BREAK
- ____ HDPE LINER LIMIT

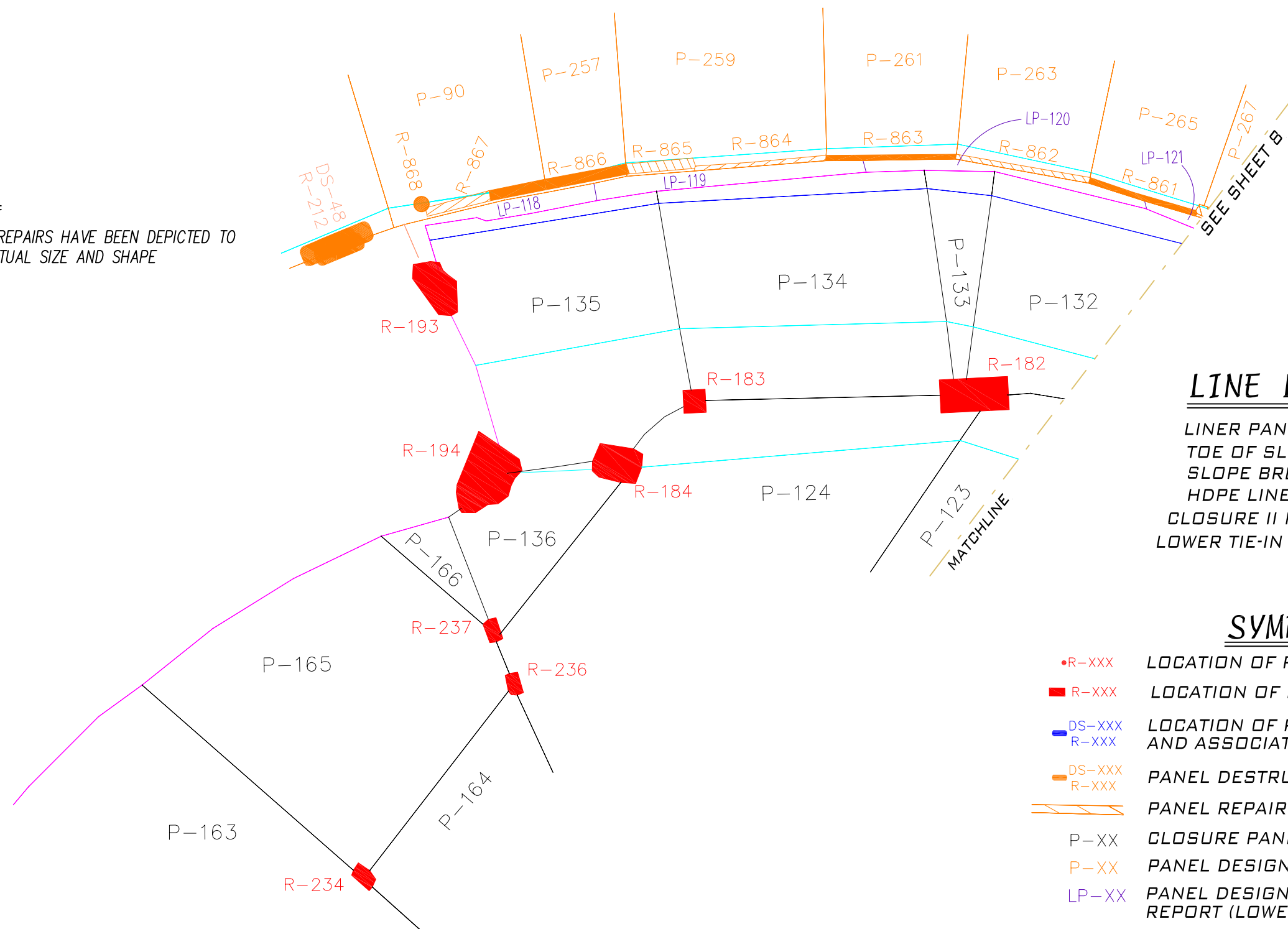
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			FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010) FIELD CREW: C.G. / M.C. / M.V.		JOB # 2008-06-23-01			

NOTES:

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LINE LEGEND

LINER PANELS	
TOE OF SLOPE	
SLOPE BREAK	
HDPE LINER LIMIT	
CLOSURE II PANELS	
LOWER TIE-IN PANELS	

SYMBOL LEGEND

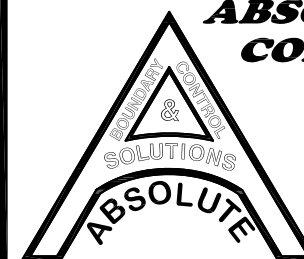
•R-XXX	LOCATION OF PANEL REPAIR (SMALL PATCH)
■ R-XXX	LOCATION OF PANEL REPAIR (LARGE PATCH)
DS-XXX R-XXX	LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
DS-XXX R-XXX	PANEL DESTRUCT / REPAIR PER CLOSURE II REPORT
	PANEL REPAIR PER CLOSURE II REPORT
P-XX	CLOSURE PANEL DESIGNATION NUMBER
P-XX	PANEL DESIGNATOR PER CLOSURE II REPORT
LP-XX	PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)

NO.	REVISION	DATE
△		
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△		
△		

CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU) BMI SOUTH FINAL CLOSURE GEOMEMBRANE AS-BUILT

FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010)
FIELD CREW: C.G / M.C. / M.V.

JOB # 2008-06-23-01

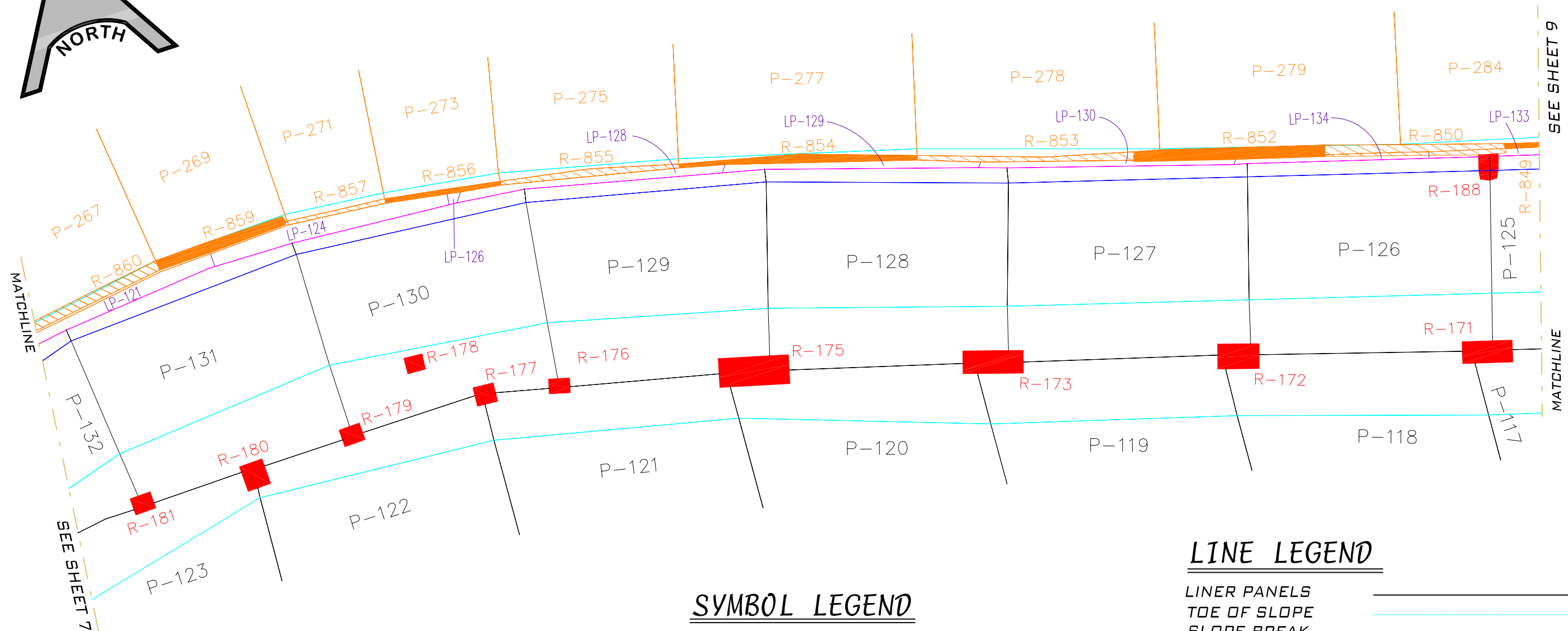
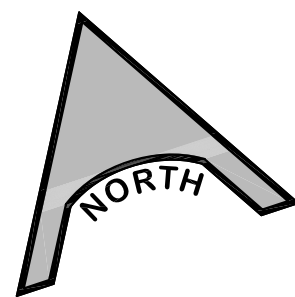


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Date: April 21, 2010
Drawn: C. Givant
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Task: 2010.04.15.01

Sheet No. 7 of 13



SYMBOL LEGEND

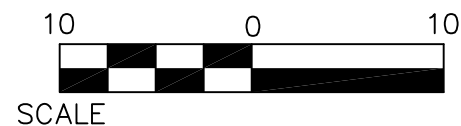
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- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX LOCATION OF PANEL DESTRUCT SAMPLE
—R-XXX AND ASSOCIATED PANEL REPAIR
- DS-XXX PANEL DESTRUCT / REPAIR PER CLOSURE II REPORT
—R-XXX
- PANEL REPAIR PER CLOSURE II REPORT
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER CLOSURE II REPORT
- LP-XX PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)

LINE LEGEND

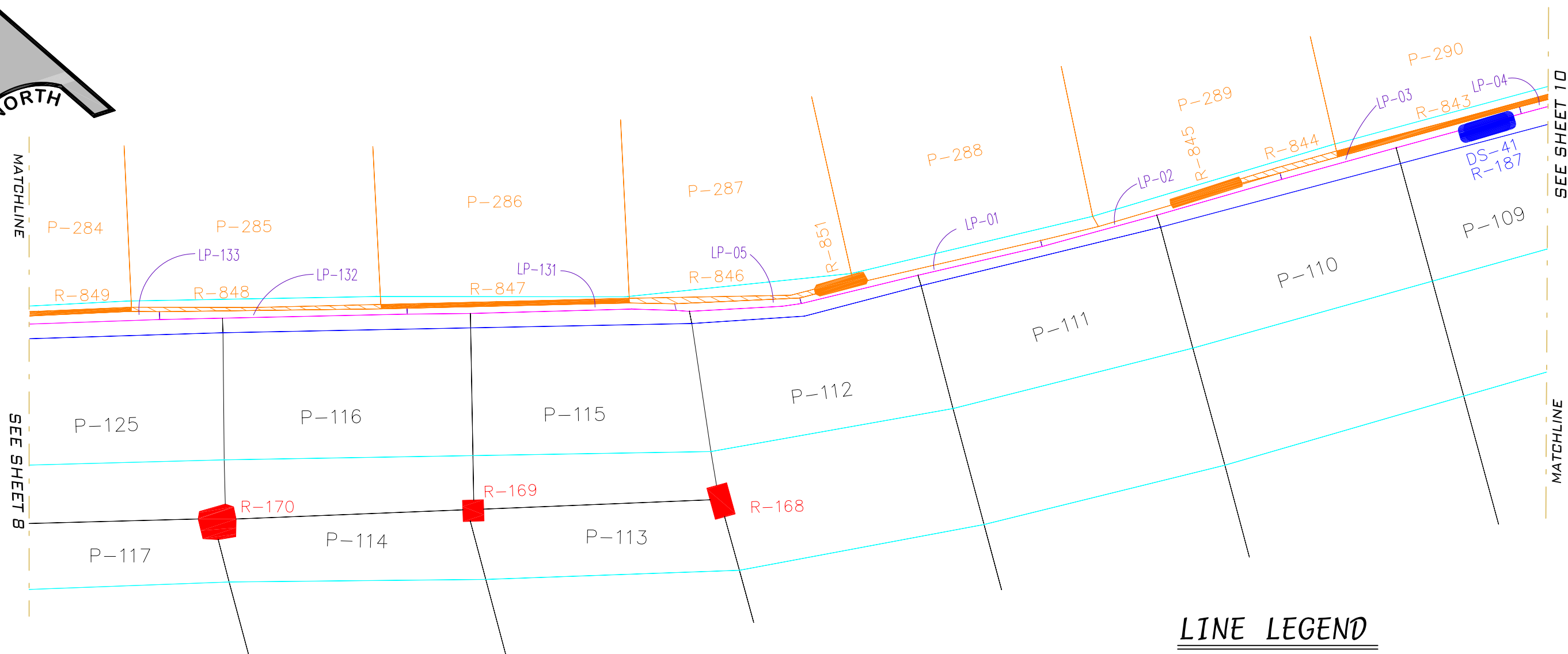
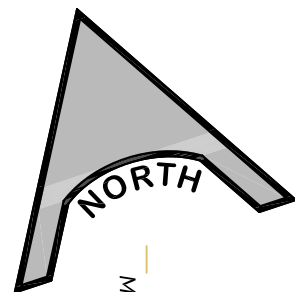
- LINER PANELS
- TOE OF SLOPE
- SLOPE BREAK
- HDPE LINER LIMIT
- CLOSURE II PANELS
- LOWER TIE-IN PANELS

NOTES:

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NO.	REVISION	DATE	<div>CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)</div> <div>BMI SOUTH FINAL CLOSURE</div> <div>GEOMEMBRANE AS-BUILT</div> <div>FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010)</div> <div>FIELD CREW: C.G / M.C. / M.V.</div> <div>JOB # 2008-06-23-01</div>		<div><div><div>ABSOLUTE</div><div>BOUNDARY & CONTROL SOLUTIONS</div></div><div>ABSOLUTE BOUNDARY & CONTROL SOLUTIONS</div><div>6440 SKY POINT DRIVE</div><div>SUITE 140 - PMB 321</div><div>LAS VEGAS, NV. 89131</div><div>(702) 953-7452</div><div>(702) 987-5943 FAX</div><div>WWW.AB-CS.COM</div></div>		Date:	April 21, 2010
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△							Sheet No. 8 of 13	



SYMBOL LEGEND

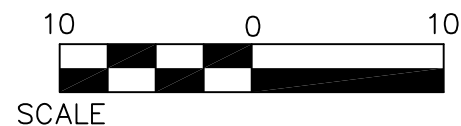
- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
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- DS-XXX R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- DS-XXX R-XXX PANEL DESTRUCT / REPAIR PER CLOSURE II REPORT
- PANEL REPAIR PER CLOSURE II REPORT
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER CLOSURE II REPORT
- LP-XX PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)

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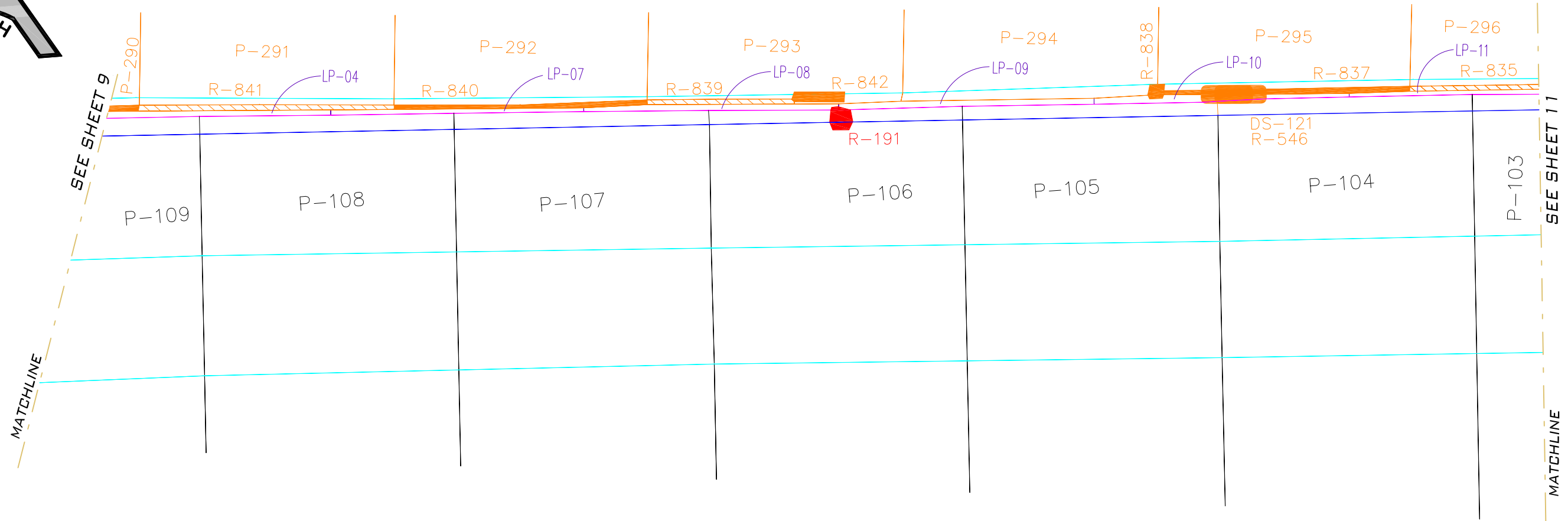
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- SLOPE BREAK
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- CLOSURE II PANELS
- LOWER TIE-IN PANELS

NOTES:

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SYMBOL LEGEND

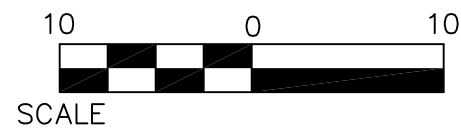
- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- DS-XXX R-XXX PANEL DESTRUCT / REPAIR PER CLOSURE II REPORT
- ▨ PANEL REPAIR PER CLOSURE II REPORT
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER CLOSURE II REPORT
- LP-XX PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)

LINE LEGEND

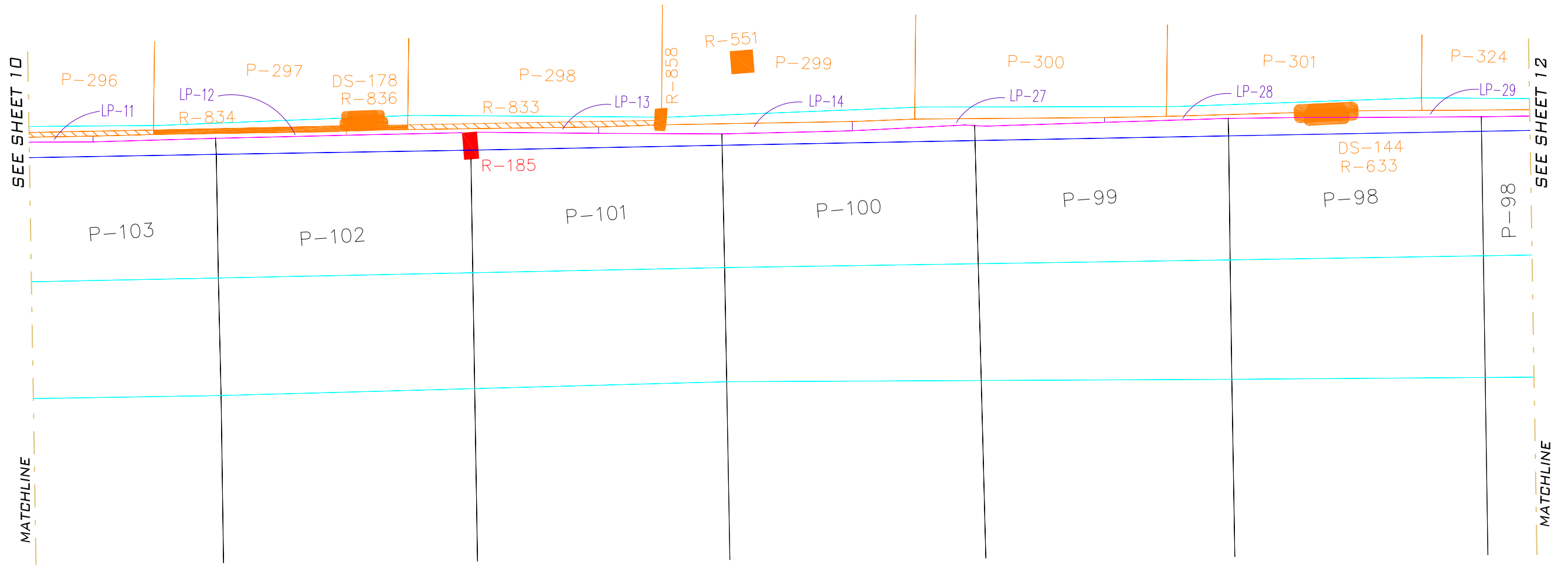
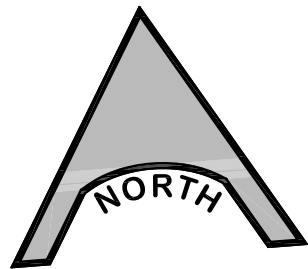
- ____ LINER PANELS
- ____ TOE OF SLOPE
- ____ SLOPE BREAK
- ____ HDPE LINER LIMIT
- ____ CLOSURE II PANELS
- ____ LOWER TIE-IN PANELS

NOTES:

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△						Sheet No. 10 of 13		
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SYMBOL LEGEND

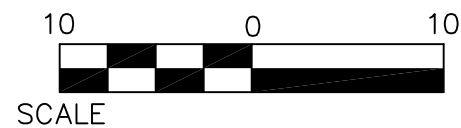
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- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
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- ▨ PANEL REPAIR PER CLOSURE II REPORT
- P-XX CLOSURE PANEL DESIGNATION NUMBER
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- LP-XX PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)

LINE LEGEND

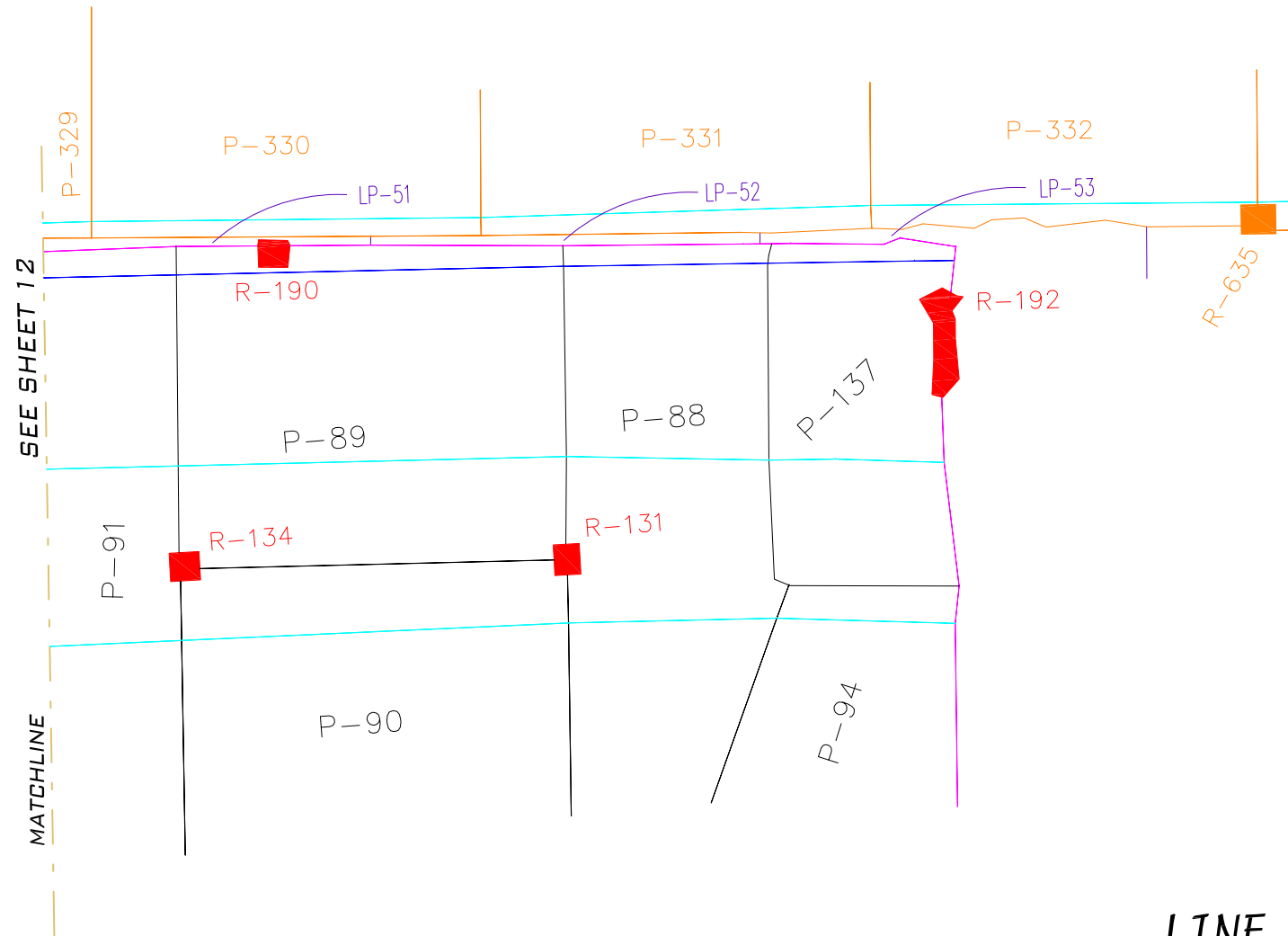
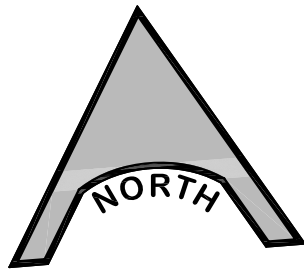
- _____ LINER PANELS
- _____ TOE OF SLOPE
- _____ SLOPE BREAK
- _____ HDPE LINER LIMIT
- _____ CLOSURE II PANELS
- _____ LOWER TIE-IN PANELS

NOTES:

- 1) LARGE PANEL REPAIRS HAVE BEEN DEPICTED TO REPRESENT ACTUAL SIZE AND SHAPE



NO.	REVISION	DATE	<div>CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)</div> <div>BMI SOUTH FINAL CLOSURE</div> <div>GEOMEMBRANE AS-BUILT</div> <div>FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010)</div> <div>FIELD CREW: C.G / M.C. / M.V.</div> <div>JOB # 2008-06-23-01</div>		<div><div><div>ABSOLUTE</div><div>BOUNDARY & CONTROL SOLUTIONS</div></div><div>ABSOLUTE BOUNDARY & CONTROL SOLUTIONS</div><div>6440 SKY POINT DRIVE</div><div>SUITE 140 - PMB 321</div><div>LAS VEGAS, NV. 89131</div><div>(702) 953-7452</div><div>(702) 987-5943 FAX</div><div>WWW.AB-CS.COM</div></div>		Date:	April 21, 2010
△							Drawn:	C. Givant
△							Checked:	C. Givant
△							Task:	2010.04.15.01
△							Sheet No. 11 of 13	



SYMBOL LEGEND

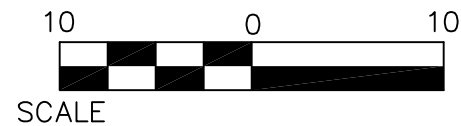
- R-XXX LOCATION OF PANEL REPAIR (SMALL PATCH)
- R-XXX LOCATION OF PANEL REPAIR (LARGE PATCH)
- DS-XXX R-XXX LOCATION OF PANEL DESTRUCT SAMPLE AND ASSOCIATED PANEL REPAIR
- DS-XXX R-XXX PANEL DESTRUCT / REPAIR PER CLOSURE II REPORT
- PANEL REPAIR PER CLOSURE II REPORT
- P-XX CLOSURE PANEL DESIGNATION NUMBER
- P-XX PANEL DESIGNATOR PER CLOSURE II REPORT
- LP-XX PANEL DESIGNATOR PER ORIGINAL BASIN AS-BUILT REPORT (LOWER PANEL TIE-IN)


LINE LEGEND

- LINER PANELS
- TOE OF SLOPE
- SLOPE BREAK
- HDPE LINER LIMIT
- CLOSURE II PANELS
- LOWER TIE-IN PANELS

NOTES:

- 1) LARGE PANEL REPAIRS HAVE BEEN DEPICTED TO REPRESENT ACTUAL SIZE AND SHAPE



NO.	REVISION	DATE	CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)		 ABSOLUTE BOUNDARY & CONTROL SOLUTIONS 6440 SKY POINT DRIVE SUITE 140 - PMB 321 LAS VEGAS, NV. 89131 (702) 953-7452 (702) 987-5943 FAX WWW.AB-CS.COM	Date:	April 21, 2010
△			BMI SOUTH FINAL CLOSURE			Drawn:	C. Givant
△			GEOMEMBRANE AS-BUILT			Checked:	C. Givant
△			FIELD SURVEY DATES: VARIOUS (MARCH & APRIL 2010)			Task:	2010.04.15.01
△			FIELD CREW: C.G / M.C. / M.V.			Sheet No. 13 of 13	
			JOB # 2008-06-23-01				

ELECTRONIC FILES

The Compact Disk (CD) included in the pocket at the end of this report contains the following Directories and Files:

PDF Files (.pdf)

1. Report - (BMI South - Closure HDPE Liner As-Built)
2. (Field Notes) - 2009-5-15 (BMI-South-IC Liner ASB)
3. (Field Notes) - 2010-3-17 (BMI-S Liner ASB Limit-Glonass)
4. (Field Notes) - 2010-3-17 (BMI-S LINER ASB-R8)
5. (Field Notes) - 2010-4-10 (Closure II+BMI-S Liner ASB-Glonas)
6. (Field Notes) - 2010-4-15 (Closure II Extra Repairs+BMI-South Liner As-Built-R8)

CAD Files (.dwg)

1. 2010-04-20 (BMI South HDPE Liner FINAL ASB) – 2007
2. 2010-04-20 (BMI South HDPE Liner FINAL ASB) - Details – 2007
3. 2010-04-20 (BMI South HDPE Liner FINAL ASB)
4. 2010-04-20 (BMI South HDPE Liner FINAL ASB) - Details

Coordinate Files (.csv)

The following files are Comma Separated Value Files in the following format:

Point Name,Northing,Easting,Elevation,Description

1. Closure II & BMI South ASB Data


Raw Data Files (.dc)

The following files are Trimble Data Collector (.DC) files that contain the Raw Field Data.

1. 2009-5-15 (BMI-South-IC Liner ASB)-MC+TG
2. 2010-3-17 (BMI-S Liner ASB Limit-Glonass)-MC
3. 2010-3-17 (BMI-S LINER ASB-R8)-MC
4. 2010-4-10 (Closure II+BMI-S Liner ASB-Glonas)-TG+MV+MC
5. 2010-4-15 (Closure II Extra Repairs+BMI-South Liner As-Built-R8)-MV+MC



Contractor's Stamp

Contractor Name:	Entact Environmental Services, LLC
Project Name (Number):	BRC Eastside Common Areas Soils Remediation Project (E-7207)
Contract Number:	6389
Submittal Summary:	BMI-South Final Closure - Final HDPE Liner As-Built
Submittal Number:	02200-002WW
Specification Section:	Section 02200, Part 3.14
Drawing Number (s):	15
Page Number:	02200-10
Signed:	 Michael M. Carlson - Field Engineer
Previous Submittal Date (s):	
Date Submitted:	4/22/2010

By this submittal, I hereby represent that I have reviewed this submittal, verified the products, determined and evaluated field measurements and construction criteria possible at the time of this submittal, and coordinated the information within this submittal with respect to the requirements of the Work and the Contract Documents.

**CORRECTIVE ACTION MANAGEMENT UNIT
(BMI SOUTH)
FINAL COVERSOIL SYSTEM AS-BUILT REPORT
HENDERSON, NV**

Prepared for:



ENTACT Environmental Services, LLC
699 South Friendswood Dr.
Suite 101
Friendswood, TX. 77546
(281) 996-9892

Prepared by:



Absolute Boundary & Control Solutions
6440 Sky Point Drive
Suite 140 – PMB 321
Las Vegas, NV 89131
(702) 953-7452

May 24, 2010



5/24/10

Attn: Erik Gehringer, Project Manager
ENTACT Environmental Services, LLC
699 South Friendswood Drive
Friendswood, TX. 77546

Re: CAMU – BMI SOUTH — Final Coversoil System As-Built

Mr. Gehringer,

This report outlines the results of the Final Coversoil System As-Built Survey which was accomplished within the BMI South area of the Corrective Action Management Unit (CAMU) project.

The intent of said report is to provide information such as but not limited to, Data, Calculations, Drawings, Tables, Charts, Electronic Files and other required media to satisfy the Submittal Requirements as outlined in Section 01050 of the Project Technical Specifications, Dated May, 2008.

Absolute Boundary & Control Solutions (ABCS) is pleased you have chosen us to complete these services, and assures you that every attempt has been made to prepare same in a fashion meeting or exceeding the Project Specifications. If however after your review you determine that revisions, clarifications or other modifications are needed, please do not hesitate to bring them to our attention.

In closing, thank you again for the opportunity to serve ENTACT. If you have any questions, comments or concerns, please do not hesitate to contact me.

Sincerely,

Craig A. Givant, PLS
President

(702) 953-7452
(702) 839-9750 fax

CERTIFICATION PAGE

CAMU – BMI SOUTH AREA
FINAL COVERSOIL SYSTEM AS-BUILT REPORT
HENDERSON, NV

I, Craig A. Givant, a Professional Land Surveyor registered in the State of Nevada, certify (as defined by Nevada Revised Statutes 625.403) that:

1. This report and any Land Surveying Practices (N.R.S. 625.040) on which it is based were performed directly by me or under my responsible charge (N.R.S. 625.080) in accordance with the Standards and Practices Governing Land Surveyors in the State of Nevada as defined by any applicable sections of the Nevada Revised Statutes (N.R.S.) or the Nevada Administrative Code (N.A.C.).
2. By affixing my official seal and signature below I am confirming that I am a Registered Land Surveyor in the State of Nevada and thereby satisfy the requirements of Section 01050, Part 1.03, Subpart A or the Project Technical Specifications.

Craig A. Givant, PLS
PLS 14348



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FIELD NOTES

BMI South – Final Coversoil System As-Built

The surface shown on the attached drawing represents the Final Coversoil System As-Built conditions within the BMI South area of the CAMU pursuant to the respective Final Coversoil Design verification. The data files used during the collection of the survey data are as follows:

New Survey Data

1. 2010-5-12 (BMI-S Eastern Edge ASb Topo)-MC
2. 2010-05-13 (BMI South CVR Verification) - CAG

All survey data used to determine the location and elevation of the above referenced Surface was collected electronically by Absolute Boundary & Control Solutions (ABCS).

Pertinent parameters required to be input into the software and which were obtained by means of human interaction, were verified as correct by performing field checks. These field checks and their resultant accuracies can be viewed within the Electronic Field Notes (Raw Data). The above referenced Raw Data files were used while acquiring the As-Built information. These files have not been printed for inclusion in this report however a Portable Document File (PDF) of each raw data printout is included electronically on the attached Compact Disk (CD). It should be noted that the contents of these Raw Data files may not pertain solely to the report herein presented and may include additional data from other “tasks” performed on the same day or outdated data which was reacquired at a later date. In all cases the coordinate listing appearing herein was used to generate the reported surface(s).

SURVEY DATA

As required by the project specification Absolute Boundary & Control Solutions (ABCS) utilized field survey methods which resulted in precisions equal to or better than the following:

Horizontal Coordinates: $\pm 1.0'$ (One Foot)

Vertical Coordinates: $\pm 0.10'$ (One Tenth of a Foot)

1. Coordinate Printout of the reduced (measured) coordinates from the Field Collection Efforts.

Point No.	Northing	Easting	Elevation	Description
4000	16987.91	14948.68	1772.63	dtm
4002	16995.86	14943.94	1773.46	dtm-top
4003	16995.74	14949.68	1773.04	dtm-top
4004	17042.09	14953.25	1775.11	dtm-top
4005	17075.13	14954.73	1776.22	dtm-top
4006	17110.44	14957.31	1776.72	dtm-top
4007	17156.84	14961.36	1777.02	dtm-top
4008	17196.61	14965.46	1776.55	dtm-top
4009	17231.99	14968.33	1776.33	dtm-top
4010	17271.91	14974.87	1775.27	dtm-top
4011	17306.97	14977.73	1774.01	dtm-top
4012	17344.50	14979.73	1771.81	dtm-topics
4013	17377.28	14979.42	1769.57	dtm-top
4014	17412.84	14977.95	1768.23	dtm-top
4015	17430.67	14986.70	1766.75	dtm-toe
4016	17386.37	14987.12	1768.30	toe
4017	17353.69	14986.98	1770.52	toe
4018	17322.99	14983.85	1772.29	toe
4019	17273.07	14979.40	1774.22	toe
4020	17232.39	14975.02	1774.76	toe
4021	17176.55	14969.28	1774.97	toe
4022	17126.98	14965.59	1775.19	toe
4023	17079.01	14963.19	1773.99	toe
4024	17039.46	14960.58	1772.75	toe
4025	17006.37	14956.10	1771.96	toe
4026	16991.20	14951.92	1772.33	toe
4027	17020.53	14716.61	1774.52	chk
4028	17053.15	14722.36	1778.78	chk
4029	17063.96	14658.42	1779.86	chk

Point No.	Northing	Easting	Elevation	Description
4030	17041.73	14650.69	1775.22	chk
4031	17037.27	14661.86	1774.88	chk
4032	17061.73	14673.19	1779.53	chk
4033	17057.60	14473.61	1773.64	rock
4034	17067.34	14454.72	1774.50	rock
4035	17072.92	14435.05	1775.11	rock
4036	17077.13	14417.37	1774.50	rock
4038	17097.87	14433.10	1779.49	rock
4039	17095.06	14469.80	1782.95	rock
4040	17090.17	14503.36	1783.05	rock
4041	17090.15	14532.14	1783.68	rock
4042	17084.31	14574.10	1783.37	rock
4043	17074.55	14623.47	1781.72	rock
4044	17064.35	14657.57	1779.94	rock
4045	17042.79	14652.21	1775.67	rock
4046	17036.17	14632.10	1774.22	rock
300000	16996.46	14949.34	1772.92	F 1.4
520023	17449.21	14958.01	1766.61	20023
520024	17435.10	14957.88	1767.91	20024
520025	17396.58	14927.64	1772.64	20025
520027	17450.34	14906.65	1767.19	20027
520028	17416.27	14904.04	1771.78	20028
520029	17396.21	14903.34	1774.11	20029
520030	17391.20	14855.35	1776.53	20030
520031	17415.32	14855.90	1773.59	20031
520032	17439.70	14856.04	1769.79	20032
520035	17446.61	14805.52	1769.62	20035
520036	17419.73	14804.79	1773.84	20036
520037	17399.52	14804.53	1776.56	20037
520039	17452.03	14756.23	1769.45	20039
520040	17423.92	14754.31	1773.76	20040
520041	17399.72	14753.16	1776.67	20041
520043	17457.51	14706.61	1769.18	20043
520044	17435.25	14705.79	1772.81	20044
520045	17414.62	14703.89	1775.54	20045
520048	17421.82	14651.90	1775.30	20048
520049	17449.35	14655.82	1771.39	20049
520050	17463.54	14657.46	1769.19	20050
520053	17464.87	14607.15	1769.46	20053
520054	17433.62	14605.81	1773.74	20054

Point No.	Northing	Easting	Elevation	Description
520057	17444.24	14555.05	1772.35	20057
520058	17462.51	14556.20	1770.23	20058
520061	17471.16	14484.03	1768.80	20061
520062	17448.46	14479.55	1770.93	20062
520065	17461.88	14439.81	1769.79	20065
520066	17486.97	14447.68	1767.60	20066
520069	17495.47	14382.51	1768.13	20069
520070	17470.04	14374.53	1769.75	20070
520071	17485.31	14327.59	1768.40	20071
520072	17509.21	14334.09	1767.66	20072
520076	17489.13	14317.82	1768.37	20076
520079	17487.18	14300.54	1768.26	20079
520080	17137.76	14319.12	1770.16	20080
541030	17093.19	14819.69	1779.03	41030
541047	17356.34	14800.83	1778.93	41047
541082	17395.69	14499.64	1776.39	41082
541091	17448.63	14378.77	1771.50	41091
541092	17450.69	14318.01	1768.94	41092
541093	17423.15	14322.42	1769.26	41093
541097	17330.16	14326.26	1769.57	41097
541103	17190.01	14337.49	1770.35	41103
541106	17144.40	14349.06	1772.07	41106
541108	17111.62	14380.39	1774.21	41108
541134	17092.79	14739.78	1780.08	41134
541137	17110.78	14652.70	1781.30	41137
541141	17113.62	14562.62	1783.40	41141
541153	17265.81	14466.89	1778.57	41153
541155	17309.65	14476.09	1776.92	41155
541157	17355.18	14477.71	1776.20	41157
541163	17367.67	14579.63	1778.52	41163
541231	17320.63	14886.95	1777.63	41231
541232	17272.31	14883.83	1778.89	41232
541233	17225.25	14881.20	1779.53	41233
541235	17135.25	14876.35	1779.86	41235
541236	17085.00	14873.27	1778.28	41236
541240	17063.71	14829.24	1777.99	41240
541241	17110.40	14831.82	1779.37	41241
541242	17158.88	14834.92	1780.07	41242
541243	17209.49	14838.53	1780.15	41243
541244	17258.14	14841.67	1780.19	41244

Point No.	Northing	Easting	Elevation	Description
541245	17306.05	14843.36	1779.47	41245
541247	17373.20	14847.16	1777.76	41247
541250	17376.13	14802.01	1778.29	41250
541251	17331.52	14800.07	1779.78	41251
541252	17282.73	14796.09	1780.65	41252
541253	17236.91	14793.35	1780.72	41253
541254	17190.96	14790.93	1780.54	41254
541255	17145.02	14788.44	1780.43	41255
541256	17098.33	14786.04	1779.61	41256
541257	17069.09	14784.37	1778.75	41257
541260	17073.87	14739.66	1779.80	41260
541262	17170.37	14745.29	1781.01	41262
541263	17217.01	14748.66	1781.05	41263
541264	17265.45	14751.07	1781.20	41264
541265	17313.07	14754.02	1780.73	41265
541266	17360.31	14756.13	1779.04	41266
541267	17378.79	14758.16	1778.06	41267
541275	17148.44	14698.04	1781.35	41275
541276	17102.59	14696.12	1780.82	41276
541277	17080.05	14694.84	1780.73	41277
541280	17084.73	14651.22	1781.14	41280
541281	17129.46	14653.19	1781.49	41281
541282	17177.79	14655.61	1781.74	41282
541283	17224.78	14658.97	1782.03	41283
541284	17270.99	14661.33	1781.87	41284
541285	17318.27	14663.29	1780.93	41285
541286	17365.09	14667.07	1779.08	41286
541287	17384.11	14669.00	1778.13	41287
541290	17387.34	14624.10	1777.93	41290
541291	17343.33	14621.02	1779.85	41291
541292	17295.62	14618.87	1781.41	41292
541293	17248.17	14615.42	1782.38	41293
541294	17201.99	14613.06	1782.74	41294
541295	17157.90	14609.94	1782.47	41295
541296	17112.59	14606.79	1782.44	41296
541297	17089.43	14605.88	1782.45	41297
541299	17086.70	14561.30	1783.50	41299
541300	17093.45	14562.17	1783.62	41300
541301	17136.08	14564.81	1783.19	41301
541302	17185.04	14567.67	1783.38	41302

Point No.	Northing	Easting	Elevation	Description
541303	17232.74	14570.89	1783.03	41303
541304	17278.28	14573.36	1781.83	41304
541305	17325.27	14576.48	1780.13	41305
541307	17389.78	14578.60	1777.55	41307
541310	17393.31	14534.28	1777.06	41310
541311	17350.16	14531.26	1778.07	41311
541312	17303.00	14529.19	1779.83	41312
541313	17255.42	14526.09	1781.89	41313
541314	17206.50	14523.63	1783.42	41314
541315	17160.51	14521.06	1783.65	41315
541316	17114.28	14517.65	1783.84	41316
541317	17097.00	14515.92	1783.84	41317
541320	17120.70	14479.11	1783.84	41320
541325	17352.23	14489.29	1776.72	41325
541340	17372.56	14400.55	1773.20	41340
541342	17389.13	14324.62	1769.30	41342
541345	17321.44	14420.61	1773.91	41345
541348	17276.21	14417.78	1774.68	41348
541349	17286.03	14374.54	1771.86	41349
541351	17249.43	14333.80	1770.00	41351
541352	17238.72	14379.58	1772.80	41352
541353	17228.09	14426.41	1777.14	41353
541354	17220.44	14464.71	1780.49	41354
541355	17172.91	14465.94	1782.24	41355
541356	17180.61	14427.53	1779.18	41356
541357	17190.78	14386.26	1774.46	41357
541359	17158.59	14340.06	1771.13	41359
541361	17147.97	14432.75	1780.86	41361
541363	17121.28	14451.08	1782.80	41363
541373	17154.09	14485.70	1783.55	41373
541377	17179.06	14487.36	1783.02	41377
541384	17224.74	14490.21	1781.81	41384
541393	17140.41	14400.45	1777.20	41393
541394	17270.26	14492.62	1779.94	41394
541400	17302.80	14494.30	1778.36	41400
541403	17318.10	14495.25	1777.67	41403
541414	17405.72	14400.81	1774.43	41414
560027	17388.50	14949.44	1771.12	60027
560028	17347.37	14927.74	1774.87	60028
560044	17276.56	14954.46	1776.41	60044

Point No.	Northing	Easting	Elevation	Description
560050	17323.83	14965.71	1773.76	60050
560052	17304.69	14930.54	1776.66	60052
560054	17373.49	14966.68	1770.42	60054
560055	17252.74	14896.79	1778.77	60055
560064	17222.16	14938.00	1778.29	60064
560076	17180.51	14935.44	1778.74	60076
560086	17194.19	14893.11	1779.80	60086
560095	17146.90	14928.28	1779.24	60095
560100	17124.46	14944.48	1778.22	60100
560109	17076.12	14941.49	1776.90	60109
560116	17038.81	14935.68	1775.63	60116
560122	17040.39	14910.64	1775.67	60122
560141	17041.74	14883.92	1775.87	60141
560145	17009.90	14889.15	1774.52	60145
560154	17040.32	14839.08	1776.29	60154
560227	17089.32	14539.79	1783.74	60227
560242	17095.15	14472.75	1783.06	60242
560243	17104.75	14463.07	1783.27	60243
560250	17096.73	14449.17	1781.45	60250
560251	17097.83	14428.18	1778.88	60251
560255	17078.91	14414.82	1774.52	60255
560256	17075.07	14436.91	1775.50	60256
560262	17085.08	14459.81	1779.58	60262
560263	17071.00	14459.13	1775.59	60263
560266	17077.69	14504.59	1780.22	60266
560267	17089.97	14505.71	1783.06	60267
560270	17080.18	14549.72	1782.50	60270
560271	17072.67	14549.21	1780.74	60271
560274	17066.83	14593.48	1780.28	60274
560275	17077.60	14594.49	1782.31	60275
560276	17083.30	14595.03	1782.79	60276
560278	17069.02	14638.73	1780.71	60278
560279	17059.41	14637.95	1778.94	60279
560280	17043.91	14636.88	1775.48	60280
560283	17038.13	14681.29	1775.65	60283
560284	17059.83	14682.81	1779.25	60284
560285	17068.99	14683.61	1780.25	60285
560287	17065.19	14727.60	1779.73	60287
560288	17056.40	14727.07	1779.16	60288
560290	17025.78	14725.54	1775.23	60290

Point No.	Northing	Easting	Elevation	Description
560291	17016.70	14770.22	1775.07	60291
560292	17044.66	14772.10	1777.36	60292
560293	17061.61	14772.61	1778.64	60293
560295	17019.12	14815.03	1775.18	60295
560296	17013.08	14859.64	1774.53	60296
580001	16997.41	14900.11	1774.31	80001
580002	16999.40	14853.65	1773.96	80002
580003	17001.77	14821.95	1774.04	80003
580004	17003.44	14779.87	1774.26	80004
580005	17006.03	14713.71	1773.51	80005
580006	17022.19	14665.68	1773.38	80006
580007	17035.35	14631.84	1774.00	80007
580008	17057.22	14593.10	1777.99	80008
580009	17062.45	14548.40	1778.00	80009
580010	17058.67	14511.96	1775.84	80010
580011	17048.88	14425.60	1770.14	80011
580012	17058.41	14429.68	1773.23	80012
580013	17071.94	14397.56	1772.81	80013
580014	17085.40	14377.89	1772.22	80014
580015	17111.42	14343.97	1771.28	80015
580017	17143.16	14299.36	1769.24	80017
580018	17182.05	14290.77	1768.94	80018
580019	17245.14	14277.86	1768.53	80019
580020	17321.19	14261.75	1768.28	80020
580021	17380.16	14249.39	1767.91	80021
580022	17419.03	14242.20	1767.71	80022
580023	17440.69	14237.49	1767.75	80023
580024	17452.13	14236.15	1767.63	80024
580025	17475.92	14238.49	1767.53	80025
580026	17495.40	14245.87	1767.49	80026
580027	17512.67	14257.00	1767.19	80027
580028	17530.51	14275.53	1766.49	80028
580029	17539.10	14297.47	1766.46	80029
580030	17540.60	14316.29	1766.35	80030
580031	17537.82	14341.55	1766.18	80031
580032	17521.44	14391.03	1765.91	80032
580033	17502.19	14452.09	1765.79	80033
580034	17487.24	14490.78	1766.68	80034
580035	17484.02	14557.65	1766.11	80035
580036	17478.62	14607.98	1766.85	80036

Point No.	Northing	Easting	Elevation	Description
580037	17474.36	14657.39	1766.96	80037
580038	17472.61	14707.16	1766.31	80038
580039	17468.07	14757.38	1766.58	80039
580040	17466.90	14807.34	1765.93	80040
580041	17466.33	14857.38	1764.95	80041
580042	17462.78	14907.42	1764.76	80042
580043	17458.59	14955.51	1764.98	80043
580044	17455.55	14987.94	1764.84	80044
580045	17056.63	14415.12	1772.72	80045
580046	16989.64	14949.35	1772.57	80046
580047	16990.25	14899.59	1772.09	80047
580048	16992.74	14853.29	1772.01	80048
580049	16994.11	14821.20	1772.07	80049
580050	16995.83	14779.59	1771.97	80050
580051	16998.88	14711.98	1771.33	80051
580052	17014.20	14662.87	1771.01	80052
580053	17025.67	14625.87	1770.97	80053
580054	17034.72	14597.88	1771.13	80054
580055	17039.22	14544.60	1770.77	80055
580056	17042.43	14502.22	1770.58	80056
580057	17045.70	14463.84	1770.09	80057
580058	17057.72	14464.82	1773.34	80011
580059	17048.23	14412.13	1769.93	80059
580060	17062.72	14391.44	1770.44	80060
580061	17076.27	14370.56	1769.51	80061
580062	17104.10	14337.76	1768.62	80062
580063	17127.05	14309.91	1767.61	80063
5200110	17480.90	14287.71	1768.19	200110
56060001	17432.95	14285.12	1768.54	6060001
560500069	17469.37	14275.77	1768.10	60500069
560500074	17186.33	14303.23	1769.16	60500074
560500075	17249.52	14303.33	1769.11	60500075
560500076	17329.18	14303.87	1769.02	60500076
560500079	17362.20	14303.23	1769.06	60500079

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
20023	520023	17449.434	14957.988	1766.5735	1766.608	0.23	-0.02	-0.03	As-Built
20024	520024	17434.73	14957.805	1767.8725	1767.907	-0.37	-0.07	-0.03	As-Built
20025	520025	17396.376	14927.409	1772.6095	1772.636	-0.21	-0.23	-0.03	As-Built
20027	520027	17449.658	14906.633	1767.1445	1767.193	-0.68	-0.02	-0.05	As-Built
20028	520028	17415.935	14904.005	1771.7105	1771.778	-0.33	-0.04	-0.07	As-Built
20029	520029	17396.937	14903.311	1774.1325	1774.11	0.73	-0.02	0.02	As-Built
20030	520030	17391.283	14855.648	1776.5305	1776.534	0.09	0.30	0.00	As-Built
20031	520031	17415.18	14855.974	1773.6065	1773.594	-0.14	0.07	0.01	As-Built
20032	520032	17439.997	14855.968	1769.7845	1769.789	0.30	-0.07	0.00	As-Built
20035	520035	17446.825	14805.386	1769.5645	1769.615	0.22	-0.13	-0.05	As-Built
20036	520036	17419.802	14805.041	1773.7915	1773.84	0.07	0.25	-0.05	As-Built
20037	520037	17399.941	14804.651	1776.5625	1776.561	0.42	0.12	0.00	As-Built
20039	520039	17451.54	14756.234	1769.4065	1769.447	-0.49	0.00	-0.04	As-Built
20040	520040	17423.585	14754.296	1773.6785	1773.76	-0.33	-0.01	-0.08	As-Built
20041	520041	17399.524	14753.498	1776.5885	1776.666	-0.19	0.34	-0.08	As-Built
20043	520043	17457.259	14706.671	1769.1775	1769.178	-0.25	0.06	0.00	As-Built
20044	520044	17435.23	14705.792	1772.8455	1772.806	-0.02	0.00	0.04	As-Built
20045	520045	17414.615	14704.089	1775.5725	1775.536	-0.01	0.20	0.04	As-Built
20048	520048	17421.466	14651.924	1775.2925	1775.296	-0.35	0.02	0.00	As-Built
20049	520049	17448.936	14655.579	1771.3485	1771.385	-0.42	-0.24	-0.04	As-Built
20050	520050	17463.069	14656.676	1769.1915	1769.194	-0.47	-0.78	0.00	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
20053	520053	17464.703	14607.006	1769.3955	1769.464	-0.16	-0.15	-0.07	As-Built
20054	520054	17433.286	14605.865	1773.7685	1773.744	-0.34	0.06	0.02	As-Built
20057	520057	17443.702	14555.078	1772.2965	1772.349	-0.54	0.02	-0.05	As-Built
20058	520058	17462.102	14555.993	1770.2255	1770.227	-0.41	-0.21	0.00	As-Built
20061	520061	17470.555	14484.224	1768.7985	1768.8	-0.61	0.19	0.00	As-Built
20062	520062	17448.037	14479.625	1770.8665	1770.929	-0.42	0.07	-0.06	As-Built
20065	520065	17461.234	14440.01	1769.7225	1769.788	-0.64	0.20	-0.07	As-Built
20066	520066	17486.733	14447.766	1767.5565	1767.6	-0.24	0.09	-0.04	As-Built
20069	520069	17495.215	14382.648	1768.0605	1768.126	-0.26	0.14	-0.07	As-Built
20070	520070	17469.732	14374.802	1769.6865	1769.753	-0.30	0.27	-0.07	As-Built
20071	520071	17485.234	14327.299	1768.4435	1768.402	-0.08	-0.29	0.04	As-Built
20072	520072	17509.206	14334.073	1767.6725	1767.66	0.00	-0.01	0.01	As-Built
20076	520076	17489.105	14318.103	1768.3205	1768.372	-0.02	0.28	-0.05	As-Built
20079	520079	17486.891	14300.342	1768.1805	1768.264	-0.29	-0.20	-0.08	As-Built
20080	520080	17137.596	14319.014	1770.0915	1770.156	-0.16	-0.11	-0.06	As-Built
41030	541030	17093.113	14819.757	1779.064	1779.033	-0.08	0.07	0.03	As-Built
41047	541047	17356.323	14800.996	1778.869	1778.929	-0.01	0.17	-0.06	As-Built
41082	541082	17395.775	14499.76	1776.327	1776.385	0.09	0.12	-0.06	As-Built
41091	541091	17448.294	14378.492	1771.445	1771.504	-0.34	-0.28	-0.06	As-Built
41092	541092	17450.413	14318.296	1768.973	1768.939	-0.28	0.29	0.03	As-Built
41093	541093	17423.119	14322.688	1769.181	1769.26	-0.03	0.27	-0.08	As-Built
41097	541097	17330.588	14326.538	1769.493	1769.566	0.43	0.27	-0.07	As-Built
41103	541103	17190.193	14337.54	1770.249	1770.345	0.18	0.05	-0.10	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
41106	541106	17144.549	14348.779	1772.011	1772.066	0.15	-0.28	-0.06	As-Built
41108	541108	17111.753	14380.523	1774.143	1774.213	0.13	0.13	-0.07	As-Built
41134	541134	17092.978	14739.592	1780.103	1780.084	0.19	-0.19	0.02	As-Built
41137	541137	17110.516	14652.404	1781.349	1781.302	-0.27	-0.29	0.05	As-Built
41141	541141	17113.729	14562.602	1783.367	1783.402	0.10	-0.01	-0.04	As-Built
41153	541153	17265.588	14467.334	1778.533	1778.568	-0.22	0.44	-0.04	As-Built
41155	541155	17309.101	14475.704	1776.843	1776.917	-0.54	-0.39	-0.07	As-Built
41157	541157	17354.925	14477.621	1776.135	1776.204	-0.26	-0.09	-0.07	As-Built
41163	541163	17367.437	14579.654	1778.431	1778.519	-0.23	0.03	-0.09	As-Built
41231	541231	17320.232	14886.965	1777.603	1777.633	-0.40	0.02	-0.03	As-Built
41232	541232	17272.521	14884.028	1778.826	1778.889	0.21	0.20	-0.06	As-Built
41233	541233	17225.355	14881.584	1779.475	1779.53	0.10	0.38	-0.06	As-Built
41235	541235	17135.195	14876.16	1779.795	1779.86	-0.06	-0.19	-0.06	As-Built
41236	541236	17084.873	14873.104	1778.21	1778.279	-0.13	-0.16	-0.07	As-Built
41240	541240	17063.443	14829.118	1777.914	1777.987	-0.27	-0.12	-0.07	As-Built
41241	541241	17110.809	14831.662	1779.349	1779.374	0.41	-0.16	-0.03	As-Built
41242	541242	17159.023	14834.878	1780.019	1780.072	0.15	-0.04	-0.05	As-Built
41243	541243	17209.566	14838.491	1780.12	1780.15	0.07	-0.03	-0.03	As-Built
41244	541244	17258.094	14841.895	1780.15	1780.194	-0.05	0.22	-0.04	As-Built
41245	541245	17305.839	14843.378	1779.393	1779.471	-0.22	0.02	-0.08	As-Built
41247	541247	17372.889	14847.478	1777.67	1777.755	-0.31	0.31	-0.09	As-Built
41250	541250	17376.079	14802.005	1778.196	1778.289	-0.05	-0.01	-0.09	As-Built
41251	541251	17331.409	14800.01	1779.721	1779.781	-0.11	-0.06	-0.06	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
41252	541252	17282.458	14796.534	1780.584	1780.645	-0.27	0.44	-0.06	As-Built
41253	541253	17237.084	14793.564	1780.625	1780.716	0.17	0.21	-0.09	As-Built
41254	541254	17191.033	14790.942	1780.52	1780.542	0.07	0.01	-0.02	As-Built
41255	541255	17145.04	14788.465	1780.46	1780.429	0.02	0.03	0.03	As-Built
41256	541256	17098.377	14785.853	1779.594	1779.61	0.05	-0.18	-0.02	As-Built
41257	541257	17069.08	14784.109	1778.734	1778.753	-0.01	-0.26	-0.02	As-Built
41260	541260	17074.017	14739.719	1779.737	1779.804	0.15	0.06	-0.07	As-Built
41262	541262	17170.198	14745.406	1780.946	1781.007	-0.17	0.12	-0.06	As-Built
41263	541263	17217.261	14748.564	1780.975	1781.047	0.25	-0.09	-0.07	As-Built
41264	541264	17265.417	14750.947	1781.127	1781.195	-0.03	-0.13	-0.07	As-Built
41265	541265	17312.866	14753.972	1780.726	1780.734	-0.21	-0.05	-0.01	As-Built
41266	541266	17360.232	14756.112	1779.009	1779.042	-0.08	-0.02	-0.03	As-Built
41267	541267	17378.607	14757.935	1778.003	1778.059	-0.19	-0.22	-0.06	As-Built
41275	541275	17148.435	14698.177	1781.276	1781.348	0.00	0.14	-0.07	As-Built
41276	541276	17102.635	14695.911	1780.807	1780.822	0.04	-0.20	-0.01	As-Built
41277	541277	17079.811	14694.665	1780.65	1780.732	-0.24	-0.18	-0.08	As-Built
41280	541280	17084.708	14651.061	1781.061	1781.137	-0.02	-0.16	-0.08	As-Built
41281	541281	17129.493	14653.062	1781.472	1781.494	0.03	-0.13	-0.02	As-Built
41282	541282	17177.524	14655.645	1781.73	1781.741	-0.26	0.03	-0.01	As-Built
41283	541283	17224.696	14658.832	1781.97	1782.031	-0.08	-0.14	-0.06	As-Built
41284	541284	17271.059	14661.199	1781.829	1781.87	0.07	-0.13	-0.04	As-Built
41285	541285	17318.068	14663.394	1780.886	1780.932	-0.20	0.10	-0.05	As-Built
41286	541286	17364.901	14666.981	1779.012	1779.084	-0.18	-0.09	-0.07	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
41287	541287	17384.018	14668.896	1778.073	1778.128	-0.09	-0.10	-0.05	As-Built
41290	541290	17386.913	14623.952	1777.833	1777.927	-0.43	-0.14	-0.09	As-Built
41291	541291	17343.322	14620.727	1779.827	1779.853	-0.01	-0.29	-0.03	As-Built
41292	541292	17295.443	14618.594	1781.387	1781.41	-0.18	-0.27	-0.02	As-Built
41293	541293	17248.057	14615.346	1782.307	1782.38	-0.11	-0.07	-0.07	As-Built
41294	541294	17201.981	14612.701	1782.698	1782.735	0.00	-0.36	-0.04	As-Built
41295	541295	17157.85	14609.769	1782.374	1782.468	-0.05	-0.17	-0.09	As-Built
41296	541296	17112.46	14606.751	1782.444	1782.442	-0.13	-0.04	0.00	As-Built
41297	541297	17089.544	14605.804	1782.434	1782.453	0.12	-0.07	-0.02	As-Built
41299	541299	17087.191	14561.519	1783.596	1783.504	0.49	0.22	0.09	As-Built
41300	541300	17093.758	14562.365	1783.572	1783.62	0.31	0.20	-0.05	As-Built
41301	541301	17136.319	14565.122	1783.102	1783.187	0.24	0.31	-0.08	As-Built
41302	541302	17185.15	14567.728	1783.336	1783.38	0.11	0.06	-0.04	As-Built
41303	541303	17232.313	14571.03	1782.973	1783.032	-0.43	0.14	-0.06	As-Built
41304	541304	17277.456	14573.369	1781.746	1781.828	-0.83	0.01	-0.08	As-Built
41305	541305	17325.678	14576.067	1780.044	1780.132	0.40	-0.41	-0.09	As-Built
41307	541307	17389.709	14578.7	1777.492	1777.553	-0.07	0.10	-0.06	As-Built
41310	541310	17393.249	14534.233	1777.039	1777.056	-0.06	-0.04	-0.02	As-Built
41311	541311	17349.948	14531.414	1778.023	1778.065	-0.22	0.16	-0.04	As-Built
41312	541312	17303.093	14528.899	1779.735	1779.829	0.10	-0.29	-0.09	As-Built
41313	541313	17255.124	14526.177	1781.848	1781.894	-0.30	0.09	-0.05	As-Built
41314	541314	17206.68	14523.612	1783.391	1783.417	0.18	-0.01	-0.03	As-Built
41315	541315	17160.498	14520.915	1783.64	1783.65	-0.01	-0.15	-0.01	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
41316	541316	17114.42	14517.812	1783.846	1783.844	0.14	0.16	0.00	As-Built
41317	541317	17097.258	14516.07	1783.79	1783.84	0.26	0.15	-0.05	As-Built
41320	541320	17120.633	14479.37	1783.864	1783.842	-0.07	0.26	0.02	As-Built
41325	541325	17351.985	14489.52	1776.666	1776.717	-0.24	0.23	-0.05	As-Built
41340	541340	17372.289	14401.171	1773.147	1773.201	-0.27	0.63	-0.05	As-Built
41342	541342	17388.641	14324.744	1769.23	1769.299	-0.49	0.12	-0.07	As-Built
41345	541345	17321.066	14420.601	1773.841	1773.912	-0.38	-0.01	-0.07	As-Built
41348	541348	17275.999	14418.18	1774.641	1774.681	-0.21	0.41	-0.04	As-Built
41349	541349	17285.897	14374.725	1771.792	1771.858	-0.13	0.18	-0.07	As-Built
41351	541351	17249.576	14333.763	1769.947	1769.997	0.15	-0.04	-0.05	As-Built
41352	541352	17238.554	14379.715	1772.72	1772.795	-0.16	0.13	-0.08	As-Built
41353	541353	17228.192	14426.437	1777.047	1777.137	0.10	0.03	-0.09	As-Built
41354	541354	17220.423	14464.879	1780.45	1780.486	-0.01	0.17	-0.04	As-Built
41355	541355	17173.207	14465.955	1782.205	1782.237	0.30	0.01	-0.03	As-Built
41356	541356	17180.498	14427.564	1779.142	1779.178	-0.12	0.04	-0.04	As-Built
41357	541357	17190.857	14386.815	1774.394	1774.462	0.08	0.55	-0.07	As-Built
41359	541359	17158.39	14340.077	1771.114	1771.133	-0.20	0.02	-0.02	As-Built
41361	541361	17148.136	14432.621	1780.774	1780.858	0.17	-0.13	-0.08	As-Built
41363	541363	17121.208	14451.312	1782.753	1782.802	-0.07	0.23	-0.05	As-Built
41373	541373	17153.874	14485.87	1783.472	1783.554	-0.21	0.17	-0.08	As-Built
41377	541377	17179.192	14487.39	1783.027	1783.022	0.13	0.03	0.01	As-Built
41384	541384	17224.719	14490.128	1781.737	1781.805	-0.02	-0.08	-0.07	As-Built
41393	541393	17140.371	14400.766	1777.121	1777.197	-0.04	0.31	-0.08	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
41394	541394	17269.965	14492.795	1779.918	1779.935	-0.30	0.18	-0.02	As-Built
41400	541400	17302.333	14494.617	1778.284	1778.355	-0.47	0.32	-0.07	As-Built
41403	541403	17317.754	14495.436	1777.612	1777.67	-0.34	0.19	-0.06	As-Built
41414	541414	17406.035	14401.191	1774.454	1774.427	0.32	0.39	0.03	As-Built
60027	560027	17388.223	14949.106	1771.081	1771.124	-0.27	-0.33	-0.04	As-Built
60028	560028	17347.437	14927.689	1774.827	1774.865	0.06	-0.05	-0.04	As-Built
60044	560044	17276.454	14954.325	1776.343	1776.408	-0.10	-0.13	-0.06	As-Built
60050	560050	17323.861	14965.97	1773.673	1773.762	0.03	0.26	-0.09	As-Built
60052	560052	17304.361	14930.402	1776.641	1776.66	-0.33	-0.14	-0.02	As-Built
60054	560054	17373.264	14966.722	1770.365	1770.419	-0.23	0.04	-0.05	As-Built
60055	560055	17252.43	14896.764	1778.724	1778.768	-0.31	-0.02	-0.04	As-Built
60064	560064	17222.32	14938.112	1778.224	1778.285	0.16	0.11	-0.06	As-Built
60076	560076	17180.59	14935.488	1778.738	1778.737	0.08	0.05	0.00	As-Built
60086	560086	17194.186	14893.195	1779.731	1779.803	0.00	0.09	-0.07	As-Built
60095	560095	17147.272	14927.919	1779.214	1779.243	0.37	-0.36	-0.03	As-Built
60100	560100	17124.646	14944.392	1778.137	1778.219	0.19	-0.09	-0.08	As-Built
60109	560109	17076.068	14941.045	1776.821	1776.901	-0.06	-0.45	-0.08	As-Built
60116	560116	17038.77	14935.747	1775.564	1775.63	-0.04	0.07	-0.07	As-Built
60122	560122	17040.511	14910.387	1775.672	1775.671	0.12	-0.26	0.00	As-Built
60141	560141	17041.449	14883.801	1775.783	1775.87	-0.29	-0.12	-0.09	As-Built
60145	560145	17009.417	14889.056	1774.456	1774.523	-0.48	-0.10	-0.07	As-Built
60154	560154	17040.285	14838.743	1776.287	1776.293	-0.03	-0.34	-0.01	As-Built
60227	560227	17090.085	14539.779	1783.69	1783.743	0.76	-0.01	-0.05	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
60242	560242	17094.933	14472.957	1783.101	1783.055	-0.22	0.20	0.05	As-Built
60243	560243	17104.603	14462.965	1783.322	1783.269	-0.15	-0.10	0.05	As-Built
60250	560250	17096.438	14449.288	1781.534	1781.447	-0.30	0.12	0.09	As-Built
60251	560251	17097.815	14428.187	1778.83	1778.882	-0.01	0.01	-0.05	As-Built
60255	560255	17079.373	14414.742	1774.451	1774.52	0.47	-0.08	-0.07	As-Built
60256	560256	17075.399	14436.943	1775.423	1775.504	0.33	0.03	-0.08	As-Built
60262	560262	17084.743	14460.226	1779.553	1779.577	-0.34	0.41	-0.02	As-Built
60263	560263	17071.33	14459.173	1775.51	1775.587	0.33	0.05	-0.08	As-Built
60266	560266	17077.931	14504.557	1780.217	1780.221	0.24	-0.03	0.00	As-Built
60267	560267	17090.226	14505.566	1783.02	1783.057	0.25	-0.14	-0.04	As-Built
60270	560270	17080.714	14549.601	1782.494	1782.504	0.54	-0.11	-0.01	As-Built
60271	560271	17073.326	14549.152	1780.672	1780.738	0.66	-0.06	-0.07	As-Built
60274	560274	17067.272	14593.703	1780.251	1780.282	0.44	0.22	-0.03	As-Built
60275	560275	17077.668	14594.608	1782.248	1782.31	0.07	0.12	-0.06	As-Built
60276	560276	17083.422	14594.844	1782.772	1782.79	0.13	-0.18	-0.02	As-Built
60278	560278	17068.921	14638.632	1780.638	1780.706	-0.10	-0.10	-0.07	As-Built
60279	560279	17059.783	14638.025	1778.937	1778.939	0.37	0.08	0.00	As-Built
60280	560280	17044.01	14636.996	1775.39	1775.476	0.10	0.12	-0.09	As-Built
60283	560283	17038.756	14681.213	1775.595	1775.652	0.62	-0.08	-0.06	As-Built
60284	560284	17059.607	14682.608	1779.238	1779.246	-0.22	-0.20	-0.01	As-Built
60285	560285	17069.062	14683.222	1780.252	1780.245	0.07	-0.39	0.01	As-Built
60287	560287	17064.935	14727.481	1779.808	1779.73	-0.25	-0.12	0.08	As-Built
60288	560288	17056.554	14726.975	1779.171	1779.16	0.15	-0.09	0.01	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
60290	560290	17026.535	14725.542	1775.165	1775.227	0.76	0.00	-0.06	As-Built
60291	560291	17016.797	14770.182	1775.068	1775.067	0.10	-0.04	0.00	As-Built
60292	560292	17044.437	14771.555	1777.436	1777.359	-0.22	-0.55	0.08	As-Built
60293	560293	17061.643	14772.436	1778.648	1778.636	0.03	-0.18	0.01	As-Built
60295	560295	17019.354	14814.974	1775.187	1775.18	0.24	-0.06	0.01	As-Built
60296	560296	17012.964	14859.781	1774.449	1774.525	-0.12	0.14	-0.08	As-Built
80001	580001	16997.4474	14899.9078	1774.2577	1774.307	0.03	-0.20	-0.05	As-Built
80002	580002	16999.7161	14853.6306	1773.9046	1773.961	0.32	-0.01	-0.06	As-Built
80003	580003	17001.8754	14821.5983	1773.9961	1774.043	0.11	-0.35	-0.05	As-Built
80004	580004	17003.726	14779.9766	1774.1708	1774.26	0.29	0.10	-0.09	As-Built
80005	580005	17006.4051	14713.8508	1773.4663	1773.514	0.38	0.14	-0.05	As-Built
80006	580006	17022.4278	14665.6009	1773.3257	1773.376	0.24	-0.08	-0.05	As-Built
80007	580007	17035.8707	14632.0392	1773.9614	1774	0.52	0.20	-0.04	As-Built
80008	580008	17058.0536	14593.1078	1777.9212	1777.987	0.84	0.01	-0.07	As-Built
80009	580009	17062.92	14548.361	1777.9388	1777.997	0.47	-0.04	-0.06	As-Built
80010	580010	17059.1629	14512.1387	1775.7551	1775.836	0.50	0.17	-0.08	As-Built
80011	580058	17057.6232	14464.9072	1773.2977	1773.338	-0.09	0.09	-0.04	As-Built
80012	580012	17058.8434	14429.7707	1773.1705	1773.229	0.44	0.09	-0.06	As-Built
80013	580013	17071.6238	14397.5858	1772.7385	1772.81	-0.31	0.02	-0.07	As-Built
80014	580014	17085.5384	14377.7696	1772.1576	1772.221	0.14	-0.12	-0.06	As-Built
80015	580015	17111.9918	14344.1136	1771.2565	1771.278	0.58	0.14	-0.02	As-Built
80017	580017	17143.1369	14299.5235	1769.1629	1769.236	-0.02	0.16	-0.07	As-Built
80018	580018	17182.0975	14290.9726	1768.8734	1768.941	0.05	0.20	-0.07	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
80019	580019	17245.3238	14277.611	1768.572	1768.528	0.19	-0.25	0.04	As-Built
80020	580020	17321.6847	14261.5349	1768.2327	1768.281	0.49	-0.21	-0.05	As-Built
80021	580021	17380.2781	14249.3254	1767.9471	1767.91	0.12	-0.06	0.04	As-Built
80022	580022	17418.9155	14241.3707	1767.7903	1767.711	-0.11	-0.83	0.08	As-Built
80023	580023	17440.5694	14237.0999	1767.7573	1767.753	-0.12	-0.39	0.00	As-Built
80024	580024	17452.0464	14235.6247	1767.6909	1767.625	-0.08	-0.53	0.07	As-Built
80025	580025	17475.8774	14237.8072	1767.5688	1767.529	-0.04	-0.68	0.04	As-Built
80026	580026	17495.4968	14245.3258	1767.5283	1767.485	0.10	-0.55	0.04	As-Built
80027	580027	17512.389	14256.5429	1767.2174	1767.19	-0.28	-0.46	0.03	As-Built
80028	580028	17530.0711	14275.1844	1766.4828	1766.486	-0.44	-0.35	0.00	As-Built
80029	580029	17539.0541	14297.3356	1766.3812	1766.459	-0.04	-0.13	-0.08	As-Built
80030	580030	17540.6619	14315.9233	1766.3113	1766.347	0.06	-0.36	-0.04	As-Built
80031	580031	17537.0321	14341.3634	1766.1522	1766.183	-0.79	-0.19	-0.03	As-Built
80032	580032	17521.9408	14390.8601	1765.8876	1765.91	0.50	-0.17	-0.02	As-Built
80033	580033	17502.706	14452.1689	1765.7882	1765.785	0.52	0.08	0.00	As-Built
80034	580034	17487.7292	14490.5055	1766.6818	1766.681	0.49	-0.28	0.00	As-Built
80035	580035	17484.5064	14557.5253	1766.1005	1766.11	0.49	-0.13	-0.01	As-Built
80036	580036	17478.6389	14607.7727	1766.8262	1766.853	0.02	-0.20	-0.03	As-Built
80037	580037	17474.5587	14657.3899	1766.973	1766.964	0.20	0.00	0.01	As-Built
80038	580038	17472.8794	14707.4417	1766.311	1766.313	0.27	0.28	0.00	As-Built
80039	580039	17468.4857	14757.4397	1766.5528	1766.58	0.42	0.06	-0.03	As-Built
80040	580040	17466.9124	14807.2856	1765.8605	1765.934	0.02	-0.05	-0.07	As-Built
80041	580041	17466.1832	14857.4704	1764.8794	1764.952	-0.15	0.09	-0.07	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
80042	580042	17463.162	14907.3089	1764.6687	1764.763	0.39	-0.11	-0.09	As-Built
80043	580043	17458.885	14955.3105	1764.9203	1764.977	0.29	-0.20	-0.06	As-Built
80044	580044	17456.4686	14987.9413	1764.9281	1764.838	0.92	0.00	0.09	As-Built
80045	580045	17057.1591	14415.1842	1772.6984	1772.716	0.53	0.07	-0.02	As-Built
80046	580046	16989.668	14949.227	1772.5614	1772.567	0.03	-0.12	-0.01	As-Built
80047	580047	16990.895	14899.652	1771.9498	1772.089	0.64	0.06	-0.14	As-Built
80048	580048	16992.73	14853.311	1771.8541	1772.005	-0.01	0.03	-0.15	As-Built
80049	580049	16994.197	14821.247	1771.9475	1772.071	0.08	0.05	-0.12	As-Built
80050	580050	16995.957	14779.662	1771.8776	1771.965	0.12	0.07	-0.09	As-Built
80051	580051	16998.878	14712.012	1771.2935	1771.327	-0.01	0.03	-0.03	As-Built
80052	580052	17014.2615	14662.9908	1770.9565	1771.005	0.06	0.12	-0.05	As-Built
80053	580053	17025.841	14625.931	1770.8091	1770.974	0.17	0.07	-0.16	As-Built
80054	580054	17034.748	14597.906	1770.9492	1771.134	0.03	0.03	-0.18	As-Built
80055	580055	17039.146	14544.6	1770.6478	1770.768	-0.07	0.00	-0.12	As-Built
80056	580056	17042.409	14502.389	1770.4569	1770.577	-0.02	0.17	-0.12	As-Built
80057	580057	17045.647	14463.953	1770.0736	1770.085	-0.06	0.11	-0.01	As-Built
80058	580011	17048.72	14425.385	1770.1462	1770.143	-0.16	-0.21	0.00	As-Built
80059	580059	17048.154	14412.256	1769.784	1769.931	-0.08	0.12	-0.15	As-Built
80060	580060	17062.5993	14391.4201	1770.3773	1770.441	-0.12	-0.02	-0.06	As-Built
80061	580061	17077.01	14370.634	1769.4569	1769.512	0.74	0.07	-0.06	As-Built
80062	580062	17104.419	14337.875	1768.6165	1768.624	0.32	0.12	-0.01	As-Built
80063	580063	17127.3458	14310.045	1767.5585	1767.607	0.30	0.14	-0.05	As-Built
200110	5200110	17480.886	14287.589	1768.1485	1768.189	-0.02	-0.12	-0.04	As-Built

CAMU (BMI South) - Final Coversoil System As-Built vs. Design Comparison

Design Point Number	As-Built Point Number	Design Northing	Design Easting	Design Elevation	As-built Elevation	Delta Northing	Delta Easting	Delta Elevation	Notes
6060001	56060001	17433.194	14284.997	1768.6275	1768.539	0.24	-0.12	0.09	As-Built
60500069	560500069	17469.267	14275.553	1768.0805	1768.1	-0.11	-0.22	-0.02	As-Built
60500074	560500074	17186.219	14303.237	1769.0805	1769.164	-0.11	0.01	-0.08	As-Built
60500075	560500075	17249.284	14303.297	1769.0675	1769.114	-0.23	-0.03	-0.05	As-Built
60500076	560500076	17329.239	14303.502	1769.0455	1769.024	0.06	-0.37	0.02	As-Built
60500079	560500079	17362.451	14303.052	1769.0935	1769.057	0.25	-0.18	0.04	As-Built

DRAWINGS

The following Measurement Drawings, Topographic Survey Drawings and/or Cross-Section Drawings are attached.

1. **BMI South Final Coversoil System As-Built, dated 5/24/2010.**

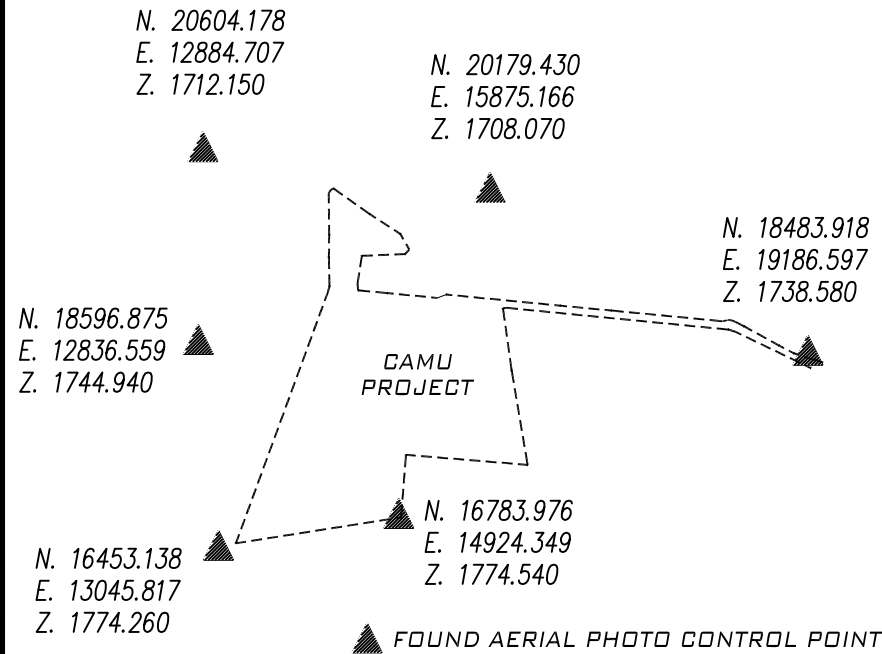
This drawing depicts the Final Coversoil System As-Built Conditions within the BMI South Area of the CAMU. It also contains information regarding the control network utilized and other pertinent survey data. Due to the scale at which this drawing was prepared, the intended correlation representation may not be entirely clear. In ALL cases the Survey Data herein provided takes precedence over any graphical representation(s).

2. **CAMU – BMI South – Final Cover soil Volume, dated 5/27/2010.**

This drawing depicts the Final Cover soil System As-Built Conditions (Surface 2) within the BMI South Area of the CAMU as of 5/13/2010 and the Final Sub-Grade As-Built surface (Surface 1) as reported by ABCS in that certain report prepared under Task No. 2010.03.29.01-B. A Volumetric comparison of these surfaces is also provided. Information regarding the control network utilized and other pertinent survey data are also provided. Due to the scale at which this drawing was prepared, the intended correlation representation may not be entirely clear. In ALL cases the Survey Data herein provided takes precedence over any graphical representation(s).

PROJECT CONTROL

1" = 2000'



SURFACE DESCRIPTION

THE SURFACE SHOWN HEREON REPRESENTS THE FINAL COVERSOIL AS-BUILT CONDITIONS PURSUANT TO THE RESPECTIVE FINAL COVERSOIL VERIFICATION. THIS SURFACE WAS GENERATED BASED UPON AS-BUILT SURVEY DATA ACQUIRED BY ABGS THRU 5/13/2010.



BENCHMARK

CLARK COUNTY BENCHMARK (6C22 2E4), BEING A RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CENTERLINE ISLAND, 4' WEST OF THE NOSE IN THE MIDDLE OF SUNSET ROAD, WEST SIDE OF THE INTERSECTION OF BOULDER HIGHWAY AND SUNSET ROAD.

PUBLISHED ELEVATION - 505.816 METERS = 1659.50 FEET
NAVD 1988 DATUM - PUBLISHED (2003)

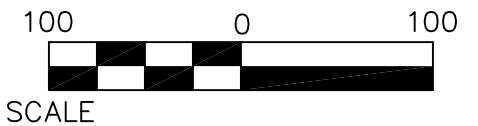
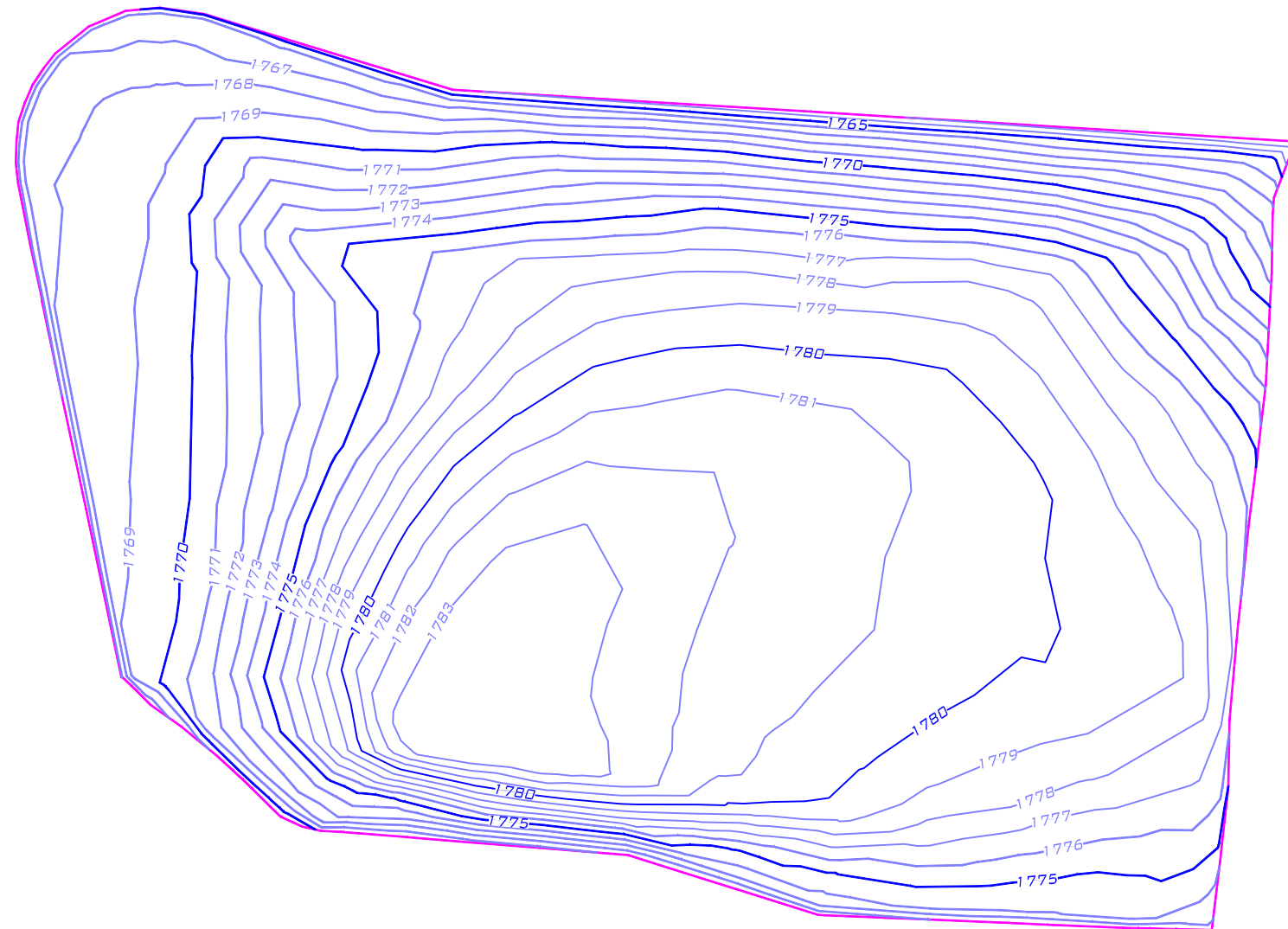
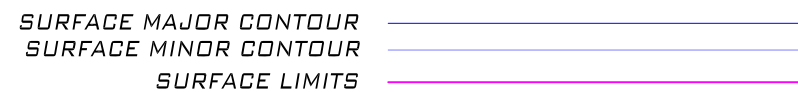
BASIS OF BEARINGS


SOUTH 85°36'52" WEST, BEING THE BEARING BETWEEN CLARK COUNTY GIS CONTROL POINTS "CC-GIS 848" AND CC-GIS W51", AS SHOWN ON THE MAP IN FILE 88 OF SURVEYS, PAGE 53, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

COORDINATE SYSTEM

THE COORDINATE SYSTEM AND ASSOCIATED BEARING ROTATION INFORMATION WAS ESTABLISHED AND PROVIDED BY PBS&J.

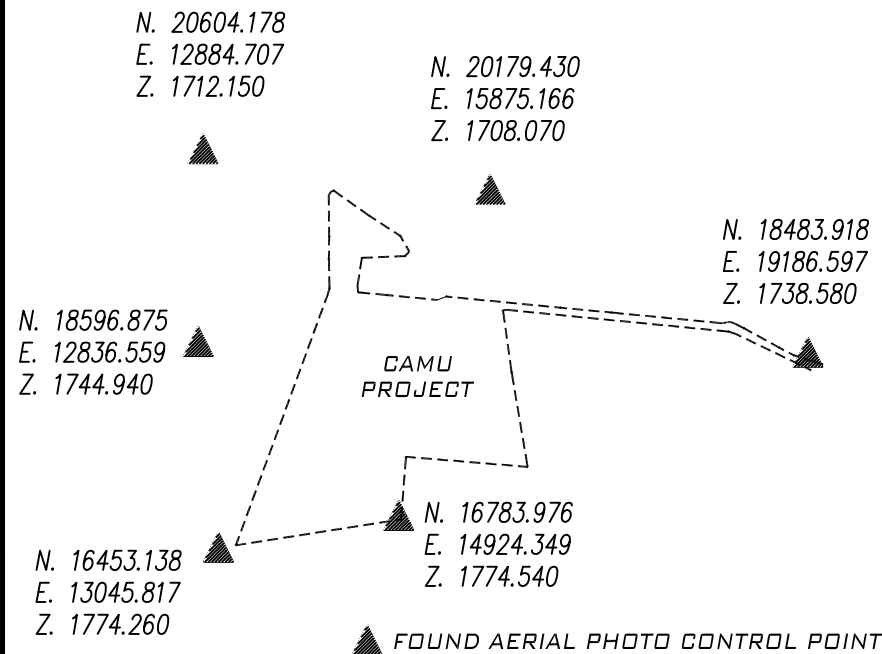
LINE LEGEND



NO.	REVISION	DATE	CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)			ABSOLUTE BOUNDARY & CONTROL SOLUTIONS	Date:	May 24, 2010
△			<i>BMI SOUTH FINAL COVERSOIL SYSTEM AS-BUILT</i>			6440 SKY POINT DRIVE	Drawn:	C. Givant
△						SUITE 140 - PMB 321	Checked:	C. Givant
△						LAS VEGAS, NV. 89131	Task:	2010.04.21.01-B
△						(702) 953-7452	Sheet No. 1 of 1	
△			(702) 987-5943 FAX					
			FIELD SURVEY DATES: VARIOUS THRU 5/13/2010			WWW.AB-CS.COM		
			FIELD CREW: C.A.G., M.C.		PROJECT # 2008.06.23.01			

PROJECT CONTROL

1" = 2000'



BENCHMARK

CLARK COUNTY BENCHMARK (6C22 2E4), BEING A RIVET AND SQUARE ALUMINUM PLATE IN A CONCRETE CENTERLINE ISLAND, 4' WEST OF THE NOSE IN THE MIDDLE OF SUNSET ROAD, WEST SIDE OF THE INTERSECTION OF BOULDER HIGHWAY AND SUNSET ROAD.

PUBLISHED ELEVATION - 505.816 METERS = 1659.50 FEET
NAVD 1988 DATUM - PUBLISHED (2003)

BASIS OF BEARINGS

SOUTH 85°36'52" WEST, BEING THE BEARING BETWEEN CLARK COUNTY GIS CONTROL POINTS "CC-GIS 848" AND CC-GIS W51", AS SHOWN ON THE MAP IN FILE 88 OF SURVEYS, PAGE 53, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

COORDINATE SYSTEM

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LINE LEGEND

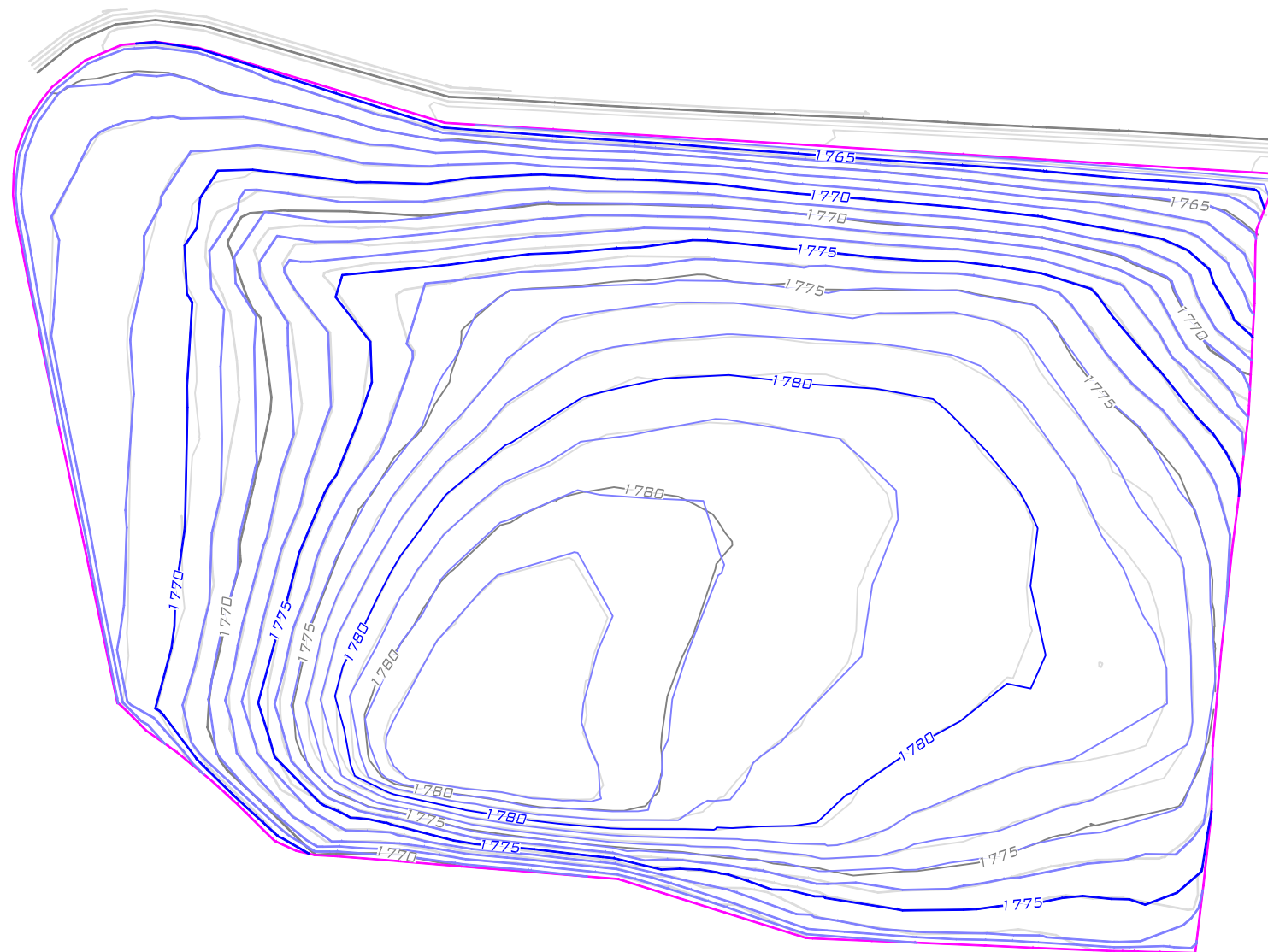
- SURFACE 1 - MAJOR CONTOUR
- SURFACE 1 - MINOR CONTOUR
- SURFACE 2 - MAJOR CONTOUR
- SURFACE 2 - MINOR CONTOUR
- SURFACE 2 LIMITS

SURFACE 1

THE SURFACE SHOWN HEREON AS "SURFACE 1" REPRESENTS THE PRE-LINER SUB-GRADE AS-BUILT SURFACE AS ORIGINALLY REPORTED IN THAT CERTAIN REPORT PREPARED BY ABSOLUTE BOUNDARY & CONTROL SOLUTIONS (ABCS) UNDER TASK NUMBER 2010.03.29.01-A, DATED MARCH 29, 2010 AND SUBSEQUENTLY FINALIZED IN A REPORT PREPARED UNDER TASK NO. 2010.03.29.01-B, DATED MAY 27, 2010. THIS SURFACE WAS RAISED (+0.0625') TO ACCOUNT FOR THE THICKNESS OF THE INSTALLED GEOSYNTHETIC MATERIALS.

SURFACE 2

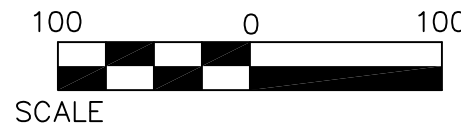
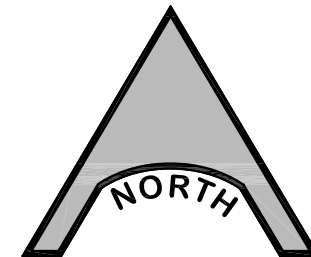
THE SURFACE SHOWN HEREON AS "SURFACE 2" REPRESENTS THE FINAL COVERSOIL AS-BUILT CONDITIONS PURSUANT TO THE RESPECTIVE FINAL COVERSOIL VERIFICATION. THIS SURFACE WAS GENERATED BASED UPON AS-BUILT SURVEY DATA ACQUIRED BY ABCS THRU 5/13/2010.



SURFACE VOLUME COMPARISON

A COMPARISON FROM SURFACE 1 TO SURFACE 2 WAS PERFORMED VIA COMPUTER METHODS IN AUTOCAD CIVIL 3D VERSION 2010. THIS COMPARISON RESULTED IN A NET QUANTITY OF:

FILL: 24,023 CUBIC YARDS (INCLUDING GRAVEL MULCH)



NO.	REVISION	DATE
△		
△		
△		
△		

CORRECTIVE ACTION MANAGEMENT UNIT - (CAMU)

BMI SOUTH FINAL COVERSOIL
SYSTEM PLACEMENT VOLUME

FIELD SURVEY DATES: VARIOUS THRU 5/13/2010
FIELD CREW: C.A.G., M.C.

PROJECT # 2008.06.23.01

ABSOLUTE BOUNDARY & CONTROL SOLUTIONS

ABSOLUTE

ABSOLUTE BOUNDARY & CONTROL SOLUTIONS

6440 SKY POINT DRIVE
SUITE 140 - PMB 321
LAS VEGAS, NV. 89131
(702) 953-7452
(702) 987-5943 FAX
WWW.AB-CS.COM

Date:	May 27, 2010
Drawn:	C. Givant
Checked:	C. Givant
Task:	2010.04.21.01-B
Sheet No.	1 of 1

ELECTRONIC FILES

The Compact Disk (CD) included in the pocket at the end of this report contains the following Directories and Files:

PDF Files (.pdf)

The following files are adobe Portable Document Files which can be viewed using a readily available free version of Adobe Acrobat Reader.

1. (Report) – BMI South - Final Coversoil System ASB
2. 2010-05-13 (BMI South CVR Verification)
3. 2010-5-12 (BMI-S Eastern Edge ASb Topo)

CAD Files (.dwg)

The following files are AutoCAD Drawing files created in Civil 3D 2011. Filenames proceeded by “2007” have been exported or “saved down” to a version 2007 drawing file.

1. 2010-05-24 (BMI South) - Final Coversoil ASB
2. 2010-05-24 (BMI South)- Final Coversoil ASB – 2007
3. 2010-05-27 (BMI South) - Final Coversoil Volume – 2007
4. 2010-05-27 (BMI South) - Final Coversoil Volume

Coordinate Files (.csv)

The following files are Comma Separated Value Files in the following format:

Point Name, Northing, Easting, Elevation, Description

1. BMI South FG ASB

Raw Data Files (.dc)

The following files are Trimble Data Collector (.DC) files that contain the Raw Field Data.

1. 2010-05-13 (BMI South CVR Verification) – CAG
2. 2010-5-12 (BMI-S Eastern Edge ASb Topo)-MC

APPENDIX H

Warranties



LIMITED MATERIAL WARRANTY

REQUESTED BY: Environmental Specialties, Inc.
PROJECT: Landwell/Basic Remediation Restoration Project, South Closure
TYPE MATERIAL: 60 mil HDPE Microspike®
LOCATION: Henderson, NV

The company, referred to herein as AGRU AMERICA, warrants that AGRU AMERICA liners will correspond to the specifications as indicated in AGRU AMERICA technical records, catalogs, guidelines and test certificates at the time when sold.

AGRU AMERICA warrants that the material is faultless and resistant for a period of twenty (20) years, prorated from the point of time sold when properly installed, covered and used for: Pond, Exposed.

AGRU AMERICA's liability under this warranty is not applicable when damage is caused by:

- Natural phenomena such as thunderstorms, floods, earthquakes, act's of war or other acts of God;
- Chemicals which are not suitable for HDPE liners according to chemical resistance guides or from experience.

Further, AGRU AMERICA is not liable for damages due to the misapplication, incorrect installation, and damages resulting from any kind of inadequate handling. In the event that any defects are noticed in the liner, AGRU AMERICA must be notified in writing within thirty (30) days.

AGRU AMERICA shall be given an opportunity to ascertain the cause of damages. AGRU AMERICA reserves the right to decide how damages will be settled.

Under no circumstances will AGRU AMERICA assume liability for consequential damages due to defective liner or incorrect installation. AGRU AMERICA will not be responsible for failures arising from incorrect welding of seams in the installation.

Further, AGRU AMERICA's warranty will be void in the event that the buyer performs repairs or makes alterations without the express approval of AGRU AMERICA in writing. AGRU AMERICA's maximum liability under this warranty will not exceed the purchase price of liner and will only be in force when payment has been made in full and further claims regardless of the legal suppositions are not applicable.

This warranty is only valid on condition that the generally approved technical standards and in particular the guidelines for the installation of the liner are followed and only after full bank funding of this project.

For AGRU AMERICA, Inc.

Authorized Official

(Date)

Paul W. Barker, Vice President – (04/23/10)



7943 Pecue Lane, Suite A. Baton Rouge, LA 70809

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.
ONE-YEAR INSTALLATION
LIMITED WARRANTY
FOR GEOSYNTHETIC MATERIAL INSTALLATION ONLY

Project: Landwell/Basic Remediation Restoration Project- South Closure.

Subject to the terms and conditions set forth below, ESI warrants to Basic Remediation Company that the installation of HDPE membrane liner, geosynthetic clay liner (GCL) and geocomposite sold to Basic Remediation Company pursuant to project number 07-11-1271 at the above referenced Project was performed in a good and workmanlike manner for a period of one year from the date upon which installation was completed.

The Warranty does not cover any damage to the HDPE liner, GCL or geocomposite material, or defects in the HDPE liner, GCL or geocomposite material found to have been a result of misuse, abuse or conditions existing after installation including, but not limited to, malicious mischief; vandalism; sabotage; fire; acts of God; acts of the public enemy; acts of war or public rebellion; severe weather conditions of all types; damage due to any of the following: ice, wind, subsidence, chemicals harmful to the liner, GCL or geocomposite, machinery, foreign objects or animals. The HDPE liner, GCL and geocomposite material will be warranted by the manufacturer only, not Environmental Specialties International, Inc.

In the event circumstances are found to exist which Basic Remediation Company believes may give rise to a claim under the Warranty, the following procedure shall be followed:

- a. Basic Remediation Company shall give ESI written notice of the facts and circumstances of said claim within 10 days of becoming aware of said facts and circumstances. Said notice shall be sent by registered or certified mail, return receipt requested, postage prepaid, addressed to Kevin Simms, ESI 7943 Pecue Lane, Suite A, Baton Rouge, LA 70809. The words "WARRANTY CLAIM" shall be clearly marked on the face of the envelope in the lower right hand corner. Said notice shall contain, at a minimum, the name and address of the owner, the name and address of the installation, the date upon which the installation was completed and the facts known to Basic Remediation Company upon which the claim is based. Failure to provide ESI with timely notice of the claim shall void the Warranty.



TEL: (225) 291-2700 FAX: (225) 291-2788 URL: www.ESILiners.com

- b. Within twenty days after receipt of the notice described in paragraph a, above, ESI shall inspect the allegedly defective HDPE liner, GCL and geocomposite. Basic Remediation Company shall pay the expenses incurred by ESI in making the inspection, including current per diem rates for personnel involved in making the inspection, in the event ESI determines that the claim is not covered by the Warranty.
- c. BASIC REMEDIATION COMPANY SHALL NOT REPAIR, REMOVE, ALTER, OR DISTURB ANY HDPE LINER, GCL OR GEOCOMPOSITE NOR SHALL BASIC REMEDIATION COMPANY ALLOW ANYONE ELSE TO REPAIR, REPLACE, REMOVE, ALTER, OR DISTURB ANY HDPE LINER, GCL OR GEOCOMPOSITE PRIOR TO SUCH INSPECTION PROVIDED; HOWEVER, THAT BASIC REMEDIATION COMPANY MAY TAKE EMERGENCY ACTION NECESSARY TO PREVENT DAMAGE TO PERSONS, PROPERTY OR THE ENVIRONMENT. A FAILURE TO STRICTLY COMPLY WITH THIS PARAGRAPH SHALL VOID THE WARRANTY.
- d. If it is determined that the claim is covered by the Warranty, ESI shall either repair or replace so much of the HDPE liner, GCL and geocomposite as is defective. THE REMEDIES PROVIDED HEREIN ARE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THE WARRANTY. Any determination as to whether the claim is covered by the Warranty or what constitutes the appropriate method of remedying a defect will be made by ESI after consultation with Basic Remediation Company.
- e. Basic Remediation Company agrees that it shall provide ESI with clean, dry and unobstructed access to the damaged or defective HDPE liner, GCL and geocomposite in order for ESI to perform the inspections and repairs, which may be required pursuant to the Warranty. ESI shall not be liable for any costs relating to providing access to the HDPE liner, GCL and geocomposite.

THE REMEDIES PROVIDED TO BASIC REMEDIATION COMPANY HEREIN ARE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THE WARRANTY AND ARE INTENDED FOR THE SOLE BENEFIT OF BASIC REMEDIATION COMPANY. NEITHER THE WARRANTY NOR ANY RIGHTS HEREUNDER SHALL BE ASSIGNABLE. ESI SHALL HAVE NO LIABILITY UNDER THE WARRANTY TO THIRD PARTIES OR STRANGERS TO THIS AGREEMENT. THE WARRANTY SET FORTH ABOVE IS THE ONLY WARRANTY APPLICABLE TO THE HDPE LINER, GCL AND GEOCOMPOSITE AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ESI

BE LIABLE IN CONTRACT, TORT OR OTHERWISE FOR ANY DIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES FOR, RESULTING FROM, OR IN CONNECTION WITH, THE USE OF THE HDPE LINER, GCL OR GEOCOMPOSITE. IN THE EVENT THE EXCLUSIVE REMEDY PROVIDED HEREIN FAILS IN ITS ESSENTIAL PURPOSE, AND IN THAT EVENT ONLY, BASIC REMEDIATION COMPANY SHALL BE ENTITLED TO RETURN OF THE PURCHASE PRICE FOR SO MUCH OF THE MATERIAL AS ESI DETERMINES TO HAVE VIOLATED THE WARRANTY PROVIDED HEREIN.

Except for the warranty set forth above, no representation or warranty made by any sales or other representative of ESI, or any other person, concerning the HDPE liner, GCL or geocomposite shall be binding upon ESI.

This warranty shall not be effective until full payment has been made to ESI. Any waiver of the terms and conditions of the Warranty shall be in writing signed by ESI. The failure to insist upon strict compliance with any of the terms and conditions contained herein shall not act as a waiver of strict compliance with all of the remaining terms and conditions of the Warranty and shall not act as a waiver as to any of the terms and conditions of the Warranty as to future claims under the Warranty.

ENVIRONMENTAL SPECIALTIES INTERNATIONAL, INC.



By:
Kevin Simms, Vice-President

Date: April 23, 2010

Acceptance: The foregoing Warranty is hereby duly accepted and shall become a binding Warranty upon approval.

Accepted by:

Approved by:

I have read and agree to the terms and conditions of the Warranty.

BY:.....

BY..... (Kevin Simms)

TITLE:

TITLE: Vice-President ESI

DATE:.....

DATE:.....