WASTE MANAGEMENT

VISTA LANDFILL, INC.
242 W. Keene Road
Apopka, FL 32703
(407) 886-2920
(407) 889-8043 Fax

September 11, 2008

F. Thomas Lubozynski, P.E.
Waste Program Administrator
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Subject: Orange County – SW
Vista Landfill – Class III
Permit Numbers SC48-0165969-014/SO48-0165969-015
WACS# 87081
Cell 1 Construction Final Certification Report Dated September 2008

Dear Mr. Lubozynski:

Please find enclosed two originals of the subject report. We look forward to the ~~filed~~ field inspection planned for September 19, 2008 at 10 am.

If you have any questions or need additional information regarding this matter please contact me at 407-902-1469.

Sincerely,

Sheree Grant
District Engineer
North Florida Market Area
Waste Management Inc. of Florida

C: Jay Davoll, P.E. City of Apopka
Juan Quiroz, P.E. Geosyntec
Irv Slike, WMIF

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994

DEP Application No. _____
(Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: SC48-0165969 County: Orange

Name of Project: Cell 1 Construction

Name of Owner: Vista Landfill, LLC

Name of Engineer: Geosyntec Consultants

Type of Project: Landfill cell construction.

Cost: Estimate $ _____ Actual $ _____

Site Design: Quantity: 2500 ton/day Site Acreage: 150 (total site) / 7.4 (Cell 1) Acres

Deviations from Plans and Application Approved by DEP:

No substantial deviations from the Plans, see attached as-built drawings.

Address and Telephone No. of Site: 242 West Keene Road, Apopka, Florida 32703

(Telephone: 407-886-2920)

Name(s) of Site Supervisor: Sheree Grant (cell phone: 407-902-1469)

Date Site inspection is requested: 19 September 2008

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No. SC48-0165969 :Dated: 22 February 2008

Date: 11 September 2008

Juan D. Quiroz
Signature of Professional Engineer 11 Sept 2008

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Vista Landfill, Class III
Cell 1 Construction
Apopka, Orange County, Florida




FINAL CERTIFICATION REPORT
FOR CONSTRUCTION QUALITY
ASSURANCE SERVICES

SEPTEMBER 2008

Prepared For:

Vista Landfill, LLC
Attn: Sheree Grant
242 West Keene Road
Apopka, FL 32703

Submitted By:

Geosyntec consultants
engineers | scientists | innovators

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CELL 1 CONSTRUCTION
VISTA LANDFILL, CLASS III

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APPENDICES

SECTION 1: INTRODUCTION

1.1 Terms of Reference

This certification report summarizes the construction quality assurance (CQA) activities performed by Geosyntec Consultants (Geosyntec) of Boca Raton, Florida during construction of the Cell 1 liner and leachate collection system at Vista Landfill, Class III (Vista Landfill) facility located in Apopka, Florida. The Vista Landfill is owned and operated by Vista Landfill, LLC, a wholly owned subsidiary of Waste Management, Inc. of Florida (WMIF).

The CQA monitoring activities for construction of Cell 1 were performed to confirm compliance with the solid waste management facility's construction and operation permits (Permit Nos. SC48-0165969-014 and S048-0165969-015) issued by Florida Department of Environmental Protection (FDEP), Central District on 22 February 2008 and in accordance with Chapter 62-701 – *Solid Waste Management Facilities* of the Florida Administrative Code (FAC).

Cell 1 was constructed in accordance with the above mentioned permits and associated plans and technical specifications. This certification report was prepared for Ms. Sheree Grant, District Engineer for Vista Landfill, LLC. This CQA report was prepared by the Geosyntec CQA Site Manager, Mr. Clarence Jones, and Project Manager, Mr. Dan Schauer, P.G., and was reviewed by the Geosyntec CQA Engineer-of-Record, Dr. Juan D. Quiroz, P.E.

A description of the report content is provided below.

1.2 Report Organization

This certification report is organized as described below.

- A brief description of the project is provided in Section 2;
- A summary of the CQA program is presented in Section 3;
- A description of the CQA monitoring and testing activities performed during earthwork related construction activities for Cell 1 is provided in Section 4;
- A description of the CQA monitoring and testing activities performed during the geosynthetics installation for Cell 1 is provided in Section 5; and
- A summary of the observations resulting from the CQA monitoring and testing activities performed by Geosyntec and a certification statement signed and sealed by the CQA Engineer-of-Record, a professional engineer registered in the State of Florida, are presented in Section 6.

The geotechnical laboratory and field test results are presented in Appendix A. The geosynthetic manufacturer's quality control test results are presented in Appendix B. The independent CQA laboratory conformance test results are presented in Appendix C. The geosynthetics field CQA logs are provided in Appendix D. A record drawing depicting the cell limits and geomembrane panel layout is included in Appendix E. The hydrostatic test results for the leachate forcemain connecting Cell 1 to the leachate manhole (located south of the leachate storage tanks), along with various detail

drawings of the leachate collection system, are presented in Appendix F. Finally, a photographic log of major construction activities for Cell 1 is included in Appendix G of this report.

SECTION 2: PROJECT DESCRIPTION

2.1 General

The Cell 1 construction activities included installation of a liner and leachate collection system over an approximate 8-acre area at the Class III disposal facility. The cell construction limits included perimeter berms, and the floor and side slopes of the landfill cell. As indicated on the project plans and specifications, Cell 1 construction included the following: (i) excavation of existing soil within the cell footprint to the desired soil subbase elevation; (ii) preparation of the liner subbase; (iii) installation of the geosynthetics [60-mil thick textured, high-density polyethylene (HDPE) geomembrane; double-sided geocomposite lateral drainage layer; and geosynthetic clay liner (only under the leachate collection pipe and sump area)]; (iv) placement of a 2 ft-thick liner protective cover soil layer; and (v) installation of leachate collection system (LCS) components (including but not limited to a perforated leachate collection pipe along the cell floor and solid side slope riser leachate conveyance pipes, drainage gravels, and filter geotextiles). In addition, construction of the leachate transmission forcemeain from Cell 1 to the manhole located south of the leachate storage tank area is considered part of this certification report. However, construction of ancillary items (i.e., surface water runoff drainage system, access roads, etc.) were undertaken as part of this project, however the construction of these items is considered outside the certification requirements of this CQA report.

The CQA monitoring services included the following:

- CQA testing and monitoring services for the Cell 1 liner system and LCS components;
- review and approval of earthwork contractor and geosynthetic manufacturer submittals (e.g., catalog cut sheets, shop drawings, as-built drawings, manufacturer quality control test results);
- compilation of daily field reports, field and laboratory results, and photographic documentation;
- coordination of the geomembrane panel layout survey and preparation of the resulting record drawing; and
- preparation of this final CQA certification report for submittal to FDEP.

2.2 Construction Activities

This certification report documents the CQA monitoring activities performed for construction of the Cell 1 liner and leachate collection system, and includes both earthwork and geosynthetics installation as indicated in the approved permit drawings.

The Cell 1 liner and leachate collection system design exceeds the current requirements of Chapter 62-701, FAC for Class III disposal facilities. The Cell 1 liner system consists of the following components (from top to bottom):

- minimum 24-in thick protective soil layer;
- leachate collection system, consisting of a perforated leachate collection pipe wrapped in drainage gravel and geotextile filter fabric along the cell floor, a solid leachate collection sump riser pipe, and a leachate collection sump;

- geocomposite drainage layer, consisting of an HDPE geonet with a needle-punched, non-woven geotextile heat bonded to each side, hereafter referred to as geocomposite;
- geomembrane liner, consisting of a 60-mil thick textured, HDPE geomembrane;
- geosynthetic clay liner (GCL), consisting of a Bentonite layer with a needle-punched, non-woven geotextile on both sides; and
- prepared subbase.

SECTION 3: CONSTRUCTION QUALITY ASSURANCE PROGRAM

3.1 General

The scope of the CQA monitoring, testing, and documentation services performed by Geosyntec during the construction of Cell 1 at Vista Landfill, included review of project documents, field CQA operations, and preparation of this final certification report which includes a geomembrane panel layout record drawing. These activities are described in the following sections of this report.

The earthwork construction for Cell 1 was performed by Total Site Development, Inc. of Orlando, Florida under direct contract with Vista Landfill, LLC. Installation of the geosynthetics was performed by Environmental Specialties, Inc. (ESI) of Baton Rouge, Louisiana. Geosyntec provided the CQA monitoring, testing, and documentation during construction. A list of personnel involved in construction of Cell is included in Section 3.5 of this report. The construction of Cell 1 commenced on April 31, 2008 and was substantially complete on 14 July 2008.

3.2 Related Documents

As previously noted, this certification report summarizes the CQA activities performed by Geosyntec during construction of Cell 1 at Vista Landfill. The CQA activities conducted by Geosyntec were performed in general accordance with the requirements of the following documents:

- "*Project Specifications, Vista Landfill*, Class III Facility, *Apopka, Florida*", prepared by Geosyntec, dated July 2007; and
- "*Construction Quality Assurance (CQA) Plan, Vista Landfill*, Class III, *Apopka, Florida*", prepared by Geosyntec, dated July 2007; and
- "*Cell 1 Construction, Vista Class III Landfill, Apopka, Florida*," prepared by Geosyntec, dated February 2008, and "*Permit Modification Drawings, Vista Class III Landfill, Apopka, Florida*", prepared by Geosyntec, dated July 2007.

All of the above documents are hereafter collectively referred to as the CQA Documents in this certification report. During construction, minor modifications were made to these documents to accommodate existing site conditions. These major modifications are described in more detail below. However, no substantial changes were made to the CQA Documents.

3.3 Field CQA Operations

The following activities were performed as part of Geosyntec's on-site CQA services:

Earthwork:

- monitoring the landfill subbase surface preparation prior to installation of the geosynthetics;
- collecting samples of soils and aggregates used in construction of the cell;
- reviewing and evaluating geotechnical laboratory test results to ensure compliance of soils and aggregates with the requirements of the CQA Documents;

- monitoring soil placement, grading, and compaction of earthwork related construction activities; and
- monitoring of the protective cover soil layer placement activities.

Geosynthetics:

- monitoring delivery, storage, and tracking the inventory of geosynthetic materials delivered for the project;
- coordinating the collection of geosynthetic conformance samples from in-plant sources or delivered rolls and forwarding samples to an off-site geosynthetics testing laboratory;
- collecting and reviewing geosynthetic manufacturers' quality control (MQC) certification documents and geosynthetic laboratory conformance test results to verify compliance with the requirements of the CQA Documents;
- monitoring installation of geosynthetic materials in trial seams, production seaming, nondestructive testing, and repair operations; and
- coordinating destructive testing of geomembrane seams at the minimum frequency required by the CQA Documents.

3.4 Certification Report and Record Drawings

This CQA certification report was prepared for construction of Cell 1. The geomembrane panel layout record drawing is included in Appendix E of this report. During the construction of Cell 1, CQA monitoring and testing activities were documented by CQA personnel in Daily Field Reports (DFRs) and various other forms. In addition, MQC certificates for the geosynthetics and independent laboratory conformance results were provided to Geosyntec for review and inclusion with this report. Results of CQA monitoring and testing activities that are critical with respect to the satisfactory performance of the Cell 1liner system and protection of the surrounding environment are included in the report appendices and are summarized in the following sections in this certification report.

3.5 Project Personnel

Major personnel or representatives of the firms involved in the project are as follows:

Owner: Vista Landfill, LLC – Apopka, Florida

- Sheree Grant, District Engineer

CQA Consultant: Geosyntec Consultants, Inc. (Geosyntec) – Boca Raton, Florida

- Juan D. Quiroz, Ph.D., P.E., Engineer-of-Record
- Dan Schauer, P.G., CQA Project Manager
- Clarence Jones, Site CQA Manager

Geosynthetics Installer: Environmental Specialties International (ESI) – Baton Rouge, LA

- Ishmael Buitron, Superintendent

Earthwork Subcontractor: *Total Site Development, Inc.* – Orlando, Florida

- Ronnie Stalvey, Superintendent

Surveyor: Pickett & Associates, Inc. – Bartow, Florida

- Jason Martel, PSM, Professional Surveyor

Geotechnical Laboratory: Excel Geotechnical Testing, Inc. (EGT) – Roswell, Georgia

- Nader Rad, Ph.D., P.E., Project Manager

Geosynthetics Laboratory: TRI/Environmental (TRI) – Austin, Texas

- Sam Allen, Project Manager

SECTION 4: CONSTRUCTION QUALITY ASSURANCE – EARTHWORK

4.1 General

Geosyntec monitored earthwork related to construction of the Cell 1 liner and leachate collection system which included subbase preparation prior to placement of the geosynthetics and subsequent placement of protective soil and leachate collection system above the liner system. During construction, Geosyntec was responsible for collection of representative soil and gravel samples for laboratory testing. The off-site geotechnical laboratory tests were performed by Excel Geotechnical Testing, Inc. (EGT) of Roswell, Georgia.

4.2 Soil and Drainage Gravel Source and Requirements

The Cell 1 soil subbase surface was prepared by excavation of existing soil from the cell footprint to the desired elevations. Representative samples of the existing soil subbase were obtained by Geosyntec CQA personnel and tested by EGT to assure that the minimum specified requirements were achieved. The results of the geotechnical laboratory tests for the subbase are presented in Appendix A-1. The results of the in-situ (i.e., field) moisture and density testing are presented in Appendix A-2.

The protective cover soils were generated from the segregation of soil excavated from the Cell 1 footprint during the subbase preparation activities. During the segregation process, the protective cover soils were stockpiled on-site adjacent to the Cell 1 construction area. Representative samples of protective cover soil were obtained from the on-site stockpile and from material hauled to the cell during placement operations. These samples were tested for grain size distribution, engineering classification and hydraulic conductivity. In addition, Geosyntec verified the protective cover soil layer thickness by direct measurement at random locations across the cell area once placement activities were complete. These thickness measurements and a sketch showing the measurement locations are presented in Appendix A-3. The results of the geotechnical tests for the protective cover are presented in Appendix A-1.

The drainage gravel materials used for the leachate collection system were obtained from Conrad Yelvington Distributors, Inc. located in Orlando, Florida. Representative samples of drainage gravel were obtained and tested for grain-size distribution and carbonate content. The results of the geotechnical tests for the drainage gravel are presented in Appendix A-1.

4.3 Subbase Preparation and Testing

Upon completion of the Cell 1 footprint excavation to the desired lines and grades, the soil subbase surface was compacted with a vibratory smooth drum roller. In addition, proof rolling of the subbase was performed in accordance with the specifications and any areas which exhibited unacceptable yielding were reworked until acceptable results were achieved. A copy of the subbase acceptance form is provided in Appendix D-1; and a sealed as-built drawing for the top of subbase grades is provided in Appendix E. Representative samples of the soil subbase were collected by Geosyntec CQA personnel and tested by EGT for standard proctor (ASTM D 698), grain-size distribution (ASTM D 422) and engineering classification (ASTM D 2487). In-situ surface moisture and density tests (ASTM D 6938) were also performed to assure that the minimum specified compactation requirements were achieved. Copies of the CQA laboratory and field moisture/density results are presented in Appendices A-1 and A-2, respectively.

4.4 Protective Soil Layer

A total of approximately 28,000 cy of protective soil was placed in Cell 1. Grain-size distribution analyses (ASTM D 422), soil classification (ASTM D 2487) and hydraulic conductivity (ASTM D 2434) were performed on samples of protective soil by EGT. A total of ten (10) protective soil samples (referred as PC-01 through PC-10) were collected from materials placed in Cell 1. Grain-size distribution, soil classification and hydraulic conductivity analyses were performed on the protective layer soils. The hydraulic conductivity of the protective soil samples ranged from 1.3×10^{-2} cm/sec to 8.3×10^{-3} cm/sec which exceeded the specified minimum hydraulic conductivity of 1.0×10^{-4} cm/sec. The actual CQA test frequency of 1 test per 2,800 cy exceeded the minimum testing frequency of 1 test per 3,000 cy of in-place protective soil required by the CQA Documents. The laboratory test results for the protective soil are presented in Appendix A; and a sealed as-built drawing for the top of protective soil grades is provided in Appendix E.

4.5 Granular Drainage Materials

Granular drainage stone meeting the requirements of No. 57 stone (per ASTM D 448) were placed around the leachate collection pipe running the length of the Cell 1 floor. Granular drainage materials meeting the requirements of No. 4 stone (per ASTM D 448) were used in the Cell 1 leachate collection sump area. Grain-size distribution analyses (ASTM C 136) were performed by EGT on samples of drainage gravel collected by Geosyntec prior to installation. Results for the analyses indicating compliance of the materials with the project specifications and the laboratory results are presented in Appendix A. The No. 4 and No. 57 granular drainage materials were supplied by Conrad Yelvington Distributors located in Orlando, Florida.

The hydraulic conductivity (ASTM D 2434) of the No. 57 stone was measured to be 25 cm/sec, which exceeded the minimum specified requirement of 1 cm/sec. The hydraulic conductivity of the No. 4 stone was measured to be 45 cm/sec, which exceeded the minimum specified requirement of 10 cm/sec. Carbonate content analyses (ASTM D 3042) were also performed on the No. 57 and No. 4 stone granular drainage materials. The No. 57 and No. 4 stone used in construction of the leachate collection system were found to contain less than 5 percent carbonate.

A total of 82 cy of No. 4 drainage gravel and 80 cy of No. 57 gravel were placed in Cell 1. One (1) grain-size distribution analysis was performed on each of the drainage gravels placed in Cell 1. The laboratory test results are presented in Appendix A-1. The actual CQA test frequency of 1 test per 80 cy (approx.) for grain-size distribution analysis exceeded the minimum testing frequency of one test per 2,000 cy as required by the CQA Documents.

CQA personnel monitored the placement of the granular drainage material to ensure (i) the underlying geosynthetics were not damaged; (ii) the perforated pipes were properly surrounded by the drainage materials and the geotextile; and (iii) the drainage materials were placed in accordance with the requirements of the CQA Documents.

SECTION 5: CONSTRUCTION QUALITY ASSURANCE – GEOSYNTHETICS

5.1 General

Geosyntec monitored the installation of the geosynthetic components of the system in Cell 1, as described in Section 2. At times, several system installation operations were conducted simultaneously during construction. When this occurred, the on-site CQA personnel monitored the operations that were considered most critical to the performance of the system.

Also included in this section is the installation of the leachate transmission forcemain from Cell1 to the manhole located south of the leachate storage tank area.

5.2 CQA of Textured Geomembrane

5.2.1 Conformance Testing and Documentation

The 60-mil thick testured, HDPE geomembrane was supplied by Agru America, Inc. (Agru) of Georgetown, South Carolina. Conformance samples of textured geomembrane were collected (from the rolls produced for the project) by TRI, which coordinated with the manufacturer to collect the CQA samples at Agru's manufacturing plant. TRI also performed the CQA conformance testing in accordance with the CQA Documents on the samples of textured geomembrane collected.

The MQC certificates, test results and the CQA conformance test results were reviewed by CQA personnel and were found to be in compliance with the CQA Documents. The MQC certificates are presented in Appendix B and the CQA conformance tests are presented in Appendix C. Geosyntecs' review of the MQC and CQA tests results indicate the tests were conducted at the required test frequencies, and the acceptance criteria are in accordance with the CQA Documents.

A total of five (5) CQA conformance samples were tested for approximately 424,453 ft^2 of textured geomembrane delivered to the site for installation in Cell 1. The actual CQA test frequency of 1 test per 84,890 ft^2 for the textured geomembrane exceeded the minimum frequency of 1 test per 100,000 ft^2 required by the CQA Documents. As a minimum, one conformance sample was tested during CQA from each resin lot supplied for the project.

5.2.2 Interface Friction Testing

As discussed in Section 2, the liner system components used in Cell 1 consists of (from top to bottom) the protective soil layer, geocomposite, geomembrane liner, and prepared subbase. Two interface friction tests were performed in accordance with the CQA Documents to evaluate the interface shear strength for the various components of the liner system. A composite configuration (i.e., "sandwich test"), which represents the as-built liner system, was utilized for the interface friction testing. The tests for interface friction were performed by TRI.

The interface shear tests were performed as part of the CQA testing program. The tests were performed using samples of geosynthetics collected from rolls that were actually installed in Cell 1. The soils for the protective cover soil and liner subbase soil were obtained from the materials placed in Cell 1.

The CQA Documents required the evaluation of two specific cases for interface friction which simulated both high normal stress (Case 1) and low normal stress (Case 2). In Case 1, three different interfaces between the various components of the liner system were tested at normal stresses of 2,000, 7,000 and 12,000 psf. In Case 2, the three interfaces were tested at normal stresses of 100, 300 and 500 psf. Peak (at small displacements) and residual (at large displacements) shear strengths were measured at each normal stress. The interface shear tests were conducted under wetted/saturated conditions. The following liner system interfaces were tested (from top to bottom):

1 Protective cover soil layer / geocomposite;

2 geocomposite / textured geomembrane; and

3 textured geomembrane / subbase soil

The measured peak and residual shear strengths exceeded the minimum specification requirements. Copies of the interface friction tests are provided in Appendix C-4.

5.2.3 Field Monitoring Activities

5.2.3.1 Delivery and On-Site Storage

Upon delivery to the site, geomembrane rolls were stored in an area located northeast of Cell 1. The rolls were typically transported by an off-road forklift with a spreader bar attachment or using the nylon slings which were attached to each roll. CQA personnel periodically monitored the installer's delivery, unloading, and storage procedures to ensure that the material was handled in an appropriate manner. The CQA personnel also compared the roll numbers of the geomembrane rolls delivered to the manufacturer's bill of lading. An inventory of the rolls delivered for the project was maintained by the CQA personnel and is included in Appendix D-2.

5.2.3.2 Deployment

The geomembrane rolls were lifted using a spreader bar attached to an off-road forklift. The panels were positioned using laborers assisted by a track-mounted, low-ground pressure, all-terrain vehicle (ATV). CQA personnel monitored the deployment of each geomembrane panel. During deployment, the CQA personnel checked for the following:

- manufacturing defects;
- damage that may have occurred during shipment, storage, and handling; and
- damage resulting from installation activities, including damage as a consequence of panel placement, seaming operations, or weather.

If any materials were observed to be damaged or deficient, the installer was notified and the damaged materials were either discarded or repaired. CQA personnel observed and documented the repair locations to verify compliance with the CQA Documents. Details of the geomembrane panel

placement were recorded by CQA personnel on panel placement logs, which are included in Appendix D-3 of this report.

5.2.3.3 Trial Seams

Prior to production seaming, the installer prepared geomembrane trial seams for each piece of seaming equipment to be used. Additional trial seams were prepared approximately every five hours or when field conditions changed. CQA personnel evaluated the trial seams as follows:

- trial seams were welded under similar conditions as production seaming;
- test strips were cut from the trial seams at random locations with a die press;
- ten (10) test strips were tested using a field tensiometer and compared to the passing criteria for the tests, which were as follows:

Fusion

- *Peel tests* - a minimum bonded seam strength of 91 lb/in (inside/outside); and
- *Shear test* - a minimum bonded seam strength of 120 lb/in.

Extrusion

- *Peel test* - a minimum bonded seam strength of 78 lb/in; and
- *Shear test* - a minimum bonded seam strength of 120 lb/in.

If trial welds failed, the machine or welding process was adjusted and a new trial seam was prepared. The new sample was tested to ensure compliance with the above strength requirements. The procedure was repeated, as needed, until passing results were obtained.

Trial seam samples were not archived. Details of the trial seams, including the trial seam test results, are included in Appendix D-4 of this report.

5.2.3.4 Production Seams

Geomembrane production seaming operations were monitored by CQA personnel. The majority of the geomembrane production seams were fabricated using double-track fusion welders. Seam repairs were made using hand-held extrusion welders. Rub sheets were periodically used during production seaming to provide a clean surface to weld over. During or after fabrication, the geomembrane seams were visually examined for workmanship and continuity. Geomembrane seaming logs are included in Appendix D-5 of this report.

5.2.4 Nondestructive Seam Testing

5.2.4.1 Scope

Nondestructive testing of geomembrane seams was periodically monitored by CQA personnel. All geomembrane seams were nondestructively tested for continuity by the installer using the air pressure

procedure for double-track fusion seams and the vacuum-box test procedure for extrusion welded seams. Failed air pressure seams, if applicable, were capped and then retested using vacuum-box test methods after determining the failed seam length. Leaks identified using the vacuum-box method were repaired and retested as described in Section 5.2.5.

5.2.4.2 Air Pressure Testing

Accessible double-track fusion seams were nondestructively tested using the air pressure test. The procedure used by the installer for air pressure testing was as follows:

- visually observe the integrity of the annulus of the section of seam being tested and isolating the section by sealing the ends using heat and pressure;
- insert the needle of a pressure test apparatus into the annulus at one end of the seam;
- inflate the annulus to a gauge pressure between 25-30 pounds per square inch (psi) with an air pump and maintain the gauge pressure for at least 5 minutes;
- repair faulty area in accordance with Section 5.2.5 if the pressure loss exceeds 3 psi or if the pressure does not stabilize; and
- confirm airflow through the entire annulus by releasing the air from the seam at the opposite end from where the needle was inserted.

5.2.4.3 Vacuum-Box Testing

The vacuum-box was used by the installer to nondestructively test extrusion seams and repairs. The procedure used by the installer for vacuum testing was as follows:

- wet a strip of seam with a soapy solution;
- place the vacuum-box assembly over the wetted area, close the bleed valve and open the vacuum valve;
- force the box onto the sheet until a vacuum is observed;
- examine the seam through the viewing window for a period of approximately 20 seconds for the occurrence of air bubbles;
- remove the assembly and continue the process over the entire length of the seam; and
- record the location of any leaks.

Nondestructive seam test results for the closure in Cell 1are presented in Appendix D-5 and D-7. If nondestructive testing indicated that repairs were necessary, repairs were made in accordance with procedures presented in Section 5.2.5. All repairs were tested using the vacuum-box test procedure.

5.2.5 Destructive Seam Sample Testing

5.2.5.1 Scope

In accordance with the CQA Documents, CQA personnel identified and collected geomembrane seam samples for destructive testing. The samples were tested by the off-site geosynthetics laboratory, TRI.

For a destructive seam sample to be considered as passing, the seam strength criteria described in Section 5.2.2.3 had to be met for at least four out of the five test specimens obtained from the sample. In addition, if one non-FTB failure was observed, the average of the four test specimens had to meet the specified strength criterion.

5.2.5.2 Sampling Procedures

The full destructive seam sample was removed by the installer and test strips were cut from the ends of sample with a die press. Each strip was peel and shear-tested in the field. At each destructive seam sample location, a test sample measuring approximately 12 inches across the seam and 42 inches along the seam was obtained. The sample was divided into three pieces and distributed to: (i) the independent off-site geosynthetics laboratory for testing, (ii) the installer for field testing, and (iii) the owner as an archive sample.

5.2.5.3 Test Results

Off-site laboratory testing of geomembrane seam samples was performed in accordance with the CQA Documents. At the off-site geosynthetics laboratory, five 1-inch wide test specimens were removed from the destructive seam sample using a die press. On a calibrated tensiometer, five test specimens were peel-tested for adhesion strength. For fusion seams, peel tests were performed on both the bottom (inside track) and top (outside track) edges. Additionally, five specimens were tested for shear strength. The seam acceptance/rejection criteria described in Sections 5.2.2.3 and 5.2.4.1 were used to evaluate the destructive seam samples.

The destructive seam test results are presented in Appendix D-6. A total of thirty-eight (38) destructive seam samples were tested for a total seam length of approximately 18,876 lineal ft (lf). This corresponds to an approximate sample frequency of 1 per 497 lf of seam. The actual destructive seam test frequencies exceeded the minimum frequency of 1 per 500 lf of production seams required by the CQA Documents.

All geomembrane seam samples tested destructively during construction of Cell 1 met the testing criteria noted in Section 5.2.2.3.

5.2.6 Geomembrane Repairs

The repair procedures presented in this subsection were used by the installer to patch holes and tears, spot-extrude impact damage or other minor defects, and for grinding and extrusion welding small sections of failed fusion seams (if the exposed edge was accessible). In the cases where patches or caps were used to repair the damaged geomembrane (i.e., small holes, tears, or on seams which failed nondestructive or destructive testing), an approximately 12-inches wide capping strip was used.

During the repair or panel tie-in operations, the following procedures were implemented:

- technicians and seaming equipment used were required to pass trial welds;
- patches or caps extended at least 6 inches beyond the edge of the defect and all corners were rounded; and
- repairs were tested using vacuum box and visually observed for continuity.

Repair summary logs prepared by Geosyntec during CQA activities are included in Appendix D-7 of this report. A record drawing illustrating layout of panels, location of seams, destructive samples, and repairs are included in Appendix E.

5.3 CQA of Geocomposite

5.3.1 Conformance Testing and Documentation

The geocomposite used was Transnet 330-2-8 manufactured by SKAPS Industries of Georgetown, South Carolina. The geocomposite conformance samples were collected by TRI, which coordinated with the manufacturer to collect the CQA samples at the SKAPS Industries manufacturing plant in Georgetown, South Carolina. TRI also performed the CQA conformance testing on the samples of geocomposite collected.

The MQC certificates and test results and the CQA conformance test results were reviewed by CQA personnel and were found to be in compliance with the CQA Documents. The results of the MQC and CQA conformance tests for 146 rolls (407,340 ft^2) of geocomposite are presented in Appendix B and C, respectively.

A total of three (3) CQA conformance samples were tested for 407,340 ft^2 of geocomposite approved for installation in Cell 1. The actual CQA test frequency of 1 test per 135,780 ft^2 (approx.) of the geocomposite exceeded the frequency of 1 test per 200,000 ft^2 required by the CQA Documents.

5.3.2 Field Monitoring Activities

5.3.2.1 Delivery and On-Site Storage

Upon delivery to the site, geocomposite rolls were stored in an area located northeast of the Cell 1. The rolls were typically transported by an off-road forklift. CQA personnel periodically monitored the installer's delivery, unloading, and storage procedures to ensure that the material was handled in an appropriate manner. The CQA personnel also compared the roll numbers of the geocomposite rolls delivered to the manufacturer's bill of lading. An inventory of the rolls delivered for the project was maintained by the CQA personnel and is presented in Appendix D-2.

5.3.2.2 Deployment

CQA personnel monitored the deployment of the primary geocomposite for the following:

- manufacturing defects;

- damage that may have occurred during shipment, storage, and handling; and
- damage resulting from installation activities.

If the materials were observed to be damaged, the installer was notified and the damaged materials were either discarded or repaired. CQA personnel observed repair locations to verify conformance with the CQA Documents.

CQA personnel periodically monitored the deployment of the primary geocomposite, as well as its condition after installation, to confirm that the installer took measures to:

- securely anchor the geocomposite in the anchor trench or ballast it with sand bags;
- unroll the geocomposite down the slope (i.e., rolls were aligned perpendicular to the slope contours) in a manner that kept the panel in sufficient tension to avoid excessive wrinkling;
- avoid entrapment of dust, stones, or other objects that would damage or clog the geocomposite;
- avoid damaging the underlying geomembrane during deployment;
- overlap the bottom geotextile edges;
- secure the geonet component of adjacent geocomposite panels with nylon fasteners, installed on a maximum 5-ft spacing laterally and at 2-ft spacing on end seams; and
- overlap and continuously sew the upper geotextile edges.

Any observed holes in the geotextile component of the geocomposite were repaired by placing a patch of non-woven geotextile over the hole that extended at least one foot beyond the edge of the hole. These patches were continuously thermally bonded to the undamaged portion of the geocomposite. This method was also used along the tie-in at the toe of the slope and along trimmed panels. Any observed holes or tears in the geonet component of the composite were repaired by the installer by placing a patch of the same material over or under the hole or tear, at least 2-ft beyond the edges of the hole or tear. These patches were secured using nylon fasteners, followed by thermal bonding of the uppermost geotextile of the patch to the undamaged portion of the geocomposite.

5.4 CQA of Geosynthetic Clay Liner

5.4.1 Conformance Testing and Documentation

A geosynthetic clay liner (GCL) was used for construction of the liner system within the sump area and underneath the leachate collection pipe alignment in Cell 1. Bentomat-ST GCL, used for construction of Cell 1, was manufactured by Colloid Environmental Technologies Company (CETCO) of Cartersville, Georgia. Conformance samples of the GCL were collected (from the rolls produced for the project) by TRI, which coordinated with the manufacturer to collect the CQA samples at CETCO's manufacturing plant. TRI also performed the CQA conformance testing in accordance with the CQA Documents on the samples of the GCL collected.

The MQC certificates and test results and the CQA conformance test results were reviewed by CQA personnel and were found to be in compliance with the CQA Documents. The results of the MQC and CQA conformance tests for the GCL are presented in Appendix B and C, respectively.

A total of one (1) CQA conformance sample was tested for approximately 18,000 square feet (ft^2) of GCL delivered to the site for installation in Cell 1. The actual CQA test frequency of 1 test per 18,000 ft^2 of GCL exceeded the minimum testing frequency of 1 test per 200,000 ft^2 required by the CQA Documents.

5.4.2 Field Monitoring Activities

5.4.2.1 Delivery and On-Site Storage

Upon delivery, GCL rolls were unloaded in an area located southeast of the Cell 1 construction area, stacked on an elevated soil berm, and covered with plastic tarps. The rolls were typically transported on site by an off-road forklift equipped with a stinger bar. CQA personnel periodically monitored the installer's delivery, unloading, and storage procedures and observed that the GCL was handled in an appropriate manner. The CQA personnel also compared the roll numbers of the GCL rolls delivered to the manufacturer's bill of lading. An inventory of the rolls delivered for the project was maintained by the CQA personnel. This inventory also includes the rolls that were approved for installation based on MQC and CQA test results and the rolls that were used during construction. Only approved rolls were incorporated into the work.

5.4.2.2 Deployment

The GCL rolls were lifted using a spreader with cargo straps attached to a low-ground pressure forklift. The rolls were deployed by unrolling the GCL rolls attached to the low-ground pressure forklift. Panels were re-positioned as necessary using laborers.

CQA personnel monitored the deployment of the GCL rolls. During deployment, the CQA personnel checked for the following:

- manufacturing defects;
- damage that may have occurred during shipment, storage, and handling; and
- damage resulting from installation activities.

If any materials were observed to be damaged, the installer was notified and the damaged materials were either discarded or repaired. CQA personnel observed repair locations to verify conformance with the requirements of the CQA Documents.

CQA personnel also periodically monitored the deployment of the GCL as well as its condition after installation to ensure that the installer followed the following procedures:

- the GCL was unrolled and placed in a manner which kept the GCL in sufficient tension to avoid excessive wrinkling and was securely anchored in the anchor trench or ballasted with sand bags;
- the rolls were deployed with the woven geotextile in contact with the geomembrane;
- adjacent GCL panels in the sump area were overlapped a minimum of 6 inches along the length of the panels and 12 inches along the width of the panels; and
- granular bentonite was added between overlap along the width of panels and repaired areas;
- measures were taken to keep the GCL free of contamination and protected from premature hydration; and
- geomembrane installation immediately followed installation of the GCL.

5.5 Leachate Forcemain Testing

As part of the Cell 1 Construction Project, ESI installed the dual-containment leachate transmission forcemain which connects the Cell 1 leachate collection system at the top of the north slope of Cell 1 to the leachate manhole located south of the auxiliary leachate storage tank area along the northwest portion of the landfill. The leachate transmission forcemain consisted of a dual-wall HDPE pipe installed outside and along the perimeter of Cell 1. The inner solid-wall HDPE pipe measured six (6) inches in diameter, and the outer HDPE solid-wall pipe was ten (10) inches in diameter.

ESI hydrostatically tested the outer 10-inch HDPE pipe on 29 May 2008; and the inner 6-inch HDPE pipe was hydrostatically tested on 30 May 2008. Various detailed drawings of the leachate transmission system are presented in Appendix F.

5.5.1 Hydrostatic Testing

The hydrostatic tests were performed after the leachate forcemain pipe was fabricated and placed in the open trench. The hydrostatic tests were performed in accordance with the guidelines for Hydrostatic Testing as provided by the Plastics Pipe Institute, and manufacturer recommendations. The tests were performed by filling the outside and inside pipes with water and pressurized with air. The inner 6-inch diameter pipe was pressurized to 50 psi and allowed to stabilize for one hour. The outer 10-inch diameter pipe was pressurized to 15 psi and allowed to stabilize for one hour. The hydrostatic tests commenced following the one hour stabilization period. Both, the 6-inch and 10-inch pipe, showed no drop in air pressure over the one hour testing period; and therefore, passed the specified hydrostatic testing requirement.

SECTION 6: SUMMARY

Observation of the construction of Cell 1 at the Vista Landfill, Class III facility was performed by Geosyntec during the period of 31 April to 14 July 2008. During this time, CQA personnel monitored the installation of the following components of Cell 1:

- earthwork (sub-base, perimeter berms, leachate collection system and protective soil layer);
- leachate transmission forcemain from Cell 1 to the manhole located south of the leachate storage tanks; and
- liner system geosynthetics in Cell 1.

During construction of the above components, CQA personnel verified that performance and conformance testing was performed at the frequencies required by the CQA Documents and that the installation met or exceeded the requirements of the CQA Documents. CQA personnel also verified that conditions or materials identified as not conforming to the CQA Plan were replaced, repaired, and/or retested, as described in this report.

The results of the CQA activities undertaken by Geosyntec as described in this report indicate that Cell 1 was constructed in accordance with the CQA Documents and the solid waste permit issued for the Vista Landfill, Class III facility.

Dan Schauer, P.G.
CQA/Project Manager

Juan D. Quiroz
11 Sept 2008

Juan D. Quiroz, Ph.D., P.E.
CQA Engineer-of-Record
Florida P.E. # 65275
Expiration Date: 28 February 2009

APPENDIX A

GEOTECHNICAL LABORATORY AND FIELD TEST RESULTS

Sub Appendix A-1

Laboratory Test Results

Soil Subbase

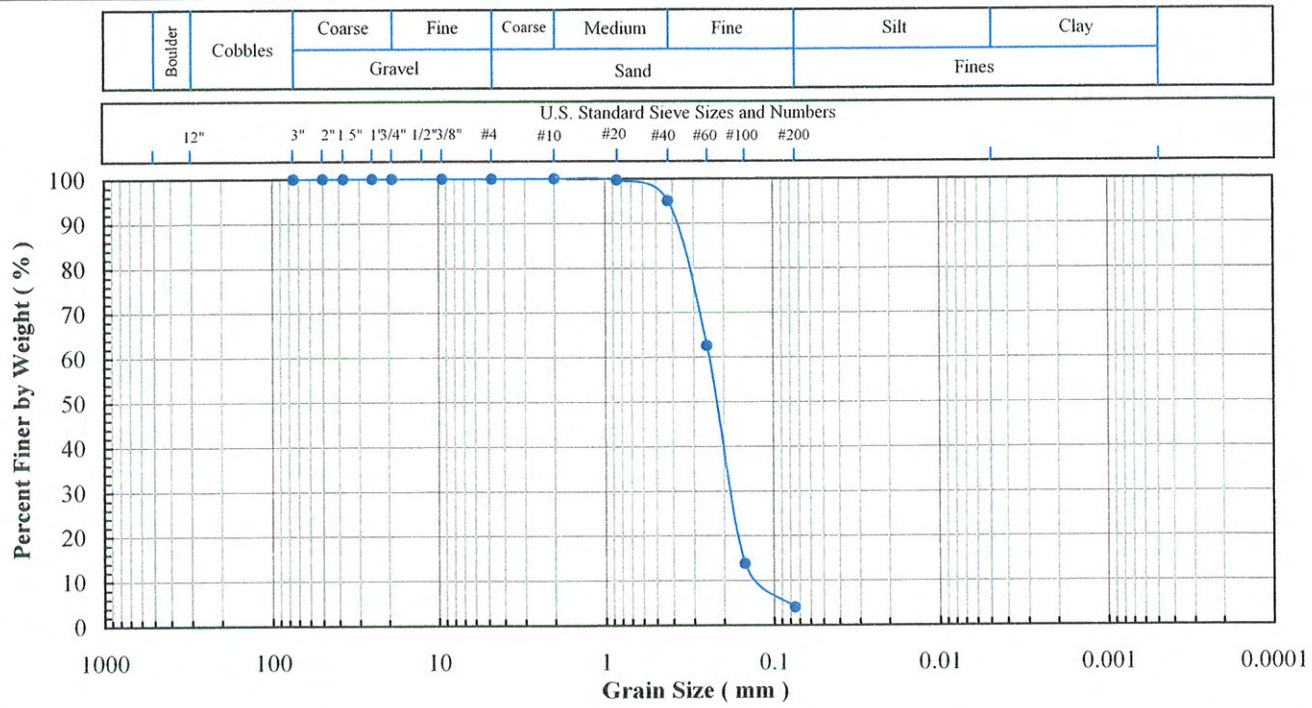
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-01
Lab Sample No:	C061

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



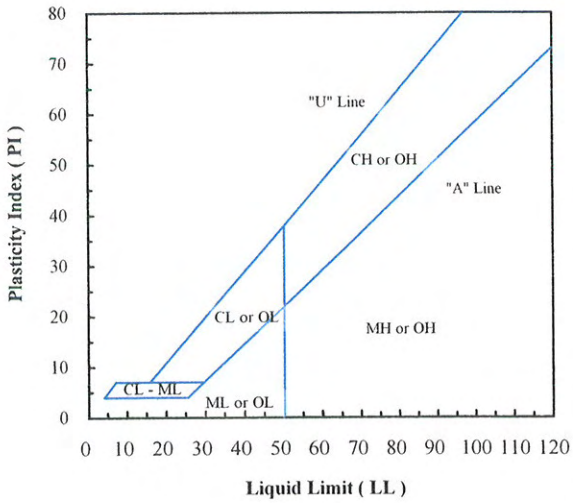
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.7
#40	0.425	95.1
#60	0.250	62.6
#100	0.150	13.8
#200	0.075	4.0

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	96.0
Fines (%):	4.0
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	1.8
Coeff. Curv. (Cc):	0.9



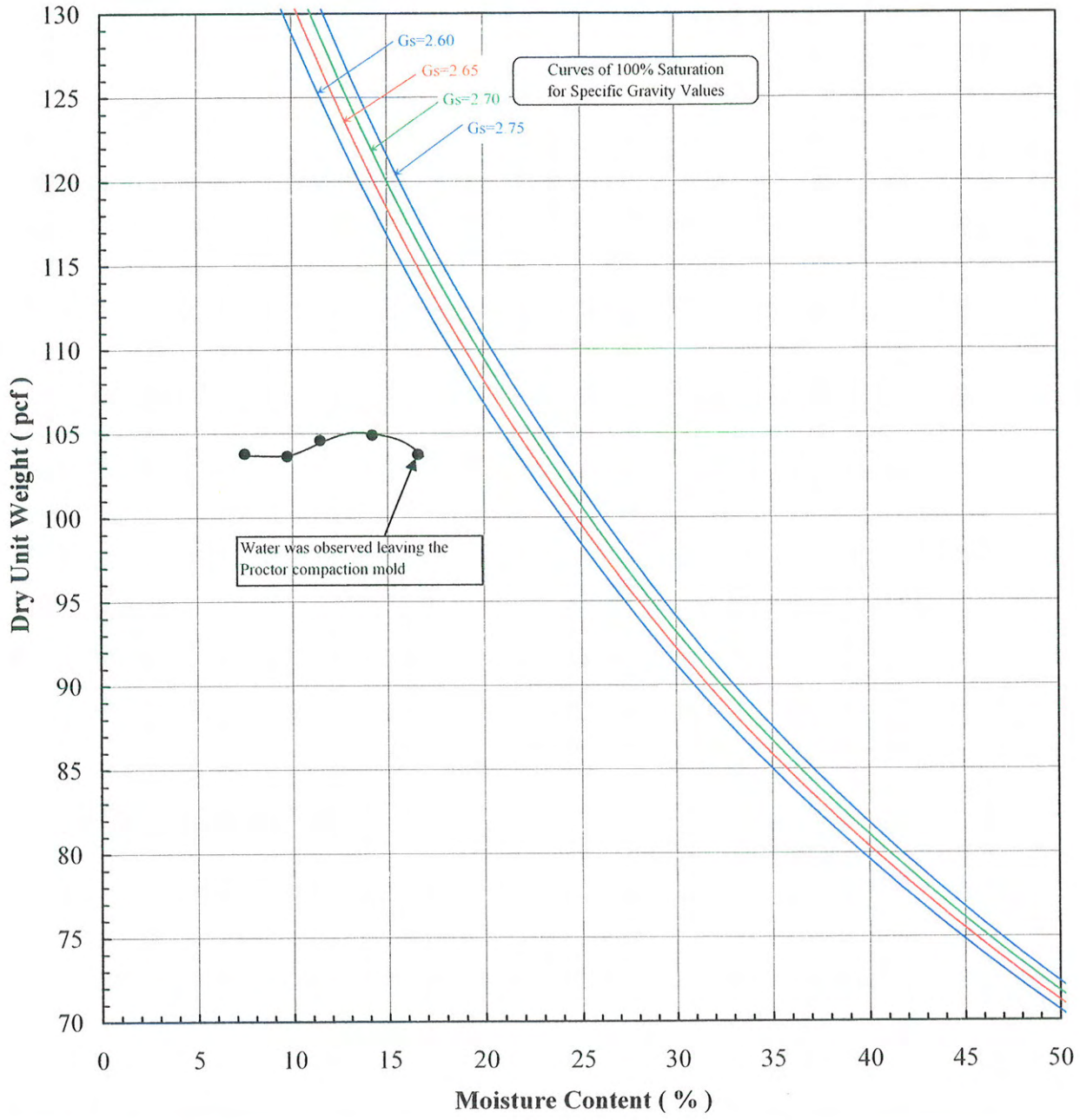
Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
SF-01	C061	1.1	4.0				SP - Poorly graded sand

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:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-01
Lab Sample No:	C061

ASTM D 698 **COMPACTION MOISTURE-DENSITY RELATIONSHIP** **Standard - Method B**



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
SF-01	C061	105.1	13.6	

Note(s):

Moisture Content based on before compaction and loss of warter from the mold (taken from the mold).

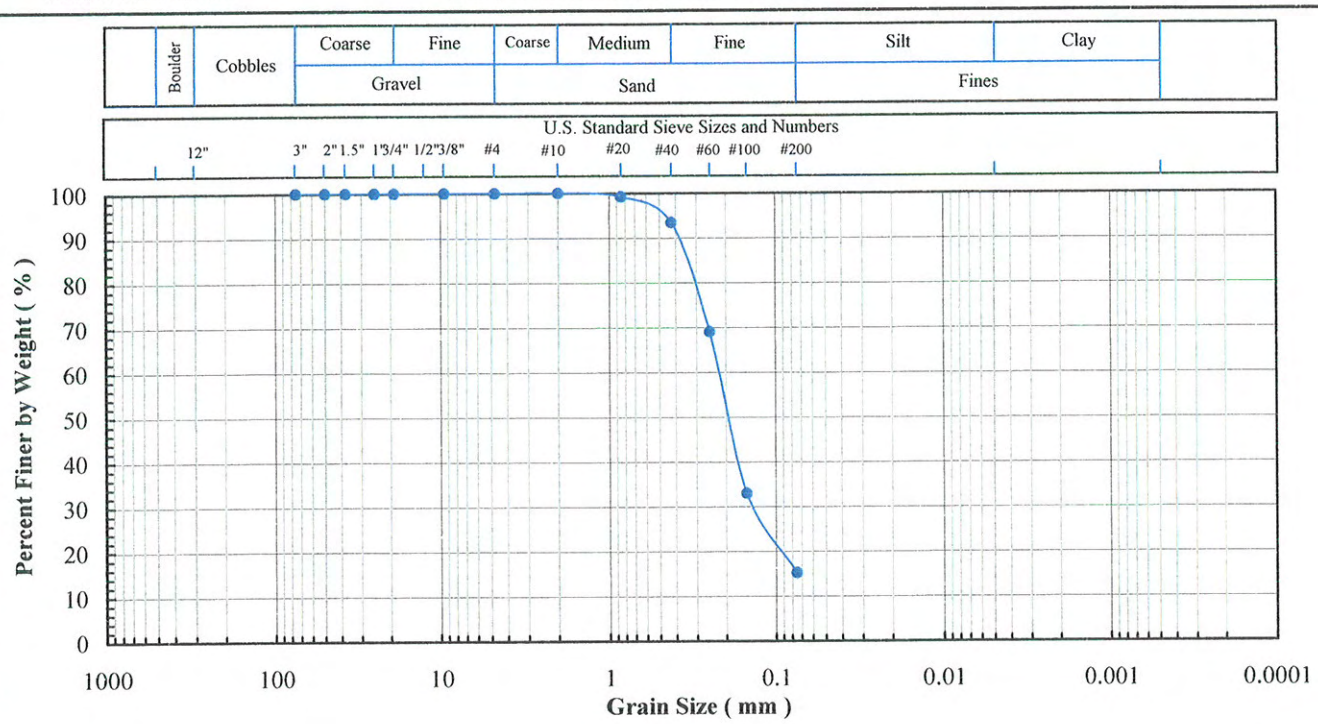
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-02
Lab Sample No:	D093

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



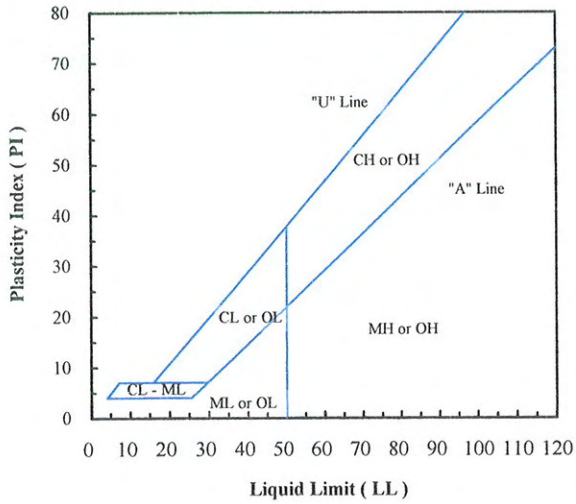
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.2
#40	0.425	93.4
#60	0.250	69.1
#100	0.150	33.0
#200	0.075	15.2

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	84.8
Fines (%):	15.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
SF-02	D093	8.8	15.2	NP	NP	NP	SM - Silty sand

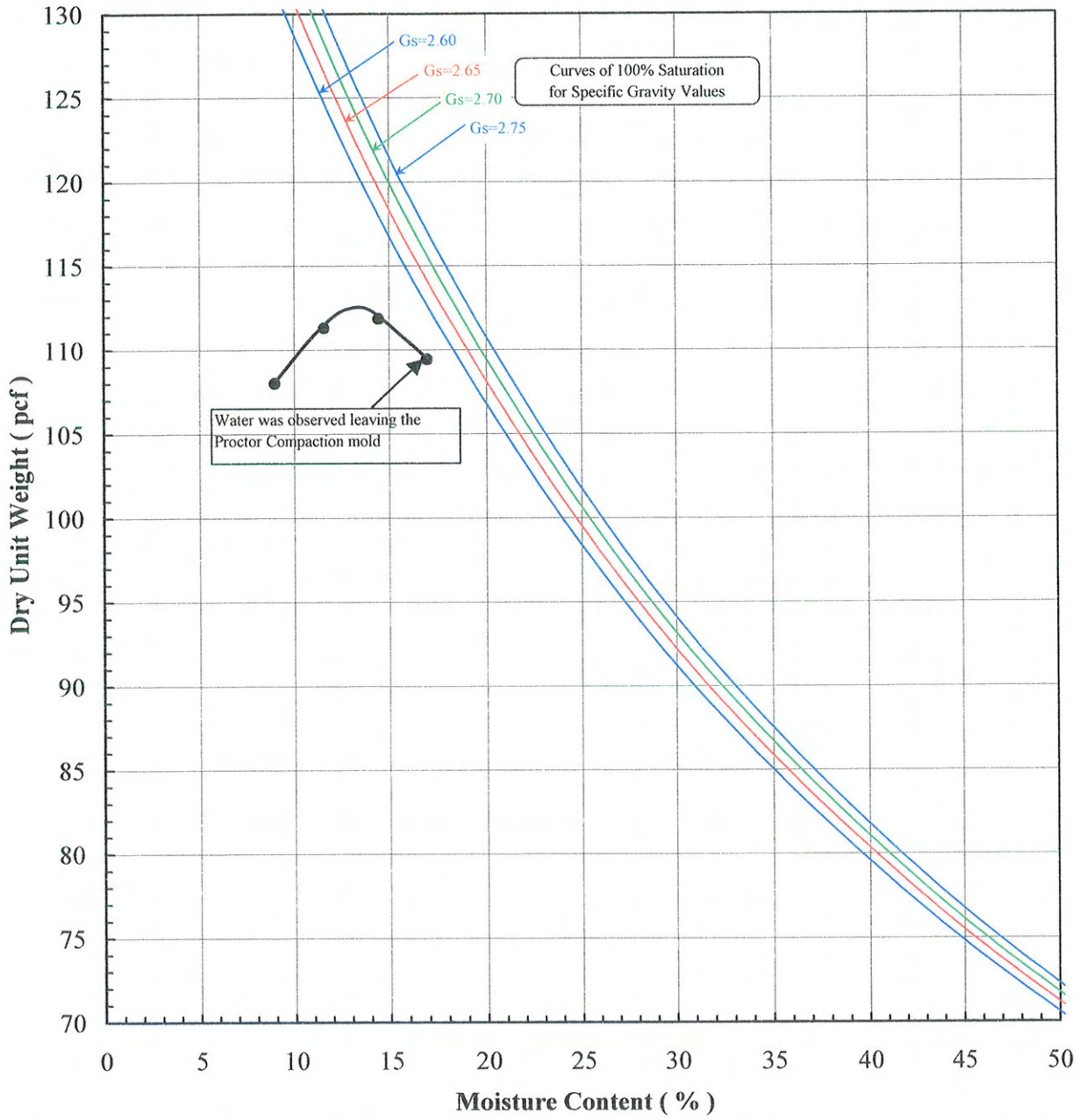
Note(s):

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:	Vista Class III Landfill
Project No:	306
Client Sample ID	SF-02
Lab Sample No:	D093

ASTM D 698 **COMPACTION MOISTURE-DENSITY RELATIONSHIP** **Standard - Method B**



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
SF-02	D093	112.8	13.3	

Note(s):

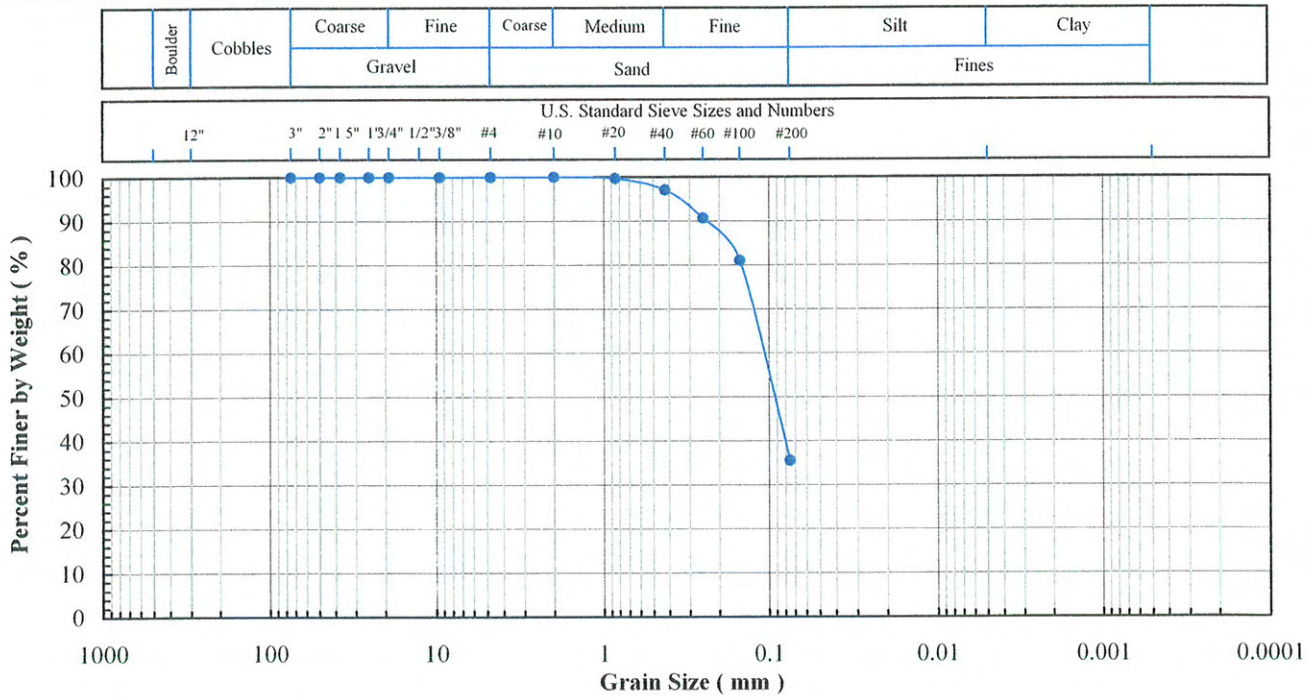
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-03
Lab Sample No:	E009

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



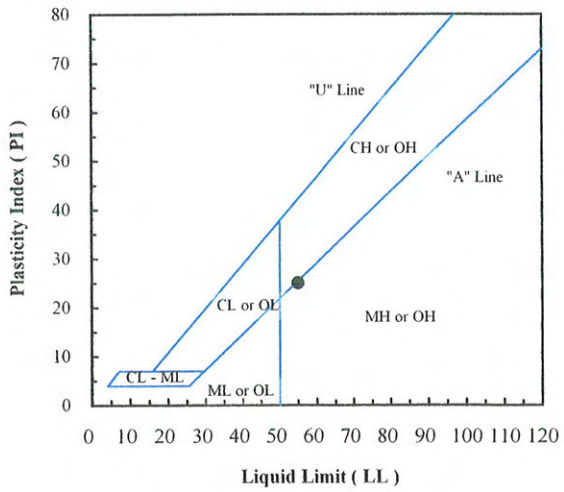
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.7
#40	0.425	97.1
#60	0.250	90.7
#100	0.150	81.1
#200	0.075	35.6

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	64.4
Fines (%):	35.6
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
SF-03	E009	25.5	35.6	55	30	25	SC - Clayey sand

Note(s):

Engineering classification is based on the assumption that the fines are either CL or CH.

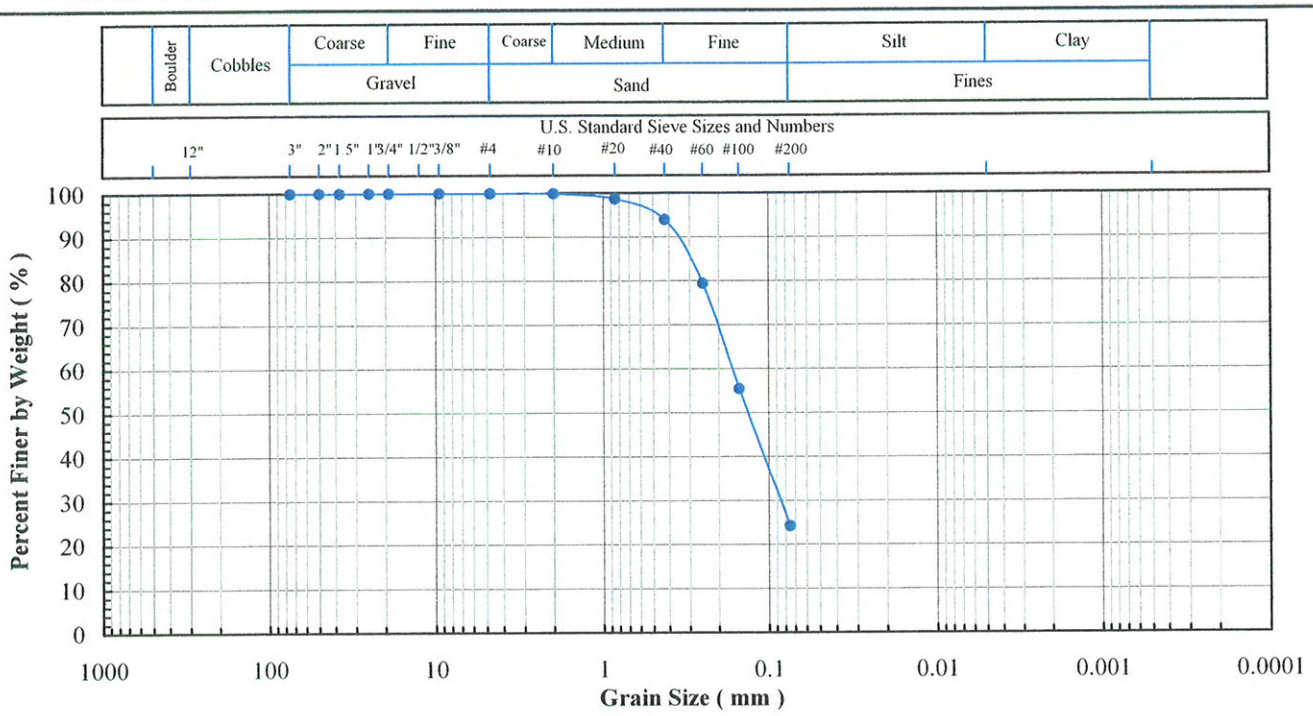
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-04
Lab Sample No:	E059

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D-4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



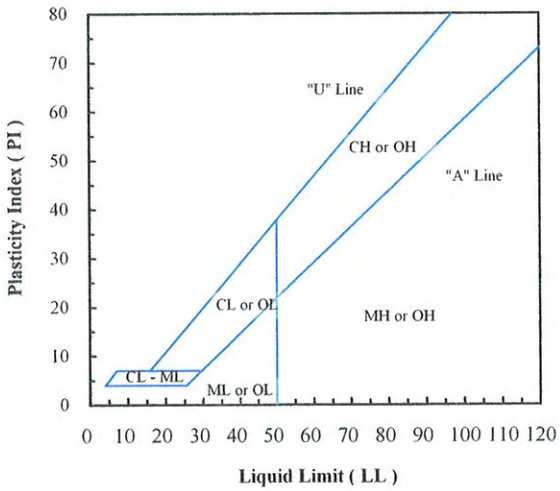
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	98.7
#40	0.425	94.0
#60	0.250	79.4
#100	0.150	55.4
#200	0.075	24.2

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	75.8
Fines (%):	24.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
SF-04	E059	14.4	24.2				SC - Clayey sand

Note(s):

Engineering classification is based on the assumption that the fines are either CL or CH.

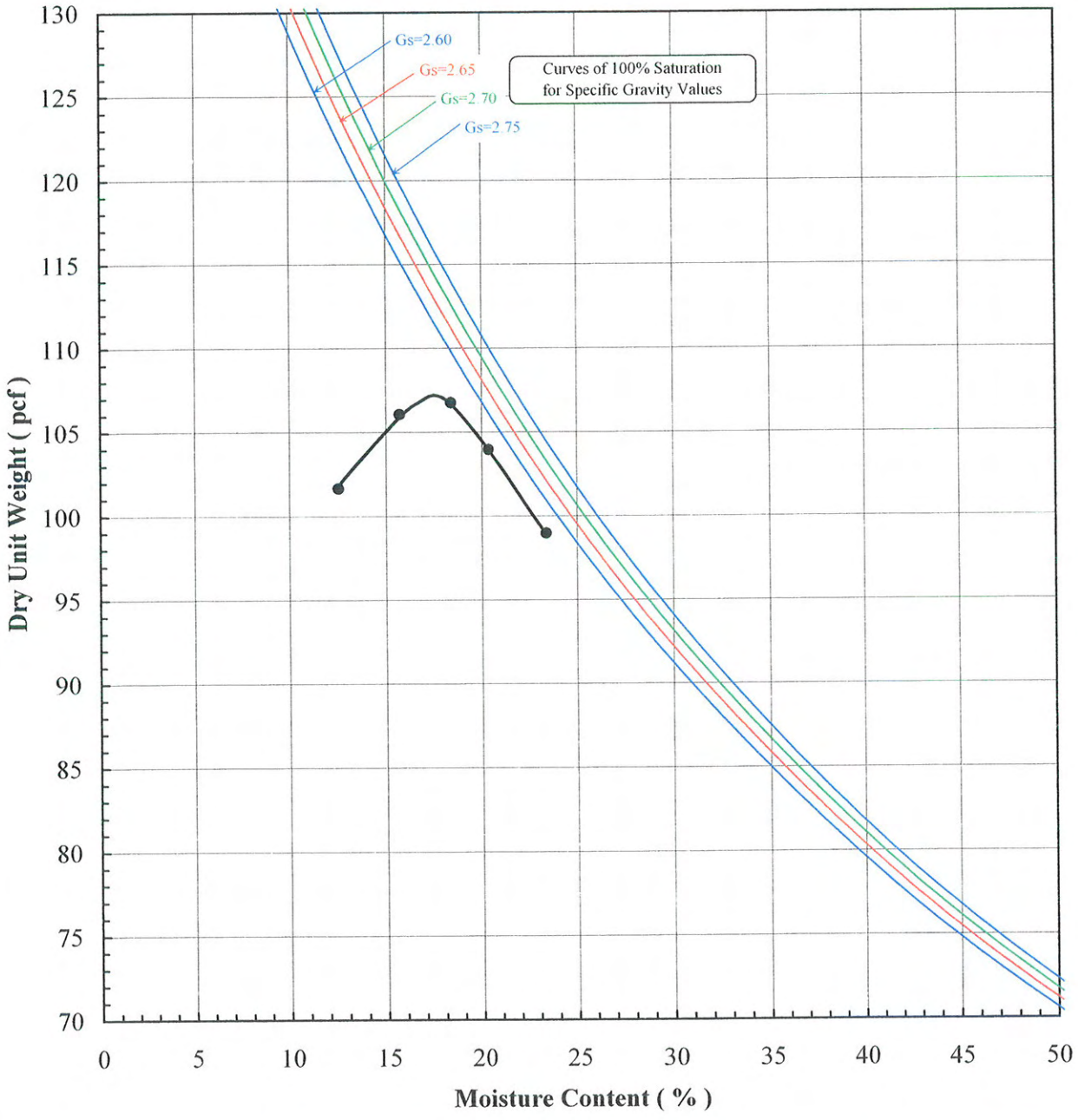
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	SF-04
Lab Sample No:	E059

ASTM D 698

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Standard - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
SF-04	E059	107.3	17.6	

Note(s):

Protective Cover

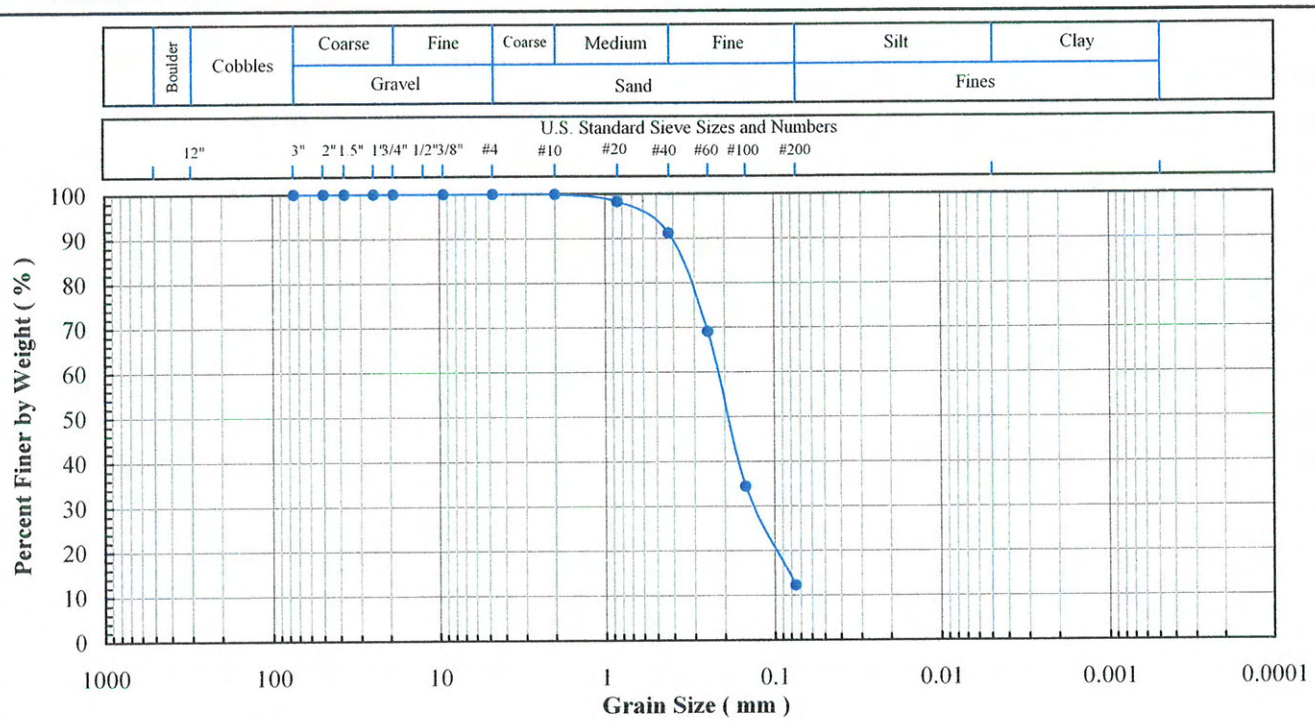
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-01
Lab Sample No:	C045

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



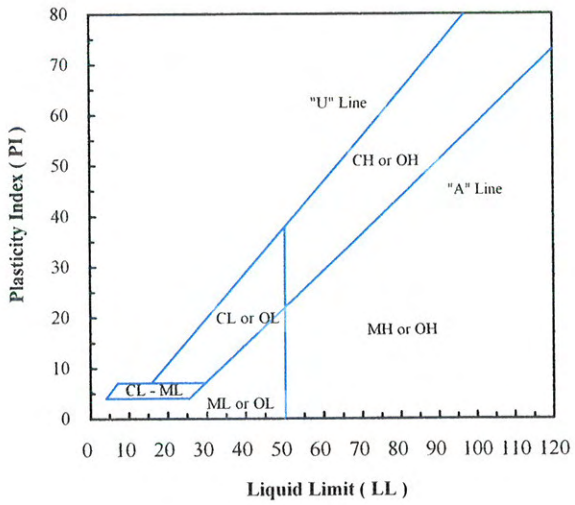
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	98.3
#40	0.425	91.2
#60	0.250	69.1
#100	0.150	34.4
#200	0.075	12.2

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	87.8
Fines (%):	12.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-01	C045	10.3	12.2	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 0.1 %

Engineering classification is based on the assumption that the fines are either ML or MH.

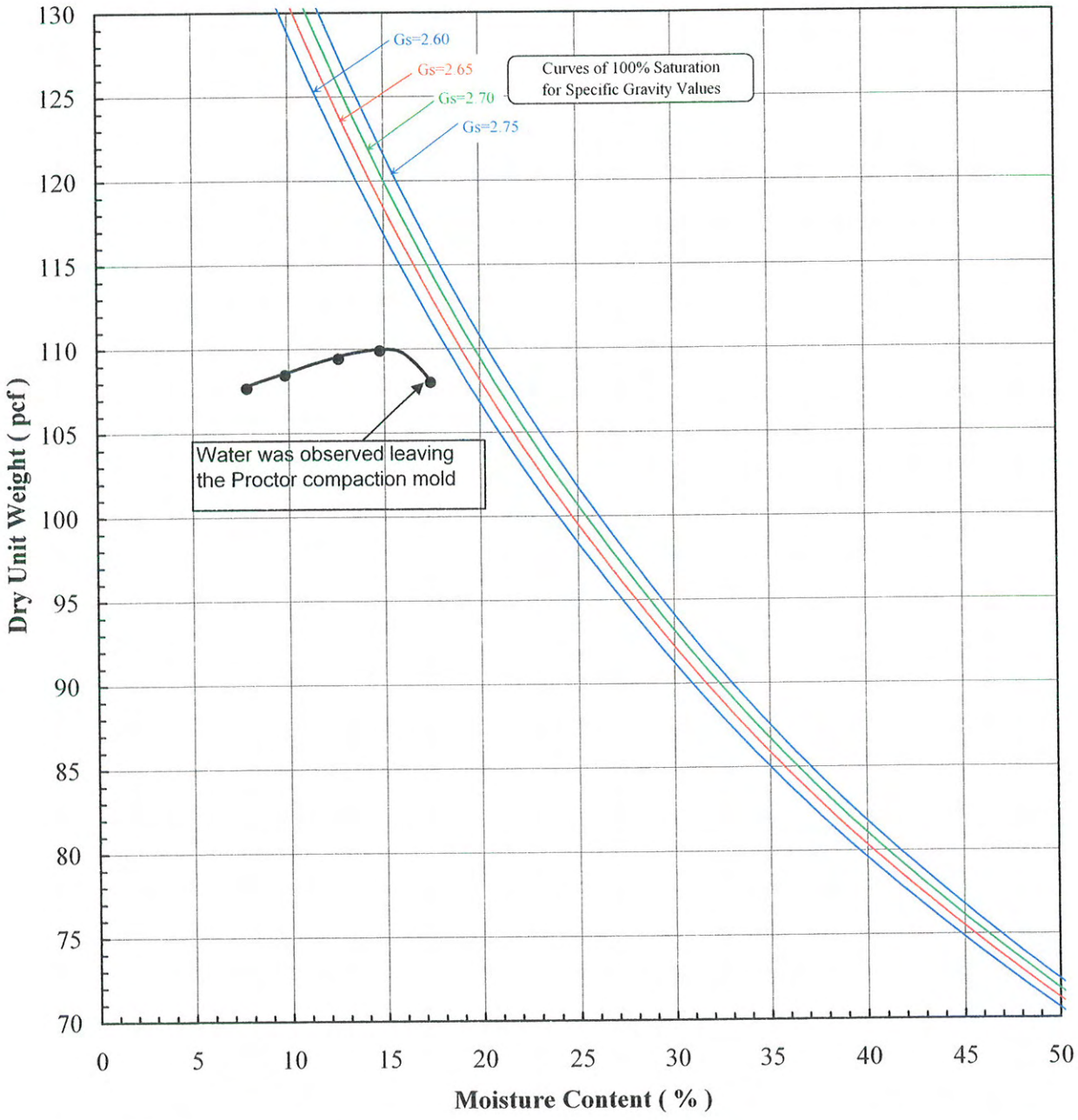
Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-01
Lab Sample No:	C045

ASTM D 698

COMPACTION MOISTURE-DENSITY RELATIONSHIP

Standard - Method B



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
PC-01	C045	110.1	15.2	

Note(s):

Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

RIGID WALL PERMEABILITY TEST [1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-01
Lab Sample Number:	C045
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	3/19/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content [3] (%)		(-)	(cm/s)
1	R	14.1	7.6	99.0	0.0	TW	0.14 - 0.39	8.8E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

Excel Geotechnical Testing, Inc.
"Excellence in Testing"
941 Forrest Street, Roswell, Georgia 30075
Tel: (770) 650 1666 Fax: (770) 650 5786

RIGID WALL PERMEABILITY TEST[1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-02
Lab Sample Number:	D094
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	4/15/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content[3] (%)		(-)	(cm/s)
1	R	14.2	7.6	103.5	0.0	TW	0.17 - 0.46	1.2E-2

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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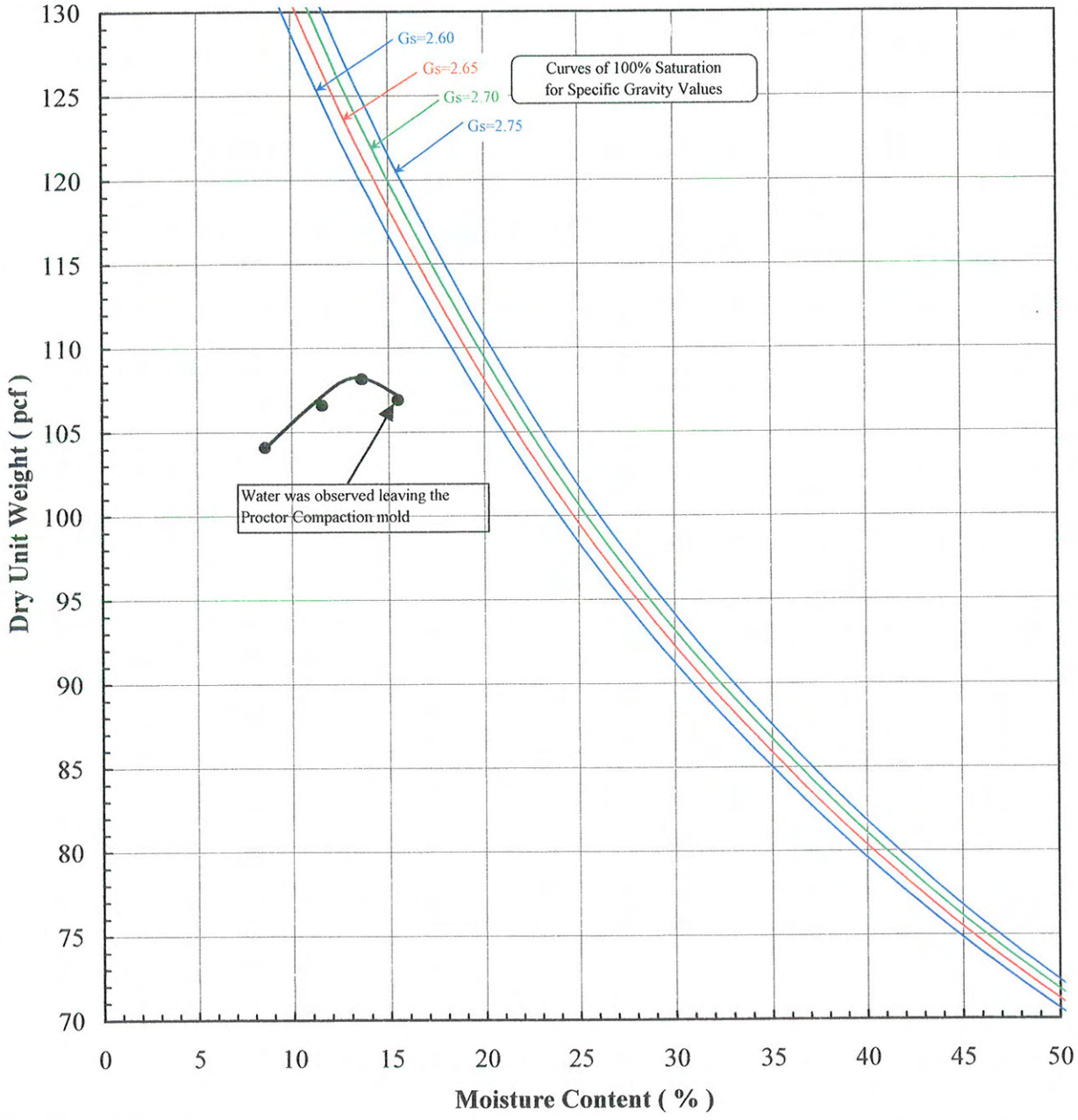
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID	PC-02
Lab Sample No:	D094

ASTM D 698 **COMPACTION MOISTURE-DENSITY RELATIONSHIP** **Standard - Method B**



Client/Site Sample ID.	Lab Sample No:	Maximum Dry Unit Weight (pcf)	Optimum Moisture Content (%)	Remarks
PC-02	D094	108.2	13.5	

Note(s):

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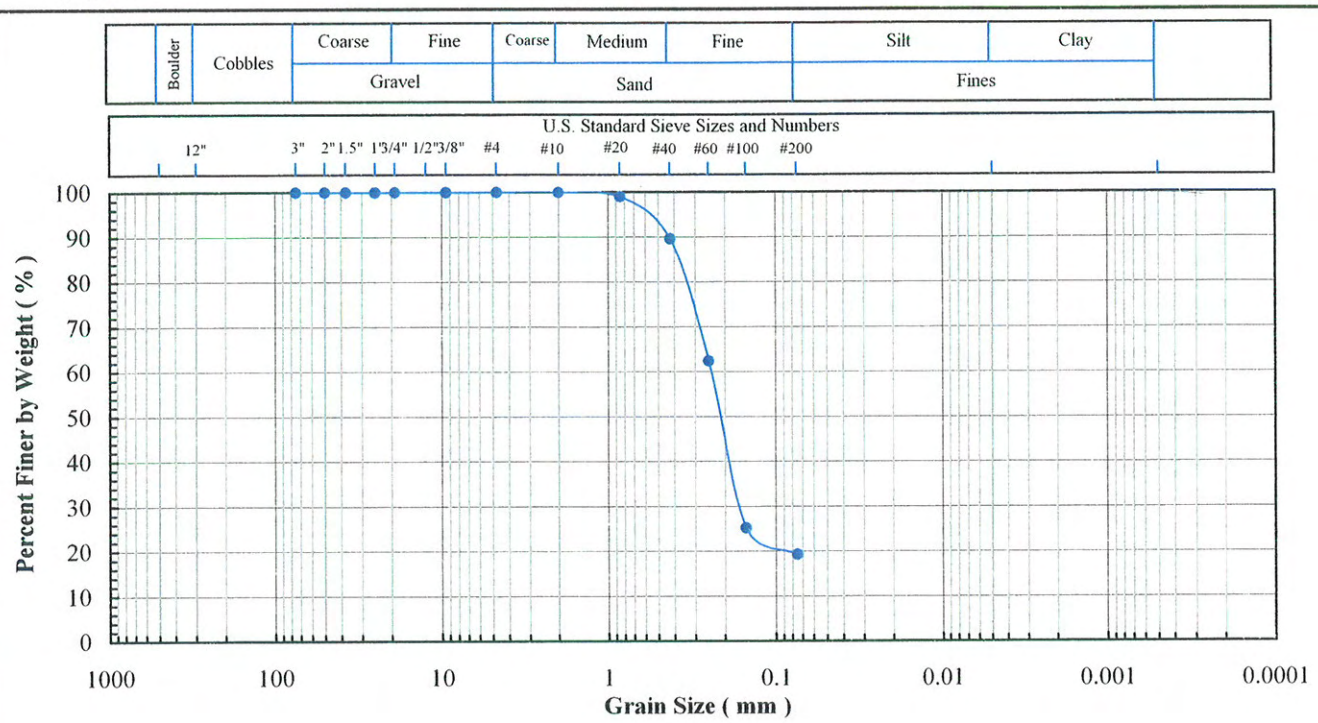
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-02
Lab Sample No:	D094

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



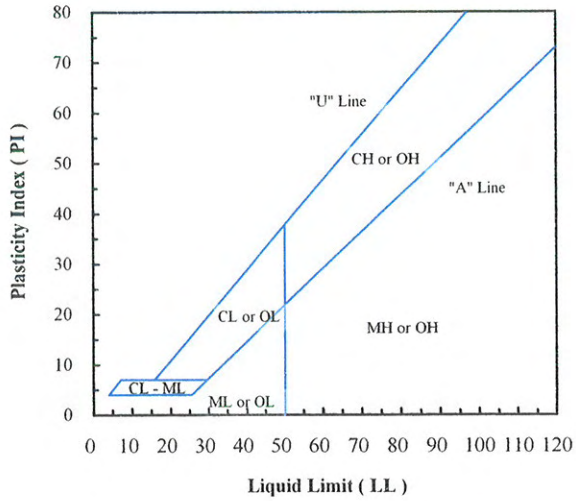
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.0
#40	0.425	89.6
#60	0.250	62.4
#100	0.150	25.2
#200	0.075	19.3

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	80.7
Fines (%):	19.3
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-02	D094	4.9	19.3	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 0.1 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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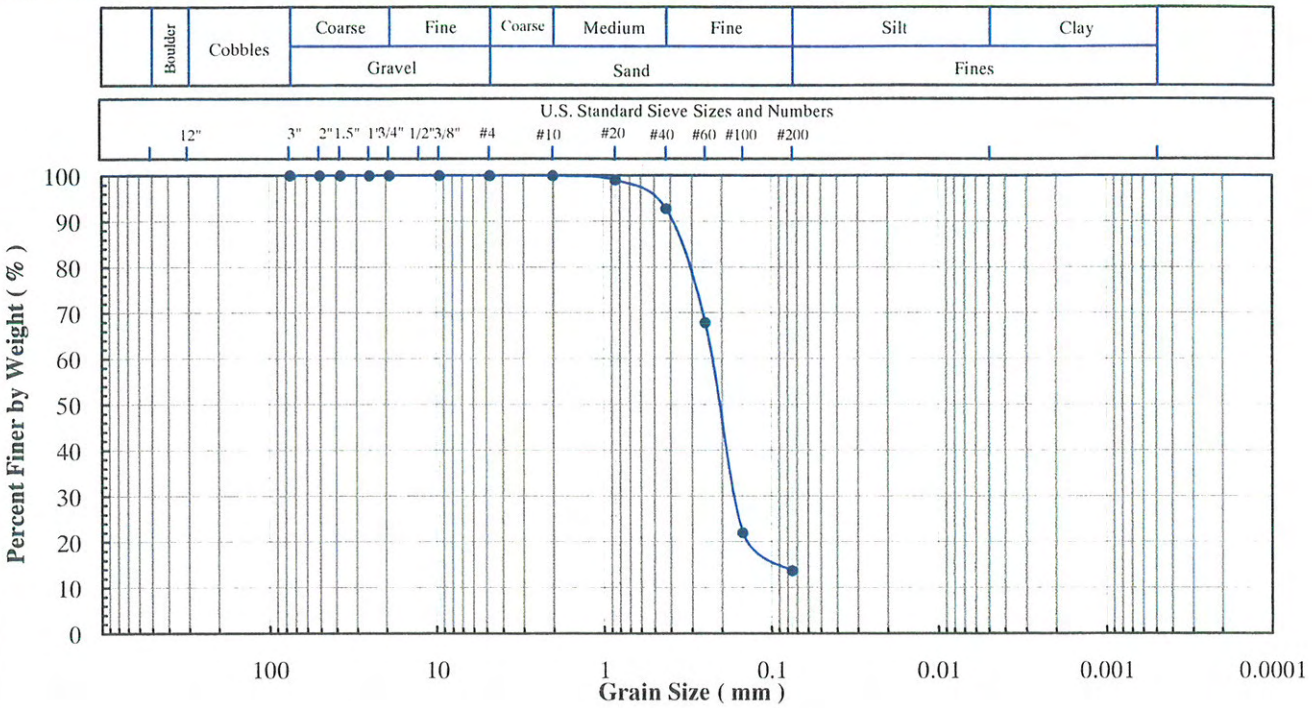
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-03
Lab Sample No:	G014

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



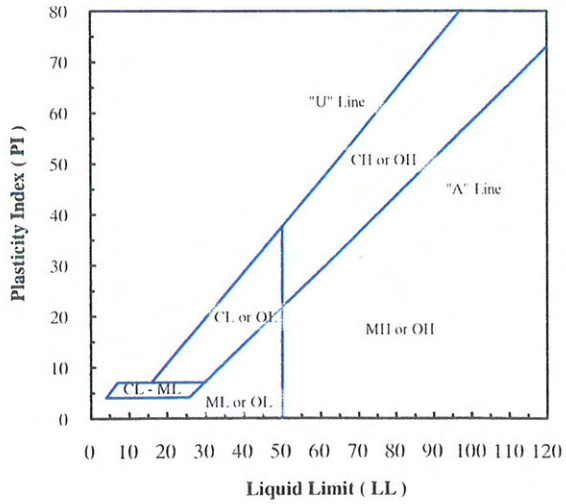
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.1
#40	0.425	92.8
#60	0.250	67.9
#100	0.150	22.0
#200	0.075	13.7

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	86.3
Fines (%):	13.7
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
PC-03	G014	8.7	13.7	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 1.0 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST[1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-03
Lab Sample Number:	G014
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/05/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content [3] (%)		(-)	(cm/s)
1	R	14.0	7.6	97.7	0.0	TW	0.12 - 0.34	8.3E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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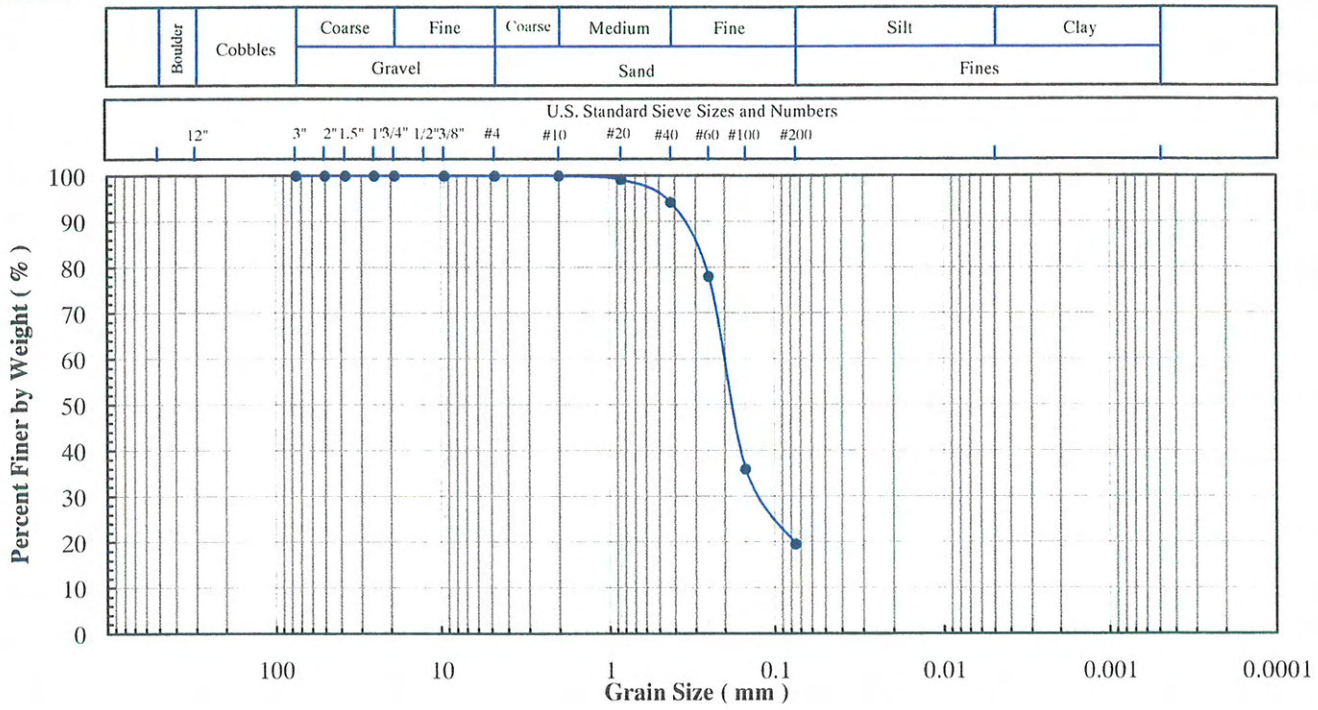
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-04
Lab Sample No:	G015

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



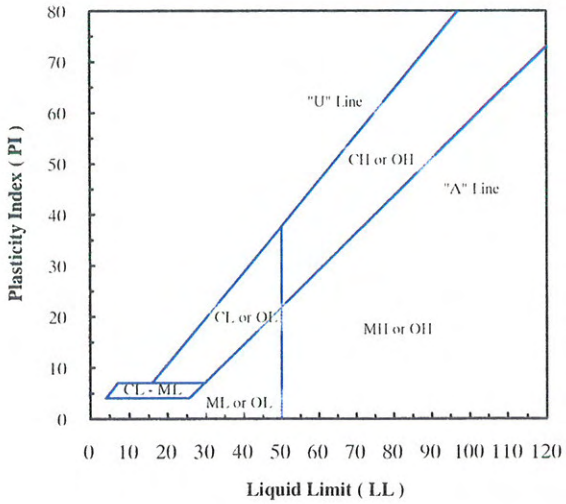
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.2
#40	0.425	94.2
#60	0.250	78.0
#100	0.150	35.9
#200	0.075	19.5

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	80.5
Fines (%):	19.5
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-04	G015	12.2	19.5	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 0.8 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST (1)

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-04
Lab Sample Number:	G015
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/06/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid (4)	Gradient Range	Hydraulic Conductivity
	Spec. Prep. (2) (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content (3) (%)		(-)	(cm/s)
1	R	13.9	7.6	96.2	0.0	TW	0.20 - 0.55	2.9E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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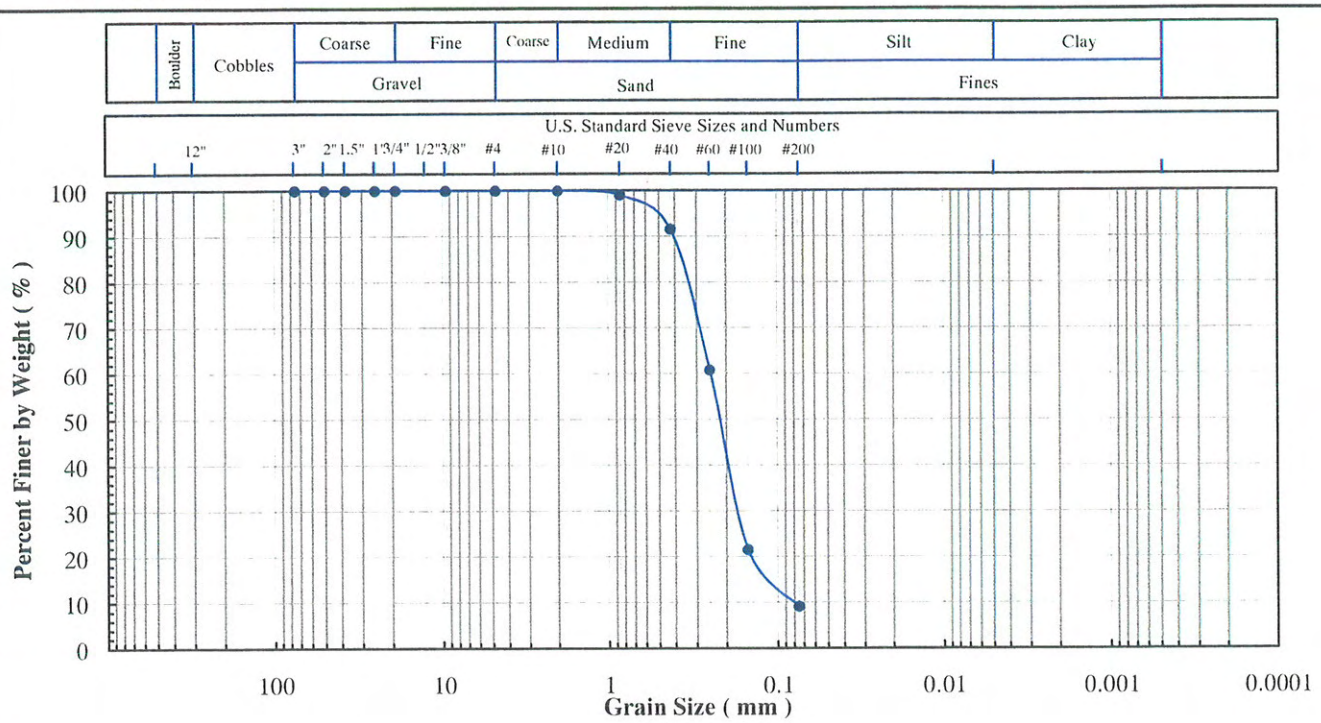
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-05
Lab Sample No:	G016

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



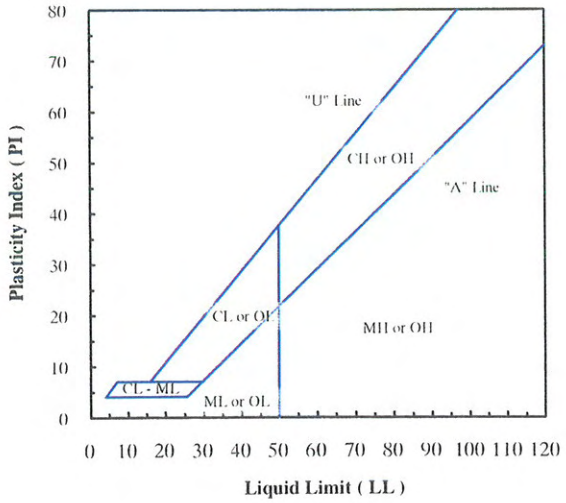
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.1
#40	0.425	91.6
#60	0.250	60.8
#100	0.150	21.5
#200	0.075	9.1

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	90.9
Fines (%):	9.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	3.1
Coeff. Curv. (Cc):	1.6



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
PC-05	G016	5.9	9.1	NP	NP	NP	SP-SM - Poorly graded sand with silt

Note(s):

Carbonate Content of Soils (ASTM D 4373): 1.0 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST[1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-05
Lab Sample Number:	G016
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/06/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content [3] (%)		(-)	(cm/s)
1	R	14.2	7.6	103.8	0.0	TW	0.20 - 0.39	1.1E-2

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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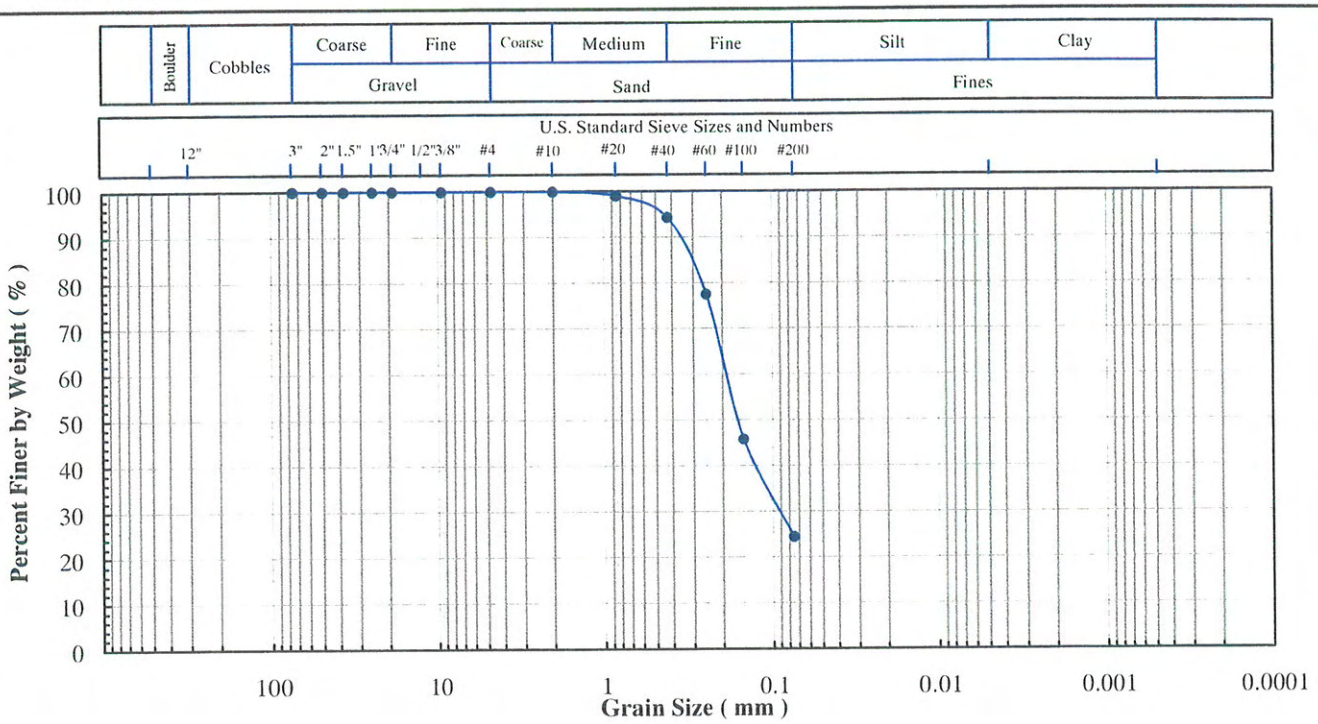
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-06
Lab Sample No:	G017

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



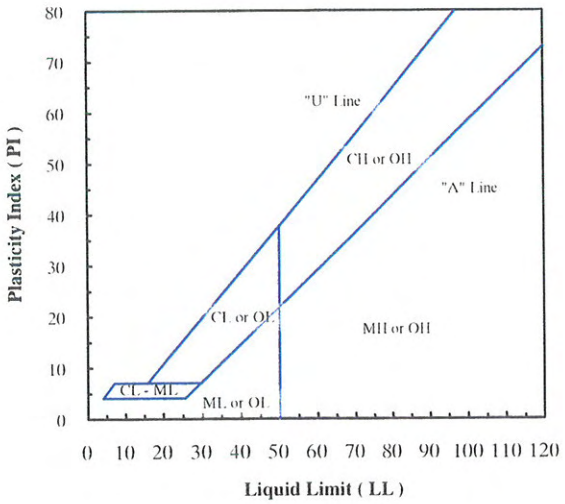
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.1
#40	0.425	94.3
#60	0.250	77.5
#100	0.150	45.8
#200	0.075	24.4

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	75.6
Fines (%):	24.4
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-06	G017	11.3	24.4	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 0.6 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST (1)

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-06
Lab Sample Number:	G017
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/06/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid (4)	Gradient Range	Hydraulic Conductivity
	Spec. Prep. (2) (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content (3) (%)		(-)	(cm/s)
1	R	14.1	7.6	97.6	0.0	TW	0.21 - 0.51	4.1E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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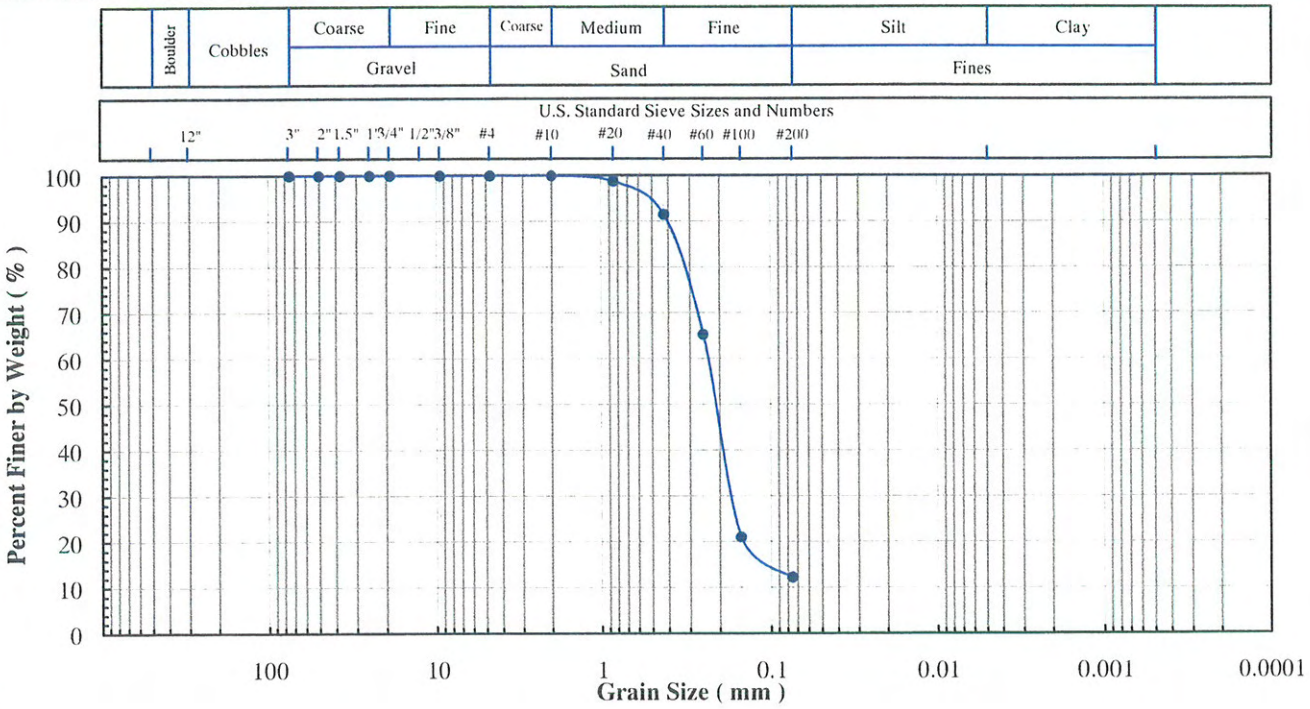
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-07
Lab Sample No:	G018

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



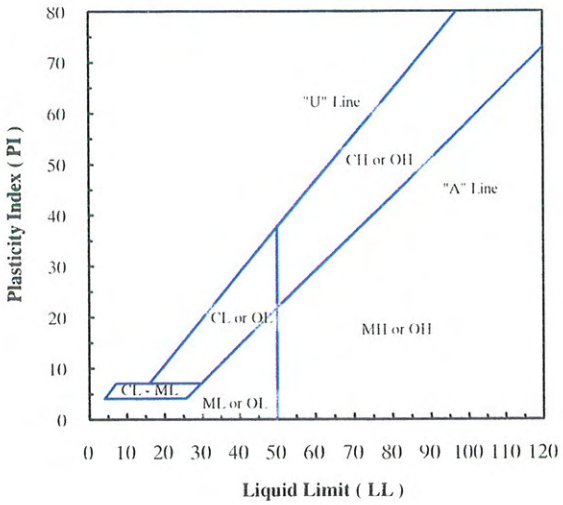
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	98.8
#40	0.425	91.5
#60	0.250	65.3
#100	0.150	21.0
#200	0.075	12.2

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	87.8
Fines (%):	12.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-07	G018	10.0	12.2	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 0.4 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST[1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-07
Lab Sample Number:	G018
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/06/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content[3] (%)		(-)	(cm/s)
1	R	14.1	7.6	97.4	0.0	TW	0.20 - 0.42	6.9E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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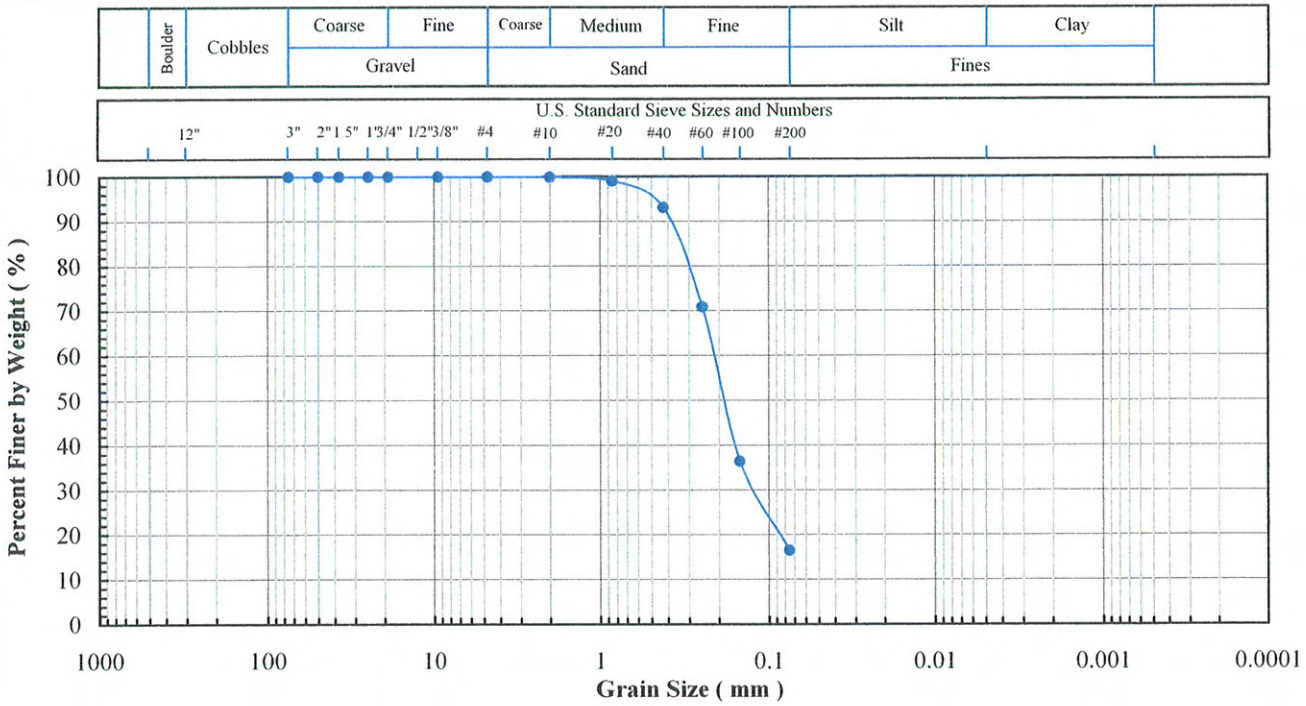
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-08
Lab Sample No:	G149

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



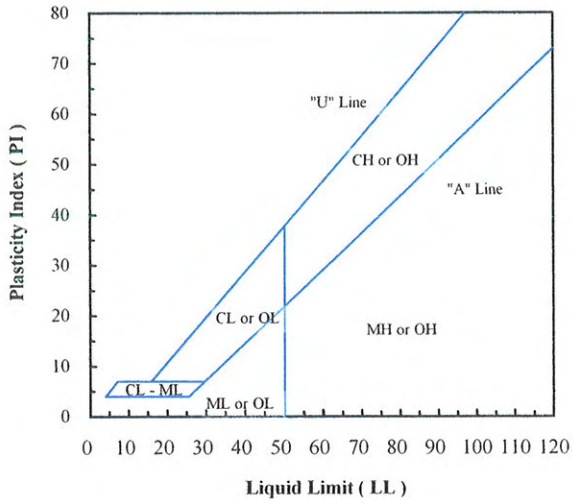
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	99.1
#40	0.425	93.1
#60	0.250	70.9
#100	0.150	36.4
#200	0.075	16.5

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	83.5
Fines (%):	16.5
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-08	G149	10.9	16.5	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 1.5 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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Tel: (770) 650 1666 Fax: (770) 650 5786

RIGID WALL PERMEABILITY TEST [1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-08
Lab Sample Number:	G149
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/30/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content [3] (%)		(-)	(cm/s)
1	R	13.8	7.6	97.2	0.0	TW	0.16 - 0.38	1.3E-2

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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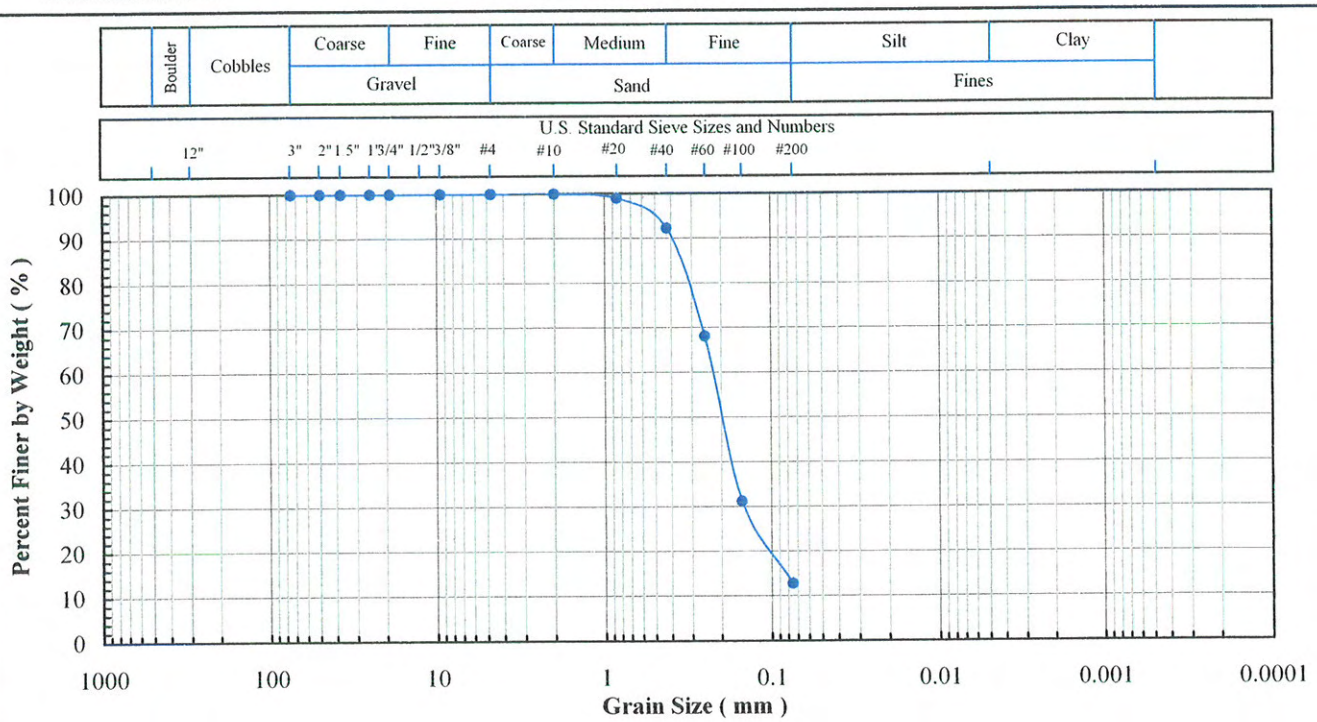
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-09
Lab Sample No:	G150

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



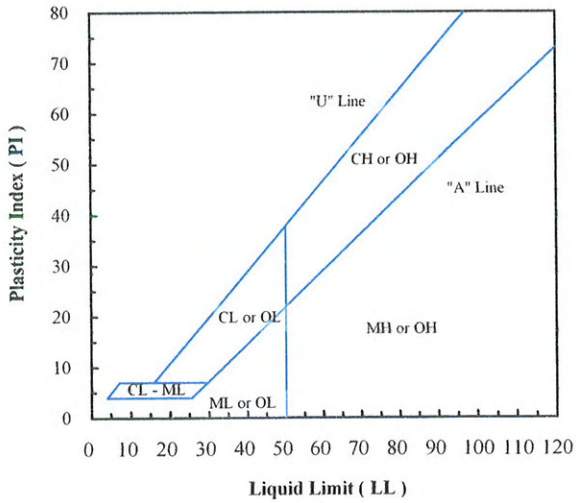
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.0
#40	0.425	92.3
#60	0.250	68.1
#100	0.150	31.2
#200	0.075	12.8

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	87.2
Fines (%):	12.8
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-09	G150	11.7	12.8	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 1.8 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST[1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-09
Lab Sample Number:	G150
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/30/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content[3] (%)		(-)	(cm/s)
1	R	13.6	7.6	95.7	0.0	TW	0.18 - 0.49	8.2E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

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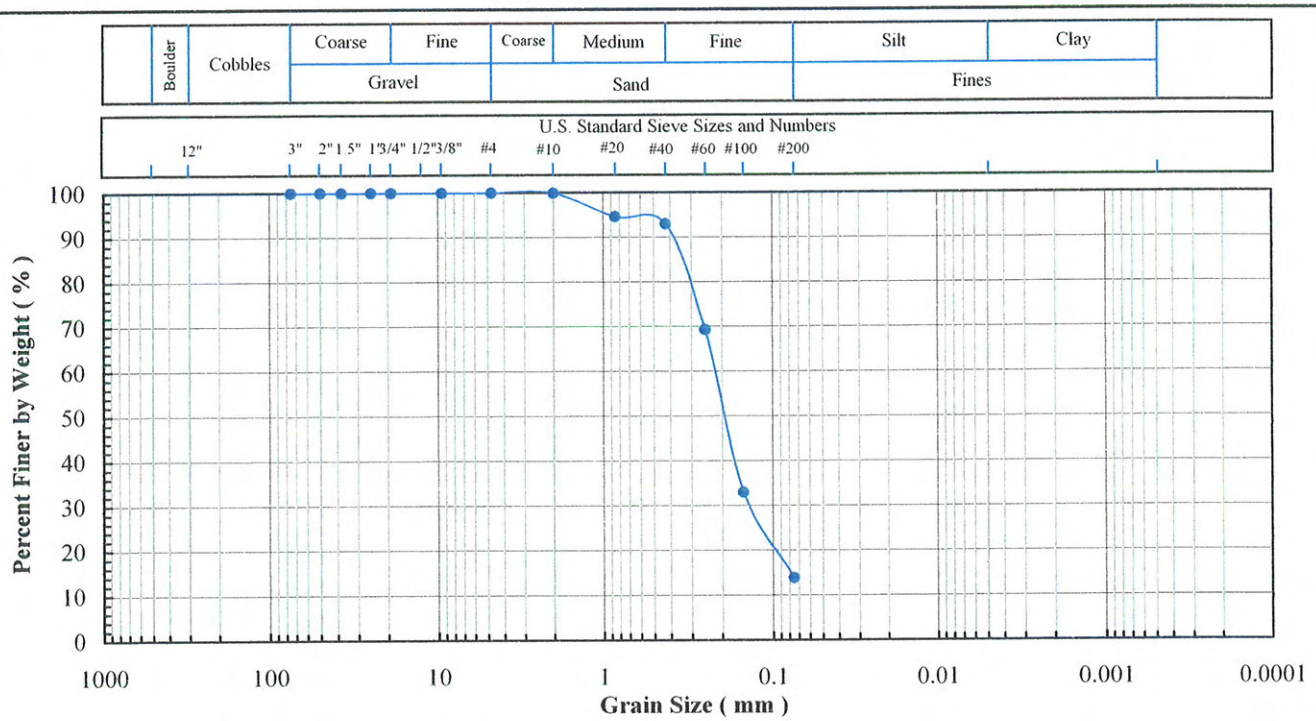
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	PC-10
Lab Sample No:	G151

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits



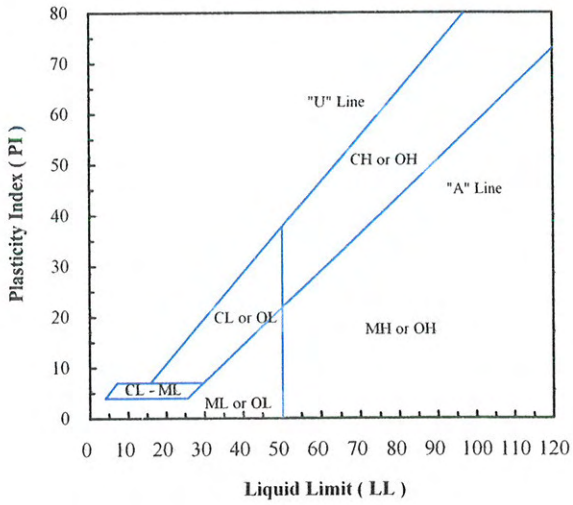
Sieve No.	Size (mm)	% Finer
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	100.0
3/4"	19	100.0
3/8"	9.5	100.0
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	94.6
#40	0.425	93.0
#60	0.250	69.3
#100	0.150	33.0
#200	0.075	13.9

Specific Gravity (-):	

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	
Sand (%):	86.1
Fines (%):	13.9
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
PC-10	G151	13.1	13.9	NP	NP	NP	SM - Silty sand

Note(s):

Carbonate Content of Soils (ASTM D 4373): 1.1 %

Engineering classification is based on the assumption that the fines are either ML or MH.

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RIGID WALL PERMEABILITY TEST [1]

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	PC-10
Lab Sample Number:	G151
Material Type:	Sand
Specified Value (cm/sec):	NA
Date Tested:	7/30/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid [4]	Gradient Range	Hydraulic Conductivity
	Spec. Prep. [2] (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content [3] (%)		(-)	(cm/s)
1	R	13.7	7.6	96.3	0.0	TW	0.17 - 0.42	8.1E-3

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 7 layers, each approximately 2.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

Drainage Gravel

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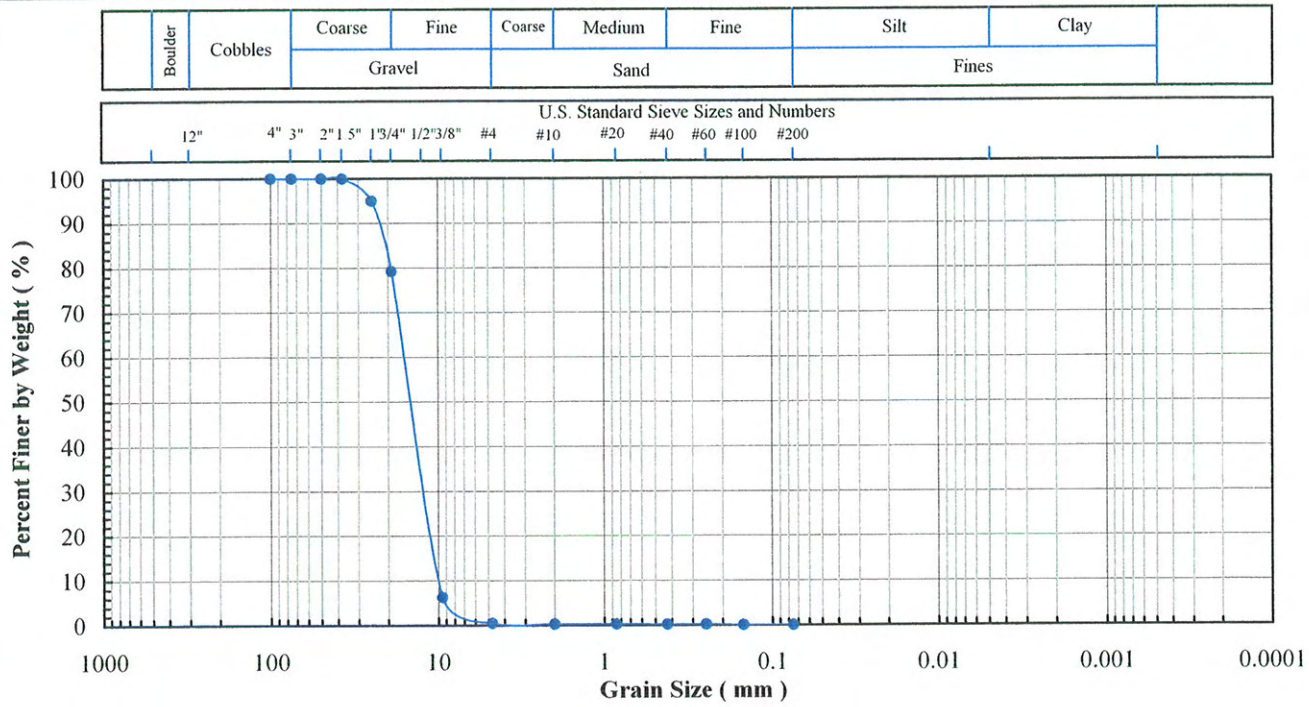
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	DG-03
Lab Sample No:	E090

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits

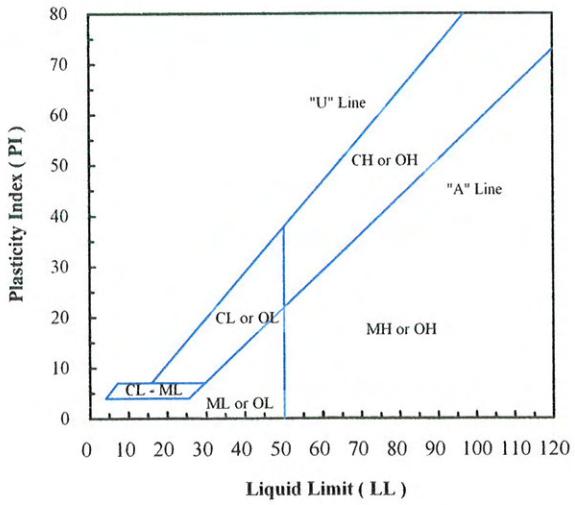


Sieve No.	Size (mm)	% Finer
4"	100	100.0
3"	75	100.0
2"	50	100.0
1.5"	37.5	100.0
1"	25	95.0
3/4"	19	79.2
3/8"	9.5	6.3
#4	4.75	0.5
#10	2.00	0.3
#20	0.850	0.3
#40	0.425	0.2
#60	0.250	0.2
#100	0.150	0.1
#200	0.075	0.1

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	99.5
Sand (%):	0.4
Fines (%):	0.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	1.6
Coeff. Curv. (Cc):	0.9



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
DG-03	E090		0.1				GP - Poorly graded gravel

Note(s): FDOT #57 STONE

Excel Geotechnical Testing, Inc.
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RIGID WALL PERMEABILITY TEST (1)

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	DG-03
Lab Sample Number:	E090
Material Type:	NA
Specified Value (cm/sec):	NA
Date Tested:	5/23/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid (4)	Gradient Range	Hydraulic Conductivity
	Spec. Prep. (2) (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content (3) (%)		(-)	(cm/s)
1	R	30.5	23.0	95.8	0.0	TW	0.002 - 0.01	2.5E+1

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 5 layers, each approximately 6.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

The entire sample was used (i.e., particles larger than 3/4 in. Seive were not removed).

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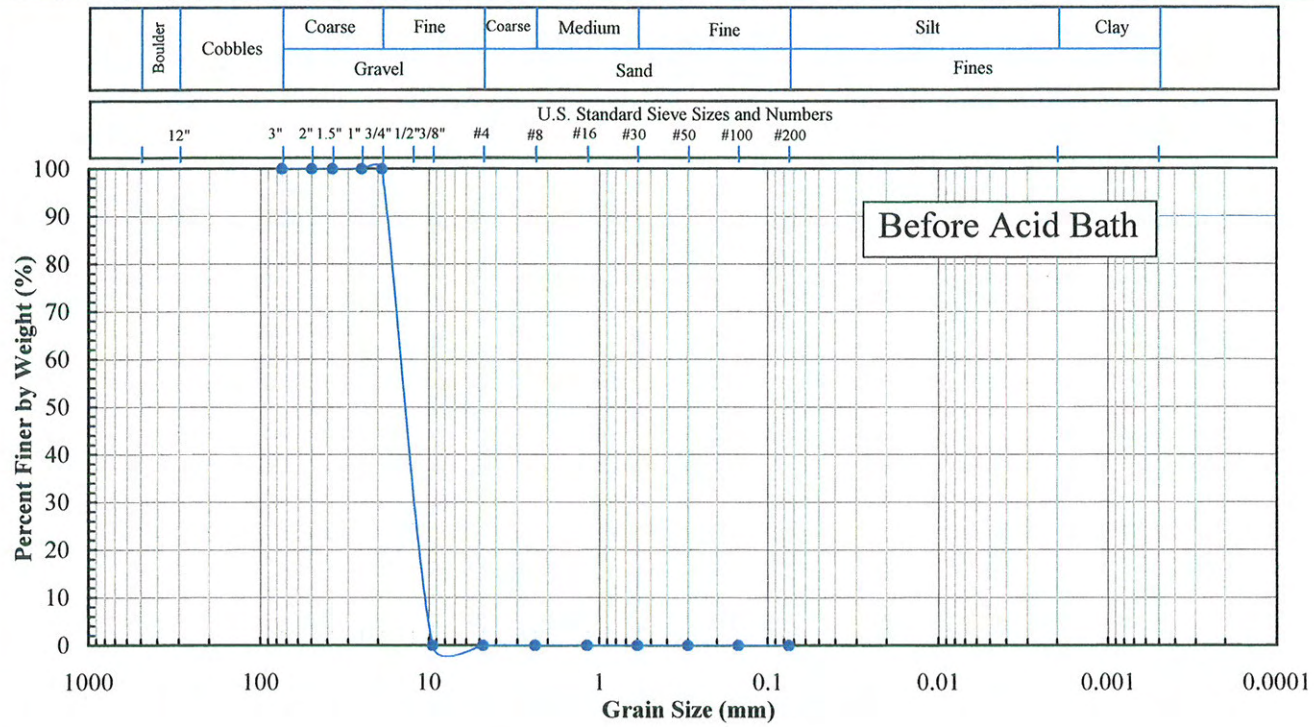
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID	DG-03
Lab Sample No:	E090

ASTM D 3042

INSOLUBLE RESIDUE IN CARBONATE AGGREGATES

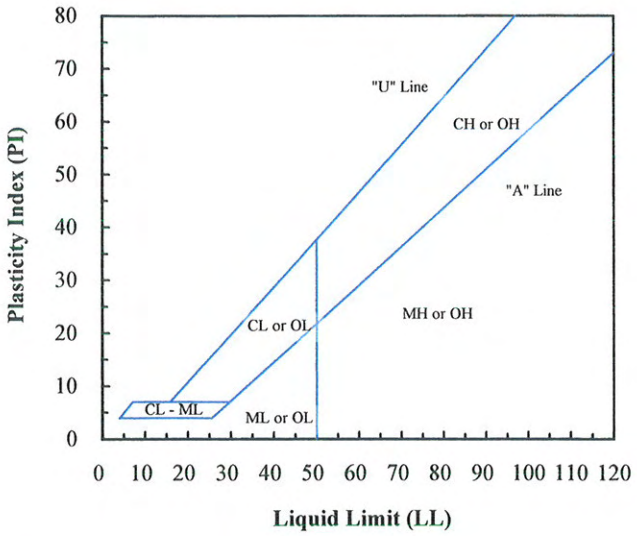


Sieve No.	Size (mm)	% Finer
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	100.0
1"	25.0	100.0
3/4"	19.0	100.0
3/8"	9.50	
#4	4.75	
#8	2.00	
#16	0.850	
#30	0.425	
#50	0.250	
#100	0.150	
#200	0.075	

Hydrometer Particle Diameter (mm)	% Finer
0.050	
0.020	
0.005	
0.002	
0.001	

Gravel (%):	100.0
Sand (%):	
Fines (%):	
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	Engineering Classification
DG-03	E090						

Note(s):

Only particles passed through 3/4 in. Sieve and washed over 3/8 in. Sieve were used.

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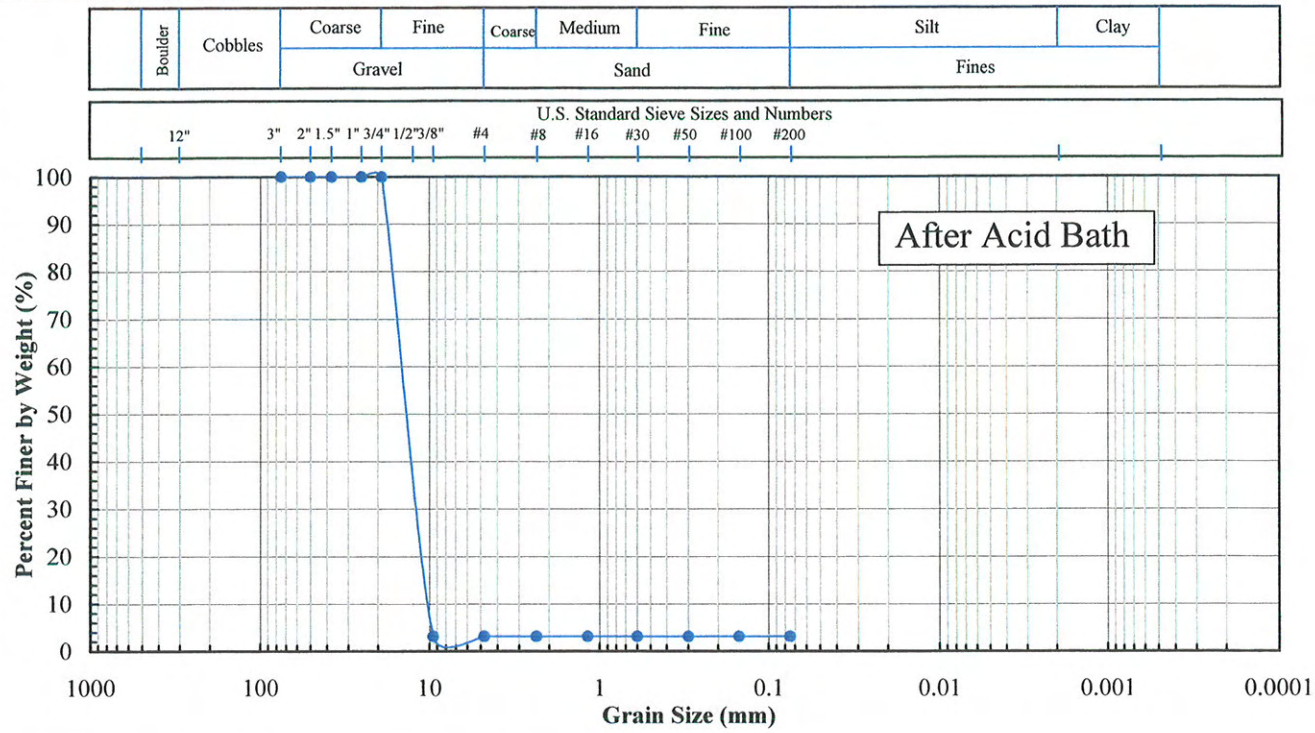
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID	DG-03
Lab Sample No:	E090

ASTM D 3042

INSOLUBLE RESIDUE IN CARBONATE AGGREGATES

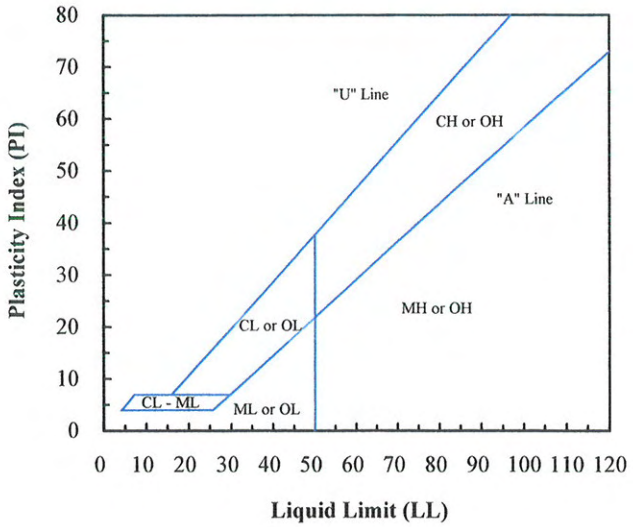


Sieve No.	Size (mm)	% Finer
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	100.0
1"	25.0	100.0
3/4"	19.0	100.0
3/8"	9.50	3.2
#4	4.75	3.2
#8	2.00	3.2
#16	0.850	3.2
#30	0.425	3.2
#50	0.250	3.2
#100	0.150	3.2
#200	0.075	3.2

Hydrometer Particle Diameter (mm)	% Finer
0.050	
0.020	
0.005	
0.002	
0.001	

Gravel (%):	96.8
Sand (%):	
Fines (%):	3.2
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	**Total Insoluble Residue** (%)
DG-03	E090		3.2				96.8

Note(s):

Only particles passed through 3/4 in. Sieve and washed over 3/8 in. Sieve were used.

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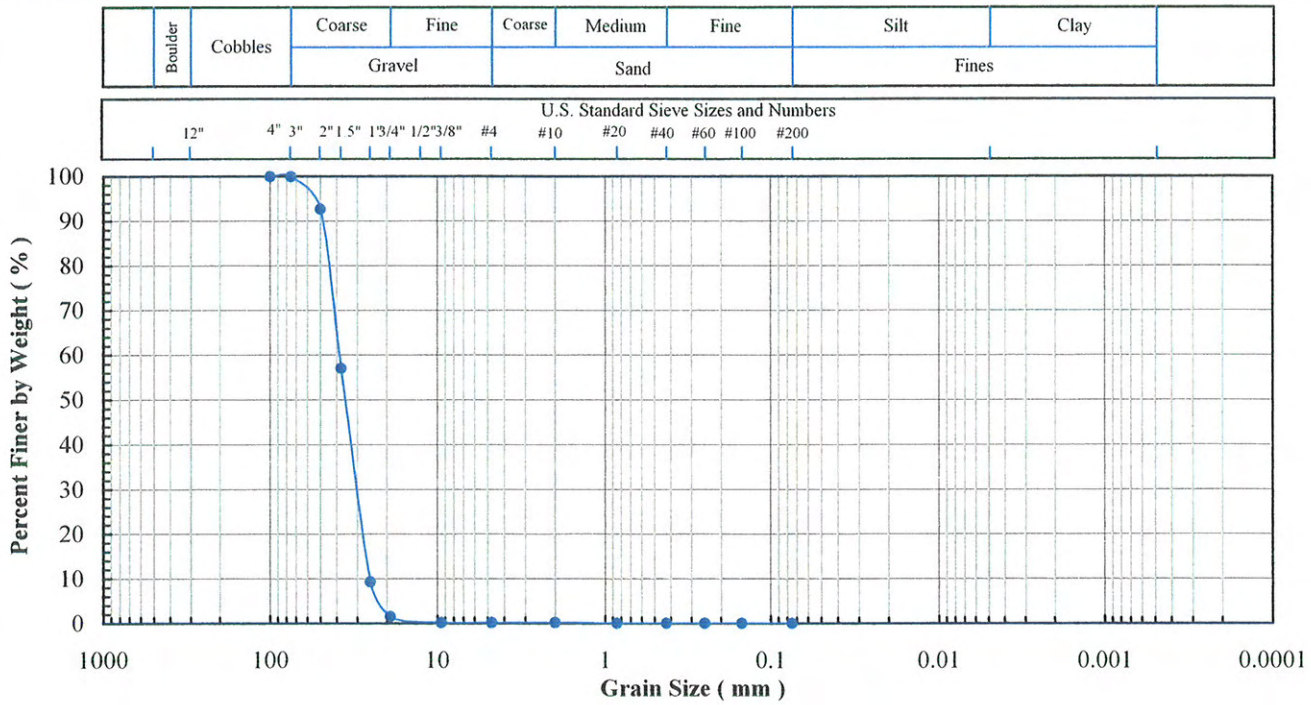
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID:	DG-04
Lab Sample No:	E091

ASTM C 136, D 422, D 854, D 1140, D2216, D 2487, D4318

SOIL INDEX PROPERTIES

Grain Size, Spec. Gravity, Moist. Content, Eng. Classification, Atterberg Limits

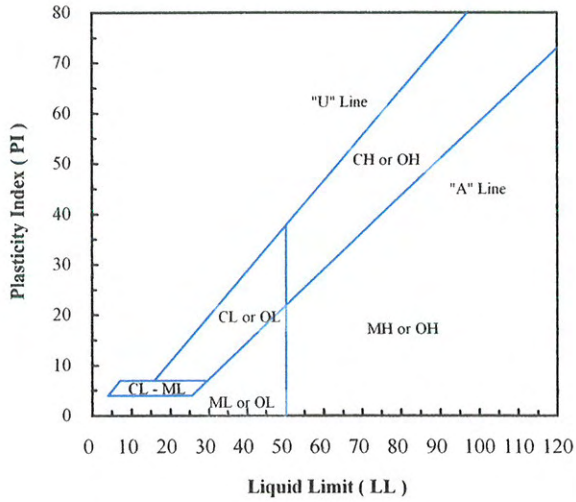


Sieve No.	Size (mm)	% Finer
4"	100	100.0
3"	75	100.0
2"	50	92.7
1.5"	37.5	57.1
1"	25	9.4
3/4"	19	1.6
3/8"	9.5	0.2
#4	4.75	0.2
#10	2.00	0.2
#20	0.850	0.1
#40	0.425	0.1
#60	0.250	0.1
#100	0.150	0.1
#200	0.075	0.1

Hydrometer Particle Diameter (mm)	% Finer

Gravel (%):	99.8
Sand (%):	0.1
Fines (%):	0.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	1.6
Coeff. Curv. (Cc):	1.0



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
DG-04	E091		0.1				GP - Poorly graded gravel

Note(s): FDOT #4 STONE

Excel Geotechnical Testing, Inc.
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RIGID WALL PERMEABILITY TEST (1)

ASTM D2434 *

Project Name:	Vista Class III Landfill
Project Number:	306
Client Name:	Geosyntec Consultants
Site Sample ID:	DG-04
Lab Sample Number:	E091
Material Type:	NA
Specified Value (cm/sec):	NA
Date Tested:	5/23/2008

Specimen Number	Specimen Initial Conditions					Permeant Liquid (4)	Gradient Range	Hydraulic Conductivity
	Spec. Prep. (2) (-)	Spec. Length (cm)	Spec. Diameter (cm)	Dry Unit Weight (pcf)	Moisture Content(3) (%)		(-)	(cm/s)
1	R	31.4	23.0	94.0	0.0	TW	0.004 - 0.01	4.5E+1

Notes:

1. Constant head test procedures were followed during the testing.
2. Remolded specimen was formed by tamping the soil in 5 layers, each approximately 6.0 cm, utilizing moderate compaction energy.
3. A moisture content of 0.0% indicates that the sample was air/oven dried before being tested.
4. Type of permeant liquid: TW = Tap Water, DTW = Deaired Tap Water, DDI = Deaired Deionized Water

* Deviations:

Laboratory temperature at 22±3 °C.

Test specimen final conditions are not presented.

The entire sample was used (i.e., particles larger than 3/4 in. Seive were not removed).

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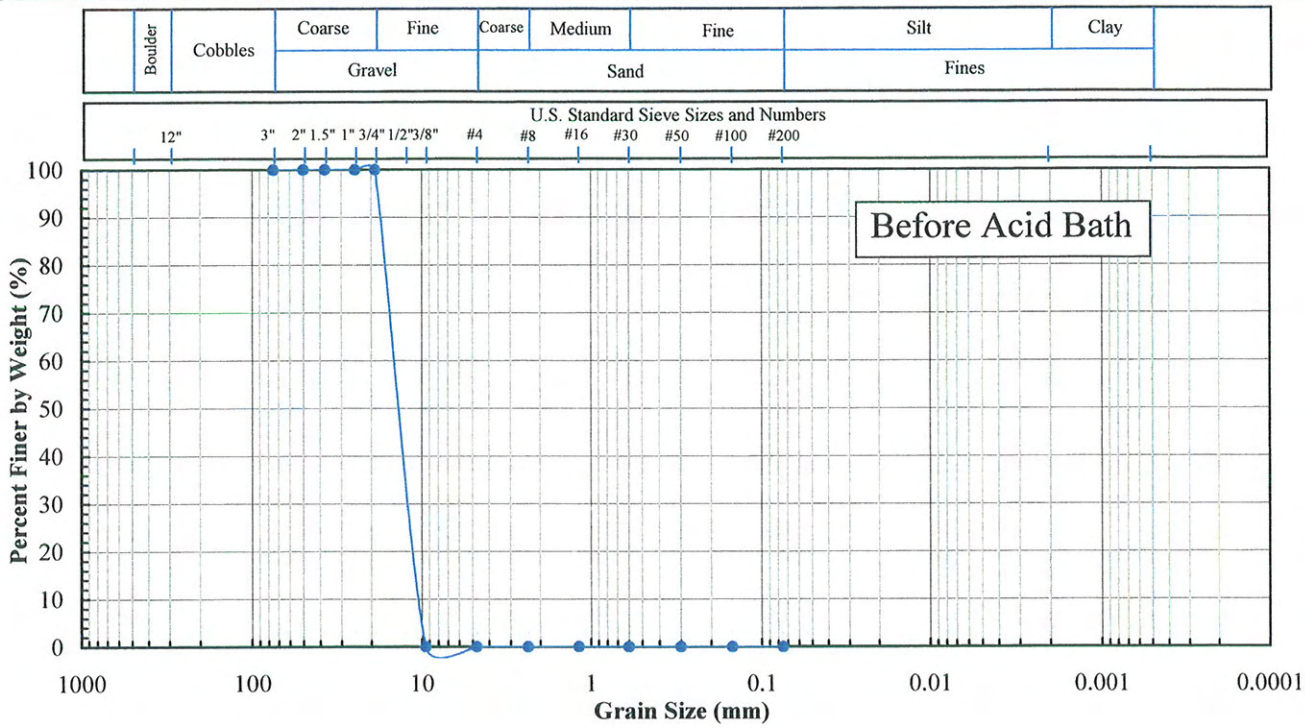
Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID	DG-04
Lab Sample No:	E091

ASTM D 3042

INSOLUBLE RESIDUE IN CARBONATE AGGREGATES

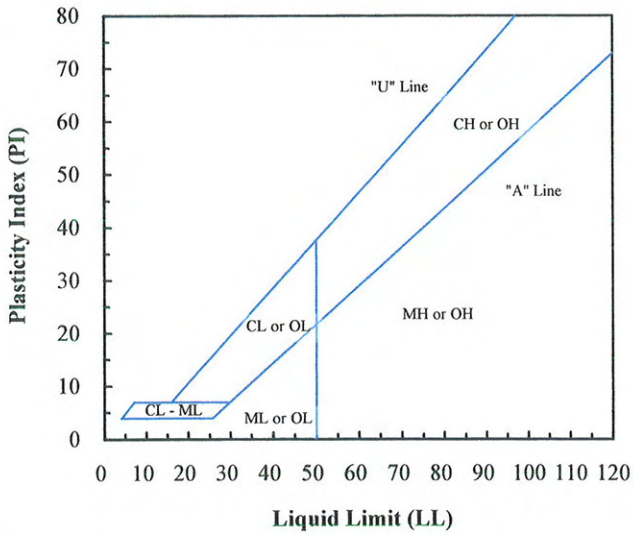


Sieve No.	Size (mm)	% Finer
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	100.0
1"	25.0	100.0
3/4"	19.0	100.0
3/8"	9.50	
#4	4.75	
#8	2.00	
#16	0.850	
#30	0.425	
#50	0.250	
#100	0.150	
#200	0.075	

Hydrometer Particle Diameter (mm)	% Finer
0.050	
0.020	
0.005	
0.002	
0.001	

Gravel (%):	100.0
Sand (%):	
Fines (%):	
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	PL (-)	PI (-)	Engineering Classification
DG-04	E091						

Note(s):

Only particles passed through 1.0 in. Sieve and washed over 3/4 in. Sieve were used.

Excel Geotechnical Testing, Inc.
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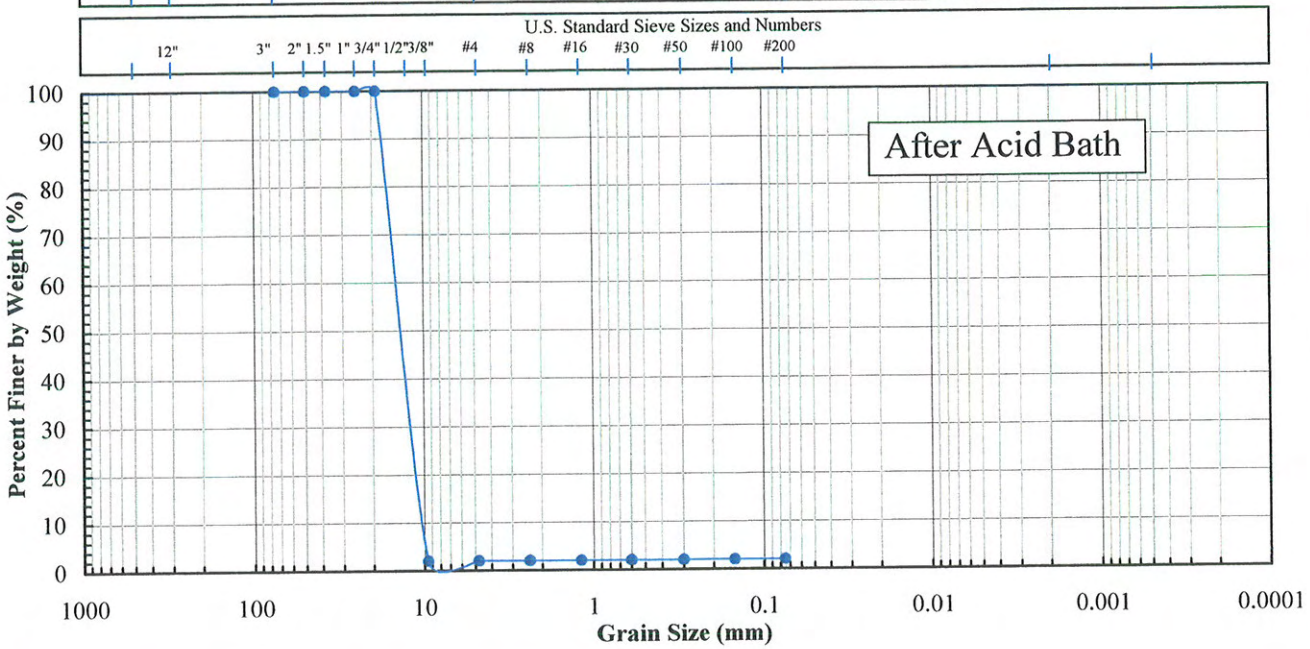
Tel: (770) 650 1666 Fax: (770) 650 5786

Project Name:	Vista Class III Landfill
Project No:	306
Client Sample ID	DG-04
Lab Sample No:	E091

ASTM D 3042

INSOLUBLE RESIDUE IN CARBONATE AGGREGATES

Boulder	Cobbles	Gravel: Coarse	Gravel: Fine	Sand: Coarse	Sand: Medium	Sand: Fine	Fines: Silt	Fines: Clay

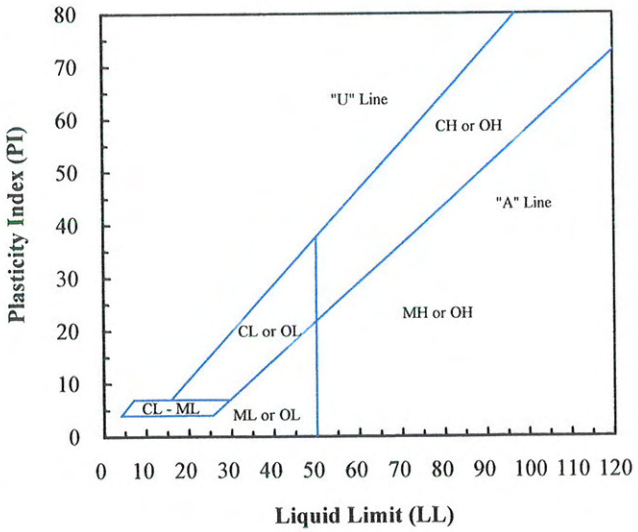


Sieve No.	Size (mm)	% Finer
3"	75.0	100.0
2"	50.0	100.0
1.5"	37.5	100.0
1"	25.0	100.0
3/4"	19.0	100.0
3/8"	9.50	2.1
#4	4.75	2.1
#8	2.00	2.1
#16	0.850	2.1
#30	0.425	2.1
#50	0.250	2.1
#100	0.150	2.1
#200	0.075	2.1

Hydrometer Particle Diameter (mm)	% Finer
0.050	
0.020	
0.005	
0.002	
0.001	

Gravel (%):	97.9
Sand (%):	
Fines (%):	2.1
Silt (%):	
Clay (%):	

Coeff. Unif. (Cu):	
Coeff. Curv. (Cc):	



Client Sample ID.	Lab Sample No:	Moisture Content (%)	Fines Content < No. 200 (%)	Atterberg Limits LL (-)	Atterberg Limits PL (-)	Atterberg Limits PI (-)	**Total Insoluble Residue (%)**
DG-04	E091		2.1				97.9

Note(s):

Only particles passed through 1.0 in. Sieve and washed over 3/4 in. Sieve were used.

SUB APPENDIX A-2

FIELD NUCLEAR DENSITY TEST RESULTS

AS-BUILT DRAWING

REV	DATE	DESCRIPTION	DRN	APP

Geosyntec consultants
10055 RIVERIDGE DRIVE, SUITE 300
TAMPA, FLORIDA 33637 USA
PH: 813.553.9000 - FX: 813.556.9720
AUTHORIZATION NUMBER 4321

WASTE MANAGEMENT
342 WEST KEENE ROAD
APOPKA, FLORIDA 32703
PH: 407.886.2920

TITLE:
DENSITY TEST LOCATION MAP

PROJECT:
CELL 1 CONSTRUCTION DRAWINGS

SITE:
VISTA CLASS III LANDFILL
APOPKA, FLORIDA

THIS DRAWING ISSUED FOR PERMITTING ONLY AND MAY NOT BE USED FOR CONSTRUCTION

ESIGNATURE

DATE

JAMES D. GARGO - LICENSE NO. 63778

DESIGN BY:	--	DATE:	27 MAY 2008
DRAWN BY:	CMV	PROJECT NO:	FQ1465.04
CHECKED BY:	CJ	FILE:	FQ1465.04P01
REVIEWED BY:	CJ	DRAWING NO.:	
APPROVED BY:	-	1	OF 1

Geosyntec consultants

WASTE MANAGEMENT

FIELD NUCLEAR MOISTURE/DENSITY TEST LOG **(ASTM D 6938)**

PROJECT: Vista Class III Landfill

LOCATION: Apopka, FL PROJECT NO.: FQ1465 TASK NO.: 02

DESCRIPTION: Cell 1 Construction DATE: 30 day April month 2008 year

SPECIFICATION REQUIREMENTS: MATERIAL SOURCE: In Situ Materails

MATERIAL TYPE: [ ] FILL [X] SUBGRADE [ ] SUBBASE [ ] CLAY [ ] OTHER: _____ MAX. LIFT THICKNESS: -- (in.)

MINIMUM COMPACTION: 95 (%) [X] ASTM D 698 [ ] ASTM D 1557 MOISTURE CONTENT RANGE: - -- to + -- of OPT.

NUCLEAR GAUGE TYPE: 3430 GAUGE SERIAL NO.: 24487 CORRECTION FACTOR: Y= None

TEST NO.	TEST LOCATION	PROBE DEPTH / LIFT NO.	LABORATORY RESULTS			FIELD TEST RESULTS						RE-TEST NO.	RE-TEST	
			SAMPLE NO.	OMC (%)	MAX. DRY UNIT WT. (pcf)	FIELD MOISTURE CONTENT[1] (%)	WET UNIT WT (pcf)	DRY UNIT WT (pcf)	PERCENT COMPACT. (%)	PASS	FAIL		PASS	FAIL
001	275 S / 20 W	12 / 0	SF-02	13.3	112.8	11.3	129.1	116.0	103	PASS				
002	575 S / 20 W	12 / 0	SF-02	13.3	112.8	5.7	118.8	112.4	100	PASS				
003	775 S / 15 W	12 / 0	SF-02	13.3	112.8	10.8	120.9	109.1	97	PASS				
004	825 S / 150 W	12 / 0	SF-02	13.3	112.8	12.3	123.5	110.0	97	PASS				
005	650 S / 250 W	12 / 0	SF-03	19.5	104	12.8	111.5	98.8	95	PASS				
006	550 S / 325 W	12 / 0	SF-02	13.3	112.8	7.6	117.5	109.2	97	PASS				
007	400 S / 475 W	12 / 0	SF-02	13.3	112.8	0.9	110.2	109.2	97	PASS				
008	300 / 480 W	12 / 0	SF-02	13.3	112.8	5.4	121.6	115.4	102	PASS				
009	100 / 475 W	12 / 0	SF-02	13.3	112.8	2.4	109.5	106.9	95	PASS				
010	30 S / 400 W	12 / 0	SF-02	13.3	112.8	2.9	109.8	106.7	95	PASS				
011	35 S / 110 W	12 / 0	SF-02	13.3	112.8	3.8	111.1	107.0	95	PASS				
012	110 S / 25 W	12 / 0	SF-02	13.3	112.8	3.2	111.3	107.8	96	PASS				
013	865 S / 75 W	12 / 0	SF-02	13.3	112.8	1.2	108.9	107.6	95	PASS				
014	700 S / 150 W	12 / 0	SF-03	19.5	104	14.6	114	99.5	96	PASS				

NOTES: (1) FIELD MOISTURE CONTENT = GAUGE READING/CORRECTED MOISTURE

COMMENTS: All test locations measured from the northeast corner of Cell 1

CHECKED BY: DAS

Geosyntec consultants

WASTE MANAGEMENT

FIELD NUCLEAR MOISTURE/DENSITY TEST LOG **(ASTM D 6938)**

PROJECT: Vista Class III Landfill

LOCATION: Apopka, FL PROJECT NO.: FQ1465 TASK NO.: 02

DESCRIPTION: Cell 1 Construction DATE: 30 day April month 2008 year

SPECIFICATION REQUIREMENTS: MATERIAL SOURCE: In Situ Materails

MATERIAL TYPE: [ ] FILL [X] SUBGRADE [ ] SUBBASE [ ] CLAY [ ] OTHER: _____ MAX. LIFT THICKNESS: -- (in.)

MINIMUM COMPACTION: 95 (%) [X] ASTM D 698 [ ] ASTM D 1557 MOISTURE CONTENT RANGE: - -- to + -- of OPT.

NUCLEAR GAUGE TYPE: 3430 GAUGE SERIAL NO.: 24487 CORRECTION FACTOR: Y= None

TEST NO.	TEST LOCATION	PROBE DEPTH / LIFT NO.	LABORATORY RESULTS			FIELD TEST RESULTS						RE-TEST NO.	RE-TEST	
			SAMPLE NO.	OMC (%)	MAX. DRY UNIT WT. (pcf)	FIELD MOISTURE CONTENT[1] (%)	WET UNIT WT (pcf)	DRY UNIT WT (pcf)	PERCENT COMPACT. (%)	PASS	FAIL		PASS	FAIL
015	600 S / 175 W	12 / 0	SF-02	13.3	112.8	10.6	119	107.6	95	PASS				
016	550 S / 275 W	12 / 0	SF-02	13.3	112.8	10.6	118.2	106.9	95	PASS				
		/												
		/												
		/												
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		/												
		/												
		/												

NOTES: (1) FIELD MOISTURE CONTENT = GAUGE READING/CORRECTED MOISTURE

COMMENTS: All test locations measured from northeast corner of Cell 1

CHECKED BY: DAS

Geosyntec consultants

WASTE MANAGEMENT

FIELD NUCLEAR MOISTURE/DENSITY TEST LOG **(ASTM D 6938)**

PROJECT: Vista Class III Landfill

LOCATION: Apopka, FL PROJECT NO.: FQ1465 TASK NO.: 02

DESCRIPTION: Cell 1 Construction DATE: 1 day May month 2008 year

SPECIFICATION REQUIREMENTS: MATERIAL SOURCE: In Situ Materails

MATERIAL TYPE: [ ] FILL [X] SUBGRADE [ ] SUBBASE [ ] CLAY [ ] OTHER: _____ MAX. LIFT THICKNESS: -- (in.)

MINIMUM COMPACTION: 95 (%) [X] ASTM D 698 [ ] ASTM D 1557 MOISTURE CONTENT RANGE: - -- to + -- of OPT.

NUCLEAR GAUGE TYPE: 3430 GAUGE SERIAL NO.: 24487 CORRECTION FACTOR: Y= None

TEST NO.	TEST LOCATION	PROBE DEPTH / LIFT NO.	LABORATORY RESULTS			FIELD TEST RESULTS						RE-TEST NO.	RE-TEST	
			SAMPLE NO.	OMC (%)	MAX. DRY UNIT WT. (pcf)	FIELD MOISTURE CONTENT[1] (%)	WET UNIT WT (pcf)	DRY UNIT WT (pcf)	PERCENT COMPACT. (%)	PASS	FAIL		PASS	FAIL
017	500 S / 110 W	12 / 0	SF-02	13.3	112.8	4.7	112.2	107.2	95	PASS				
018	500 S / 175 W	12 / 0	SF-02	13.3	112.8	4.4	117.2	112.3	100	PASS				
019	450 S / 250 W	12 / 0	SF-02	13.3	112.8	5.1	123.1	117.1	104	PASS				
020	400 S / 100 W	12 / 0	SF-02	13.3	112.8	5.6	125	118.4	105	PASS				
021	400 S / 175 W	12 / 0	SF-02	13.3	112.8	11.4	123.6	111.0	98	PASS				
022	350 S / 250 W	12 / 0	SF-02	13.3	112.8	12.7	120.6	107.0	95	PASS				
023	300 S / 375 W	12 / 0	SF-02	13.3	112.8	6.4	120.3	113.1	100	PASS				
024	400 S / 375 W	12 / 0	SF-02	13.3	112.8	9.8	120.5	109.7	97	PASS				
025	500 S / 375 W	12 / 0	SF-02	19.5	104	12.5	111.7	99.3	95	PASS				
026	275 S / 250 W	12 / 0	SF-02	13.3	112.8	17.5	125.7	107.0	95	PASS				
027	310 S / 175 W	12 / 0	SF-02	13.3	112.8	4.8	119.1	113.6	101	PASS				
028	310 S / 110 W	12 / 0	SF-02	13.3	112.8	5.7	113.5	107.4	95	PASS				
029	175 S / 100 W	12 / 0	SF-02	13.3	112.8	11.1	118.6	106.8	95	PASS				
030	175 S / 175 W	12 / 0	SF-02	13.3	112.8	4.2	111.9	107.4	95	PASS				

NOTES: (1) FIELD MOISTURE CONTENT = GAUGE READING/CORRECTED MOISTURE

COMMENTS: All test locations measured from the northeast corner of Cell 1

CHECKED BY: DAS

Geosyntec consultants

WASTE MANAGEMENT

FIELD NUCLEAR MOISTURE/DENSITY TEST LOG **(ASTM D 6938)**

PROJECT: Vista Class III Landfill

LOCATION: Apopka, FL PROJECT NO.: FQ1465 TASK NO.: 02

DESCRIPTION: Cell 1 Construction DATE: 1 day May month 2008 year

SPECIFICATION REQUIREMENTS: MATERIAL SOURCE: In Situ Materails

MATERIAL TYPE: ☐ FILL ☒ SUBGRADE ☐ SUBBASE ☐ CLAY ☐ OTHER: _____ MAX. LIFT THICKNESS: -- (in.)

MINIMUM COMPACTION: 95 (%) ☒ ASTM D 698 ☐ ASTM D 1557 MOISTURE CONTENT RANGE: - -- to + -- of OPT.

NUCLEAR GAUGE TYPE: 3430 GAUGE SERIAL NO.: 24487 CORRECTION FACTOR: Y= None

TEST NO.	TEST LOCATION	PROBE DEPTH / LIFT NO.	LABORATORY RESULTS			FIELD TEST RESULTS						RE-TEST NO.	RE-TEST	
			SAMPLE NO.	OMC (%)	MAX. DRY UNIT WT. (pcf)	FIELD MOISTURE CONTENT[1] (%)	WET UNIT WT (pcf)	DRY UNIT WT (pcf)	PERCENT COMPACT. (%)	PASS	FAIL		PASS	FAIL
031	150 S / 250 W	12 / 0	SF-02	13.3	112.8	10.9	118.3	106.7	95	PASS				
032	200 S / 375 W	12 / 0	SF-02	13.3	112.8	6.7	120.7	113.1	100	PASS				
033	75 S / 375 W	12 / 0	SF-02	13.3	112.8	7.9	134.7	124.8	111	PASS				
034	75 S / 250 W	12 / 0	SF-02	13.3	112.8	0.8	107.6	106.7	95	PASS				
035	75 S / 175 W	12 / 0	SF-02	13.3	112.8	1.6	110.6	108.9	97	PASS				
036	75 S / 100 W	12 / 0	SF-02	13.3	112.8	2.5	111.3	108.6	96	PASS				
037	425 S / 25 W	12 / 0	SF-02	13.3	112.8	5.6	115.1	109.0	97	PASS				
038	375 S / 400 W	12 / 0	SF-02	13.3	112.8	7.6	116.9	108.6	96	PASS				
039	425 S / 375 W	12 / 0	SF-02	13.3	112.8	9.1	118.5	108.6	96	PASS				
040	225 S / 475 W	12 / 0	SF-02	13.3	112.8	5.0	114.9	109.4	97	PASS				
041	80 S / 435 W	12 / 0	SF-02	13.3	112.8	6.3	118.1	111.1	98	PASS				
042	60 S / 250 W	12 / 0	SF-02	13.3	112.8	11.6	121	108.4	96	PASS				
		/												
		/												

NOTES: (1) FIELD MOISTURE CONTENT = GAUGE READING/CORRECTED MOISTURE

COMMENTS: All test locations measured from the northeast corner of Cell 1

CHECKED BY: DAS

SUB APPENDIX A-3

THICKNESS VERIFICATIONS

Vista Class III Landfill

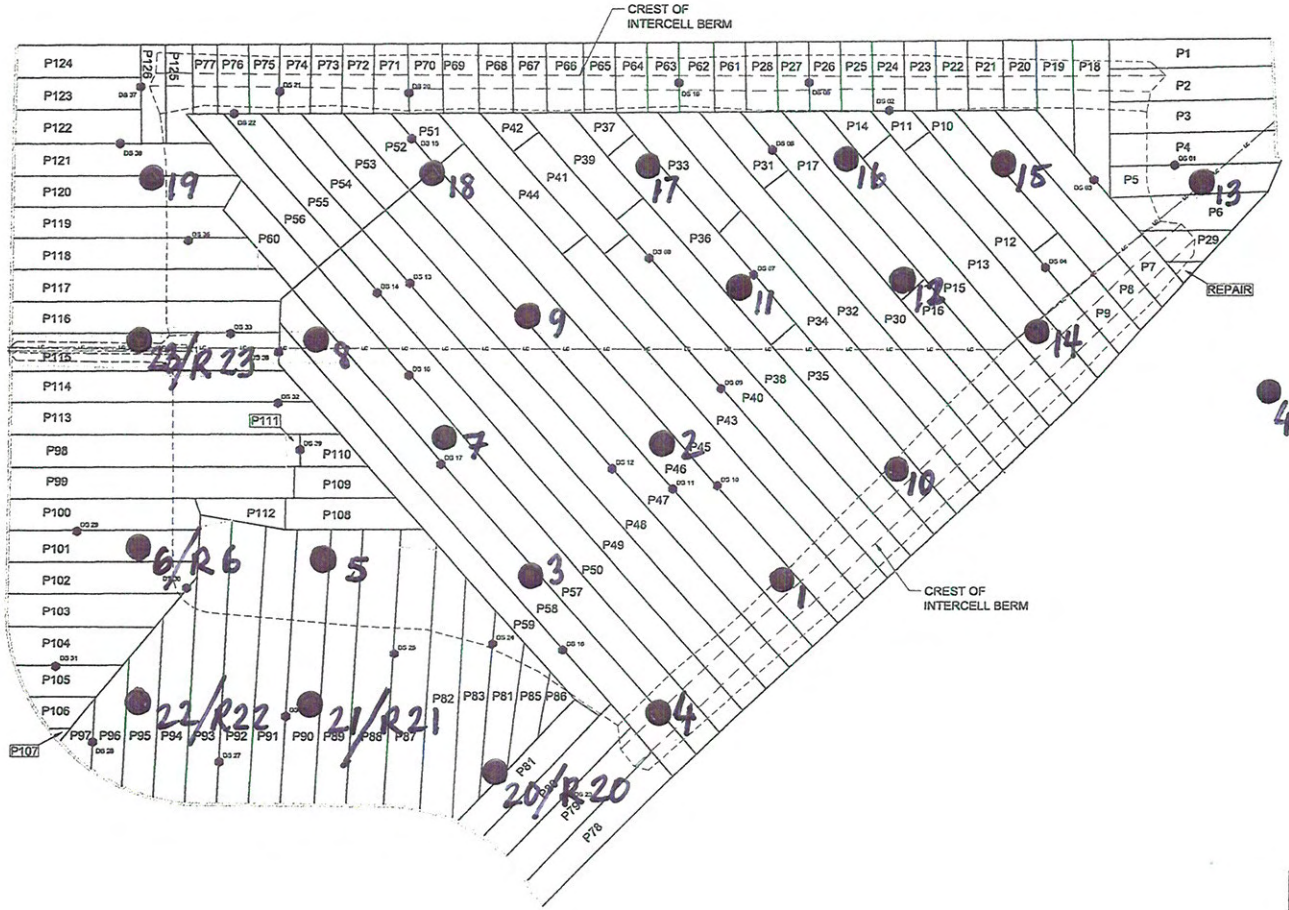
Cell 1 Construction

Protective Cover Thickness Verifications Log

Date	Map Location	Thickness Measurements (inches)	Pass/Fail (P/F)
5-22-2008	1	32	P
5-22-2008	2	32	P
5-22-2008	3	32	P
5-22-2008	4	32	P
5-22-2008	5	32	P
6-23-2008	6	32	P
6-2-2008	7	29.5	P
6-2-2008	8	29	P
6-2-2008	9	29.5	P
6-13-2008	10	24	P
6-13-2008	11	25	P
6-13-2008	12	32	P
6-13-2008	13	24	P
6-13-2008	14	24	P
6-13-2008	15	25	P
6-16-2008	16	29	P
6-16-2008	17	24	P
6-18-2008	18	25	P
6-23-2008	19	24	P
6-23-2008	20	21	F
6-23-2008	21	21	F
6-23-2008	22	22	F
6-23-2008	23	22	F
7-14-2008	R20	24	P
7-14-2008	R21	24	P
7-14-2008	R22	24	P
7-14-2008	R23	24	P
7-14-2008	R6	24	P

Notes: 1. "R" represents retest location.

2. Pass/Fail criteria equals thickness greater than or equal to 24 inches.



NORTH

0 40' 80'
SCALE IN FEET

LEGEND

P10	GEOMEMBRANE PANEL NUMBER
DS 5	DESTRUCTIVE SAMPLE (PASS)
	FUSION WELDED SEAM
	EXTRUDED SEAM
	ANCHOR TRENCH
	GEOSYNTHETIC CLAY LAYER (GCL)
	CREST OF SLOPE
	TOE OF SLOPE
	LEACHATE COLLECTION PIPE
	LEACHATE RISER PIPE

4 THICKNESS TEST VERIFICATION LOCATIONS

NO	DATE	DESCRIPTION	DRN	APP

Geosyntec consultants
1405 S RIVEREDGE DRIVE, SUITE 300
TAMPA, FLORIDA 33637 USA
PH: 813.558.8999 - FX: 813.558.9725
AUTHORIZATION NUMBER 4321

WM WASTE MANAGEMENT
242 WEST KEENE ROAD
APOPKA, FLORIDA 32789
PH: 407.886.2929

TITLE
THICKNESS VERIFICATIONS

PROJECT
CELL 1 CONSTRUCTION DRAWINGS

SITE
VISTA CLASS III LANDFILL
APOPKA, FLORIDA

THIS DRAWING IS ISSUED FOR PERMITTING ONLY AND MAY NOT BE USED FOR CONSTRUCTION.

DESIGN BY	–	DATE	16 JUNE 2006
DRAWN BY	CMV	PROJECT NO	FQ1465.04
CHECKED BY	CJ	FILE	FQ1465.04PG1
REVIEWED BY	CJ	DRAWING NO	
APPROVED BY	–		1 OF 1

AS-BUILT DRAWING

APPENDIX B

MANUFACTURERS QUALITY CONTROL TEST RESULTS

Sub Appendix B-1

Geomembrane

microspike liner
HDPE
60 mil

Waste Man Vista LF doc 10151
Apopka, FL
45 rolls 60 HD microspike
141 rolls 8-300-8 comp
10 spools 5mm HD CHEVRON WELD ROD

PO# 1000012448

roll #	METRIC DIMENSIONS width	length	area						
(K)313792 .08	7	125	875	WM Vista Apopka, FL	45tot	1	3205	3ft- Stage	7180362
(K)313793 .08	7	125	875	WM Vista Apopka, FL	45tot	2	3320		7180362
(K)314101 .08	7	125	875	WM Vista Apopka, FL	45tot	3	3330		7180362
(K)314102 .08	7	125	875	WM Vista Apopka, FL	45tot	4	3325		7180362
(K)314103 .08	7	125	875	WM Vista Apopka, FL	45tot	5	3325		7180362
(K)314104 .08	7	125	875	WM Vista Apopka, FL	45tot	6	3325		7180362
(K)314105 .08	7	125	875	WM Vista Apopka, FL	45tot	7	3330		7180362
(K)314106 .08	7	125	875	WM Vista Apopka, FL	45tot	8	3328		7180362
(K)314107 .08	7	125	875	WM Vista Apopka, FL	45tot	9	3255		7180362
(K)314108 .08	7	125	875	WM Vista Apopka, FL	45tot	10	3260		7180362
(K)314109 .08	7	125	875	WM Vista Apopka, FL	45tot	11	3250	Stage	7180362
(K)314110 .08	7	125	875	WM Vista Apopka, FL	45tot	12	3250		7180362
(K)314111 .08	7	125	875	WM Vista Apopka, FL	45tot	13	3250		7180362
(K)314112 .08	7	125	875	WM Vista Apopka, FL	45tot	14	3245		7180362
(K)314113 .08	7	125	875	WM Vista Apopka, FL	45tot	15	3225		7180362
(K)314114 .08	7	125	875	WM Vista Apopka, FL	45tot	16	3240		7180362
(K)314115 .08	7	125	875	WM Vista Apopka, FL	45tot	17	3250		7180362
(K)314116 .08	7	125	875	WM Vista Apopka, FL	45tot	18	3240		7180362
(K)314117 .08	7	125	875	WM Vista Apopka, FL	45tot	19	3245		7180362
(K)314118 .08	7	125	875	WM Vista Apopka, FL	45tot	20	3240		7180362
(K)314219 .08	7	125	875	WM Vista Apopka, FL	45tot	21	3245		7180362
(K)314220 .08	7	125	875	WM Vista Apopka, FL	45tot	22	3245	Stage	7180362
(K)314221 .08	7	125	875	WM Vista Apopka, FL	45tot	23	3250		7180362
(K)314222 .08	7	125	875	WM Vista Apopka, FL	45tot	24	3245		7180362
(K)314223 .08	7	125	875	WM Vista Apopka, FL	45tot	25	3250		7180362
(K)314224 .08	7	125	875	WM Vista Apopka, FL	45tot	26	3250		7180362
(K)314225 .08	7	125	875	WM Vista Apopka, FL	45tot	27	3240		7180362
(K)314226 .08	7	125	875	WM Vista Apopka, FL	45tot	28	3245		7180362
(K)314227 .08	7	125	875	WM Vista Apopka, FL	45tot	29	3240		7180362
(K)314228 .08	7	125	875	WM Vista Apopka, FL	45tot	30	3220		7180362
(K)314229 .08	7	125	875	WM Vista Apopka, FL	45tot	31	3215		7180362
(K)314230 .08	7	125	875	WM Vista Apopka, FL	45tot	32	3220	Stage	7180362
(K)314231 .08	7	125	875	WM Vista Apopka, FL	45tot	33	3215		7180362
(K)314232 .08	7	125	875	WM Vista Apopka, FL	45tot	34	3220		7180362
(K)314233 .08	7	125	875	WM Vista Apopka, FL	45tot	35	3230		7180362
(K)314234 .08	7	125	875	WM Vista Apopka, FL	45tot	36	3225		7180362
(K)314235 .08	7	125	875	WM Vista Apopka, FL	45tot	37	3210		7180362
(K)314236 .08	7	125	875	WM Vista Apopka, FL	45tot	38	3215		7180362
(K)314237 .08	7	125	875	WM Vista Apopka, FL	45tot	39	3215		7180362
(K)314338 .08	7	125	875	WM Vista Apopka, FL	45tot	40	3215		7180362
(K)314339 .08	7	125	875	WM Vista Apopka, FL	45tot	41	3210		7180362
(K)314340 .08	7	125	875	WM Vista Apopka, FL	45tot	42	3210		7180362
(K)314341 .08	7	125	875	WM Vista Apopka, FL	45tot	43	3215	Stage	7180362
(K)314342 .08	7	125	875	WM Vista Apopka, FL	45tot	44	3210		7180362
(K)314343 .08	7	125	875	WM Vista Apopka, FL	45tot	45	3210		7180362

agru america quality control dept.

quality certificate

ROLL # **313792-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.45 mm	57 mil
	MAX:	1.82 mm	72 mil
Asperity GRI GM12: 33 mil ODD # : TOP EVEN #: BOTTOM	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	181	

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24	
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	157 ppi		2,516	psi
	Average Strength @ Break	32 N/mm	181 ppi		2,915	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			20.14	
Lo = 2.0" Break	Average Elongation @ Break	%			458.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.0 N			55.299	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	500.2 N			112.46	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	656.5 N			147.59	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: [signature]

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **313793-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.55	mm	61	mil
	MAX:	1.85	mm	73	mil
Asperity GRI GM12: 38 mil	AVE:	1.65	mm	65	mil

ODD # : TOP EVEN #: BOTTOM

Thickness.....	1.5 mm	60 mil	
Length.....	125 m	410.1	feet
Width.....	7.00 m;	23.0	feet
OIT(Standard) ASTM D3895 minutes	181		

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.24	
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	163	ppi	2,516	psi
	Average Strength @ Break	33	N/mm	189	ppi	2,915	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			20.14	
Lo = 2.0" Break	Average Elongation @ Break		%			458.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.0	N			55.299	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	500.2	N			112.46	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	656.5	N			147.59	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: [signature]

Quality Control Department

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ROLL # **314101-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.53	mm	60	mil
	MAX:	1.86	mm	73	mil
Asperity GRI GM12: 32 mil	AVE:	1.65	mm	65	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes **181**

					TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc		.947	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g		g/10 min		.24	
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	163 ppi	2,516	psi
	Average Strength @ Break	33	N/mm	189 ppi	2,915	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%		20.14	
Lo = 2.0" Break	Average Elongation @ Break		%		458.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.0	N		55.299	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	500.2	N		112.46	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	656.5	N		147.59	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: _____

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ROLL # **314102-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.54	mm	61	mil
	MAX:	1.86	mm	73	mil
Asperity GRI GM12: 38 mil ODD # : TOP EVEN #: BOTTOM	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

OIT(Standard) ASTM D3895 minutes 181

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24
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	158 ppi	2,516	psi
	Average Strength @ Break	32 N/mm	184 ppi	2,915	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		20.14	
	Average Elongation @ Break	%		458.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.0 N		55.299	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	500.2 N		112.46	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	656.5 N		147.59	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: _____

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ROLL # **314103-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.54 mm	61 mil
	MAX:	1.85 mm	73 mil
Asperity GRI GM12: 38 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.66 mm	65 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 **181**

					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			.24
Carbon Black Content ASTM D4218	Range	%			2.28
Carbon Black Dispersion ASTM D5596	Category				10 in Cat. 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm	177 ppi	2,703	psi
	Average Strength @ Break	30 N/mm	170 ppi	2,600	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.21	
Lo = 2.0" Break	Average Elongation @ Break	%		407.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	240.9 N		54.164	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	456.0 N		102.52	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.1 N		145.69	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: _____

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ROLL # **314104-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.56	mm	61	mil	Length.....	125 m	410.1 feet
	MAX:	1.87	mm	74	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 39 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.67	mm	66	mil	OIT(Standard) ASTM D3895 minutes	181	

				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		.24
Carbon Black Content ASTM D4218	Range	%		2.28
Carbon Black Dispersion ASTM D5596	Category			10 in Cat. 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm	178 ppi	2,703 psi
	Average Strength @ Break	30 N/mm	171 ppi	2,600 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		16.21
	Average Elongation @ Break	%		407.6
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	240.9 N		54.164 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	456.0 N		102.52 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.1 N		145.69 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: H Holmes

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ROLL # **314105-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.48 mm	58 mil
	MAX:	1.83 mm	72 mil
Asperity GRI GM12: 27 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.64 mm	65 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	181	

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.28	
Carbon Black Dispersion ASTM D5596	Category				10 in Cat. 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm	174 ppi	2,703	psi
	Average Strength @ Break	29	N/mm	168 ppi	2,600	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			16.21	
	Average Elongation @ Break	%			407.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	240.9	N		54.164	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	456.0	N		102.52	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.1	N		145.69	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: _____

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ROLL # **314106-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.48	mm	58	mil
	MAX:	1.79	mm	70	mil
	AVE:	1.62	mm	64	mil

Asperity GRI GM12: **39** mil
ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes **181**

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.28	
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	172 ppi	2,703	psi
	Average Strength @ Break	29	N/mm	166 ppi	2,600	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.21	
Lo = 2.0" Break	Average Elongation @ Break	%			407.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	240.9	N		54.164	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	456.0	N		102.52	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.1	N		145.69	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: [signature]

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ROLL # **314107-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.50	mm	59	mil
	MAX:	1.87	mm	74	mil
Asperity GRI GM12: 31 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.64	mm	65	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	181	

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.28	
Carbon Black Dispersion ASTM D5596	Category				10 in Cat. 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm	174 ppi	2,703	psi
	Average Strength @ Break	29	N/mm	168 ppi	2,600	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.21	
Lo = 2.0" Break	Average Elongation @ Break	%			407.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	240.9	N		54.164	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	456.0	N		102.52	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.1	N		145.69	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: [signature]

Quality Control Department

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ROLL # **314108-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.54	mm	61	mil
	MAX:	1.77	mm	70	mil
Asperity GRI GM12: 38 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.63	mm	64	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 181

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.31	
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	167 ppi	2,599	psi
	Average Strength @ Break	31	N/mm	179 ppi	2,787	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			19.06	
	Average Elongation @ Break	%			441.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.3	N		53.358	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	457.1	N		102.77	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.0	N		145.67	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: H Holmes

Quality Control Department

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ROLL # **314109-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.59 mm	63 mil
	MAX:	1.85 mm	73 mil
Asperity GRI GM12: 29 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.71 mm	67 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 **181**

					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			.24
Carbon Black Content ASTM D4218	Range	%			2.31
Carbon Black Dispersion ASTM D5596	Category				10 in Cat. 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm	175 ppi	2,599	psi
	Average Strength @ Break	33 N/mm	188 ppi	2,787	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		19.06	
Lo = 2.0" Break	Average Elongation @ Break	%		441.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.3 N		53.358	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	457.1 N		102.77	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.0 N		145.67	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: _____

Quality Control Department

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agru america quality control dept.

quality certificate

ROLL # **314110-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.46	mm	57	mil	Length.....	125 m	410.1 feet
	MAX:	1.84	mm	72	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 39 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.60	mm	63	mil	OIT(Standard) ASTM D3895 minutes	181	

				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		.24
Carbon Black Content ASTM D4218	Range	%		2.31
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	164 ppi	2,599 psi
	Average Strength @ Break	31 N/mm	176 ppi	2,787 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		19.06
Lo = 2.0" Break	Average Elongation @ Break	%		441.4
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.3 N		53.358 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	457.1 N		102.77 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.0 N		145.67 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 3-31-08

Signature: [signature]

Quality Control Department

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agru america quality control dept.

quality certificate

ROLL # **314111-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.44 mm	57 mil
	MAX:	1.83 mm	72 mil
Asperity GRI GM12: 33 mil ODD # : TOP EVEN #: BOTTOM	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	
OIT(Standard) ASTM D3895 minutes	181		

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.31	
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	164 ppi		2,599	psi
	Average Strength @ Break	31 N/mm	176 ppi		2,787	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			19.06	
Lo = 2.0" Break	Average Elongation @ Break	%			441.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.3 N			53.358	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	457.1 N			102.77	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.0 N			145.67	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

Quality Control Department

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agru america quality control dept.

quality certificate

ROLL # **314112-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.52 mm	60 mil
	MAX:	1.86 mm	73 mil
Asperity GRI GM12: 35 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.66 mm	65 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 181

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.31	
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		2,599	psi
	Average Strength @ Break	32 N/mm	182 ppi		2,787	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			19.06	
Lo = 2.0" Break	Average Elongation @ Break	%			441.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.3 N			53.358	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	457.1 N			102.77	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	648.0 N			145.67	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314113-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.60	mm	63	mil
	MAX:	1.75	mm	69	mil
Asperity GRI GM12: 33 mil	AVE:	1.66	mm	65	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes 181

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g	g/10 min			.24	
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	160 ppi	2,452	psi
	Average Strength @ Break	34	N/mm	191 ppi	2,930	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			20.36	
Lo = 2.0" Break	Average Elongation @ Break	%			483.1	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	228.7	N		51.406	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	447.7	N		100.65	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	603.4	N		135.64	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature:

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ROLL # **314114-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.51	mm	59	mil
	MAX:	1.80	mm	71	mil
	AVE:	1.63	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: **40** mil
ODD # : TOP EVEN #: BOTTOM

OIT(Standard) ASTM D3895 minutes **181**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g	g/10 min			.24	
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	157 ppi	2,452	psi
	Average Strength @ Break	33	N/mm	188 ppi	2,930	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			20.36	
	Average Elongation @ Break	%			483.1	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	228.7	N		51.406	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	447.7	N		100.65	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	603.4	N		135.64	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: H Holmes

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ROLL # **314115-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.46	mm	57	mil	Length.....	125 m	410.1 feet
	MAX:	1.88	mm	74	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 31 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.63	mm	64	mil	OIT(Standard) ASTM D3895 minutes	181	TEST RESULTS

Specific Gravity ASTM D792	Density	g/cc		.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min		.24
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	157 ppi	2,452 psi
	Average Strength @ Break	33 N/mm	188 ppi	2,930 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		20.36
Lo = 2.0" Break	Average Elongation @ Break	%		483.1
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	228.7 N		51.406 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	447.7 N		100.65 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	603.4 N		135.64 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature:

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ROLL # **314116-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.47	mm	58	mil
	MAX:	1.82	mm	72	mil
Asperity GRI GM12: 38 mil	AVE:	1.63	mm	64	mil

ODD # : TOP EVEN #: BOTTOM

Thickness.....	1.5 mm	60 mil	
Length.....	125 m	410.1	feet
Width.....	7.00 m;	23.0	feet
OIT(Standard) ASTM D3895 minutes	181		

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24	
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	157 ppi	2,452	psi
	Average Strength @ Break	33	N/mm	188 ppi	2,930	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			20.36	
Lo = 2.0" Break	Average Elongation @ Break	%			483.1	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	228.7	N		51.406	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	447.7	N		100.65	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	603.4	N		135.64	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: M Holmes

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ROLL # **314117-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.47	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.84	mm	72	mil	Length.....	125 m	410.1 feet
						Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 32 mil	AVE:	1.64	mm	65	mil			
ODD # : TOP EVEN #: BOTTOM						OIT(Standard) ASTM D3895 minutes	181	

				TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc		.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min		.24
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	158 ppi	2,452 psi
	Average Strength @ Break	33 N/mm	189 ppi	2,930 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		20.36
Lo = 2.0" Break	Average Elongation @ Break	%		483.1
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	228.7 N		51.406 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	447.7 N		100.65 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	603.4 N		135.64 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314118-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.51	mm	59	mil
	MAX:	1.80	mm	71	mil
Asperity GRI GM12: 41 mil	AVE:	1.63	mm	64	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes 181

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.27	
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	167 ppi	2,606	psi
	Average Strength @ Break	28	N/mm	162 ppi	2,527	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			17.37	
	Average Elongation @ Break	%			394.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.0	N		53.272	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	419.6	N		94.339	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	564.9	N		127.00	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: H Holmes

Quality Control Department

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ROLL # **314219-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.50	mm	59	mil	Length.....	125 m	410.1 feet
	MAX:	1.86	mm	73	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 34 mil	AVE:	1.62	mm	64	mil	OIT(Standard) ASTM D3895 minutes	181	

ODD # : TOP EVEN #: BOTTOM

				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		.24	
Carbon Black Content ASTM D4218	Range	%		2.27	
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	166 ppi	2,606	psi
	Average Strength @ Break	28 N/mm	161 ppi	2,527	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.37	
Lo = 2.0" Break	Average Elongation @ Break	%		394.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.0 N		53.272	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	419.6 N		94.339	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	564.9 N		127.00	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314220-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.45 mm	57 mil
	MAX:	1.84 mm	72 mil
Asperity GRI GM12: 39 mil	AVE:	1.64 mm	65 mil

ODD # : TOP EVEN #: BOTTOM

Thickness.....	1.5 mm	60 mil	
Length.....	125 m	410.1 feet	
Width.....	7.00 m;	23.0 feet	
OIT(Standard) ASTM D3895 minutes	181		

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.27	
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	168 ppi		2,606	psi
	Average Strength @ Break	29 N/mm	163 ppi		2,527	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.37	
Lo = 2.0" Break	Average Elongation @ Break	%			394.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.0 N			53.272	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	419.6 N			94.339	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	564.9 N			127.00	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314221-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.47	mm	58	mil
	MAX:	1.88	mm	74	mil
Asperity GRI GM12: 30 mil	AVE:	1.61	mm	63	mil

ODD #: TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes 181

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.27	
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	2,606	psi
	Average Strength @ Break	28	N/mm	160 ppi	2,527	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.37	
Lo = 2.0" Break	Average Elongation @ Break	%			394.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.0	N		53.272	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	419.6	N		94.339	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	564.9	N		127.00	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314222-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.51	mm	59	mil
	MAX:	1.82	mm	72	mil
Asperity GRI GM12: 38 mil	AVE:	1.61	mm	63	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes 181

					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		.24	
Carbon Black Content ASTM D4218	Range		%		2.27	
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	2,606	psi
	Average Strength @ Break	28	N/mm	160 ppi	2,527	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%		17.37	
Lo = 2.0" Break	Average Elongation @ Break		%		394.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	237.0	N		53.272	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	419.6	N		94.339	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	564.9	N		127.00	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314223-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.43	mm	56	mil
	MAX:	1.83	mm	72	mil
Asperity GRI GM12: 30 mil	AVE:	1.61	mm	63	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes 181

					TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc		.944	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min		.24	
Carbon Black Content ASTM D4218	Range		%		2.15	
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	2,492	psi
	Average Strength @ Break	28	N/mm	161 ppi	2,541	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%		17.30	
Lo = 2.0" Break	Average Elongation @ Break		%		432.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.2	N		55.341	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	470.6	N		105.80	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	590.9	N		132.85	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

Quality Control Department

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ROLL # **314224-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.46	mm	57	mil
	MAX:	1.92	mm	76	mil
Asperity GRI GM12: 32 mil	AVE:	1.66	mm	65	mil
ODD # : TOP EVEN #: BOTTOM					

Thickness.....	1.5 mm		60 mil
Length.....	125 m		410.1 feet
Width.....	7.00 m;		23.0 feet
OIT(Standard) ASTM D3895 minutes	181		

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.944	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24	
Carbon Black Content ASTM D4218	Range	%			2.15	
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	163 ppi	2,492	psi
	Average Strength @ Break	29	N/mm	166 ppi	2,541	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.30	
Lo = 2.0" Break	Average Elongation @ Break	%			432.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.2	N		55.341	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	470.6	N		105.80	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	590.9	N		132.85	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314225-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.50 mm	59 mil
	MAX:	1.62 mm	64 mil
Asperity GRI GM12: 32 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.56 mm	61 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	181	

					TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc		.944	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min		.24	
Carbon Black Content ASTM D4218	Range		%		2.15	
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	153 ppi	2,492	psi
	Average Strength @ Break	27	N/mm	156 ppi	2,541	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield		%		17.30	
	Average Elongation @ Break		%		432.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.2	N		55.341	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	470.6	N		105.80	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	590.9	N		132.85	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: M. Holmes

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ROLL # **314226-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.50 mm	59 mil
	MAX:	1.83 mm	72 mil
Asperity GRI GM12: 40 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.65 mm	65 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 **181**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24
Carbon Black Content ASTM D4218	Range	%			2.15
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	2,492	psi
	Average Strength @ Break	29 N/mm	165 ppi	2,541	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.30	
Lo = 2.0" Break	Average Elongation @ Break	%		432.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.2 N		55.341	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	470.6 N		105.80	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	590.9 N		132.85	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: _____

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ROLL # **314227-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.54	mm	61	mil
	MAX:	1.85	mm	73	mil
Asperity GRI GM12: 36 mil	AVE:	1.63	mm	64	mil

ODD # : TOP EVEN #: BOTTOM

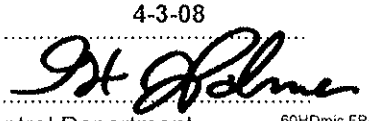
Thickness.....	1.5	mm	60 mil
Length.....	125	m	410.1 feet
Width.....	7.00	m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **181**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.944	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g	g/10 min			.24	
Carbon Black Content ASTM D4218	Range	%			2.15	
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	2,492	psi
	Average Strength @ Break	29	N/mm	163 ppi	2,541	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.30	
Lo = 2.0" Break	Average Elongation @ Break	%			432.6	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	246.2	N		55.341	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	470.6	N		105.80	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	590.9	N		132.85	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: 

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ROLL # **314228-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.48	mm	58	mil	Length.....	125 m	410.1 feet
	MAX:	1.86	mm	73	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 39 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.66	mm	65	mil	OIT(Standard) ASTM D3895 minutes	181	

					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		.24	
Carbon Black Content ASTM D4218	Range		%		2.25	
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	2,422	psi
	Average Strength @ Break	32	N/mm	181 ppi	2,773	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield		%		18.80	
	Average Elongation @ Break		%		458.9	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.2	N		57.594	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	461.1	N		103.66	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	628.6	N		141.31	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314229-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.54	mm	61	mil
	MAX:	1.77	mm	70	mil
	AVE:	1.63	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

OIT(Standard) ASTM D3895 minutes 181

					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		.24	
Carbon Black Content ASTM D4218	Range		%		2.25	
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	155 ppi	2,422	psi
	Average Strength @ Break	31	N/mm	178 ppi	2,773	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%		18.80	
Lo = 2.0" Break	Average Elongation @ Break		%		458.9	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.2	N		57.594	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	461.1	N		103.66	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	628.6	N		141.31	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314230-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.46	mm	57	mil	Length.....	125 m	410.1 feet
	MAX:	1.81	mm	71	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 40 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.62	mm	64	mil	OIT(Standard) ASTM D3895 minutes	181	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			.24	
Carbon Black Content ASTM D4218	Range	%			2.25	
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 ppi	2,422	psi
	Average Strength @ Break	31	N/mm	177 ppi	2,773	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			18.80	
Lo = 2.0" Break	Average Elongation @ Break	%			458.9	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.2	N		57.594	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	461.1	N		103.66	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	628.6	N		141.31	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: _____

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ROLL # **314231-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.50	mm	59	mil	Length.....	125 m	410.1 feet
	MAX:	1.79	mm	70	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 31 mil	AVE:	1.62	mm	64	mil	OIT(Standard) ASTM D3895 minutes	181	

ODD # : TOP EVEN #: BOTTOM

				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		.24	
Carbon Black Content ASTM D4218	Range	%		2.25	
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 ppi	2,422	psi
	Average Strength @ Break	31 N/mm	177 ppi	2,773	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		18.80	
Lo = 2.0" Break	Average Elongation @ Break	%		458.9	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.2 N		57.594	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	461.1 N		103.66	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	628.6 N		141.31	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314232-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.44 mm	57 mil
	MAX:	1.79 mm	70 mil
Asperity GRI GM12: 40 mil ODD # : TOP EVEN #: BOTTOM	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	181	

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.25	
Carbon Black Dispersion ASTM D5596	Category				10 in Cat. 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	26 N/mm	151 ppi		2,422	psi
	Average Strength @ Break	30 N/mm	172 ppi		2,773	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			18.80	
	Average Elongation @ Break	%			458.9	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.2 N			57.594	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	461.1 N			103.66	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	628.6 N			141.31	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314233-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.49 mm	59 mil
	MAX:	1.85 mm	73 mil
Asperity GRI GM12: 33 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.63 mm	64 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	181	

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.39	
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		2,656	psi
	Average Strength @ Break	33 N/mm	188 ppi		2,933	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.78	
Lo = 2.0" Break	Average Elongation @ Break	%			457.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	242.5 N			54.514	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	432.9 N			97.320	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.8 N			138.44	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314234-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.46 mm	57 mil
	MAX:	1.79 mm	70 mil
Asperity GRI GM12: 37 mil ODD # : TOP EVEN #: BOTTOM	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

OIT(Standard) ASTM D3895 minutes **181**

				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		.24
Carbon Black Content ASTM D4218	Range	%		2.39
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	167 ppi	2,656 psi
	Average Strength @ Break	32 N/mm	185 ppi	2,933 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.78
Lo = 2.0" Break	Average Elongation @ Break	%		457.0
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	242.5 N		54.514 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	432.9 N		97.320 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.8 N		138.44 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: _____

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ROLL # **314235-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.44	mm	57	mil
	MAX:	1.84	mm	72	mil
Asperity GRI GM12: 33 mil ODD #: TOP EVEN #: BOTTOM	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
OIT(Standard) ASTM D3895 minutes	181		

					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			.24	
Carbon Black Content ASTM D4218	Range	%			2.39	
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	2,656	psi
	Average Strength @ Break	33	N/mm	187 ppi	2,933	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			17.78	
	Average Elongation @ Break	%			457.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	242.5	N		54.514	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	432.9	N		97.320	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.8	N		138.44	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: H Holmes

Quality Control Department

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ROLL # **314236-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.47 mm	58 mil
	MAX:	1.83 mm	72 mil
Asperity GRI GM12: 37 mil	AVE:	1.61 mm	63 mil

ODD #: TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes **181**

					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			.24
Carbon Black Content ASTM D4218	Range	%			2.39
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	168 ppi	2,656	psi
	Average Strength @ Break	33 N/mm	186 ppi	2,933	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.78	
Lo = 2.0" Break	Average Elongation @ Break	%		457.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	242.5 N		54.514	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	432.9 N		97.320	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.8 N		138.44	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: **4-3-08**

Signature: _____

Quality Control Department

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ROLL # **314237-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.45	mm	57	mil	Length.....	125 m	410.1 feet
	MAX:	1.80	mm	71	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 32 mil	AVE:	1.58	mm	62	mil	OIT(Standard) ASTM D3895 minutes	181	TEST RESULTS

ODD # : TOP EVEN #: BOTTOM

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		.24
Carbon Black Content ASTM D4218	Range	%		2.39
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	2,656 psi
	Average Strength @ Break	32 N/mm	182 ppi	2,933 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.78
Lo = 2.0" Break	Average Elongation @ Break	%		457.0
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	242.5 N		54.514 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	432.9 N		97.320 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.8 N		138.44 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: _____

Quality Control Department

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ROLL # **314338-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC	ENGLISH
	MIN:	1.45 mm	57 mil
	MAX:	1.82 mm	72 mil
Asperity GRI GM12: 38 mil ODD # : TOP EVEN #: BOTTOM	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	181	

					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			.24
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	29 N/mm	165 ppi	2,656	psi
	Average Strength @ Break	29 N/mm	167 ppi	2,687	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.74	
Lo = 2.0" Break	Average Elongation @ Break	%		412.2	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9 N		57.756	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7 N		98.631	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0 N		138.27	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

Quality Control Department

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ROLL # **314339-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.52	mm	60	mil	Length.....	125 m	410.1 feet
	MAX:	1.79	mm	70	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 37 mil ODD # : TOP EVEN #: BOTTOM	AVE:	1.62	mm	64	mil	OIT(Standard) ASTM D3895 minutes	181	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		.24
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	2,656 psi
	Average Strength @ Break	30 N/mm	171 ppi	2,687 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.74
Lo = 2.0" Break	Average Elongation @ Break	%		412.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9 N		57.756 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7 N		98.631 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0 N		138.27 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: _____

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ROLL # **314340-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.50	mm	59	mil
	MAX:	1.80	mm	71	mil
Asperity GRI GM12: 39 mil	AVE:	1.61	mm	63	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes **181**

					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			.24	
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	29	N/mm	168 ppi	2,656	psi
	Average Strength @ Break	30	N/mm	170 ppi	2,687	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			17.74	
Lo = 2.0" Break	Average Elongation @ Break	%			412.2	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9	N		57.756	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7	N		98.631	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0	N		138.27	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314341-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.48	mm	58	mil	Length.....	125 m	410.1 feet
	MAX:	1.78	mm	70	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 38 mil ODD #: TOP EVEN #: BOTTOM	AVE:	1.60	mm	63	mil	OIT(Standard) ASTM D3895 minutes	181	

				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		.24
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	29 N/mm	167 ppi	2,656 psi
	Average Strength @ Break	30 N/mm	169 ppi	2,687 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.74
Lo = 2.0" Break	Average Elongation @ Break	%		412.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9 N		57.756 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7 N		98.631 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0 N		138.27 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314342-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.47	mm	58	mil	Length.....	125 m	410.1 feet
	MAX:	1.81	mm	71	mil	Width.....	7.00 m;	23.0 feet
Asperity GRI GM12: 41 mil	AVE:	1.61	mm	63	mil			
ODD # : TOP EVEN #: BOTTOM						OIT(Standard) ASTM D3895 minutes	181	

				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		.24
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	29 N/mm	168 ppi	2,656 psi
	Average Strength @ Break	30 N/mm	170 ppi	2,687 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.74
Lo = 2.0" Break	Average Elongation @ Break	%		412.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.46
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9 N		57.756 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7 N		98.631 lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0 N		138.27 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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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ROLL # **314343-08** Lot #: **7180362** **Liner Type: MICROSPIKE™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.49	mm	59	mil
	MAX:	1.76	mm	69	mil
Asperity GRI GM12: 33 mil	AVE:	1.63	mm	64	mil

ODD # : TOP EVEN #: BOTTOM

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

OIT(Standard) ASTM D3895 minutes **181**

					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		.24	
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	2,656	psi
	Average Strength @ Break	30	N/mm	172 ppi	2,687	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%		17.74	
Lo = 2.0" Break	Average Elongation @ Break		%		412.2	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%		-.46	
Tear Resistance ASTM D-1004 (Modified)	Average Tear Resistance	256.9	N		57.756	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Load	438.7	N		98.631	lbs
Puncture Resistance ASTM D4833 (Modified)	Load	615.0	N		138.27	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: **Waste Management, Inc. Of Florida**
PO: **1000012448 Vista Landfill**
Destination **Apopka, FL**

Date: 4-3-08

Signature: [signature]

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Chevron Phillips Chemical Company LP

CoA Date: 03/15/2008

Certificate of Analysis

Shipped To: AGRU AMERICA INC 500 GARRISON RD GEORGETOWN SC 29440 USA	CPC Delivery #: 87612234 PO #: 004763 Weight: 188800 LB Ship Date: 03/14/2008 Package: BULK
Recipient: PALMER Fax:	Mode: Hopper Car Car #: PSPX001261 Seal No: 256101

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: 7180362

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.240	g/10mi
HLMI Flow Rate	ASTM D1238	21.00	g/10mi
Density	ASTM D1505	0.9370	g/cm3
Pellet Count	P02.08.03	29.000	pel/g
Production Date		03/13/2008	

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 Tom Scheirman at 832-813-4637

SUB APPENDIX B-2

GEOCOMPOSITE

SKAPS Industries

Engineered Synthetic Products, Inc.

May 31, 2008
Agru America Inc.
500 Garrison Road
Georgetown, SC 29440

Ref. : WM Vista Landfill, FL
Customer P.O. # 4785
Transnet 330-2-8

We certify that the Transnet 330-2-8 drainage composite, meets the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Required Value	Qualifier
Geonet[4]				
Mass per Unit Area	ASTM D 5261	lbs/ft^2	0.3	Minimum
Thickness	ASTM D 5199	mil	200	Minimum
Carbon Black	ASTM D 4218	%	2 - 3	Range
Tensile Strength	ASTM D 5035	lbs/in	95	Minimum
Melt Flow	ASTM D 1238[3]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.94	Minimum
Composite				
Ply Adhesion	GRI GC7	lb/in	1.0	MARV[6]
Transmissivity[1]	ASTM D 4716	m^2/sec	9.0×10^{-4}	MARV
Transmissivity[2]	ASTM D 4716	m^2/sec	7.9×10^{-4}	MARV
Geotextile[4 & 5]				
Fabric Weight	ASTM D 5261	oz/yd^2	8.0	MARV
Grab Strength	ASTM D 4632	lbs	200	MARV
Tear Strength	ASTM D 4533	lbs	75	MARV
Puncture Resistance	ASTM D 4833	lbs	90	MARV
CBR Puncture	ASTM D 6241	lbs	500	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.5	MARV
AOS	ASTM D 4751	US Sieve	80	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.02 and a confining pressure of 500 psf between site soil & liner after 100 hours.

2 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.02 and a confining pressure of 12000 psf between site soil & liner after 100 hours.

3 Condition 190/2.16

4 Geotextile and Geonet properties are prior to lamination.

5 Geotextile data is provided by the supplier.

6 MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

571 Industrial Parkway, Commerce, GA 30529 **Phone**: 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510001	278510001 - N	2785.108	2785.141	1.48	2.56	
2	278510002	278510002 - N	2785.108	2785.141			
3	278510003	278510003 - N	2785.108	2785.141			
4	278510004	278510004 - N	2785.108	2785.141			
5	278510005	278510005 - N	2785.108	2785.141			
6	278510006	278510006 - N	2785.108	2785.141			
7	278510007	278510007 - N	2785.117	2785.103			
8	278510008	278510008 - N	2785.117	2785.103			
9	278510009	278510009 - N	2785.117	2785.103			
10	278510010	278510010 - N	2785.117	2785.103	1.33	2.21	
11	278510011	278510011 - N	2785.117	2785.103			
12	278510012	278510012 - N	2785.117	2785.103			
13	278510013	278510013 - N	2785.105	2785.119			
14	278510014	278510014 - N	2785.105	2785.119			
15	278510015	278510015 - N	2785.105	2785.119			
16	278510016	278510016 - N	2785.105	2785.119			
17	278510017	278510017 - N	2785.105	2785.119			
18	278510018	278510018 - N	2785.105	2785.119			
19	278510019	278510019 - N	2785.102	2785.106			
20	278510020	278510020 - N	2785.102	2785.106	1.56	2.48	
21	278510021	278510021 - N	2785.102	2785.106			
22	278510022	278510022 - N	2785.102	2785.106			
23	278510023	278510023 - N	2785.102	2785.106			
24	278510024	278510024 - N	2785.102	2785.106			
25	278510025	278510025 - N	2785.109	2785.124			
26	278510026	278510026 - N	2785.109	2785.124			
27	278510027	278510027 - N	2785.109	2785.124			

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510001 - N	7180185	0.9535	0.365	328	2.59	110	
278510002 - N	7180185	0.9535					
278510003 - N	7180185	0.9535					
278510004 - N	7180185	0.9535					
278510005 - N	7180185	0.9535					
278510006 - N	7180185	0.9535					
278510007 - N	7180185	0.9535					
278510008 - N	7180185	0.9535					
278510009 - N	7180185	0.9535					
278510010 - N	7180185	0.9535	0.354	322	2.45	107	
278510011 - N	7180185	0.9535					
278510012 - N	7180185	0.9535					
278510013 - N	7180185	0.9535					
278510014 - N	7180185	0.9535					
278510015 - N	7180185	0.9535					
278510016 - N	7180185	0.9535					
278510017 - N	7180185	0.9535					
278510018 - N	7180185	0.9535					
278510019 - N	7180185	0.9535					
278510020 - N	7180185	0.9535	0.359	330	2.62	112	
278510021 - N	7180185	0.9535					
278510022 - N	7180185	0.9535					
278510023 - N	7180185	0.9535					
278510024 - N	7180185	0.9535					
278510025 - N	7180185	0.9535					
278510026 - N	7180185	0.9535					
278510027 - N	7180185	0.9535					

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510028	278510028 - N	2785.109	2785.124			
2	278510029	278510029 - N	2785.109	2785.124			
3	278510030	278510030 - N	2785.109	2785.124	1.41	2.14	
4	278510031	278510031 - N	2785.126	2785.101			
5	278510032	278510032 - N	2785.126	2785.101			
6	278510033	278510033 - N	2785.126	2785.101			
7	278510034	278510034 - N	2785.126	2785.101			
8	278510035	278510035 - N	2785.126	2785.101			
9	278510036	278510036 - N	2785.126	2785.101			
10	278510037	278510037 - N	2785.139	2785.120			
11	278510038	278510038 - N	2785.139	2785.120			
12	278510039	278510039 - N	2785.139	2785.120			
13	278510040	278510040 - N	2785.139	2785.120	1.60	2.52	
14	278510041	278510041 - N	2785.139	2785.120			
15	278510042	278510042 - N	2785.139	2785.120			
16	278510043	278510043 - N	2785.115	2785.110			
17	278510044	278510044 - N	2785.115	2785.110			
18	278510045	278510045 - N	2785.115	2785.110			
19	278510046	278510046 - N	2785.115	2785.110			
20	278510047	278510047 - N	2785.115	2785.110			
21	278510048	278510048 - N	2785.115	2785.110			
22	278510049	278510049 - N	2785.107	2785.122			
23	278510050	278510050 - N	2785.107	2785.122	1.35	2.23	
24	278510051	278510051 - N	2785.107	2785.122			
25	278510052	278510052 - N	2785.107	2785.122			
26	278510053	278510053 - N	2785.107	2785.122			
27	278510054	278510054 - N	2785.107	2785.122			

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571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510028 - N	7180185	0.9535					
278510029 - N	7180185	0.9535					
278510030 - N	7180185	0.9535	0.352	331	2.37	109	
278510031 - N	7180185	0.9535					
278510032 - N	7180185	0.9535					
278510033 - N	7180185	0.9535					
278510034 - N	7180185	0.9535					
278510035 - N	7180185	0.9526					
278510036 - N	7180185	0.9526					
278510037 - N	7180185	0.9526					
278510038 - N	7180185	0.9526					
278510039 - N	7180185	0.9526					
278510040 - N	7180185	0.9526	0.362	333	2.54	111	
278510041 - N	7180185	0.9526					
278510042 - N	7180185	0.9526					
278510043 - N	7180185	0.9526					
278510044 - N	7180185	0.9526					
278510045 - N	7180185	0.9526					
278510046 - N	7180185	0.9526					
278510047 - N	7180185	0.9526					
278510048 - N	7180185	0.9526					
278510049 - N	7180185	0.9526					
278510050 - N	7180185	0.9526	0.357	325	2.40	108	
278510051 - N	7180185	0.9526					
278510052 - N	7180185	0.9526					
278510053 - N	7180185	0.9526					
278510054 - N	7180185	0.9526					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510055	278510055 - N	2785.121	2785.116			
2	278510056	278510056 - N	2785.121	2785.116			
3	278510057	278510057 - N	2785.121	2785.116			
4	278510058	278510058 - N	2785.121	2785.116			
5	278510059	278510059 - N	2785.121	2785.116			
6	278510060	278510060 - N	2785.121	2785.116	1.58	2.39	
7	278510061	278510061 - N	2785.112	2785.127			
8	278510062	278510062 - N	2785.112	2785.127			
9	278510063	278510063 - N	2785.112	2785.127			
10	278510064	278510064 - N	2785.112	2785.127			
11	278510065	278510065 - N	2785.112	2785.127			
12	278510066	278510066 - N	2785.112	2785.127			
13	278510067	278510067 - N	2785.118	2785.114			
14	278510068	278510068 - N	2785.118	2785.114			
15	278510069	278510069 - N	2785.118	2785.114			
16	278510070	278510070 - N	2785.118	2785.114	1.43	2.02	
17	278510071	278510071 - N	2785.118	2785.114			
18	278510072	278510072 - N	2785.118	2785.114			
19	278510073	278510073 - N	2785.123	2785.137			
20	278510074	278510074 - N	2785.123	2785.137			
21	278510075	278510075 - N	2785.123	2785.137			
22	278510076	278510076 - N	2785.123	2785.137			
23	278510077	278510077 - N	2785.123	2785.137			
24	278510078	278510078 - N	2785.123	2785.137			
25	278510079	278510079 - N	2785.142	2785.111			
26	278510080	278510080 - N	2785.142	2785.111	1.55	2.57	
27	278510081	278510081 - N	2785.142	2785.111			

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510055 - N	7180185	0.9526					
278510056 - N	7180185	0.9526					
278510057 - N	7180185	0.9526					
278510058 - N	7180185	0.9526					
278510059 - N	7180185	0.9526					
278510060 - N	7180185	0.9526	0.368	323	2.75	112	
278510061 - N	7180185	0.9526					
278510062 - N	7180185	0.9526					
278510063 - N	7180185	0.9526					
278510064 - N	7180185	0.9526					
278510065 - N	7180185	0.9526					
278510066 - N	7180185	0.9526					
278510067 - N	7180185	0.9526					
278510068 - N	7180185	0.9526					
278510069 - N	7180185	0.9526					
278510070 - N	7180185	0.9537	0.360	330	2.39	107	
278510071 - N	7180185	0.9537					
278510072 - N	7180185	0.9537					
278510073 - N	7180185	0.9537					
278510074 - N	7180185	0.9537					
278510075 - N	7180185	0.9537					
278510076 - N	7180185	0.9537					
278510077 - N	7180185	0.9537					
278510078 - N	7180185	0.9537					
278510079 - N	7180185	0.9537					
278510080 - N	7180185	0.9537	0.366	329	2.56	110	
278510081 - N	7180185	0.9537					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510082	278510082 - N	2785.142	2785.111			
2	278510083	278510083 - N	2785.142	2785.111			
3	278510084	278510084 - N	2785.142	2785.111			
4	278510085	278510085 - N	2785.129	2785.144			
5	278510086	278510086 - N	2785.129	2785.144			
6	278510087	278510087 - N	2785.129	2785.144			
7	278510088	278510088 - N	2785.129	2785.144			
8	278510089	278510089 - N	2785.129	2785.144			
9	278510090	278510090 - N	2785.129	2785.144	1.29	2.28	
10	278510091	278510091 - N	2785.146	2785.135			
11	278510092	278510092 - N	2785.146	2785.135			
12	278510093	278510093 - N	2785.146	2785.135			
13	278510094	278510094 - N	2785.146	2785.135			
14	278510095	278510095 - N	2785.146	2785.135			
15	278510096	278510096 - N	2785.146	2785.135			
16	278510097	278510097 - N	2785.132	2785.148			
17	278510098	278510098 - N	2785.132	2785.148			
18	278510099	278510099 - N	2785.132	2785.148			
19	278510100	278510100 - N	2785.132	2785.148	1.46	2.65	
20	278510101	278510101 - N	2785.132	2785.148			
21	278510102	278510102 - N	2785.132	2785.148			
22	278510103	278510103 - N	2785.150	2785.130			
23	278510104	278510104 - N	2785.150	2785.130			
24	278510105	278510105 - N	2785.150	2785.130			
25	278510106	278510106 - N	2785.150	2785.130			
26	278510107	278510107 - N	2785.150	2785.130			
27	278510108	278510108 - N	2785.150	2785.130			

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510082 - N	7180185	0.9537					
278510083 - N	7180185	0.9537					
278510084 - N	7180185	0.9537					
278510085 - N	7180185	0.9537					
278510086 - N	7180185	0.9537					
278510087 - N	7180185	0.9537					
278510088 - N	7180185	0.9537					
278510089 - N	7180185	0.9537					
278510090 - N	7180185	0.9537	0.355	331	2.43	108	
278510091 - N	7180185	0.9537					
278510092 - N	7180185	0.9537					
278510093 - N	7180185	0.9537					
278510094 - N	7180185	0.9537					
278510095 - N	7180185	0.9537					
278510096 - N	7180185	0.9537					
278510097 - N	7180185	0.9537					
278510098 - N	7180185	0.9537					
278510099 - N	7180185	0.9537					
278510100 - N	7180185	0.9537	0.363	328	2.68	111	
278510101 - N	7180185	0.9537					
278510102 - N	7180185	0.9537					
278510103 - N	7180185	0.9537					
278510104 - N	7180185	0.9537					
278510105 - N	7180185	0.9529					
278510106 - N	7180185	0.9529					
278510107 - N	7180185	0.9529					
278510108 - N	7180185	0.9529					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510109	278510109 - N	2785.128	2785.145			
2	278510110	278510110 - N	2785.128	2785.145	1.31	2.16	
3	278510111	278510111 - N	2785.128	2785.145			
4	278510112	278510112 - N	2785.128	2785.145			
5	278510113	278510113 - N	2785.128	2785.145			
6	278510114	278510114 - N	2785.128	2785.145			
7	278510115	278510115 - N	2785.138	2785.133			
8	278510116	278510116 - N	2785.138	2785.133			
9	278510117	278510117 - N	2785.138	2785.133			
10	278510118	278510118 - N	2785.138	2785.133			
11	278510119	278510119 - N	2785.138	2785.133			
12	278510120	278510120 - N	2785.138	2785.133	1.59	2.59	
13	278510121	278510121 - N	2785.136	2785.113			
14	278510122	278510122 - N	2785.136	2785.113			
15	278510123	278510123 - N	2785.136	2785.113			
16	278510124	278510124 - N	2785.136	2785.113			
17	278510125	278510125 - N	2785.136	2785.113			
18	278510126	278510126 - N	2785.136	2785.113			
19	278510127	278510127 - N	2785.147	2785.131			
20	278510128	278510128 - N	2785.147	2785.131			
21	278510129	278510129 - N	2785.147	2785.131			
22	278510130	278510130 - N	2785.147	2785.131	1.42	2.12	
23	278510131	278510131 - N	2785.147	2785.131			
24	278510132	278510132 - N	2785.147	2785.131			
25	278510133	278510133 - N	2785.134	2785.153			
26	278510134	278510134 - N	2785.134	2785.153			
27	278510135	278510135 - N	2785.134	2785.153			

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510109 - N	7180185	0.9529					
278510110 - N	7180185	0.9529	0.351	327	2.41	109	
278510111 - N	7180185	0.9529					
278510112 - N	7180185	0.9529					
278510113 - N	7180185	0.9529					
278510114 - N	7180185	0.9529					
278510115 - N	7180185	0.9529					
278510116 - N	7180185	0.9529					
278510117 - N	7180185	0.9529					
278510118 - N	7180185	0.9529					
278510119 - N	7180185	0.9529					
278510120 - N	7180185	0.9529	0.370	332	2.53	112	
278510121 - N	7180185	0.9529					
278510122 - N	7180185	0.9529					
278510123 - N	7180185	0.9529					
278510124 - N	7180185	0.9529					
278510125 - N	7180185	0.9529					
278510126 - N	7180185	0.9529					
278510127 - N	7180185	0.9529					
278510128 - N	7180185	0.9529					
278510129 - N	7180185	0.9529					
278510130 - N	7180185	0.9529	0.361	322	2.36	107	
278510131 - N	7180185	0.9529					
278510132 - N	7180185	0.9529					
278510133 - N	7180185	0.9529					
278510134 - N	7180185	0.9529					
278510135 - N	7180185	0.9529					

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geocomposite manufacturer, hereby certify the following for the material delievered 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	278510136	278510136 - N	2785.134	2785.153			
2	278510137	278510137 - N	2785.134	2785.153			
3	278510138	278510138 - N	2785.134	2785.153			
4	278510139	278510139 - N	2785.152	2785.104			
5	278510140	278510140 - N	2785.152	2785.104	1.57	2.34	
6	278510141	278510141 - N	2785.152	2785.104			
7	278510142	278510142 - N	2785.152	2785.104			
8	278510143	278510143 - N	2785.152	2785.104			
9	278510144	278510144 - N	2785.152	2785.104			
10	278510145	278510145 - N	2785.143	2785.149			
11	278510146	278510146 - N	2785.143	2785.149			
12	278510147	278510147 - N	2785.143	2785.149			
13	278510148	278510148 - N	2785.143	2785.149			
14	278510149	278510149 - N	2785.143	2785.149			
15	278510150	278510150 - N	2785.143	2785.149	1.36	2.05	
16	278510151	278510151 - N	2785.151	2785.125			
17	278510152	278510152 - N	2785.151	2785.125			
18	278510153	278510153 - N	2785.151	2785.125			
19	278510154	278510154 - N	2785.151	2785.125			
20	278510155	278510155 - N	2785.151	2785.125			
21	278510156	278510156 - N	2785.151	2785.125			
22	278510157	278510157 - N	2785.140	2785.154			
23	278510158	278510158 - N	2785.140	2785.154			
24	278510159	278510159 - N	2785.140	2785.154			
25	278510160	278510160 - N	2785.140	2785.154	1.49	2.54	
26	278510161	278510161 - N	2785.140	2785.154			
27	278510162	278510162 - N	2785.140	2785.154			

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SKAPS Industries

Engineered Synthetic Products, Inc.

Product : **TN330-2-8**
Project : **WM Vista Landfill, FL**

We, the Geonet Manufacturer, hereby ceritify 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)
278510136 - N	7180185	0.9529					
278510137 - N	7180185	0.9529					
278510138 - N	7180185	0.9529					
278510139 - N	7180185	0.9529					
278510140 - N	7180185	0.9533	0.367	326	2.77	111	
278510141 - N	7180185	0.9533					
278510142 - N	7180185	0.9533					
278510143 - N	7180185	0.9533					
278510144 - N	7180185	0.9533					
278510145 - N	7180185	0.9533					
278510146 - N	7180185	0.9533					
278510147 - N	7180185	0.9533					
278510148 - N	7180185	0.9533					
278510149 - N	7180185	0.9533					
278510150 - N	7180185	0.9533	0.358	330	2.38	108	
278510151 - N	7180185	0.9533					
278510152 - N	7180185	0.9533					
278510153 - N	7180185	0.9533					
278510154 - N	7180185	0.9533					
278510155 - N	7180185	0.9533					
278510156 - N	7180185	0.9533					
278510157 - N	7180185	0.9533					
278510158 - N	7180185	0.9533					
278510159 - N	7180185	0.9533					
278510160 - N	7180185	0.9533	0.369	326	2.57	110	
278510161 - N	7180185	0.9533					
278510162 - N	7180185	0.9533					

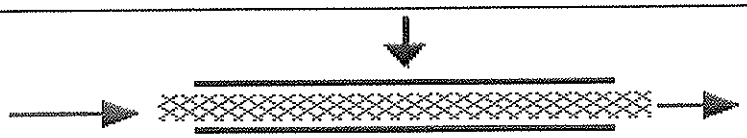
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 Fax: 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Agru America Inc.	**Job #**	2757
Project:	WM Vista Landfill, FL		
Product:	TN330-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Site Soil Geocomposite Liner	**Normal Load:** **Gradient:** **Seating Time:** **Flow Direction:**	500 psf 0.02 ft 100 hours MD

Test Results:

Roll No.	Pressure (psf)	Gradient, ft	Transmissivity, m^2/sec
			100 hours
278510001	500	0.02	1.85×10^{-3}
278510035			1.89×10^{-3}
278510070			1.77×10^{-3}
278510105			1.81×10^{-3}
278510140			1.72×10^{-3}

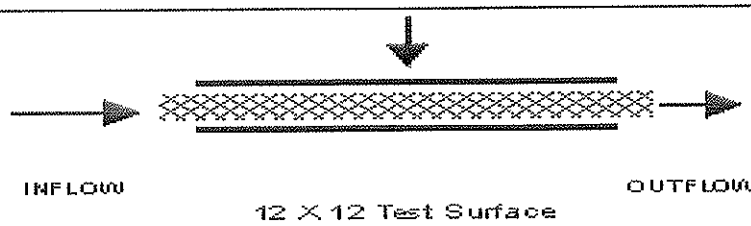
571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

ASTM D 4716

Client:	Agru America Inc.	**Job #**	2757
Project:	WM Vista Landfill, FL		
Product:	TN330-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Site Soil Geocomposite Liner	**Normal Load:** **Gradient:** **Seating Time:** **Flow Direction:**	12000 psf 0.02 ft 100 hours MD

Test Results:

Roll No.	Pressure, psf	Gradient, ft	Transmissivity, m^2/sec 100 hours
278510001	12000	0.02	1.39×10^{-3}
278510035			1.33×10^{-3}
278510070			1.29×10^{-3}
278510105			1.25×10^{-3}
278510140			1.36×10^{-3}

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Agru America Inc.
Project Name : WM Vista Landfill, FL
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN330-2-8

We, the Geonet Manufacturer, hereby certify the following for the material delivered to the above referenced project:

Resin Supplier	Resin Production Plant	Resin Brand Name	Resin Lot Number	Property	Test Method	Units	Resin Supplier Value	Tested Value*
Chevron Phillips Chemical Company	Chevron, TX	HDPE	7180185	Density	ASTM D 1505	gm/cc	0.947	0.948
				Melt Flow Index	ASTM D 1238[(a)]	gm/10 min	0.3	0.3

(a) Condition 190/2.16
* Data from SKAPS Quality Control

APPROVED 5 QA

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SKAPS Industries

Engineered Synthetic Products, Inc.

Product : TN330-2-8
Project : WM Vista Landfill, FL

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.	XMD TENSILE lbs.	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	CBR PUNCTURE lbs.	AOS US Sieve	PERM-ITY sec^{-1}
278510001	2785.108	8.13	228	230	96	119	137	653	80	1.37
	2785.141	8.43	225	232	102	118	133	691	80	1.37
278510035	2785.126	8.41	231	234	98	111	139	674	80	1.37
	2785.101	8.26	230	233	96	119	137	653	80	1.37
278510070	2785.118	8.34	235	239	105	107	130	688	80	1.37
	2785.114	8.59	232	236	105	107	130	688	80	1.37
278510105	2785.150	8.22	232	238	95	120	131	659	80	1.39
	2785.130	8.17	229	237	100	105	136	700	80	1.37
278510140	2785.152	8.22	232	238	95	120	131	659	80	1.39
	2785.104	8.26	230	233	96	119	137	653	80	1.37

571 Industrial Parkway, Commerce, GA 30529 **Phone:** 706-336-7000 **Fax:** 706-336-7007 **Email:** skaps@skaps.com

SUB APPENDIX B-3

GEOSYNTHETIC CLAY LINER

CETCO
LINING TECHNOLOGIES
800.527.9948 www.cetco.com

Date: 4/16/2008
Purchase Order: 1000012449
ORDER NUMBER: 000237117

Sheree Henninger
Waste Management

Apopka, FL 32703
shenning@wm.com

To Whom it May Concern:

Please find enclosed the MQA/MQC test data package for Geosynthetic Clay Liner shipments to Waste Management. The shipments left our Cartersville, Georgia plant on 4/17/2008.

If you have any questions regarding this information, please contact me at (770) 387-7773.

Sincerely,

Melanie King

Melanie King
Quality Assurance Coordinator
CETCO Cartersville Plant

GEOSYNTHETIC CLAY LINER
MANUFACTURING QUALITY ASSURANCE DATA PACKAGE

PROJECT NAME: Vista LF
CUSTOMER P.O.: 1000012449
ORDER NUMBER: 000237117
PREPARED FOR: Waste Management

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: Melanie King
Quality Assurance Coordinator
CETCO
218 Industrial Park

Cartersville, GA 30121

Telephone: (770) 387-7773
Fax:
E-Mail: melanie.king@cetco.com

PRODUCTION CERTIFICATION

PROJECT NAME: Vista LF
CUSTOMER P.O.: 1000012449
PREPARED FOR: Waste Management

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.

Melanie King

Melanie King
Quality Assurance Coordinator
Colloid Environmental Technologies Co. (CETCO)

CETCO LINING TECHNOLOGIES
800.527.9948 www.cetco.com

Ship Date: 4/17/2008
Order Number: 000237117
Prepared For: Waste Management

The GCL raw materials and GCL finished product manufactured for the above-referenced order number(s) are hereby certified to achieve the properties listed in the tables below.

GCL PROPERTY SPECIFICATIONS FOR BENTOMAT ST

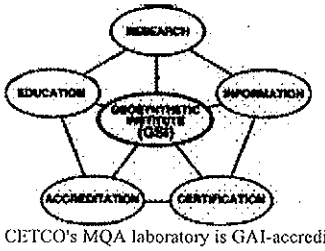
Test Method	Test Method Property	Test Frequency	Certified Value
ASTM D 5891	Bentonite Fluid Loss	1 per 50 Tons	18 ml Max
ASTM D 5993	Bentonite Mass/Area	40,000 sq ft (4000 sq m)	0.75 lb /sq ft (3.6 kg/sq m) Min
ASTM D 5890	Bentonite Swell Index	1 per 50 Tons	24 ml/2g Min
ASTM D 4632	GCL Grab Strength	200,000 sq ft (20,000 sq m)	90 lbs (400 N) MARV
ASTM D 6768	GCL Grab Strength	200,000 sq ft (20,000 sq m)	30 lbs/in MARV
ASTM D 5321	GCL Hydrated Internal Shear Strength	Periodic	500 psf (24 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 D 4632	GCL Peel Strength	40,000 sq ft (4000 sq m)	15 lbs (65 N) Min

Bentonite property tests are performed at a bentonite processing facility before shipment to CETCO's production facility.
All tensile testing is in the machine direction.

FABRIC SUPPLIER REQUIREMENTS FOR BENTOMAT ST

Raw Material	test method	mass per area	units
Nonwoven Cover Fabric	ASTM D 5261	6.0	oz/yd2
Bentomat ST Woven Base Fabric	ASTM D 5261	3.2	oz/yd2

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).

Melanie King

Melanie King
Quality Assurance Coordinator
CETCO Cartersville Plant

GCL ORDER PACKING LIST

GCL shipped for certification package number 000237117

Order #	Product	Lot Number	Roll Number	Length (ft)	Width (ft)	Square Ft	Weight (lbs)
000237117	CV-BENTOMAT ST	200816CV	00002952	150	15	2250	3354
000237117	CV-BENTOMAT ST	200816CV	00002953	150	15	2250	2972
000237117	CV-BENTOMAT ST	200816CV	00002954	150	15	2250	3076
000237117	CV-BENTOMAT ST	200816CV	00002955	150	15	2250	3032
000237117	CV-BENTOMAT ST	200816CV	00002956	150	15	2250	2958
000237117	CV-BENTOMAT ST	200816CV	00002957	150	15	2250	2956
000237117	CV-BENTOMAT ST	200816CV	00002958	150	15	2250	3110
000237117	CV-BENTOMAT ST	200816CV	00002959	150	15	2250	2978
			Totals:	**1200**	**120**	**18000**	**24436**
						Total Number of Rolls Certified: **8**	

GCL MQA TRACKING FORM

Listing of finished and raw materials used to produce certification package number 000237117

GCL			Geotextiles				Clay
CV-BENTOMAT ST			CV-N/W-WHITE-ST			CV-WOVEN-ST	CV-CG 50-ST
GCL Lot #	**GCL Roll #**	**Roll # Tested**	**Cap Lot #**	**Cap Roll #**	**Roll # Tested**	**Base Roll #**	**Clay Lot #**
200816CV	00002952	00002950	200815CV	00001320	00001315	2010070862	850072A
200816CV	00002953	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002954	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002955	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002956	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002957	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002958	00002950	200815CV	00001320	00001315	2010095922	850072A
200816CV	00002959	00002950	200815CV	00001320	00001315	2010095922	850072A

GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 000237117 have been tested in our production facility lab.

Product	Lot # Tested	Roll # Tested	Mass Area	Grab Strength	Peel Strength
		Standard Test Method:	ASTM D 5993	ASTM D 6768	ASTM D 6496
		Standard Specification:	0.75 lb/sq ft MARV	30lbs/in MARV	3.5lbs/in MARV
CV-BENTOMAT ST	200816CV	00002950	0.87	67.6	5.4

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 000237117 has been tested by American Colloid Company and yeilded the following test results.

Reference	Swell	Fluid Loss
Test Method:	ASTM D 5890	ASTM D 5891
Specification:	24 Min	18 ml Max
850072A	26.0	17.2

GEOTEXTILE TEST RESULTS FOR RAW MATERIAL SUPPLIED BY A CETCO FACILITY

The GCL in certification package number 000237117 was manufactured using these geotextiles:

Material	Lot #	Roll #	Mass Area	Grab Strenth
CV-NON-WOVEN	200815CV	00001315	6.7	31.4

GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 000237117 was manufactured with geotextiles which were tested with the following results.

BASE			
Material	**Roll Number**	**Mass Area oz/yd2**	**Grab Strenth lbs**
PPX 82TEX	2010070862	3.4	143.0
PPX 82TEX	2010095922	3.4	196.0

APPENDIX C

CONFORMANCE TEST RESULTS

SUB APPENDIX C-1

GEOMEMBRANE

April 3, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-15-08
Material(s) Tested:	1 Agru 60 mil Microspike HDPE Geomembrane(s)
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 1603, mod.) Carbon Dispersion (ASTM D 5596) Tensile (ASTM D 6693)

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 313792.08
TRI Log #: E2310-15-08

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	62	62	60	64	63	66	65	66	64	63	2	60 avg
											60	<< min	54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.945	0.945	0.945								0.945	0.000	0.94 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.34	2.36									2.35	0.01	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								1 Cat 3
Tensile Properties (ASTM D 6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	158	173	181	153	148						163	14	126 min
TD Yield Strength (ppi)	173	184	198	161	164						176	15	126 min
MD Break Strength (ppi)	194	195	235	166	197						197	25	90 min
TD Break Strength (ppi)	190	163	219	123	189						177	36	90 min
MD Yield Elongation (%)	22	22	22	22	22						22	0	12 min
TD Yield Elongation (%)	19	19	19	19	19						19	0	12 min
MD Break Elongation (%)	408	396	435	425	450						423	21	100 min
TD Break Elongation (%)	529	404	558	233	570						459	143	100 min

MD Machine Direction TD Transverse Direction

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

April 3, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-16-09
Material(s) Tested:	2 Agru 60 mil Microspike HDPE Geomembrane(s)
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 1603, mod.) Carbon Dispersion (ASTM D 5596) Tensile (ASTM D 6693)

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 314109.08
TRI Log #: E2310-16-09

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)	60	61	58	60	67	71	69	70	68	69	65	5	60 avg
											58	<< min	54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.945	0.945	0.945								0.945	0.000	0.94 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.37	2.37									2.37	0.00	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								1 Cat 3
Tensile Properties (ASTM D 6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	149	155	157	176	187						165	16	126 min
TD Yield Strength (ppi)	162	177	173	199	214						185	21	126 min
MD Break Strength (ppi)	189	205	176	222	240						206	26	90 min
TD Break Strength (ppi)	159	195	158	135	226						175	36	90 min
MD Yield Elongation (%)	21	21	21	21	21						21	0	12 min
TD Yield Elongation (%)	18	18	18	18	18						18	0	12 min
MD Break Elongation (%)	484	434	425	440	438						444	23	100 min
TD Break Elongation (%)	476	583	454	118	583						443	191	100 min

MD Machine Direction TD Transverse Direction

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 314220.08
TRI Log #: E2310-16-09

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)	72	70	66	61	59	61	60	58	58	58	62	5	60 avg
											58	<< min	54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.946	0.946	0.946								0.946	0.000	0.94 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.40	2.35									2.38	0.04	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								1 Cat 3
Tensile Properties (ASTM D 6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	171	156	145	146	150						154	11	126 min
TD Yield Strength (ppi)	190	166	166	163	157						168	13	126 min
MD Break Strength (ppi)	250	196	196	202	176						204	28	90 min
TD Break Strength (ppi)	205	192	167	192	164						184	18	90 min
MD Yield Elongation (%)	22	22	22	22	22						22	0	12 min
TD Yield Elongation (%)	19	19	19	19	19						19	0	12 min
MD Break Elongation (%)	454	443	451	436	460						449	9	100 min
TD Break Elongation (%)	524	541	471	565	480						516	40	100 min

MD Machine Direction TD Transverse Direction

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

April 7, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-19-03
Material(s) Tested:	2 Agru 60 mil Microspike HDPE Geomembrane(s)
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 1603, mod.) Carbon Dispersion (ASTM D 5596) Tensile (ASTM D 6693)

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 314230.08
TRI Log #: E2310-19-03

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)	70	68	62	60	58	67	65	67	64	62	64	4	60 avg
											58	<< min	54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.945	0.945	0.945								0.945	0.000	0.94 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.29	2.33									2.31	0.03	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								1 Cat 3
Tensile Properties (ASTM D 6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	142	161	156	159	155						155	7	126 min
TD Yield Strength (ppi)	163	154	200	162	195						175	21	126 min
MD Break Strength (ppi)	206	217	178	181	132						183	33	90 min
TD Break Strength (ppi)	163	163	162	168	211						173	21	90 min
MD Yield Elongation (%)	23	23	23	23	23						23	0	12 min
TD Yield Elongation (%)	21	21	21	21	21						21	0	12 min
MD Break Elongation (%)	455	469	390	410	258						396	84	100 min
TD Break Elongation (%)	489	523	433	515	578						507	53	100 min

MD Machine Direction TD Transverse Direction

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 314341.08
TRI Log #: E2310-19-03

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)	65	70	60	62	58	61	70	70	69	69	65	5	60 avg
											58	<< min	54 min
Density (ASTM D 1505)													
Density (g/cm3)	0.943	0.943	0.943								0.943	0.000	0.94 min
Carbon Black Content (ASTM D 1603, mod.)													
% Carbon Black	2.31	2.29									2.30	0.01	2 - 3%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1, 2
Rating - 2nd field view	1	1	1	1	1								1 Cat 3
Tensile Properties (ASTM D 6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	156	162	167	171	148						161	9	126 min
TD Yield Strength (ppi)	174	175	166	189	157						172	12	126 min
MD Break Strength (ppi)	200	143	196	194	198						186	24	90 min
TD Break Strength (ppi)	198	187	174	165	164						178	15	90 min
MD Yield Elongation (%)	22	22	22	22	22						22	0	12 min
TD Yield Elongation (%)	19	19	19	19	19						19	0	12 min
MD Break Elongation (%)	470	331	405	399	425						406	50	100 min
TD Break Elongation (%)	526	476	450	444	471						474	33	100 min

MD Machine Direction TD Transverse Direction

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SUB APPENDIX C-2

GEOCOMPOSITE

TRI / Environmental, Inc.
A Texas Research International Company

May 12, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-65-05
Material(s) Tested:	1 SKAPS TN330-2-8 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Sam R. Allen

Sam R. Allen
Vice President and Division Manager
Geosynthetic Services Division
www.GeosyntheticTesting.com

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOCOMPOSITE TEST RESULTS

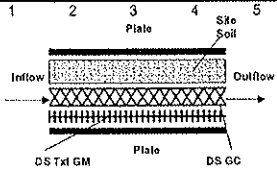
TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510002
TRI Log #: E2310-65-05

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	12,000
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12



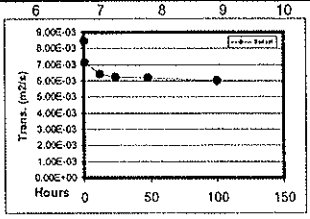


Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

PARAMETER	TEST REPLICATE NUMBER			MEAN	STD. DEV.	PROJ. SPEC.
Seat Time (hours)	Specimen	1				
	Volume (cc)	522	534	536		
	Time (s)	1027	1040	1043		
0.25	Flow Rate (GPM/ft width)	0.81	0.82	0.82	0.82	0.01
	Transmissivity (m^2/s)	8.34E-03	8.53E-03	8.50E-03	8.46E-03	1.05E-04
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				
	Volume (cc)	495	520	532		
	Time (s)	1435	1507	1523		
1	Flow Rate (GPM/ft width)	0.69	0.69	0.69	0.69	0.00
	Transmissivity (m^2/s)	7.13E-03	7.15E-03	7.14E-03	7.14E-03	1.18E-05
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				
	Volume (cc)	597	602	591		
	Time (s)	1523	1532	1526		
12	Flow Rate (GPM/ft width)	0.62	0.62	0.61	0.62	0.00
	Transmissivity (m^2/s)	6.43E-03	6.45E-03	6.35E-03	6.41E-03	4.97E-05
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				
	Volume (cc)	605	608	607		
	Time (s)	1523	1533	1526		
24	Flow Rate (GPM/ft width)	0.63	0.63	0.63	0.63	0.00
	Transmissivity (m^2/s)	6.21E-03	6.21E-03	6.21E-03	6.21E-03	1.09E-06
	Test Temp (C)	22.0				
	Temp. Corr. Factor	0.953				
	Volume (cc)	568	562	569		
	Time (s)	1509	1500	1506		
48	Flow Rate (GPM/ft width)	0.60	0.59	0.60	0.60	0.00
	Transmissivity (m^2/s)	6.17E-03	6.15E-03	6.20E-03	6.17E-03	2.59E-05
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				
	Volume (cc)	568	577	573		
	Time (s)	1540	1560	1541		
72	Flow Rate (GPM/ft width)	0.60	0.60	0.59	0.59	0.00
	Transmissivity (m^2/s)	6.16E-03	6.19E-03	6.10E-03	6.15E-03	4.43E-05 7.90E-04
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				
	Volume (cc)	559	557	551		
	Time (s)	1540	1541	1526		
100	Flow Rate (GPM/ft width)	0.59	0.58	0.58	0.58	0.01
	Transmissivity (m^2/s)	6.07E-03	5.96E-03	5.96E-03	5.99E-03	6.75E-05 7.90E-04
	Test Temp (C)	20.0				
	Temp. Corr. Factor	1.000				

MD Machine Direction TD Transverse Direction

GeosyntheticTesting.com
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June 3, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-65-05
Material(s) Tested:	3 SKAPS TN330-2-8 Double Sided Geocomposite(s)
Test(s) Requested:	Transmissivity (ASTM D 4716) - GC Peel Strength (ASTM D 7005) - GC Mass/Unit Area (ASTM D 5261) - GT Grab Tensile (ASTM D 4632) - GT Trapezoidal Tear (ASTM D 4533) - GT Apparent Opening Size (ASTM D 4751) - GT Permittivity (ASTM D 4491) - GT

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

MPatel

Dr. Mansukh Patel
Sr. Laboratory Coordinator
Geosynthetic Services Division
www.GeosyntheticTesting.com

cc: Sam R. Allen, Vice President and Division Manager

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

GEOCOMPOSITE TEST RESULTS

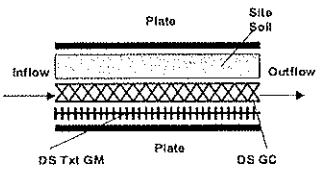
TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510002
TRI Log #: E2310-65-05

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	12,000
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12



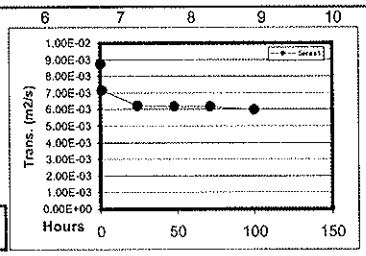


Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

PARAMETER	TEST REPLICATE NUMBER	1	2	3	4	5	MEAN	STD. DEV.	PROJ. SPEC.
Seat Time (hours)	Specimen	1							
0.25	Volume (cc)	522	541	535					
	Time (s)	10.00	10.00	10.00					
	Flow Rate (GPM/ft width)	10.27	10.40	10.32			10.33	0.07	
	Transmissivity (m^2/s)	8.56E-03	8.67E-03	8.78E-03			8.74E-03	1.59E-04	
	Test Temp (C)	20.0							
	Temp. Corr. Factor	1.000							
1	Volume (cc)	493	526	532					
	Time (s)	11.35	12.07	12.23					
	Flow Rate (GPM/ft width)	0.69	0.69	0.69			0.69	0.00	
	Transmissivity (m^2/s)	7.13E-03	7.15E-03	7.14E-03			7.14E-03	1.18E-05	
	Test Temp (C)	20.0							
	Temp. Corr. Factor	1.000							
24	Volume (cc)	605	608	607					
	Time (s)	15.23	15.31	15.28					
	Flow Rate (GPM/ft width)	0.63	0.63	0.63			0.63	0.00	
	Transmissivity (m^2/s)	6.21E-03	6.21E-03	6.21E-03			6.21E-03	1.09E-06	
	Test Temp (C)	22.0							
	Temp. Corr. Factor	0.953							
48	Volume (cc)	568	562	569					
	Time (s)	15.09	15.00	15.06					
	Flow Rate (GPM/ft width)	0.60	0.59	0.60			0.60	0.00	
	Transmissivity (m^2/s)	6.17E-03	6.15E-03	6.20E-03			6.17E-03	2.59E-05	
	Test Temp (C)	20.0							
	Temp. Corr. Factor	1.000							
72	Volume (cc)	568	577	573					
	Time (s)	15.13	15.30	15.41					
	Flow Rate (GPM/ft width)	0.60	0.60	0.59			0.59	0.00	
	Transmissivity (m^2/s)	6.16E-03	6.19E-03	6.10E-03			6.15E-03	4.43E-05	
	Test Temp (C)	20.0							
	Temp. Corr. Factor	1.000							
100	Volume (cc)	559	557	554					
	Time (s)	15.10	15.34	15.26					
	Flow Rate (GPM/ft width)	0.59	0.58	0.58			0.58	0.01	
	Transmissivity (m^2/s)	6.07E-03	5.96E-03	5.96E-03			5.99E-03	6.75E-05	7.9E-04 min
	Test Temp (C)	20.0							
	Temp. Corr. Factor	1.000							

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS
TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510002 — Geotextile Component - Side A
TRI Log #: E2310-65-05

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	500
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12

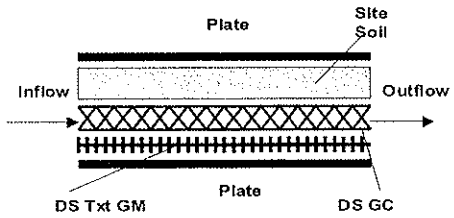

Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

PARAMETER	TEST REPLICATE NUMBER	1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Seat Time (hours)	Specimen	1												
24	Volume (cc)	726	734	723										
	Time (s)	20.15	20.15	20.12										
	Flow Rate (GPM/ft width)	0.57	0.58	0.57								0.57	0.00	
	Transmissivity (m^2/s)	5.91E-03	5.98E-03	5.89E-03								5.93E-03	4.28E-05	
	Test Temp (C)	20.0												
	Temp. Corr. Factor	1.000												
100	Volume (cc)	725	729	729										
	Time (s)	20.06	20.06	20.09										
	Flow Rate (GPM/ft width)	0.57	0.58	0.58								0.57	0.00	
	Transmissivity (m^2/s)	5.93E-03	5.96E-03	5.95E-03								5.95E-03	1.69E-05	9.0E-4 min
	Test Temp (C)	20.0												
	Temp. Corr. Factor	1.000												

Peel Strength (ASTM D 7005)

A - MD Average Peel Strength (ppi)	5.9	6.0	7.2	7.4	4.6	6.2	1.1	1 min
A - MD Average Peel Strength (g/in)	2679	2724	3269	3360	2088	2824	514	
B - MD Average Peel Strength (ppi)	3.8	3.4	4.4	4.6	3.1	3.9	0.6	1 min
B - MD Average Peel Strength (g/in)	1725	1544	1998	2088	1407	1752	290	

Note: A and B represent a randomly assigned top and bottom of the sample

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510002 — Geotextile Component - Side A
TRI Log #: E2310-65-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Mass/Unit Area (ASTM D 5261)													
5" diameter circle (grams)	3.47	3.38	4.13	3.73	3.64	4.43	3.67	3.94	4.19	3.62	3.82	0.34	
Mass/Unit Area (oz/sq.yd)	8.07	7.86	9.61	8.68	8.47	10.30	8.54	9.16	9.75	8.42	8.89	0.79	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	381	242	222	220	248	325	250	323	292	225	273	55	200 min
TD - Tensile Strength (lbs)	324	259	299	277	281	264	328	360	329	280	300	33	200 min
MD - Elong. @ Max. Load (%)	67	69	73	69	72	70	85	83	89	74	75	8	
TD - Elong. @ Max. Load (%)	99	81	109	85	91	101	97	101	89	87	94	9	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	119	149	109	168	129	114	119	104	89	160	126	25	75 min
TD - Tear Strength (lbs)	164	141	139	145	128	148	125	131	157	149	143	13	75 min
Apparent Opening Size (ASTM D 4751)													
Opening Size Diameter (mm)	0.150	0.180	0.125	0.150	0.150						0.151	0.019	0.21 max
Sieve No.	100	80	120	100	100						80		
Constant Head Permittivity (ASTM D 4491, 2 in Constant Head)													
Water Temp. (C):	20												
Correction Factor:	1.000												
Trial =>:	1					2							
Thickness (mils)	94	94	94	94	94	109	109	109	109	109			
Time (s)	12	12	12	12	12	14	14	14	14	14			
Flow (L)	2.60	2.64	2.60	2.60	2.60	2.64	2.60	2.60	2.60	2.56			
Permittivity (s-1)	2.10	2.14	2.10	2.10	2.10	1.83	1.80	1.80	1.80	1.78			
Flow rate (GPM/ft2)	157	160	157	157	157	137	135	135	135	133			
Permeability (cm/s)	0.502	0.510	0.502	0.502	0.502	0.507	0.499	0.499	0.499	0.492			
Trial =>:	3					4							
Thickness (mils)	120	120	120	120	120	101	101	101	101	101			
Time (s)	16	16	16	16	16	14	14	14	14	14			
Flow (L)	2.60	2.56	2.56	2.56	2.56	2.72	2.68	2.72	2.72	2.68			
Permittivity (s-1)	1.58	1.55	1.55	1.55	1.55	1.89	1.86	1.89	1.89	1.86	1.84	0.20	
Flow rate (GPM/ft2)	118	116	116	116	116	141	139	141	141	139	137	15	
Permeability (cm/s)	0.481	0.474	0.474	0.474	0.474	0.484	0.477	0.484	0.484	0.477	0.490	0.013	
TEMPERATURE CORRECTED VALUES											Permittivity (s-1)		0.5 min
											Flow rate (GPM/ft2)		
											Permeability (cm/s)		

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.

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510002 — Geotextile Component - Side B
TRI Log #: E2310-65-05

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Mass/Unit Area (ASTM D 5261)													
5" diameter circle (grams)	3.55	3.61	4.26	4.09	3.28	4.29	3.70	4.45	4.14	3.27	3.86	0.43	
Mass/Unit Area (oz/sq.yd)	8.26	8.40	9.91	9.51	7.63	9.98	8.61	10.35	9.63	7.61	8.99	1.01	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	256	216	406	216	240	376	215	272	263	232	269	68	200 min
TD - Tensile Strength (lbs)	293	284	282	288	289	281	280	338	280	266	288	19	200 min
MD - Elong. @ Max. Load (%)	77	77	73	77	75	73	77	76	81	81	77	3	
TD - Elong. @ Max. Load (%)	97	89	103	83	92	109	88	98	89	83	93	9	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	98	99	104	125	88	137	100	115	154	103	112	21	75 min
TD - Tear Strength (lbs)	126	117	129	140	138	176	112	166	169	130	140	22	75 min
Apparent Opening Size (ASTM D 4751)													
Opening Size Diameter (mm)	0.150	0.180	0.125	0.150	0.150						0.151	0.019	0.21 max
Sieve No.	100	80	120	100	100						80		
Constant Head Permittivity (ASTM D 4491, 2 in Constant Head)													
Water Temp. (C):	20												
Correction Factor:	1.000												
Trial =>:	1					2							
Thickness (mils)	106	106	106	106	106	119	119	119	119	119			
Time (s)	14	14	14	14	14	14	14	14	14	14			
Flow (L)	2.68	2.68	2.64	2.64	2.64	2.28	2.32	2.28	2.32	2.28			
Permittivity (s-1)	1.86	1.86	1.83	1.83	1.83	1.58	1.61	1.58	1.61	1.58			
Flow rate (GPM/ft2)	139	139	137	137	137	118	120	118	120	118			
Permeability (cm/s)	0.501	0.501	0.493	0.493	0.493	0.478	0.486	0.478	0.486	0.478			
Trial =>:	3					4							
Thickness (mils)	122	122	122	122	122	116	116	116	116	116			
Time (s)	16	16	16	16	16	16	16	16	16	16			
Flow (L)	2.68	2.72	2.68	2.68	2.68	2.72	2.72	2.72	2.68	2.72			
Permittivity (s-1)	1.63	1.65	1.63	1.63	1.63	1.65	1.65	1.65	1.63	1.65	1.68	0.10	
Flow rate (GPM/ft2)	122	124	122	122	122	124	124	124	122	124	126	7	
Permeability (cm/s)	0.504	0.512	0.504	0.504	0.504	0.486	0.486	0.486	0.479	0.486	0.492	0.010	

TEMPERATURE CORRECTED VALUES			
	Permittivity (s-1)	1.68	0.5 min
	Flow rate (GPM/ft2)	126	
	Permeability (cm/s)	0.492	

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.

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510075
TRI Log #: E2310-65-05

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	500
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12

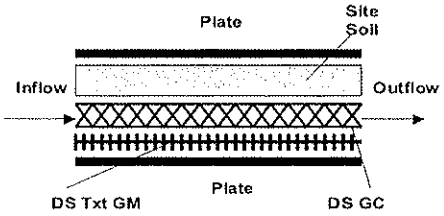

Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

Seat Time (hours)		Specimen	1			MEAN	STD. DEV.	PROJ. SPEC.
		TEST REPLICATE NUMBER	1	2	3			
24	Volume (cc)		680	682	690			
	Time (s)		20.00	20.06	20.21			
	Flow Rate (GPM/ft width)		0.54	0.54	0.54	0.54	0.00	
	Transmissivity (m^2/s)		5.58E-03	5.58E-03	5.60E-03	5.59E-03	1.35E-05	
	Test Temp (C)			20.0				
	Temp. Corr. Factor			1.000				
100	Volume (cc)		667	663	665			
	Time (s)		20.09	20.00	20.06			
	Flow Rate (GPM/ft width)		0.53	0.53	0.53	0.53	0.00	
	Transmissivity (m^2/s)		5.45E-03	5.44E-03	5.44E-03	5.44E-03	4.77E-06	9.0E-4 min
	Test Temp (C)			20.0				
	Temp. Corr. Factor			1.000				

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	12,000
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12

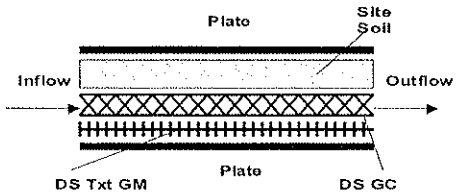

Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

Seat Time (hours)		Specimen	1			MEAN	STD. DEV.	PROJ. SPEC.
		TEST REPLICATE NUMBER	1	2	3			
24	Volume (cc)		514	511	511			
	Time (s)		20.15	20.15	20.09			
	Flow Rate (GPM/ft width)		0.40	0.40	0.40	0.40	0.00	
	Transmissivity (m^2/s)		4.18E-03	4.16E-03	4.17E-03	4.17E-03	1.22E-05	
	Test Temp (C)			20.0				
	Temp. Corr. Factor			1.000				
100	Volume (cc)		1602	552	547			
	Time (s)		74.90	25.25	25.34			
	Flow Rate (GPM/ft width)		0.34	0.35	0.34	0.34	0.00	
	Transmissivity (m^2/s)		3.51E-03	3.59E-03	3.54E-03	3.55E-03	3.90E-05	7.90E-04
	Test Temp (C)			20.0				
	Temp. Corr. Factor			1.000				

Peel Strength (ASTM D 7005)

	1	2	3	4	5	MEAN	STD. DEV.	PROJ. SPEC.
A - MD Average Peel Strength (ppi)	7.2	5.9	8.2	2.9	7.6	6.4	2.1	1 min
A - MD Average Peel Strength (g/in)	3269	2679	3723	1317	3450	2887	958	
B - MD Average Peel Strength (ppi)	4.2	4.0	4.1	2.1	4.5	3.8	1.0	1 min
B - MD Average Peel Strength (g/in)	1907	1816	1861	953	2043	1716	435	

Note: A and B represent a randomly assigned top and bottom of the sample

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510075
TRI Log #: E2310-65-05

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D 5261)					Geotextile Component - Side A								
5" diameter circle (grams)	3.29	3.95	4.76	4.10	3.19	3.10	4.15	4.14	3.69	3.32	3.77	0.54	
Mass/Unit Area (oz/sq.yd)	7.65	9.19	11.07	9.54	7.42	7.21	9.65	9.63	8.58	7.72	8.77	1.26	8 min
Grab Tensile Properties (ASTM D 4632)					Geotextile Component - Side A								
MD - Tensile Strength (lbs)	250	276	292	276	213	215	282	276	234	316	263	34	200 min
TD - Tensile Strength (lbs)	311	347	299	321	227	286	331	321	303	286	303	33	200 min
MD - Elong. @ Max. Load (%)	85	85	72	87	76	79	88	72	83	87	81	6	
TD - Elong. @ Max. Load (%)	84	95	101	89	89	85	95	92	90	102	92	6	
Trapezoidal Tear (ASTM D 4533)					Geotextile Component - Side A								
MD - Tear Strength (lbs)	89	125	100	103	109	96	93	98	189	117	112	29	75 min
TD - Tear Strength (lbs)	128	149	129	145	163	116	109	136	155	175	141	21	75 min
Mass/Unit Area (ASTM D 5261)					Geotextile Component - Side B								
5" diameter circle (grams)	3.78	3.83	4.27	3.80	3.91	4.66	3.85	3.49	3.18	3.59	3.84	0.41	
Mass/Unit Area (oz/sq.yd)	8.79	8.91	9.93	8.84	9.09	10.84	8.96	8.12	7.40	8.35	8.92	0.95	8 min
Grab Tensile Properties (ASTM D 4632)					Geotextile Component - Side B								
MD - Tensile Strength (lbs)	244	220	336	208	293	306	253	256	265	217	260	41	200 min
TD - Tensile Strength (lbs)	274	331	226	295	306	304	240	272	250	294	279	33	200 min
MD - Elong. @ Max. Load (%)	72	80	67	79	84	73	83	76	87	83	78	6	
TD - Elong. @ Max. Load (%)	91	91	98	84	94	125	87	87	85	97	94	12	
Trapezoidal Tear (ASTM D 4533)					Geotextile Component - Side B								
MD - Tear Strength (lbs)	108	91	104	88	128	119	111	79	173	105	111	26	75 min
TD - Tear Strength (lbs)	129	137	156	132	130	171	164	133	154	129	144	16	75 min

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510141
TRI Log #: E2310-65-05

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	500
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12

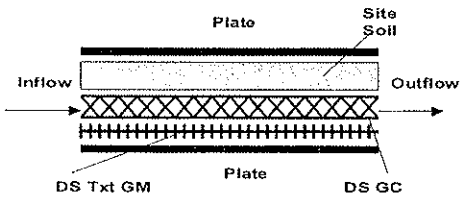

Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Seat Time (hours)	Specimen	1											
24 Volume (cc)		662	662	660									
24 Time (s)		15.18	15.21	15.06									
24 Flow Rate (GPM/ft width)		0.69	0.69	0.69							0.69	0.00	
24 Transmissivity (m^2/s)		7.15E-03	7.14E-03	7.19E-03							7.16E-03	2.54E-05	
24 Test Temp (C)			20.0										
24 Temp. Corr. Factor			1.000										
100 Volume (cc)		622	619	622									
100 Time (s)		15.21	15.09	15.21									
100 Flow Rate (GPM/ft width)		0.65	0.65	0.65							0.65	0.00	
100 Transmissivity (m^2/s)		6.71E-03	6.73E-03	6.71E-03							6.72E-03	1.20E-05	9.0E-4 min
100 Test Temp (C)			20.0										
100 Temp. Corr. Factor			1.000										

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

Normal Load (psf):	12,000
Hydraulic Gradient:	0.02
Test Length (in)	12
Test Width (in)	12

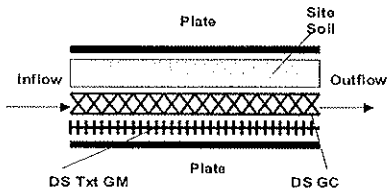

Plate / Site Soil / Sample / 60 mil Microspike Geomembrane / Plate

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Seat Time (hours)	Specimen	1											
24 Volume (cc)		462	598	600									
24 Time (s)		15.18	20.09	20.03									
24 Flow Rate (GPM/ft width)		0.48	0.47	0.47							0.48	0.01	
24 Transmissivity (m^2/s)		4.99E-03	4.88E-03	4.91E-03							4.93E-03	5.66E-05	
24 Test Temp (C)			20.0										
24 Temp. Corr. Factor			1.000										
100 Volume (cc)		540	542	540									
100 Time (s)		20.06	20.15	20.21									
100 Flow Rate (GPM/ft width)		0.43	0.43	0.42							0.43	0.00	
100 Transmissivity (m^2/s)		4.42E-03	4.41E-03	4.38E-03							4.40E-03	1.80E-05	7.90E-04
100 Test Temp (C)			20.0										
100 Temp. Corr. Factor			1.000										

Peel Strength (ASTM D 7005)

A - MD Average Peel Strength (ppi)	3.6	4.7	4.0	6.7	4.2	4.6	1.2	1 min
A - MD Average Peel Strength (g/in)	1634	2134	1816	3042	1907	2107	553	
B - MD Average Peel Strength (ppi)	2.2	2.4	2.3	2.2	2.5	2.3	0.1	1 min
B - MD Average Peel Strength (g/in)	999	1090	1044	999	1135	1053	59	

Note: A and B represent a randomly assigned top and bottom of the sample

MD Machine Direction TD Transverse Direction

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GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: SKAPS TN330-2-8 Double Sided Geocomposite
Sample Identification: 278510141
TRI Log #: E2310-65-05

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D 5261)	**Geotextile Component - Side A**												
5" diameter circle (grams)	4.27	3.67	3.20	3.96	4.09	4.70	3.75	3.60	3.20	4.17	3.86	0.47	
Mass/Unit Area (oz/sq.yd)	9.93	8.54	7.44	9.21	9.51	10.93	8.72	8.37	7.44	9.70	8.98	1.10	8 min
Grab Tensile Properties (ASTM D 4632)	**Geotextile Component - Side A**												
MD - Tensile Strength (lbs)	299	224	295	213	289	394	267	246	228	290	275	53	200 min
TD - Tensile Strength (lbs)	296	270	283	329	281	366	286	283	246	289	293	33	200 min
MD - Elong. @ Max. Load (%)	81	82	65	69	87	87	85	75	82	95	81	9	
TD - Elong. @ Max. Load (%)	93	84	121	93	87	123	91	103	85	85	97	15	
Trapezoidal Tear (ASTM D 4533)	**Geotextile Component - Side A**												
MD - Tear Strength (lbs)	109	111	113	99	122	129	135	92	86	91	109	17	75 min
TD - Tear Strength (lbs)	120	180	112	135	128	172	125	118	106	154	135	25	75 min
Mass/Unit Area (ASTM D 5261)	**Geotextile Component - Side B**												
5" diameter circle (grams)	3.61	3.62	5.10	3.80	3.55	4.29	3.46	3.89	3.68	3.59	3.86	0.50	
Mass/Unit Area (oz/sq.yd)	8.40	8.42	11.86	8.84	8.26	9.98	8.05	9.05	8.56	8.35	8.98	1.15	8 min
Grab Tensile Properties (ASTM D 4632)	**Geotextile Component - Side B**												
MD - Tensile Strength (lbs)	274	266	364	242	256	329	233	242	213	271	269	46	200 min
TD - Tensile Strength (lbs)	298	316	306	318	303	298	280	279	265	271	293	19	200 min
MD - Elong. @ Max. Load (%)	76	86	73	79	83	76	83	75	73	78	78	4	
TD - Elong. @ Max. Load (%)	105	90	112	91	97	108	86	103	92	81	97	10	
Trapezoidal Tear (ASTM D 4533)	**Geotextile Component - Side B**												
MD - Tear Strength (lbs)	98	97	94	114	134	101	127	104	125	103	110	14	75 min
TD - Tear Strength (lbs)	106	165	123	134	158	118	152	152	151	134	139	19	75 min

MD Machine Direction TD Transverse Direction

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Sub Appendix C-3

Geosynthetic Clay Liner

April 28, 2008

Mail To:	**Bill To:**
Ms. Sheree Henninger **Waste Management, Inc.**	**<= Same**

email: shenning@wm.com
cc email: dschauer@geosyntec.com

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2308-15-08
Material(s) Tested:	1 Bentomat ST GCL(s)
Test(s) Requested:	Index Flux (ASTM D 5887)

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

John M. Allen, E.I.T
Director of Geosynthetics Interaction Laboratory
Geosynthetic Services Division
www.GeosyntheticTesting.com

GeosyntheticTesting.com
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GCL TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: Bentomat ST GCL
Sample Identification: 2952
TRI Log #: E2308-15-08

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Index Flux (ASTM D 5887)													
Index Flux (m^3/m^2/sec)	2.0E-09										2.0E-09		
Hydraulic Conductivity (cm/sec)	1.7E-09										1.7E-09		5.0E-9 max

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SUB APPENDIX C-4

INTERFACE FRICTION TEST RESULTS

TRI/Environmental, Inc.
A Texas Research International Company

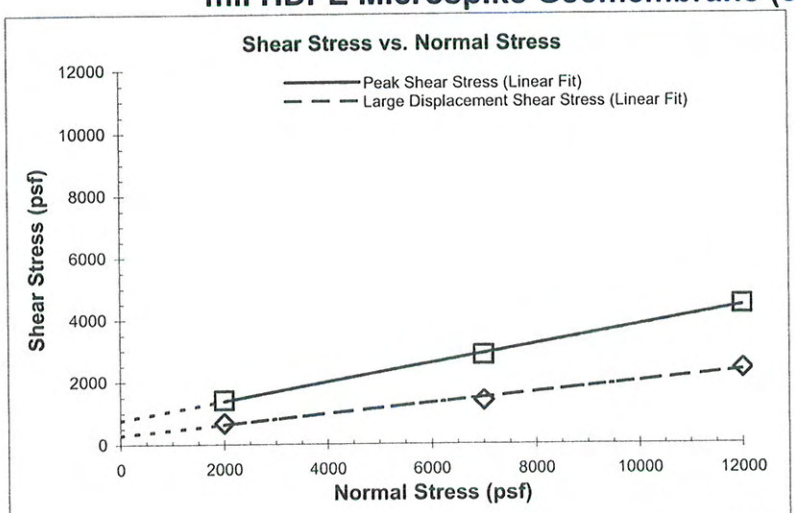
Interface Friction Test Report

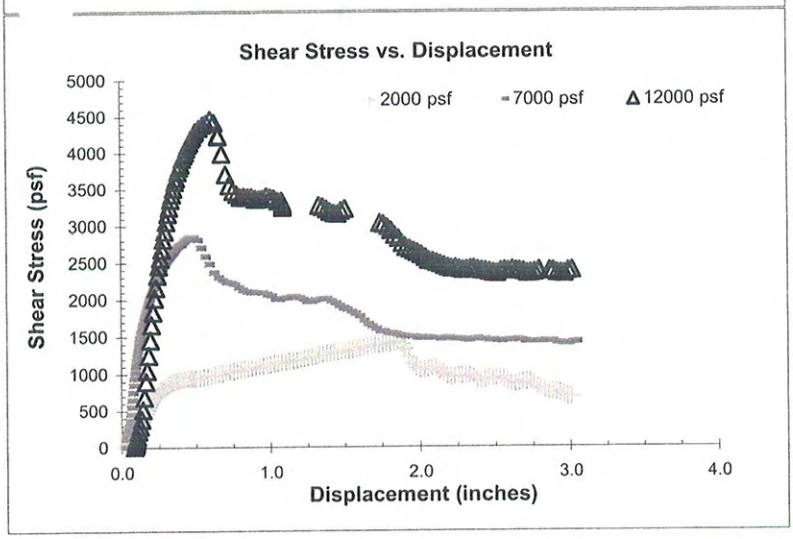
Client: **Waste Management, Inc.**
Project: **Vista Landfill, Class III**
Test Date: 07/31/08-07/31/08

TRI Log#: E2308-09-04
Test Method: ASTM D 5321

John M. Allen, E.I.T., 07/31/2008
Quality Review/Date

Tested Interface: Liner Protective Soil (T-1) vs. Agru Double-sided Geocomposite vs. Agru 60 mil HDPE Microspike Geomembrane (314101.08) vs. Subbase Soil (B-1)





Test Results		
	Peak	**Large Displacement (@ 3.0 in.)**
Friction Angle (degrees):	**17.0**	**9.7**
Y-intercept or Adhesion (psf):	**765**	**284**

Shearing occurred at the geomembrane/geocomposite interface under all loads.

Test Conditions	
Upper Box &	Liner protective soil remolded to 104.6 pcf at 15.2% moisture content
Floating Lower Box	Agru double-sided geocomposite Agru 60 mil HDPE microspike geomembrane (long spike to soil) over subbase soil remolded to 99.8 pcf at 13.6% moisture content
Box Dimensions: 12"x12"x4"	
Interface Conditioning:	Interface soaked and loading applied for a minimum of 15 minutes prior to shear.
Test Condition: Wet	
Shearing Rate: 0.04 inches/minute	

Test Data			
Specimen No.	1	2	3
Bearing Slide Resistance (lbs)	27	75	122
Normal Stress (psf)	2000	7000	12000
Corrected Peak Shear Stress (psf)	1406	2845	4464
Corrected Large Displacement Shear Stress (psf)	675	1391	2392
Peak Secant Angle (degrees)	35.1	22.1	20.4
Large Displacement Secant Angle (degrees)	18.6	11.2	11.3

TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

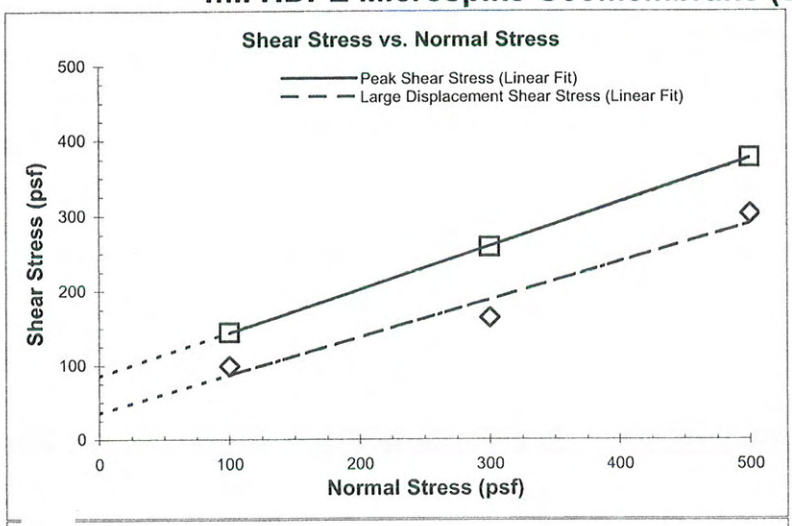
Interface Friction Test Report

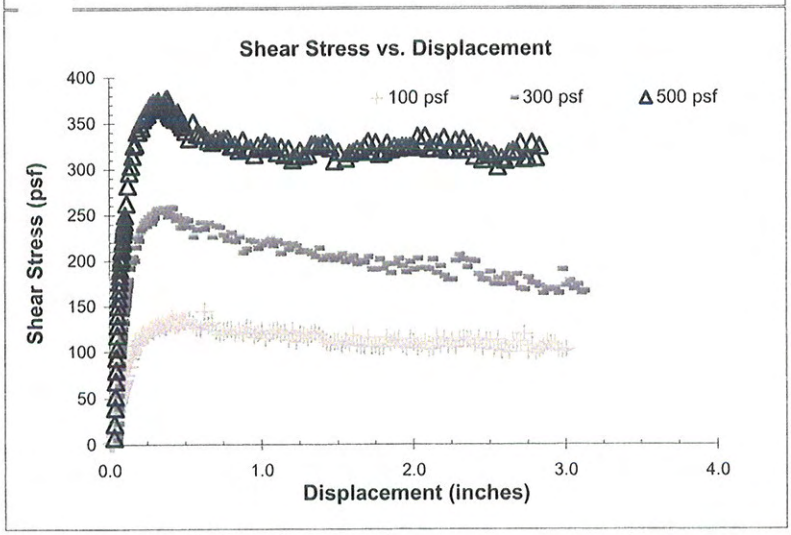
Client: **Waste Management, Inc.**
Project: **Vista Landfill, Class III**
Test Date: 08/19/08-08/20/08

TRI Log#: E2308-09-04
Test Method: ASTM D 5321

John M. Allen, E.I.T., 08/20/2008
Quality Review/Date

Tested Interface: Liner Protective Soil (T-1) vs. Agru Double-sided Geocomposite vs. Agru 60 mil HDPE Microspike Geomembrane (314101.08) vs. Subbase Soil (B-1)





Test Results

	Peak	Large Displacement (@ 3.0 in.)
Friction Angle (degrees):	30.2	27.0
Y-intercept or Adhesion (psf):	85	36

Shearing occurred at the soil/geocomposite interface under all load.

Test Conditions

Upper Box &	Liner protective soil remolded to 104.6 pcf at 15.2% moisture content
Floating Lower Box	Agru double-sided geocomposite Agru 60 mil HDPE microspike geomembrane (long spike to soil) over subbase soil remolded to 99.8 pcf at 13.6% moisture content

Box Dimensions: 12"x12"x4"

Interface Conditioning: Interface soaked and loading applied for a minimum of 15 minutes prior to shear.

Test Condition: Wet

Shearing Rate: 0.04 inches/minute

Test Data

Specimen No.	1	2	3
Bearing Slide Resistance (lbs)	9	11	13
Normal Stress (psf)	100	300	500
Corrected Peak Shear Stress (psf)	144	259	377
Corrected Large Displacement Shear Stress (psf)	99	164	303
Peak Secant Angle (degrees)	55.3	40.8	37.0
Large Displacement Secant Angle (degrees)	44.7	28.7	31.2

APPENDIX D

GEOSYNTHETICS FIELD CQA LOGS

Sub Appendix D-1

Subbase Acceptance Forms

CERTIFICATE OF ACCEPTANCE
SUBGRADE SURFACE

INSTALLER	
NAME:	Environmental Specialist International (ESI)
ADDRESS:	7943 Pecue Lane Ste A
	Baton Rouge, LA 70809
INSTALLER AUTHORIZED REPRESENTATIVE:	

PROJECT	
NAME:	Vista Class III Landfill
LOCATION:	242 West Keene Road
	Apopka, Florida 32703
OWNER:	Waste Management Inc.

I, The undersigned, duly authorized representative of _____ do hereby accept the surface on which the geosynthetics will be installed and shall be responsible for maintaining the suitability of this surface, in accordance with the project specifications. (i.e., The contractor shall not install the geosynthetics until the subgrade surface is acceptable. Installation of the geosynthetics will be considered acceptance of the subgrade.)

PRIMARY: [X] SECONDARY: [ ] OTHER: _____

DATE	PANEL NOS.	SIGNATURE
5-6-08	1 - 29	
5-7-08	30 - 50	
5-8-08	51 - 60	
5-9-08	61 - 97	
5-10-08	98 - 126	

SUB APPENDIX D-2

MATERIAL INVENTORY LOG

Geosyntec consultants

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml : 1 *Manufacturer:* Agru *Product Type:* 60 mil textured

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
Accepted Rolls												
4/18/2008	313792	23	410.1	JEG	4/3/2008	3792	p	DAS	5/5/2008	5/5/2008	p	DAS
4/16/2008	313793	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314101	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314102	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314103	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314104	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314105	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314106	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314107	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314108	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314109	23	410.1	JEG	4/3/2008	4109	p	DAS	5/5/2008	5/5/2008	p	DAS
4/18/2008	314110	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314111	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314112	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314113	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314114	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314115	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314116	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314117	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314118	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314119	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314220	23	410.1	JEG	4/3/2008	4220	p	DAS	5/5/2008	5/5/2008	p	DAS
4/18/2008	314221	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314222	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314223	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314224	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314225	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314226	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314227	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS

Geosyntec consultants

WASTE MANAGEMENT

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml: 1 *Manufacturer:* Agru *Product Type:* 60 mil textured

Inventory					Q.A. Conformance				Q.C. Documents			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
4/18/2008	314228	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314229	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314230	23	410.1	JEG	4/7/2008	4230	p	DAS	5/5/2008	5/5/2008	p	DAS
4/18/2008	314231	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314232	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314233	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314234	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314235	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314236	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314237	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314338	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314339	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314340	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314341	23	410.1	JEG	4/7/2008	4341	p	DAS	5/5/2008	5/5/2008	p	DAS
4/18/2008	314342	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS
4/18/2008	314343	23	410.1	JEG					5/5/2008	5/5/2008	p	DAS

Average Roll Width(ft.): 23 *Average Roll Length(ft.): 410*

Total Number of Rolls: 45 *Cumulative Area(sq.ft.): 424453.5*

Total Number of Conformance Tests: 5

Comments:

Geosyntec consultants

WASTE MANAGEMENT

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 *Manufacturer:* Agru *Product Type:* Geocomposite

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
Accepted Rolls												
5/10/2008	278510001	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510002	15.5	180	JEG	5/12/2008	0002	p	DAS	5/12/2008	5/12/2008	p	CJ
5/10/2008	278510003	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510004	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510005	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510006	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510007	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510008	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510009	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510010	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510011	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510012	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510013	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510014	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510015	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510016	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510017	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510018	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510019	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510020	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510021	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510022	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510023	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510024	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510025	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510026	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510027	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510028	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510029	15.5	180	jeg					5/12/2008	5/12/2008	p	CJ

Geosyntec
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Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 *Manufacturer:* Agru *Product Type:* Geocomposite

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
5/10/2008	278510030	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510031	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510032	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510033	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510034	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510035	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510036	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510037	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510038	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510039	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510040	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510041	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510042	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510043	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510044	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510045	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510046	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510047	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510048	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510049	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510050	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510051	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510052	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510053	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510054	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510055	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510056	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510057	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510058	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510059	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ

Geosyntec consultants

WASTE MANAGEMENT

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 *Manufacturer:* Agru *Product Type:* Geocomposite

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
5/10/2008	278510060	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510061	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510062	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510063	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510064	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510065	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510066	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510067	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510068	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510069	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510070	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510071	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510072	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510073	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510074	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510075	15.5	180	JEG	5/12/2008	0075	p	DAS	5/12/2008	5/12/2008	p	CJ
5/10/2008	278510076	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510077	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510078	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510079	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510080	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/10/2008	278510081	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510082	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510083	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510084	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510085	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510086	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510087	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510088	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510089	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ

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WASTE MANAGEMENT

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 ***Manufacturer:*** Agru ***Product Type:*** Geocomposite

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
5/12/2008	278510090	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510091	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510092	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510093	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510094	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510095	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510096	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510097	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510098	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510099	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510100	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510101	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510102	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510103	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510104	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510105	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510106	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510107	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510108	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510109	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510110	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510111	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510112	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510113	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510114	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510115	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510116	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510117	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510118	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510119	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ

Geosyntec
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Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 *Manufacturer:* Agru *Product Type:* Geocomposite

Inventory					Q.A. Conformance				Q.C. Documents			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
5/12/2008	278510120	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510121	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510122	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510123	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510124	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510125	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510127	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510128	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510129	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510130	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510131	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510132	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510133	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510134	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510135	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510136	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510137	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510138	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510139	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510140	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510141	15.5	180	JEG	5/12/2008	0141	p	DAS	5/12/2008	5/12/2008	p	CJ
5/12/2008	278510142	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510143	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510144	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510145	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510146	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ
5/12/2008	278510526	15.5	180	JEG					5/12/2008	5/12/2008	p	CJ

Geosyntec consultants

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gdl: 2 *Manufacturer:* Agru *Product Type:* Geocomposite

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*

Average Roll Width(ft.): 16 *Average Roll Length(ft.): 180*

Total Number of Rolls: 146 *Cumulative Area(sq.ft.): 407340*

Total Number of Conformance Tests: 3

Comments:

Geosyntec consultants

Material Inventory

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gcl : 3 *Manufacturer:* CETCO *Product Type:* Bentomat GCL

Inventory					*Q.A. Conformance*				*Q.C. Documents*			
Inv Date	*Batch-Roll*	*Width* (ft.)	*Length* (ft.)	*QA ID*	*Date*	*Samp No*	*Result*	*QAID*	*Date Rec*	*Date Ckk*	*Result*	*QAID*
Accepted Rolls												
4/30/2008	200816CV-00002952	15	150	JEG	4/16/2008	2952	p	DAS	4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002953	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002954	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002955	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002956	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002957	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002958	15	150	JEG					4/16/2008	4/16/2008	p	CJ
4/30/2008	200816CV-00002959	15	150	JEG					4/16/2008	4/16/2008	p	CJ

Average Roll Width(ft.): 15 *Average Roll Length(ft.): 150*

Total Number of Rolls: 8 *Cumulative Area(sq.ft.): 18000*

Total Number of Conformance Tests: 1

Comments:

SUB APPENDIX D-3

PANEL PLACEMENT LOG

Geosyntec
consultants

Panel Placement Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Primary / Secondary: Primary | Series: 1 | Material Type: gml

Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
1	314232	5/6/2008	9:30	SOUTH SLOPE	22.5	119	CJ
2	314232	5/6/2008	9:30	SOUTH SLOPE	22.5	116	JEG
3	314232	5/6/2008	9:40	SOUTH SLOPE	22.5	117	JEG
4	314236	5/6/2008	9:50	SOUTH SLOPE	22.5	121	JEG
5	313236	5/6/2008	10:00	SOUTH SLOPE	22.5	90	JEG
6	314236	5/6/2008	10:15	WEST INT. AND FLOOR	22.5	75	JEG
7	314225	5/6/2008	10:35	WEST INT. AND FLOOR	22.5	161	JEG
8	314225	5/6/2008	12:45	WEST INT. AND FLOOR	22.5	161	JEG
9	314225	5/6/2008	12:45	WEST INT. AND FLOOR	22.5	85.5	JEG
10	314236	5/6/2008	12:45	WEST INT. AND FLOOR	22.5	112	JEG
11	314236	5/6/2008	12:50	WEST INT. AND FLOOR	22.5	13	JEG
12	314224	5/6/2008	12:50	WEST INT. AND FLOOR	22.5	200	JEG
13	314224	5/6/2008	14:10	WEST INT. AND FLOOR	22.5	214	JEG
14	314116	5/6/2008	14:10	WEST INT. AND FLOOR	22.5	16	JEG
15	314116	5/6/2008	14:00	WEST INT. AND FLOOR	22.5	214	JEG
16	314116	5/6/2008	14:20	WEST INT. AND FLOOR	22.5	130	JEG
17	314104	5/6/2008	14:30	WEST INT. AND FLOOR	22.5	143	JEG
18	314104	5/6/2008	14:30	EAST INTERCELL BERM	22.5	103	JEG
19	314104	5/6/2008	15:00	EAST INTERCELL BERM	22.5	86.5	JEG
20	314104	5/6/2008	15:00	EAST INTERCELL BERM	22.5	64	JEG
21	314114	5/6/2008	15:05	EAST INTERCELL BERM	22.5	64	JEG
22	314114	5/6/2008	16:20	EAST INTERCELL BERM	22.5	64	JEG
23	314114	5/6/2008	16:25	EAST INTERCELL BERM	22.5	64	JEG
24	314114	5/6/2008	16:30	EAST INTERCELL BERM	22.5	64	JEG
25	314114	5/6/2008	16:35	EAST INTERCELL BERM	22.5	64	JEG
26	314114	5/6/2008	16:40	EAST INTERCELL BERM	22.5	64	JEG
27	314237	5/6/2008	16:40	EAST INTERCELL BERM	22.5	64	JEG
28	314237	5/6/2008	16:55	EAST INTERCELL BERM	22.5	64	JEG
29	314237	5/6/2008	17:00	WEST INT. AND FLOOR	10	42	JEG
30	314237	5/7/2008	7:30	WEST INT. AND FLOOR	22.5	240	JEG
31	314114	5/7/2008	7:40	WEST INT. AND FLOOR	22.5	48	JEG

Geosyntec consultants

Panel Placement Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Primary / Secondary: Primary | Series: 1 | Material Type: gml

Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
32	314223	5/7/2008	7:50	WEST INT. AND FLOOR	22.5	245	JEG
33	314223	5/7/2008	8:00	WEST INT. AND FLOOR	22.5	82.5	JEG
34	314343	5/7/2008	8:05	WEST INT. AND FLOOR	22.5	250	JEG
35	314343	5/7/2008	8:25	WEST INT. AND FLOOR	22.5	161	JEG
36	314338	5/7/2008	8:30	WEST INT. AND FLOOR	22.5	73	JEG
37	314114	5/7/2008	8:40	WEST INT. AND FLOOR	22.5	13	JEG
38	314114	5/7/2008	8:45	WEST INT.	22	22	cj
39	314113	5/7/2008	8:55	WEST INT. AND FLOOR	22.5	145	JEG
40	314114	5/7/2008	9:00	WEST INT. AND FLOOR	22.5	227	JEG
41	314227	5/7/2008	9:02	WEST INT. AND FLOOR	22.5	146	JEG
42	314113	5/7/2008	9:05	WEST INT. AND FLOOR	22.5	43	JEG
43	314227	5/7/2008	9:30	WEST INT. AND FLOOR	22.5	227	JEG
44	314105	5/7/2008	13:00	WEST INT. AND FLOOR	22.5	154	JEG
45	314341	5/7/2008	13:00	WEST INT. AND FLOOR	22.5	412	JEG
46	314112	5/7/2008	13:30	WEST INT. AND FLOOR	22.5	414	JEG
47	314234	5/7/2008	14:40	WEST INT. AND FLOOR	22.5	412	JEG
48	314722	5/7/2008	14:50	WEST INT. AND FLOOR	22.5	413	46
49	314108	5/7/2008	14:55	WEST INT. AND FLOOR	22.5	412	CJ
50	314110	5/7/2008	16:40	WEST INT. AND FLOOR	22.5	413	CJ
51	314105	5/8/2008	7:45	WEST INT. AND FLOOR	22.5	39	CJ
52	314105	5/8/2008	7:50	WEST INT. AND FLOOR	22.5	59	CJ
53	314105	5/8/2008	7:55	WEST INT. AND FLOOR	22.5	79	CJ
54	314105	5/8/2008	8:00	WEST INT. AND FLOOR	22.5	91	CJ
55	314340	5/8/2008	8:05	WEST INT. AND FLOOR	22.5	117	CJ
56	314340	5/8/2008	8:10	WEST INT. AND FLOOR	22.5	117	55
57	314228	5/8/2008	15:00	WEST INT. AND FLOOR	22	414	CJ
58	314103	5/8/2008	15:05	WEST INT. AND FLOOR	22.5	414	CJ
59	313792	5/8/2008	15:10	WEST INT. AND FLOOR	22	328	CJ
60	313792	5/8/2008	15:15	WEST INT. AND FLOOR	22	83	CJ
61	314102	5/9/2008	7:30	EAST INTERCELL BERM	22	64	CJ
62	314102	5/9/2008	19:35	EAST INTERCELL BERM	22	64	CJ

Geosyntec
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Panel Placement Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Primary / Secondary: Primary | Series: 1 | Material Type: gml

Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
63	314102	5/9/2008	7:40	EAST INTERCELL BERM	22	64	CJ
64	314102	5/9/2008	7:45	EAST INTERCELL BERM	22	64	CJ
65	314102	5/9/2008	7:50	EAST INTERCELL BERM	22	64	CJ
66	314102	5/9/2008	7:55	EAST INTERCELL BERM	22	64	CJ
67	314235	5/9/2008	8:00	EAST INTERCELL BERM	22	64	CJ
68	314235	5/9/2008	8:05	EAST INTERCELL BERM	22	64	CJ
69	314235	5/9/2008	8:10	EAST INTERCELL BERM	22	64	CJ
70	314235	5/9/2008	8:15	EAST INTERCELL BERM	22	64	CJ
71	314235	5/9/2008	8:20	EAST INTERCELL BERM	22	64	CJ
72	314235	5/9/2008	8:25	EAST INTERCELL BERM	22	64	CJ
73	314235	5/9/2008	8:30	EAST INTERCELL BERM	22	64	CJ
74	314233	5/9/2008	8:35	EAST INTERCELL BERM	22	64	CJ
75	314233	5/9/2008	8:40	EAST INTERCELL BERM	22	64	CJ
76	314233	5/9/2008	8:45	EAST INTERCELL BERM	22	64	CJ
77	314233	5/9/2008	8:50	EAST INTERCELL BERM	22	64	CJ
78	314221	5/9/2008	10:00	WEST SLOPE	22	133	CJ
79	314221	5/9/2008	10:05	WEST SLOPE	22	131	CJ
80	314221	5/9/2008	10:10	WEST SLOPE	22	140	CJ
81	314219	5/9/2008	10:15	WEST SLOPE	22	137	CJ
82	314219	5/9/2008	10:20	WEST SLOPE	22	177	CJ
83	313792	5/9/2008	10:40	WEST SLOPE	22	170	CJ
84	313792	5/9/2008	11:00	WEST SLOPE	22	125	CJ
85	313792	5/9/2008	13:45	WEST SLOPE	22	73	CJ
86	313792	5/9/2008	14:00	WEST SLOPE	22	27	CJ
87	314115	5/9/2008	14:05	WEST SLOPE	22	199	CJ
88	314115	5/9/2008	14:10	WEST SLOPE	22	201	CJ
89	314111	5/9/2008	14:15	WEST SLOPE	22	201	CJ
90	314111	5/9/2008	14:20	WEST SLOPE	22	200	CJ
91	314117	5/9/2008	14:25	WEST SLOPE	22	206	CJ
92	314117	5/9/2008	14:30	WEST SLOPE	22	209	CJ
93	314107	5/9/2008	15:00	WEST SLOPE	22	207	CJ

Geosyntec consultants

Panel Placement Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Primary / Secondary: Primary | Series: 1 | Material Type: gml

Panel	Batch-Roll	Date	Time	Placement/Location/Comments	Width (ft.)	Length (ft.)	QA ID
94	314107	5/9/2008	15:10	WEST SLOPE	22	158	CJ
95	314226	5/9/2008	15:15	WEST SLOPE	22	183	CJ
96	314226	5/9/2008	15:20	WEST SLOPE	22	98	CJ
97	314226	5/9/2008	16:50	WEST SLOPE	22	54	CJ
98	314220	5/10/2008	7:30	NORTH SLOPE	22	145	CJ
99	314220	5/10/2008	7:38	NORTH SLOPE	22	145	CJ
100	314342	5/10/2008	7:50	NORTH SLOPE	22	146	CJ
101	314342	5/10/2008	8:10	NORTH SLOPE	22	145	CJ
102	314339	5/10/2008	8:12	NORTH SLOPE	22	150	CJ
103	314339	5/10/2008	8:20	NORTH SLOPE	22	131	CJ
104	314339	5/10/2008	8:25	NORTH SLOPE	22	110	CJ
105	314226	5/10/2008	8:30	NORTH SLOPE	22	183	CJ
106	314342	5/10/2008	8:35	NORTH SLOPE	22	56	CJ
107	314342	5/10/2008	8:40	NORTH SLOPE	22	24	CJ
108	314233	5/10/2008	8:45	NORTH FLOOR	22	100	CJ
109	314340	5/10/2008	14:50	NORTH FLOOR	22	50	CJ
110	314107	5/10/2008	14:55	NORTH FLOOR	22	51	CJ
111	314219	5/10/2008	15:00	NORTH FLOOR	22	18	CJ
112	314226	5/10/2008	15:05	NORTH FLOOR	22	202	CJ
113	314118	5/10/2008	15:10	NORTH SLOPE	22	196	CJ
114	314118	5/10/2008	15:15	NORTH SLOPE	22	208	CJ
115	314229	5/10/2008	15:35	NORTH SLOPE	22	208	CJ
116	314229	5/10/2008	15:45	NORTH SLOPE	22	208	CJ
117	314231	5/10/2008	15:55	NORTH SLOPE	22	208	CJ
118	314231	5/10/2008	16:00	NORTH SLOPE	22	194	CJ
119	314109	5/10/2008	16:20	NORTH SLOPE	22	194	CJ
120	314109	5/10/2008	16:25	NORTH SLOPE	22	177	CJ
121	314110	5/10/2008	16:30	NORTH SLOPE	22	177	CJ
122	314110	5/10/2008	16:35	NORTH SLOPE	22	120	CJ
123	314230	5/10/2008	16:40	NORTH SLOPE	22	122	CJ
124	314230	5/10/2008	17:00	NORTH SLOPE	22	123	CJ

Geosyntec consultants

WASTE MANAGEMENT

Panel Placement Log

Project: Vista Class III Landfill
ProjNo: FQ1465
Location: Apopka, Florida
TaskNo: 01
Description: Cell 1

Primary / Secondary: Primary
Series: 1
Material Type: gml

Panel	*Batch-Roll*	*Date*	*Time*	*Placement/Location/Comments*	*Width (ft.)*	*Length (ft.)*	*QA ID*
125	314340	5/10/2008	17:10	EAST INTERCELL BERM	22	70	CJ
126	314106	5/10/2008	17:35	EAST INTERCELL BERM	22	70	CJ

Number of Panels: 126
Approx. Area (sq. ft). 382848.75

Sub Appendix D-4

Trial Seam Log

Geosyntec
consultants

Trial Seam Log - Fusion

WM. WASTE MANAGEMENT

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1

Tensiometer Description: EXAMO

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	5/6/2008	8:45	1210	ER	S/S	860	5.0	116	119	159	ppi	P	JEG
1-002	5/6/2008	8:46	019	JC	S/S	860	4.5	110	117	159	ppi	P	JEG
1-003	5/6/2008	12:10	019	JC	S/S	850	5.0	108	116	148	ppi	P	JEG
1-004	5/6/2008	12:15	1210	ER	S/S	850	5.0	104	113	149	ppi	P	JEG
1-005	5/6/2008	12:38	1210	ER	T/T	850	4.0	108	116	148	ppi	P	JEG
1-006	5/6/2008	13:00	019	JC	T/T	850	4.0	131	127	149	ppi	p	JEG
1-007	5/6/2008	14:10	1209	IS	S/S	850	5.0	112	116	148	ppi	P	JEG
1-008	5/6/2008	14:12	1209	IS	T/T	850	4.0	114	124	153	ppi	P	JEG
1-009	5/6/2008	16:20	1209	IS	T/S	850	4.0	110	109	148	ppi	p	JEG
1-010	5/7/2008	7:37	019	JC	S/S	850	4.5	116	122	171	ppi	p	JEG
1-011	5/7/2008	7:40	019	JC	T/T	850	4.0	143	148	176	ppi	p	JEG
1-012	5/7/2008	7:40	1210	ER	S/S	850	4.5	116	122	175	ppi	p	JEG
1-013	5/7/2008	7:45	1210	ER	T/T	850	4.0	131	127	167	ppi	p	JEG
1-014	5/7/2008	7:15	1209	IS	S/S	850	5.0	110	110	165	ppi	p	JEG
1-015	5/7/2008	7:20	1209	IS	T/T	850	4.0	142	130	161	ppi	p	JEG
1-016	5/7/2008	13:07	019	JC	S/S	850	4.8	108	110	155	ppi	p	JEG
1-017	5/7/2008	13:10	019	JC	T/T	850	4.0	106	110	147	ppi	p	JEG
1-018	5/7/2008	13:10	1209	IS	S/S	850	5.0	107	110	149	ppi	p	JEG
1-019	5/7/2008	13:05	1209	IS	T/T	850	4.0	129	138	153	ppi	p	JEG
1-020	5/7/2008	13:12	1210	ER	S/S	850	5.0	107	114	149	ppi	p	JEG
1-021	5/7/2008	13:15	1210	ER	T/T	850	4.5	127	118	148	ppi	p	JEG
1-022	5/8/2008	7:10	1209	IS	S/S	850	5.0	127	118	179	ppi	P	CJ
1-023	5/8/2008	7:15	1209	IS	T/T	850	4.0	124	133	160	ppi	P	JEG
1-024	5/8/2008	7:40	24	ER	S/S	850	4.5	121	122	170	ppi	P	CJ
1-025	5/8/2008	7:45	1210	ER	T/T	850	4.0	137	119	157	ppi	P	CJ
1-026	5/8/2008	7:50	1208	JC	S/S	850	4.5	122	122	168	ppi	P	CJ
1-027	5/8/2008	7:55	27	JC	T/T	860	4.0	152	151	170	ppi	P	CJ
1-028	5/8/2008	14:46	1208	JC	S/S	850	5.0	116	116	157	ppi	P	CJ
1-029	5/8/2008	14:20	1209	IS	S/S	850	5.0	116	109	157	ppi	P	CJ
1-030	5/8/2008	14:26	1210	ER	T/T	850	4.0	107	107	154	ppi	P	CJ
1-031	5/8/2008	14:30	1209	IS	T/T	850	4.0	126	127	149	ppi	P	CJ
1-032	5/8/2008	15:00	1208	JC	T/T	850	4.0	117	121	148	ppi	P	CJ
1-033	5/9/2008	7:20	33	JC	S/S	850	4.7	116	122	176	PPI	P	CJ
1-034	5/9/2008	7:15	1209	IS	S/S	850	5	110	110	168	PPI	P	CJ

Geosyntec
consultants

WASTE MANAGEMENT

Trial Seam Log - Extrusion

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1

Tensiometer Description: EXAMO

Material Type gml : 1 *Peel:* 0 ppi *Shear:* 0 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	5/8/2008	9:02	1	EB	T/T	500	550	127	157	PPI	P		CJ
1-002	5/8/2008	9:00	015	IS	T/T	500	550	111	153	PPI	P		CJ
1-003	5/8/2008	13:07	015	IS	T/T	500	550	110	147	PPI	P		CJ
1-004	5/8/2008	13:15	513	EB	T/T	400	550	121	150	PPI	P		CJ
1-005	5/10/2008	17:00	513	ER	T/T	400	550	128	147	PPI	P		CJ
1-006	5/12/2008	7:15	013	IS	T/T	500	550	130	157	PPI	P		CJ
1-007	5/12/2008	7:30	513	EB	T/T	450	550	138	156	PPI	P		CJ
1-008	5/12/2008	13:10	013	IS	T/T	450	500	117	148	PPI	P		CJ
1-009	5/13/2008	7:20	013	IS	T/T	400	550	128	164	PPI	P		CJ

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Trial Seam Log - Fusion

WM WASTE MANAGEMENT

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1

Tensiometer Description: EXAMO

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	5/9/2008	7:25	1210	ER	S/S	850	4.0	110	112	166	PPI	P	CJ
1-036	5/9/2008	7:10	1209	IS	T/T	850	4.0	156	157	170	PPI	P	CJ
1-037	5/9/2008	7:30	1210	ER	T/T	850	4.0	140	140	165	PPI	P	CJ
1-038	5/9/2008	12:42	1208	JC	S/S	850	4.5	107	107	155	PPI	P	CJ
1-039	5/9/2008	12:50	1210	ER	T/S	850	4.5	106	110	151	PPI	P	CJ
1-040	5/9/2008	12:46	1208	JC	T/S	850	4.0	109	108	148	PPI	P	CJ
1-041	5/9/2008	14:50	1209	IS	T/S	850	4.5	117	117	150	PPI	P	CJ
1-042	5/9/2008	14:55	1209	IS	S/S	850	5	108	109	157	PPI	P	CJ
1-043	5/10/2008	7:30	1210	ER	S/S	850	4.5	117	134	169	PPI	P	CJ
1-044	5/10/2008	7:10	1209	IS	S/S	850	5	117	110	166	PPI	P	CJ
1-045	5/10/2008	7:37	1208	JC	S/S	850	5.5	116	123	164	PPI	P	CJ
1-046	5/10/2008	7:15	1209	IS	T/T	850	4.0	140	139	170	PPI	P	CJ
1-047	5/10/2008	7:35	1210	ER	T/T	850	4.0	116	119	162	PPI	P	CJ
1-048	5/10/2008	7:40	1208	JC	T/T	850	4.0	127	121	167	PPI	P	CJ
1-049	5/10/2008	10:20	1208	JC	T/S	850	4.0	117	112	153	PPI	P	CJ
1-050	5/10/2008	12:13	1210	ER	S/S	850	5	110	119	148	PPI	P	CJ
1-051	5/10/2008	12:00	1209	IS	S/S	850	5	119	116	147	PPI	P	CJ
1-052	5/10/2008	12:10	1208	JC	S/S	850	4.5	114	117	150	PPI	P	CJ
1-053	5/10/2008	12:10	1210	ER	T/T	850	4.0	116	122	150	PPI	P	CJ
1-054	5/10/2008	12:10	1209	IS	T/T	850	4.0	117	116	147	PPI	P	CJ
1-055	5/10/2008	12:14	1208	JC	T/T	850	4.0	114	116	151	PPI	P	CJ

Sub Appendix D-5

Production Seam Log

Geosyntec consultants

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/5/2008	16:37	019	JC	F	1-005-018-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/5/2008	16:45	019	JC	F	1-003-018-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/6/2008	9:30	019	JC	F	1-001-002 0-112	112	JEG	0-112	30-30	BS	P	AT	JEG
5/6/2008	9:50	1210	ER	F	1-002-003 0-109	109	JEG	1-002-003	30-30	BS	P	AT	JEG
5/6/2008	10:15	019	JC	F	1-003-004 0-113	113	JEG	1-003-004	30-30	BS	P	AT	JEG
5/6/2008	10:20	1210	ER	F	1-004-005 90-0	99	JEG	1-004-005	30-30	BS	P	AT	JEG
5/6/2008	10:30	019	JC	F	1-005-006 80-0	80	JEG	1-005-006	30-30	BS	P	AT	JEG
5/6/2008	12:30	019	JC	F	1-007-008-161-0	161	JEG	0-152	30-29	BS	P	AT	JEG
5/6/2008	12:47	1210	ER	F	1-009-010 22.5-0	22.5	JEG	0-22.5	30-30	BS	P	AT	JEG
5/6/2008	13:00	1210	ER	F	1-008-009 0-85.5	85.5	JEG	83-0	30-30	BS	P	AT	JEG
5/6/2008	13:15	1210	ER	F	1-008-010 0-102	102	JEG	0-102	30-30	BS	P	AT	JEG
5/6/2008	13:30	019	JC	F	1-009-012-0-86	86	JEG	0-86	30-29	BS	P	AT	CJ
5/6/2008	13:30	019	JC	F	1-010-012 0-112	112	JEG	112-0	30-29	BS	P	AT	JEG
5/6/2008	13:35	1210	ER	F	1-011-012 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	JEG
5/6/2008	13:46	019	JC	F	1-010-011 0-8.5	8.5	JEG	0-8.5	30-30	BS	P	AT	JEG
5/6/2008	13:48	1210	ER	F	1-012-013 0-200.5	200.5	JEG	0-200.5	30-30	BS	P	AT	JEG

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/6/2008	14:00	019	JC	F	1-013-014 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	JEG
5/6/2008	14:20	1210	ER	F	1-011-013 0-13	13	JEG	13-0	30-30	BS	P	AT	JEG
5/6/2008	14:20	019	JC	F	1-013-015 0-214	214	JEG	214	30-30	BS	P	AT	JEG
5/6/2008	14:25	1210	ER	F	1-011-014 0-16	16	JEG	16	30-30	BS	P	AT	JEG
5/6/2008	14:30	1210	ER	F	1-015-016 0-125.5	125.5	JEG	125.5	30-30	BS	P	AT	JEG
5/6/2008	14:45	019	JC	F	1-014-015 0-35	35	JEG	35	30-30	BS	P	AT	JEG
5/6/2008	14:46	1209	IS	F	1-018-019 86.5-0	86.5	JEG	0-86.5	30-29	BS	P	AT	JEG
5/6/2008	15:00	1210	ER	F	1-015-017 0-144	144	JEG	144	30-30	BS	P	AT	JEG
5/6/2008	15:00	019	JC	F	1-016-017 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	JEG
5/6/2008	15:05	1209	IS	F	1-019-020 0-63.5	63.5	JEG	0-63.5	30-30	BS	P	AT	JEG
5/6/2008	15:10	1209	IS	F	1-020-021 0-64	64	JEG	0-64	30-29	BS	P	AT	JEG
5/6/2008	15:17	1209	IS	F	1-021-022 63-0	63	JEG	0-63	30-30	BS	P	AT	JEG
5/6/2008	15:24	019	JC	F	1-022-023 0-64	64	JEG	0-64	30-30	BS	P	AT	JEG
5/6/2008	15:30	1209	IS	F	1-023-024 64-0	64	JEG	0-64	30-30	BS	P	AT	JEG
5/6/2008	15:30	1210	ER	F	1-024-025 0-64	64	JEG	0-64	30-29	BS	P	AT	JEG
5/6/2008	15:46	019	JC	F	1-026-027 0-64	64	JEG	0-64	30-30	BS	P	AT	JEG

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WASTE MANAGEMENT

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/6/2008	15:48	1209	IS	F	1-025-026 0-65	65	JEG	0-65	30-30	BS	P	AT	JEG
5/6/2008	15:52	1210	ER	F	1-027-028 0-63	63	JEG	0-63	30-30	BS	P	AT	JEG
5/6/2008	16:00	1210	ER	F	1-006-029 0-42	42	JEG	0-42	30-30	BS	P	AT	CJ
5/6/2008	16:00	1209	IS	F	1-007-029 0-28	28	JEG	0-28	30-30	BS	P	AT	CJ
5/6/2008	16:20	1209	IS	F	1-006-007 28-56	28	JEG	28-56	30-30	BS	P	AT	CJ
5/6/2008	16:25	1210	ER	F	1-007-020 0-21	21	JEG	0-21	30-30	BS	P	AT	CJ
5/6/2008	16:30	1209	IS	F	1-007-018 56-86	30	JEG	56-86	30-30	BS	P	AT	CJ
5/6/2008	16:30	1209	IS	F	1-007-019 86-117	31	JEG	86-117	30-30	BS	P	AT	CJ
5/6/2008	16:30	1210	ER	F	1-007-021 21-28	7	JEG	0-7	30-30	BS	P	AT	CJ
5/6/2008	16:30	1210	ER	F	1-008-021 28-44	16	JEG	28-44	30-30	BS	P	AT	CJ
5/6/2008	16:33	1210	ER	F	1-008-022 44-59	15	JEG	44-59	30-30	BS	P	AT	CJ
5/6/2008	16:36	1210	ER	F	1-010-022 59-66.5	7.5	JEG	59-66.5	30-30	BS	P	AT	CJ
5/6/2008	16:38	1210	ER	F	1-010-023 66.5-88.5	22	JEG	66.5-88.5	30-30	BS	P	AT	CJ
5/6/2008	16:42	019	JC	F	1-004-018-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/6/2008	16:44	1210	ER	F	1-011-024 89-111.5	22.5	JEG	111.5	30-30	BS	P	AT	JEG
5/6/2008	16:50	1210	ER	F	1-011-025 111.5-118	6.5	JEG	111.5-118	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: EQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/6/2008	16:50	1210	ER	F	1-014-025 118-134	16	JEG	118	30-30	BS	P	AT	JEG
5/6/2008	16:53	019	JC	F	1-002-018-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/6/2008	16:54	1210	ER	F	1-014-026 134-147.5	13.5	JEG	147.5	30-30	BS	P	AT	JEG
5/6/2008	16:58	019	JC	F	1-001-018-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/6/2008	17:00	1210	ER	F	1-015-026 147.5-156	8.5	JEG	147.5	30-30	BS	P	AT	JEG
5/6/2008	17:00	1210	ER	F	1-015-027 156-177	21	JEG	177	30-30	BS	P	AT	JEG
5/6/2008	17:06	1210	ER	F	1-017-028 178.5-201.5	23	JEG	201.5	30-30	BS	P	AT	JEG
5/7/2008	8:00	019	JC	F	1-016-030 130-0	130	JEG	130	30-30	BS	P	AT	JEG
5/7/2008	8:15	1210	ER	F	1-030-032 0-245	242	JEG	245	30-30	BS	P	AT	JEG
5/7/2008	8:20	1210	ER	F	1-031-032 0-67	67	JEG	0	30-30	BS	P	AT	JEG
5/7/2008	8:24	019	JC	F	1-017-030 114-0	114	JEG	114	30-30	BS	P	AT	JEG
5/7/2008	8:30	019	JC	F	1-032-034 252.5-0	252.5	JEG	0-252.5	30-30	BS	P	AT	CJ
5/7/2008	8:35	1209	IS	F	1-034-035 0-161	161 .	JEG	0-161	30-29	BS	P	AT	CJ
5/7/2008	8:40	1209	IS	F	1-033-036-0-88	88	JEG	0-88	30-30	BS	P	AT	CJ
5/7/2008	8:44	1209	IS	F	1-030-031 0-22	22	JEG	0-22	30-30	BS	P	AT	JEG
5/7/2008	8:45	1210	ER	F	1-035-036 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/7/2008	8:50	1210	ER	F	1-036-037 0-22	22	JEG	0-22	30-30	BS	P	AT	CJ
5/7/2008	8:54	019	JC	F	1-017-031-48-0	48	JEG	0-48	30-30	BS	P	AT	JEG
5/7/2008	9:00	1210	ER	F	1-036-038 0-70.5	70.5	JEG	0-70.5	30-29	BS	P	AT	CJ
5/7/2008	9:05	1209	IS	F	1-033-037-0-13	13	JEG	0-13	30-30	BS	P	AT	CJ
5/7/2008	9:05	1210	ER	F	1-035-038 0-161	161	JEG	0-161	30-29	BS	P	AT	CJ
5/7/2008	9:10	1210	ER	F	1-036-039 0-112	112	JEG	0-112	30-29	BS	P	AT	CJ
5/7/2008	9:12	1209	IS	F	1-033-034-0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	CJ
5/7/2008	9:25	1210	ER	F	1-037-039 0-32	32	JEG	0-32	30-29	BS	P	AT	CJ
5/7/2008	9:27	019	JC	F	1-038-039 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	CJ
5/7/2008	9:29	019	JC	F	1-039-041 0-145	145	JEG	0-145	30-30	BS	P	AT	CJ
5/7/2008	9:31	1210	ER	F	1-039-042 0-24	24	JEG	0-24	30-30	BS	P	AT	CJ
5/7/2008	9:36	019	JC	F	1-038-040 0-224	224	JEG	0-224	30-30	BS	P	AT	CJ
5/7/2008	9:41	019	JC	F	1-038-041 0-5	5	JEG	0-5	30-30	BS	P	AT	CJ
5/7/2008	9:46	019	JC	F	1-032-033 82.5-0	82.5	JEG	0-82.5	30-30	BS	P	AT	CJ
5/7/2008	10:21	1209	IS	F	1-034-036 0-92.5	92.5	JEG	0-92.5	30-30	BS	P	AT	CJ
5/7/2008	11:02	1209	IS	F	1-040-041 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/7/2008	11:15	1209	IS	F	1-040-043 0-227	227	JEG	0-227	30-30	BS	P	AT	CJ
5/7/2008	11:39	1210	ER	F	1-041-042 0-22.5	22.5	JEG	0	30-30	BS	P	AT	JEG
5/7/2008	11:45	1209	IS	F	1-041-043-187-148	39	JEG	187-148	30-30	BS	P	AT	CJ
5/7/2008	11:46	1210	ER	F	1-043-044 0-22.5	22.5	JEG	0-22.5	30-30	BS	P	AT	CJ
5/7/2008	11:49	1209	IS	F	1-041-044 0-105	105	JEG	0-105	30-30	BS	P	AT	JEG
5/7/2008	12:03	019	JC	F	1-042-044 0-43	43	JEG	0-43	30-30	BS	P	AT	CJ
5/7/2008	13:32	019	JC	F	1-043-045 0-265	265	JEG	0-265	30-30	BS	P	AT	CJ
5/7/2008	14:04	1209	IS	F	1-045-046 0-412	412	JEG	0-412	30-30	BS	P	AT	CJ
5/7/2008	14:15	019	JC	F	1-044-045 0-150	150	JEG	0-150	30-30	BS	P	AT	CJ
5/7/2008	14:43	019	JC	F	1-046-047 0-414	414	JEG	0-414	30-30	BS	P	AT	CJ
5/7/2008	15:40	1209	IS	F	1-047-043-0-414	414	CJ	0-414	30-30	BS	P	AT	CJ
5/7/2008	16:06	019	JC	F	1-048-049-0-413	413	CJ	0-413	30-30	BS	P	AT	CJ
5/7/2008	16:47	1209	IS	F	1-049-050-164-412	248	CJ	164-412	30-30	BS	P	AT	CJ
5/7/2008	16:59	1210	ER	F	1-049-050-0-164	164	CJ	0-164	30-30	BS	P	AT	CJ
5/8/2008	7:53	1209	IS	F	1-044-051-0-18	18	CJ	0-18	30-30	BS	P	AT	CJ
5/8/2008	8:00	1209	IS	F	1-051-052-0-39	39	CJ	0-39	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/8/2008	8:10	1210	ER	F	1-052-053-0-59	59	CJ	0-59	30-30	BS	P	AT	CJ
5/8/2008	8:11	1209	IS	F	1-053-054-0-79	79	CJ	0-79	30-30	BS	P	AT	CJ
5/8/2008	8:15	0128	JC	F	1-054-055-0-91	91	CJ	0-91	30-30	BS	P	AT	CJ
5/8/2008	8:28	1209	IS	F	1-055-056-0-117	117	CJ	0-117	30-30	BS	P	AT	CJ
5/8/2008	8:51	1210	ER	F	1-045-051-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	8:56	1210	ER	F	1-046-052-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	9:00	1210	ER	F	1-047-053-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	9:03	1210	IS	F	1-050-057-0-413	413	CJ	0-413	30-30	BS	P	AT	CJ
5/8/2008	9:05	1210	ER	F	1-048-054-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	9:10	1210	ER	F	1-049-055-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	9:15	1210	ER	F	1-050-056-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	15:18	1208	JC	F	1-057-058-0-414	414	CJ	0-414	30-30	BS	P	AT	CJ
5/8/2008	15:40	1210	ER	F	1-058-059-0-328	328	CJ	0-328	30-30	BS	P	AT	CJ
5/8/2008	16:03	1209	IS	F	1-057-050-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/8/2008	16:13	1210	IS	F	1-056-050-415-	4	CJ	415-	30-30	BS	P	AT	CJ
5/9/2008	7:30	1208	JC	F	1-028-051-0-62	62	CJ	0-62	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/9/2008	7:40	1209	IS	F	1-061-062-62	62	CJ	0-62	30-30	BS	P	AT	CJ
5/9/2008	7:48	1210	ER	F	1-062-063-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	7:50	1208	JC	F	1-063-064-0-64	64	CJ	0-64	30-30	BS	P	AT	CJ
5/9/2008	7:57	1209	IS	F	1-064-065-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:05	1210	ER	F	1-065-066-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:14	1208	JC	F	1-066-067-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:14	1209	IS	F	1-067-068-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:26	1210	ER	F	1-068-069-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:30	1209	IS	F	1-069-070-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:31	1208	JC	F	1-070-071-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:45	1209	IS	F	1-071-072-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:46	1210	ER	F	1-072-073-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	8:58	1208	JC	F	1-073-074-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	9:06	1210	IS	F	1-074-075-0-63	63	CJ	0-63	30-30	BS	P	AT	CJ
5/9/2008	9:06	1210	ER	F	1-075-076-0-62	62	CJ	0-62	30-29	BS	P	AT	CJ
5/9/2008	9:10	1208	JC	F	1-076-077-0-61	61	CJ	0-61	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/9/2008	9:47	1209	IS	F	1-031-061-0-17	17	CJ	0-17	30-30	BS	P	AT	CJ
5/9/2008	9:50	1209	IS	F	1-031-062-0-11	11	CJ	0-11	30-30	BS	P	AT	CJ
5/9/2008	9:53	1209	IS	E	1-032-062-35-46	11	CJ	35-46	30-30	BS	P	AT	CJ
5/9/2008	9:54	1209	IS	E	1-017-061-0-5	5	CJ	0-5	VTOK	SR	P	VT	CJ
5/9/2008	9:55	1209	IS	F	1-032-063-46-64	18	CJ	46-64	30-30	BS	P	AT	CJ
5/9/2008	9:57	1209	IS	F	1-032-062-35-49	14	CJ	35-49	30-30	BS	P	AT	CJ
5/9/2008	9:58	1209	IS	F	1-033-063-64-68	4	CJ	64-68	30-30	BS	P	AT	CJ
5/9/2008	10:00	1209	IS	E	1-033-064-68-91	23	CJ	68-91	30-30	BS	P	AT	CJ
5/9/2008	10:04	1209	IS	F	1-037-065-94-114	20	CJ	94-114	30-30	BS	P	AT	CJ
5/9/2008	10:07	1209	IS	F	1-037-066-114-121	7	CJ	114-121	30-30	BS	P	AT	CJ
5/9/2008	10:09	1209	IS	F	1-039-066-123-137	14	CJ	123-137	30-30	BS	P	AT	CJ
5/9/2008	10:15	1209	IS	F	1-042-067-153-159	6	CJ	153-159	30-30	BS	P	AT	CJ
5/9/2008	10:17	1209	IS	F	1-039-067-137-153	16	CJ	153-137	30-30	BS	P	AT	CJ
5/9/2008	10:17	1209	IS	F	1-042-068-159-182	23	CJ	159-182	30-30	BS	P	AT	CJ
5/9/2008	10:21	1209	IS	F	1-044-069-182-204	22	CJ	182-204	30-30	BS	P	AT	CJ
5/9/2008	10:24	1209	IS	F	1-044-070-204-212	8	CJ	0-8	30-30	BS	P	AT	CJ

Geosyntec consultants

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/9/2008	10:26	1209	IS	F	1-051-070-212-227	15	CJ	212-227	30-30	BS	P	AT	CJ
5/9/2008	10:29	1209	IS	F	1-051-071-227-243	16	CJ	227-243	30-30	BS	P	AT	CJ
5/9/2008	10:32	1209	IS	F	1-052-071-243-250	7	CJ	243-250	30-30	BS	P	AT	CJ
5/9/2008	10:34	1209	IS	F	1-052-072-250-273	23	CJ	250-273	30-30	BS	P	AT	CJ
5/9/2008	10:37	1209	IS	F	1-053-073-273-295	22	CJ	273-295	30-30	BS	P	AT	CJ
5/9/2008	10:40	1209	IS	F	1-053-074-295-302	7	CJ	295-302	30-30	BS	P	AT	CJ
5/9/2008	10:40	1208	JC	f	1-078-079-0-130	130	CJ	0-130	30-30	BS	P	AT	CJ
5/9/2008	10:42	1209	IS	F	1-054-074-302-318	16	CJ	302-318	30-30	BS	P	AT	CJ
5/9/2008	10:45	1209	IS	F	1-054-075-318-329	11	CJ	318-329	30-30	BS	P	AT	CJ
5/9/2008	10:47	1209	IS	F	1-055-075-329-342	13	CJ	329-342	30-30	BS	P	AT	CJ
5/9/2008	10:47	1209	IS	F	1-055-076-342-363	21	CJ	342-363	30-30	BS	P	AT	CJ
5/9/2008	10:53	1210	ER	f	1-079-080-0-128	128	CJ	0-128	30-30	BS	P	AT	CJ
5/9/2008	10:54	1209	IS	F	1-056-077-363-386	23	CJ	363-386	30-30	BS	P	AT	CJ
5/9/2008	11:10	1208	JC	f	1-080-081-0-137	137	CJ	0-137	30-30	BS	P	AT	CJ
5/9/2008	12:09	1209	IS	F	1-059-086-0-23	23	CJ	0-23	30-30	BS	P	AT	CJ
5/9/2008	13:23	1210	ER	f	1-081-083-0-32	32	CJ	0-32	30-30	BS	P	AT	CJ

Geosyntec consultants

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/9/2008	13:40	1210	ER	f	1-083-084-0-125	125	CJ	0-125	30-30	BS	P	AT	CJ
5/9/2008	13:52	013	IS	E	1-059-Extension	11	CJ	128-134	VT OK	SR	P	VT	CJ
5/9/2008	14:03	1208	JC	f	1-085-086-0-27	72	CJ	0-27	30-30	BS	P	AT	CJ
5/9/2008	14:10	1210	ER	f	1-081-085-67-101	34	CJ	67-101	30-30	BS	P	AT	CJ
5/9/2008	14:14	1208	JC	f	1-082-083-0-177	177	CJ	0-173	30-30	BS	P	AT	CJ
5/9/2008	14:17	1210	ER	f	1-081-086-101-134	33	CJ	101-134	30-30	BS	P	AT	CJ
5/9/2008	14:35	1208	JC	f	1-082-087-0-196	196	CJ	0-196	30-30	BS	P	AT	CJ
5/9/2008	14:40	1208	JC	f	1-084-085-0-73	73	CJ	0-73	30-30	BS	P	AT	CJ
5/9/2008	14:45	1208	JC	f	1-081-084-32-67	35	CJ	32-67	30-30	BS	P	AT	CJ
5/9/2008	14:45	1210	ER	F	1-087-088-0-189	189	CJ	0-189	30-30	BS	P	AT	CJ
5/9/2008	14:56	1209	IS	F	1-058-031-0-20	20	CJ	0-20	30-30	BS	P	AT	CJ
5/9/2008	15:04	1209	IS	F	1-058-079-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/9/2008	15:08	1209	IS	F	1-058-078-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/9/2008	15:09	1208	JC	F	1-088-089-0-198	198	CJ	0-198	30-30	BS	P	AT	CJ
5/9/2008	15:17	1209	IS	E	1-059-081-0-8	8	CJ	0-8	30-30	BS	P	AT	CJ
5/9/2008	15:28	1210	ER	F	1-089-090-0-198	198	CJ	0-198	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: EQ1465
TaskNo: 01

Material Type: gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/9/2008	15:36	1209	IS	F	1-059-082-96-128	128	CJ	96-128	30-28	BS	P	AT	CJ
5/9/2008	15:41	1209	IS	F	1-059-083-63-96	33	CJ	63-96	30-28	BS	P	AT	CJ
5/9/2008	15:43	1208	JC	F	1-090-091-0-197	197	CJ	0-197	30-30	BS	P	AT	CJ
5/9/2008	15:46	1209	IS	F	1-059-084-30-9-63	54	CJ	9-63	30-28	BS	P	AT	CJ
5/9/2008	15:50	1209	IS	F	1-059-085-0-30	30	CJ	0-30	30-28	BS	P	AT	CJ
5/9/2008	16:11	1210	ER	F	1-091-092-0-203	203	CJ	0-203	30-30	BS	P	AT	CJ
5/9/2008	16:11	1209	IS	F	1-092-093-0-206	206	CJ	0-206	30-30	BS	P	AT	CJ
5/9/2008	16:26	1208	IS	F	1-093-094-0-155	155	CJ	0-155	30-30	BS	P	AT	CJ
5/9/2008	16:56	1209	IS	F	1-094-095-0-132	132	CJ	0-132	30-30	BS	P	AT	CJ
5/9/2008	17:05	1210	ER	F	1-095-096-0-95	95	CJ	0-95	30-30	BS	P	AT	CJ
5/9/2008	17:10	1208	JC	F	1-096-097-0-51	48	CJ	0-51	30-30	BS	P	AT	CJ
5/10/2008	7:48	1209	IS	F	1-098-099-0-202	202	CJ	0-202	30-30	BS	P	AT	CJ
5/10/2008	7:57	1210	ER	F	1-099-100-0-147	147	CJ	0-147	30-30	BS	P	AT	CJ
5/10/2008	8:02	1208	JC	F	1-100-101-0-143	143	CJ	0-143	30-30	BS	P	AT	CJ
5/10/2008	8:25	1209	IS	F	1-101-102-0-147	147	CJ	0-147	30-30	BS	P	AT	CJ
5/10/2008	8:32	1208	JC	F	1-102-103-0-128	128	CJ	0-128	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/10/2008	8:32	1210	ER	F	1-103-104-0-107	107	CJ	0-107	30-30	BS	P	AT	CJ
5/10/2008	8:54	1209	IS	F	1-104-105-0-78	78	CJ	0-78	30-30	BS	P	AT	CJ
5/10/2008	9:01	1210	ER	F	1-106-107-0-17	17	CJ	0-13	30-30	BS	P	AT	CJ
5/10/2008	9:05	1208	JC	F	1-105-106-0-53	53	CJ	0-53	30-30	BS	P	AT	CJ
5/10/2008	9:44	1209	IS	F	1-097-107-0-8	8	CJ	0-8	30-30	BS	P	AT	CJ
5/10/2008	9:45	1209	IS	F	1-097-106-37-8	29	CJ	37-8	30-30	BS	P	AT	CJ
5/10/2008	9:50	1209	IS	F	1-096-105-70-39	31	CJ	70-39	30-30	BS	P	AT	CJ
5/10/2008	9:55	1209	IS	F	1-095-104-103-116-76	40	CJ	116-76	30-30	BS	P	AT	CJ
5/10/2008	9:55	1209	IS	F	1-096-104-76-70	6	CJ	76-70	30-30	BS	P	AT	CJ
5/10/2008	9:57	1210	ER	F	1-109-110-0-50	50	CJ	0-50	30-30	BS	P	AT	CJ
5/10/2008	10:01	1209	IS	F	1-095-103-116-103	13	CJ	116-103	30-30	BS	P	AT	CJ
5/10/2008	10:03	1209	IS	F	1-094-103-133-116	17	CJ	133-116	30-30	BS	P	AT	CJ
5/10/2008	10:06	1209	IS	F	1-094-102-154-133	21	CJ	154-133	30-30	BS	P	AT	CJ
5/10/2008	10:08	1208	JC	F	1-099-112-0-52	52	CJ	0-52	30-30	BS	P	AT	CJ
5/10/2008	10:13	1210	ER	F	1-108-112-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:19	1210	ER	F	1-099-109-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/10/2008	10:20	1209	IS	F	1-093-101-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:20	1209	IS	F	1-093-102-0-4	4	CJ	0-4	30-30	BS	P	AT	CJ
5/10/2008	10:20	1208	JC	F	1-099-108-0-6	6	CJ	0-6	30-30	BS	P	AT	CJ
5/10/2008	10:20	1208	JC	F	1-108-109-0-74	74	CJ	0-74	30-30	BS	P	AT	CJ
5/10/2008	10:24	1209	IS	F	1-093-100-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:30	1210	ER	F	1-110-Extension	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:37	1210	ER	F	1-098-Extension	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:38	1209	IS	F	1-093-Extension	16	CJ	0-16	30-30	BS	P	AT	CJ
5/10/2008	10:40	1208	JC	F	1-059-103-134-163	29	CJ	134-163	30-30	BS	P	AT	CJ
5/10/2008	10:41	1209	IS	F	1-093-112-0-5	5	CJ	0-5	30-30	BS	P	AT	CJ
5/10/2008	10:42	1209	IS	F	1-092-112-0-23	23	CJ	0-23	30-30	BS	P	AT	CJ
5/10/2008	10:45	1208	JC	F	1-059-109-163-192	29	CJ	163-192	30-30	BS	P	AT	CJ
5/10/2008	10:46	1209	IS	F	1-091-112-0-12	12	CJ	0-12	30-30	BS	P	AT	CJ
5/10/2008	10:48	1209	IS	F	1-091-108-0-12	12	CJ	0-12	30-30	BS	P	AT	CJ
5/10/2008	10:50	1208	JC	F	1-059-110-192-220	28	CJ	192-220	30-30	BS	P	AT	CJ
5/10/2008	10:54	1209	IS	F	1-089-108-0-23	23	CJ	0-23	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/10/2008	10:55	1209	IS	F	1-059-111-220-249	29	CJ	0-29	30-30	BS	P	AT	CJ
5/10/2008	10:58	1210	ER	F	1-087-Extension	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:58	1209	IS	F	1-088-108-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	10:59	1209	IS	F	1-090-108-0-23	23	CJ	0-23	30-30	BS	P	AT	CJ
5/10/2008	11:02	1209	IS	F	1-108-Extension	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	13:15	1208	JC	F	1-098-113-0-193	193	CJ	0-193	30-30	BS	P	AT	CJ
5/10/2008	13:22	1209	IS	F	1-111-113-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	13:42	1210	ER	F	1-113-114-0-193	193	CJ	0-193	30-29	BS	P	AT	CJ
5/10/2008	14:10	1208	JC	F	1-115-116-0-205	205	CJ	0-205	30-29	BS	P	AT	CJ
5/10/2008	14:12	1208	JC	F	1-110-111-0-34	34	CJ	0-34	30-30	BS	P	AT	CJ
5/10/2008	14:16	1210	ER	F	1-111-114-0-18	18	CJ	0-18	30-29	BS	P	AT	JEG
5/10/2008	14:49	1209	IS	F	1-114-115-0-205	205	CJ	0-205	30-30	BS	P	AT	CJ
5/10/2008	14:50	1210	ER	F	1-116-117-0-205	205	CJ	0-205	30-30	BS	P	AT	CJ
5/10/2008	15:00	1209	IS	F	1-058-080-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	15:00	1208	JC	F	1-117-118-0-191	191	CJ	0-191	30-30	BS	P	AT	CJ
5/10/2008	15:23	1209	IS	F	1-118-119-0-191	191	CJ	0-119	30-30	BS	P	AT	CJ

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Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/10/2008	15:43	1210	ER	F	1-119-120-0-164	164	CJ	0-164	30-30	BS	P	AT	CJ
5/10/2008	16:04	1209	IS	F	1-120-121-0-174	174	CJ	0-174	30-30	BS	P	AT	CJ
5/10/2008	16:10	1208	JC	F	1-121-122-0-117	117	CJ	0-117	30-30	BS	P	AT	CJ
5/10/2008	16:32	1209	IS	F	1-060-119-47-76	29	CJ	47-76	30-30	BS	P	AT	CJ
5/10/2008	16:44	1209	IS	F	1-059-114-264-277	28	CJ	249-277	30-30	BS	P	AT	CJ
5/10/2008	16:47	1209	IS	F	1-059-115-300-277	23	CJ	0-23	30-30	BS	P	AT	CJ
5/10/2008	16:48	1208	JC	F	1-122-123-0-119	119	CJ	0-119	30-30	BS	P	AT	CJ
5/10/2008	16:50	1209	IS	F	1-059-116-311-300	11	CJ	311-300	30-30	BS	P	AT	CJ
5/10/2008	16:52	1209	IS	F	1-058-116-320-311	9	CJ	0-9	30-30	BS	P	AT	CJ
5/10/2008	17:00	1209	IS	F	1-058-117-0-8	8	CJ	0-8	30-30	BS	P	AT	CJ
5/10/2008	17:05	1209	IS	F	1-117-Extension	12	CJ	0-12	30-30	BS	P	AT	CJ
5/10/2008	17:07	1210	ER	F	1-123-124-0-120	120	CJ	0-120	30-30	BS	P	AT	CJ
5/10/2008	17:10	1209	IS	F	1-118-Extension	16	CJ	0-16	30-30	BS	P	AT	CJ
5/10/2008	17:20	1208	JC	E	1-056-125-0-8	8	CJ	0-8	VT OK	SR	P	VT	CJ
5/10/2008	17:21	1208	JC	F	1-077-125-0-58	58	CJ	0-58	30-30	BS	P	AT	CJ
5/10/2008	17:23	1209	IS	F	1-060-117-0-19	19	CJ	0-19	30-30	BS	P	AT	CJ

Geosyntec consultants

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*
5/10/2008	17:25	1209	IS	F	1-060-118-0-6	6	CJ	0-6	30-30	BS	P	AT	CJ
5/10/2008	17:27	1209	IS	F	1-060-Extension	20	CJ	19-39	30-30	BS	P	AT	CJ
5/10/2008	17:36	1209	IS	F	1-060-120-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	17:40	1209	IS	F	1-056-120-0-7	7	CJ	0-7	30-30	BS	P	AT	CJ
5/10/2008	17:40	1209	IS	F	1-056-121-7-35	28	CJ	7-35	30-30	BS	P	AT	CJ
5/10/2008	17:42	1208	JC	F	1-125-126-0-70	71	CJ	0-71	30-30	BS	P	AT	CJ
5/10/2008	17:57	1209	IS	F	1-121-125-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	18:01	1209	IS	F	1-121-126-0-10	10	CJ	0-10	30-30	BS	P	AT	CJ
5/10/2008	18:01	1209	IS	F	1-122-126-0-25	25	CJ	0-25	30-30	BS	P	AT	CJ
5/10/2008	18:04	1208	IS	F	1-123-126-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/10/2008	18:12	1209	IS	F	1-124-126-0-22	22	CJ	0-22	30-30	BS	P	AT	CJ
5/12/2008	11:17	513	EB	E	1-099-Extension	8	CJ	0-8	VTOK	SR	P	VT	CJ
5/12/2008	11:20	513	EB	E	1-100-extension	6	CJ	0-6	VT OK	SR	P	VT	CJ
5/12/2008	11:53	513	EB	E	1-112-extension	11	CJ	0-11	VT OK	SR	P	VT	CJ

Geosyntec consultants

Production Seam Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Material Type: gml : 1 Specifications: Seam Pressure: 25-30 psi for 5 minutes < 3 psi drop Vacuum Box: 5 psi for 20 seconds

Primary / Secondary: Primary Series: 1

Production Seam					Location			Nondestructive Test					
Date	*Time*	*Mach. ID*	*Oper. ID*	*Ext/ Fus:*	*SeamNo* Series-Seam1-Seam2-Begin-End	*Length* (ft.)	*QA ID*	*Location*	*Detail*	*Oper.*	*Result*	*Action*	*QA ID*

Total Length Fusion: 18875.5 Total Length Extrusion: 91

Comments:

Sub Appendix D-6

Destructive Test Log

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WASTE MANAGEMENT

Destructive Test Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Test Reqs: Fusion: Peel Inside: 91 Peel Outside: 91 Shear: 120
Extrusion: Peel: 0 Shear: 0

Primary / Secondary: Primary Series: 1 MaterialType: 1

Sample Data								Test Data							
			Location					Peel		Shear	Unit	Result	QA	Re test	Re test
Samp No	Weld Type	Track Type	Seam	Dist. (ft.)	Mach ID	Oper ID	Date Samp	Inside	Outside		ppi/psi	(P/F)	ID	1	2
1-001	F	D	1-004-005	30	1210	ER	5/6/2008	Lab	123	118	183	ppi	p	-	-	-
								Field	106	109	160	PPI	P	CJ		
1-002	F	D	1-017-024	64 W	1210	ER	5/7/2008	Lab	115	138	179	ppi	p	-	-	-
								Field	116	113	167	PPI	P	CJ		
1-003	F	D	1-007-018	72	1210	ER	5/7/2008	Lab	134	145	182	ppi	p	-	-	-
								Field	133	122	163	PPI	P	CJ		
1-004	F	D	1-009-012	50	019	JC	5/7/2008	Lab	127	138	178	ppi	p	-	-	-
								Field	111	110	163	PPI	P	CJ		
1-005	F	D	1-026-027	15	019	JC	5/7/2008	Lab	114	114	178	ppi	p	-	-	-
								Field	108	107	164	PPI	P	CJ		
1-006	F	D	017-031	12 E	019	JC	5/8/2008	Lab	128	121	178	ppi	p	-	-	-
								Field	109	106	160	ppi	P	CJ		
1-007	F	D	034-036	39 W	1209	IS	5/8/2008	Lab	126	110	180	ppi	p	-	-	-
								Field	112	116	167	PPI	P	CJ		
1-008	F	D	038-040	20 W	019	JC	5/8/2008	Lab	129	120	178	ppi	p	-	-	-
								Field	107	109	161	PPI	P	CJ		
1-009	F	D	040-043	299 W	1209	IS	5/8/2008	Lab	120	115	181	ppi	p	-	-	-
								Field	106	107	159	PPI	P	CJ		
1-010	F	D	045-046	94 E	1209	IS	5/8/2008	Lab	130	111	180	ppi	p	-	-	-
								Field	101	110	167	PPI	P	CJ		

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WASTE MANAGEMENT

Destructive Test Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Test Reqs: Fusion: Peel Inside: 91 Peel Outside: 91 Shear: 120
Extrusion: Peel: 0 Shear: 0

Primary / Secondary: Primary Series: 1 MaterialType: 1

Sample Data									Test Data							
			Location						Peel		Shear	Unit	Result	QA	Re test	Re test
Samp No	Weld Type	Track Type	Seam	Dist. (ft.)	Mach ID	Oper ID	Date Samp		Inside	Outside		ppi/psi	(P/F)	ID	1	2
1-011	F	D	046-047	133 E	019	JC	5/8/2008	Lab	122	124	175	ppi	p	-	-	-
								Field	112	110	158	PPI	P	CJ		
1-012	F	D	047-048	166 E	1209	IS	5/8/2008	Lab	123	117	177	ppi	p	-	-	-
								Field	107	114	159	PPI	P	CJ		
1-013	F	D	048-049	370 E	019	JC	5/8/2008	Lab	121	119	175	ppi	p	-	-	-
								Field	116	114	168	PPI	P	CJ		
1-014	F	D	049-050	31 W	1209	IS	5/8/2008	Lab	147	119	174	ppi	p	-	-	-
								Field	110	110	164	PPI	P	CJ		
1-015	F	D	051-052	29 E	1209	IS	5/8/2008	Lab	122	135	176	ppi	p	-	-	-
								Field	109	124	161	PPI	P	CJ		
1-016	F	D	050-057	300 E	1210	IS	5/9/2008	Lab	124	114	176	ppi	p	-	-	-
								Field	107	117	159	PPI	P	CJ		
1-017	F	D	057-058	250 E	1208	JC	5/9/2008	Lab	136	140	172	ppi	p	-	-	-
								Field	119	107	157	PPI	P	CJ		
1-018	F	D	058-059	300 E	1210	ER	5/9/2008	Lab	126	126	182	ppi	p	-	-	-
								Field	122	116	160	PPI	P	CJ		
1-019	F	D	062-063	28 E	1210	ER	5/9/2008	Lab	131	141	193	ppi	p	-	-	-
								Field	110	110	160	PPI	P	CJ		
1-020	F	D	070-071	15 E	1208	JC	5/9/2008	Lab	131	118	178	ppi	p	-	-	-
								Field	109	110	169	PPI	P	CJ		

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Destructive Test Log

Project: Vista Class III Landfill
Location: Apopka, Florida
Description: Cell 1

ProjNo: FQ1465
TaskNo: 01

Test Reqs: Fusion: Peel Inside: 91 Peel Outside: 91 Shear: 120
Extrusion: Peel: 0 Shear: 0

Primary / Secondary: Primary Series: 1 MaterialType: 1

Sample Data									Test Data						Re test 1	Re test 2
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						
1-021	F	D	074-075	8 E	1209	IS	5/9/2008	Lab	128	113	180	ppi	p	-	-	-
								Field	106	116	164	PPI	P	CJ		
1-022	F	D	055-076	356 N	1209	IS	5/9/2008	Lab	132	140	175	ppi	p	-	-	-
								Field	111	117	170	PPI	P	CJ		
1-023	F	D	079-080	57 E	1210	ER	5/9/2008	Lab	121	124	181	ppi	p	-	-	-
								Field	117	121	170	PPI	P	CJ		
1-024	F	D	083-084	13 W	1210	ER	5/10/2008	Lab	120	119	182	ppi	p	-	-	-
								Field	108	110	170	PPI	P	CJ		
1-025	F	D	087-088	100 E	1210	ER	5/10/2008	Lab	123	116	178	ppi	p	-	-	-
								Field	110	110	165	PPI	P	CJ		
1-026	F	D	090-091	150 W	1208	JC	5/10/2008	Lab	124	125	182	ppi	p	-	-	-
								Field	114	117	158	PPI	P	CJ		
1-027	F	D	092-093	22 E	1209	IS	5/10/2008	Lab	120	108	175	ppi	p	-	-	-
								Field	109	110	163	PPI	P	CJ		
1-028	F	D	096-097	26 E	1208	JC	5/10/2008	Lab	137	123	182	ppi	p	-	-	-
								Field	101	117	157	PPI	P	CJ		
1-029	F	D	100-101	25 S	1208	JC	5/10/2008	Lab	131	116	174	ppi	p	-	-	-
								Field	131	134	187	PPI	P	CJ		
1-030	F	D	094-102	150 SE	1209	IS	5/10/2008	Lab	146	130	176	ppi	p	-	-	-
								Field	110	126	164	PPI	P	CJ		

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Destructive Test Log

Project: Vista Class III Landfill ProjNo: FQ1465
Location: Apopka, Florida TaskNo: 01
Description: Cell 1

Test Reqs: Fusion: Peel Inside: 91 Peel Outside: 91 Shear: 120
Extrusion: Peel: 0 Shear: 0

Primary / Secondary: Primary Series: 1 MaterialType: 1

Sample Data									Test Data							
			Location						Peel		Shear	Unit	Result	QA	Re test	Re test
Samp No	Weld Type	Track Type	Seam	Dist. (ft.)	Mach ID	Oper ID	Date Samp		Inside	Outside		ppi/psi	(P/F)	ID	1	2
1-031	F	D	104-105	15 S	1209	IS	5/10/2008	Lab	129	119	180	ppi	p	-	-	-
								Field	116	116	168	PPI	P	CJ		
1-032	F	D	113-114	11 N	1210	ER	5/10/2008	Lab	126	124	186	ppi	p	-	-	-
								Field	122	122	168	PPI	P	CJ		
1-033	F	D	115-116	20 N	1208	JC	5/10/2008	Lab	119	138	181	ppi	p	-	-	-
								Field	117	117	163	PPI	P	CJ		
1-034	F	D	110-Ext	4 E	1210	ER	5/10/2008	Lab	130	131	165	ppi	p	-	-	-
								Field	117	111	160	PPI	P	CJ		
1-035	F	D	119-120	140 S	1210	ER	5/10/2008	Lab	118	126	182	ppi	p	-	-	-
								Field	130	121	168	PPI	P	CJ		
1-036	F	D	121-122	7 N	1208	JC	5/12/2008	Lab	122	118	175	ppi	p	-	-	-
								Field	106	110	159	PPI	P	CJ		
1-037	F	D	123-126	2 W	1209	IS	5/12/2008	Lab	139	128	157	ppi	p	-	-	-
								Field	110	114	161	PPI	P	CJ		
1-038	F	D	059-115	9 W	1209	IS	5/12/2008	Lab	156	138	186	ppi	p	-	-	-
								Field	110	109	163	PPI	P	CJ		

Comments:

Sub Appendix D-7

Repair Summary Log

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill

Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01

Description: Cell 1

Installer: Environmental Specialties International, Inc.

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
5/8/2008	1-001	001	E	1-004-005		30 S		5	2		513	EB	JEG	5/8/2008	SR	P	VT	JEG
5/8/2008	1-002			1-001-002-018		112 N		2	2		513	EB	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-003		E	1-002-003-018		109 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-004		E	1-003-004-018		114 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	JEG
5/12/2008	1-005		E	1-004-005-018		90 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	JEG
5/12/2008	1-006		E	1-005-006-018		80 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	JEG
5/8/2008	1-008		F	1-006-029		42 N		3	3		513	EB	CJ	5/12/2008	SR	P	VT	JEG
5/8/2008	1-010		E		1-029		3 E	3	3		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-011		E	1-007-018		82 E		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/12/2008	1-012		E	1-007-018-019		86.5 E		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-013		E	1-007-019-020		53.5 W		2	3		513	EB	CJ	5/12/2008	SR	P	VT	JEG
5/8/2008	1-014		E	1-007-020-021		64 W		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-015		E	1-007-008-021		161 E		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-016		E	1-007-008		161 E		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-017		F		1-008		5 E	2	3		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-018		E	1-008-009-010		85.5 E		2	2	2	015	IS	JEG	5/13/2008	SR	P	VT	JEG

Geosyntec
consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/8/2008	1-020		E	1-008-010-022		112 E		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/8/2008	1-021		E	1-010-022-023		64 W		2	3		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/8/2008	1-022		E	1-017-024-025		64 W		3	2		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-023	002	E	1-017-024		8 N		5	2		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-024		E	1-011-024-025		64 W		3	2		513	EB	JEG	5/12/2008	SR	P	VT OK	CJ
5/8/2008	1-025		E	1-014-025-026		64 W		2	3		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-026		E	1-014-026		8 N		2	2		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-027		E	1-014-015-026		35 N		2	2		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-028		E	1-015-026-027		64 W		2	3		513	EB	JEG	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-029		E	1-015-017-027-028		63 W		3	3		513	EB	JEG	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-030	005	F	1-026-027		15 E		5	2		513	EB	JEG	5/8/2008	SR	P	VT	JEG
5/8/2008	1-031		E	1-009-010-012		86 E		2	3	3	015	IS	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-032		E	1-009-012		76 E		2	4	2	015	IS	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-033		E	1-010-011-012		112 E		2	2		513	EB	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-034		E	1-011-013-014		13 E		2	2		513	EB	CJ	5/12/2008	SR	P	VT OK	CJ
5/8/2008	1-035		E	1-011-012-013		200.5 E		2	2		513	EB	CJ	5/12/2008	SR	P	VT	JEG

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/8/2008	1-036		E	1-013-014-015		214 E		2	2		513	EB	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-037		E	1-015-016-017		114 E		2	2		015	IS	CJ	5/12/2008	SR	P	VT	JEG
5/8/2008	1-038		E	1-017-030		90 E		2	3		015	IS	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-039		E	1-016-030		110 E		2	2		015	IS	CJ	5/13/2008	SR	P	VT	JEG
5/8/2008	1-040		E	1-017-030-031		48 W		2	2		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-041	006	E	1-017-031		12 E		2	2		015	IS	CJ	5/12/2008	SR	P	VT OK	CJ
5/8/2008	1-042		E	1-030-031-032		67 W		3	3		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-043		F	1-031-032		83 W		3	2		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-044		E	1-032-033-034		252 E		3	2		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-045		E	1-033-036-037		73 E		3	2		513	EB	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-046		E	1-034-036		88 E		3	2		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/12/2008	1-047	007	F	1-034-036		39 E		3	2		015	IS	CJ	5/8/2008	SR	P	VT OK	CJ
5/8/2008	1-048		E	1-034-035-036		92.5 E		3	3		015	IS	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-049		E	035-036		112 E		2	2		015	IS	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-050		E	1-035-036-038		115 W		2	2		015	IS	CJ	5/8/2008	SR	P	VT	CJ
5/8/2008	1-051		E	1-036-037-039		230 E		2	2		513	EB	CJ	5/8/2008	SR	P	VT	CJ

Geosyntec
consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-052		E	1-039-04-042		24 W		2	3		513	EB	CJ	5/8/2008	SR	P	VT	CJ
5/8/2008	1-053		E	1-038-039-041		145 W		6	2		015	EB	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-054		E	1-038-040-041		227 E		3	3		015	IS	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-055	008	E	1-038-040		145 E		3	3		015	IS	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-056	009	E	1-040-043		299 W		3	2		015	IS	CJ	5/8/2008	SR	P	VT	JEG
5/8/2008	1-057		E	1-041-044		105 W		8	3		015	IS	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-058		E	1-041-043-044		148 W		2	2		015	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/8/2008	1-059		E	1-041-042		100 W		3	2		015	IS	CJ	5/13/2008	CJ	P	VT	CJ
5/8/2008	1-060		E	1-041-042-043		43 W		2	2		513	EB	CJ	5/8/2008	SR	P	VT	CJ
5/8/2008	1-061		E	1-044-045-051		413 W		4	3		513	EB	CJ	5/8/2008	SR	P	VT	CJ
5/8/2008	1-062		E	1-043-044		265 E		2	2		015	IS	CJ	5/8/2008	CJ	P	VT	CJ
5/8/2008	1-063		E		1-045		8 S	2	2		015	IS	CJ	5/13/2008	SR	P	VT	CJ
5/8/2008	1-064	010	E	1-045-046		94 E		6	3		015	IS	CJ	5/13/2008	SR	P	VT	CJ
5/8/2008	1-065		E	1-045-046-051-052		413 E		2	2		513	EB	CJ	5/8/2008	SR	P	VT	CJ
5/8/2008	1-066	015	E	1-051-052		29 E		5	2		513	EB	CJ	5/8/2008	SR	P	VT	CJ
5/9/2008	1-067		E	1-046-047-052-053		58 W		2	2		513	EB	JEG	5/8/2008	SR	P	VT	CJ

Geosyntec
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Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/9/2008	1-068	011	E	1-046-047		130 N		2	5		015	IS	JEG	5/13/2008	SR	P	VT	CJ
5/9/2008	1-069	012	E	1-047-048		166 N		5	2		015	IS	JEG	5/13/2008	SR	P	VT	CJ
5/9/2008	1-070		E	1-047-048-053-054		414 E		2	2		513	EB	JEG	5/8/2008	SR	P	VT	CJ
5/9/2008	1-071		E	1-048-049-054-055		90 W		2	3		513	EB	JEG	5/8/2008	SR	P	VT	CJ
5/9/2008	1-072	013	E	1-048-048		370 N		5	2		015	IS	JEG	5/8/2008	SR	P	VT	CJ
5/12/2008	1-073		E	1-049-050		164 W		3	2		015	IS	JEG	5/8/2008	SR	P	VT	CJ
5/12/2008	1-074	014	E	1-049-050		31 W		5	2		513	EB	JEG	5/8/2008	SR	P	VT	CJ
5/9/2008	1-075		E	1-049-050-055-056		412 E		3	2		513	EB	JEG	5/8/2008	SR	P	VT	CJ
5/12/2008	1-076		E	1-017-028-061		4 N		10	3		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-077		E	1-031-061-062		64 W		3	3		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-078		E	1-031-032-062		35 N		4	3		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-079		E	1-032-062-063		46 N		2	3		015	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-080		E	1-033-063		64 N		3	2		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-081		E	1-033-063-064		68 N		2	2		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-082	019	E	1-062-063		28 N		5	2		513	EB	CJ	5/13/2008	CJ	P	VT	CJ
5/12/2008	1-083		E	1-064-065		94 N		6	3		513	EB	CJ	5/13/2008	SR	P	VT	JEG

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-084		E	1-037-065-066		114 N		2	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/12/2008	1-085		E	1-037-036-066		123 N		5	4		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/12/2008	1-086		E	1-039-066-067		137 N		3	2		513	EB	CJ	5/13/2008	SR	P	VT	JEG
5/12/2008	1-087		E	1-039-042-067		153		2	2		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-088		E	1-042-067-068		159 N		2	2		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-089		E	1-042-044-068-069		182 N		3	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-090		E	1-044-069-070		204 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-091		E	1-044-05-070		212 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-092		E	1-051-070-071		227 N		2	2		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-093	020	E	1-070-071		15 E		5	2		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-094		E	1-051-052-071		243 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-095		E	1-052-071-072		250 N		2	2		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-096		E	1-052-053-072-073		273 N		2	2		13	IS	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-097		E	1-053-073-074		295 N		2	2		13	IS	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-098		E	1-053-054-074		302 N		2	2		13	IS	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-099		E	1-054-074-075		318 N		2	2		13	IS	CJ	5/13/2008	SR	P	VT	CJ

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-100	021	E	1-074-075		8 E		5	2		13	IS	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-101		E	1-070-071		23		2	3		513	EB	JEG	5/12/2008	CJ	P	VT	CJ
5/12/2008	1-102		E	1-054-055-075		329 S		2	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-103		E	1-055-075-076		342 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-104	022	E	1-055-076		356 S		5	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-105		E	1-055-056-076-077		115 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-106		E	1-056-077-125		386 E		3	2		513	EB	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-107		E	1-077-125		20 S		2	4		513	EB	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-108		E	1-056-121-125		35 S		7	4		513	EB	CJ	5/12/2008	SR	P	VT	CJ
5/12/2008	1-109		E	1-121-125-126		70 E		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-110		E	1-121-122-126		70 E		2	4		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-111	036	E	1-121-122		7 N		2	5		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-112		E	1-122-126		117 S		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-113		E	1-122-123-126		117 S		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-114	037	E	1-123-126		120 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-115		E	1-123-124-126		120 S		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG

Geosyntec consultants

Repair Summary Log

WASTE MANAGEMENT

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-116	035	E	1-119-120		140 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-117		E	1-060-119-120		76 E		3	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-118		E	1-056-060-120		83 E		2	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-119		E	1-056-120-121		174 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-120		E	1-060-118-119		191 S		1	1		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-121		E	1-060-118-EXT		40 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-122		E	1-117-118-EXT		191 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-123		E	1-060-117-118		225		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/10/2008	1-124		E	1-057-058-060-117		413 S		2	3		513	EB	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-125		E	1-050-056-057-060		412 E		2	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-126		E	1-058-116-117		320 E		12	5		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-127		E	1-116-117		75 S		2	5		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-128		E	1-116-117		230 S		2	3		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/10/2008	1-129		E	1-115-116		75 S		2	3		513	ER	JEG	5/13/2008	SR	P	VT	JEG
5/10/2008	1-130		E		1-115		4	2	2		513	ER	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-131	033	E	1-115-116		20 N		2	5		513	EB	JEG	5/13/2008	SR	P	VT	JEG

Geosyntec
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Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-132		E	1-058-059-116		311 S		2	1		513	EB	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-133		E	1-059-115-116		328		2	2		513	EB	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-134	038	E	1-059-115		9 E		2	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-135		E	1-059-114-115		205		2	2		513	EB	JEG	5/13/2008	SR	P	VT	CJ
5/10/2008	1-136		E	1-059-111-114		20 S		15	4		513	ER	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-137		E	1-111-113-114		193		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-138	032	E	1-113-114		12N		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/10/2008	1-139		E	1-113-114		70 N		2	3		013	ER	JEG	5/13/2008	SR	P	VT	JEG
5/10/2008	1-140		E		1-113		4	2	2		513	ER	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-141		E	1-078-111-113		202		3	3		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-142	016	E	1-058-059		50 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-143	017	E	1-057-058		250 E		5	2		13	IS	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-144	018	E	1-050-057		300 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-145		E	1-058-059-081		134 S		2	3		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/13/2008	1-146		E	1-058-080-081		125 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-147		E	1-058-079-080		125 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill

Location: Apopka, Florida ProjNo: EQ1465 TaskNo: 01

Description: Cell 1

Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-148		E	1-058-078-079		129 E		1	1		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-149	023	E	1-079-080		57 N		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-150		E	1-081-082-083		196 W		4	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-151		E	1-081-083-084		32 S		2	3		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-152		E	1-081-084-085		67 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-153		E	1-081-085-086		101 S		1	1		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-154		E	1-059-081-086		24 S		1	1		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-155		E	1-059-085-086		26 E		3	15		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-156		E	1-059-084-085		73 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/13/2008	1-157		E	1-059-083-084		125 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-158	024	E	1-083-084		13 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-159		E	1-059-082-083		177 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-160		E		1-059		12 S	3	2		013	IS	CJ	5/13/2008	SR	P	VT	CJ
5/12/2008	1-161		E	1-059-082-087-EXT		128 E		2	5		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-162		E	1-059-108-EXT		134 E		2	1		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-163		E	1-058-108-109		163 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-164		E	1-059-109-110		192 S		2	1		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-165		E	1-059-110-111		214 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/12/2008	1-166		E	1-087-088-108-EXT		198 E		3	4		013	IS	JEG	5/13/2008	SR	P	VT	CJ
5/13/2008	1-167	025	E	1-087-088		100 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-168		E	1-088-089-108		198 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-169		E	1-089-090-108		193 E		2	3		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-170		E	1-090-091-108		195 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-171		E	1-091-108-112		209 E		1	1		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-172	026	E	1-090-091		150 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-173	027	E	1-092-093		175 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-174	028	E	1-096-097		26 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-175		E	1-097-107		2 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-176		E	1-097-106-107		8 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-177		E	1-096-097-105-106		37 E		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-178		E	1-096-104-105		70 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-179		E	1-095-096-104		76 E		4	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-180		E	1-095-103-104		103 E		2	2		013	IS	JEG	5/14/2008	SR	P	VT	JEG
5/12/2008	1-181		E	1-094-095-103		116 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-182		E	1-094-102-103		133 E		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-183	030	E	1-094-102		150 E		2	4		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-184		E	1-093-094-102		154 E		3	4		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-185		E	1-093-101-102		147 S		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-186		E	1-093-100-101		143 S		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-187		E	1-093-100-EXT		195 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-188		E	1-093-112-EXT		195 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-189		E	1-092-093-112		195 E		2	2		513	EB	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-190		E	1-091-092-112		195 E		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-191		E	1-099-108-112		82 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-192		E	1-099-108-109		78 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-193		E	1-098-099-EXT		202 S		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-194		E	1-109-110-EXT		50 N		2	1		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-195	034	E	1-110-EXT		50 N		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG

Geosyntec consultants

Repair Summary Log

Project: Vista Class III Landfill
Location: Apopka, Florida ProjNo: FQ1465 TaskNo: 01
Description: Cell 1
Installer: Environmental Specialties International, Inc.

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
5/12/2008	1-196		E	1-110-111-EXT		40 N		2	2		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/10/2008	1-198		E	1-098-113		76 N		2	4		513	ER	JEG	5/13/2008	SR	P	VT	JEG
5/13/2008	1-199		E		1-098		4	2	2		513	ER	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-204	029	E	1-100-101		25 S		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG
5/12/2008	1-205	031	E	1-104-105		15 N		2	4		013	IS	JEG	5/13/2008	SR	P	VT	JEG

SUB APPENDIX D-8

LABORATORY DESTRUCTIVE TEST RESULTS

May 9, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.
255 W. Keene Road
Apopka, FL 32703

email: shenning@wm.com
cc email: dschauer@geosyntec.com
cc email: cjones@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-66-03
Material(s) Tested:	15 Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

Codes	
AD	Adhesion failure (100% Peel)
BRK	Break in sheeting away from Seam edge
SE	Break in sheeting at edge of seam
AD-BRK	Break in sheeting after some adhesion failure - partial peel
SIP	Separation in the plane of the sheet (leaving the bond intact)
FTB	Film tearing bond (all non "AD" failures)
NON-FTB	100% peel

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Jennifer T. Tenney

Jennifer Tenney
Project Manager
Geosynthetic Services Division
www.GeosyntheticTesting.com

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-1**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	130	120	125	119	119	Peel A: 123	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	115	118	120	119	119	Peel B: 118	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	182	181	182	183	185	Shear: 183	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-2**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	116	118	112	122	107	Peel A: 115	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	137	137	140	139	138	Peel B: 138	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	179	178	178	180	182	Shear: 179	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-3**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	139	133	140	128	129	134	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	147	145	144	146	141	145	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	181	183	181	180	184	182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-4**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	125	128	125	131	124	127	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	138	135	138	138	142	138	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	178	179	176	179	180	178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-5**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	124	111	116	111	108	Peel A 114	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	120	114	116	109	109	Peel B 114	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	178	178	178	177	181	Shear 178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-6**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	133	122	127	132	124	Peel A 128	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	109	129	115	120	133	Peel B 121	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	177	180	176	179	179	Shear 178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-7**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	127	126	125	129	125	Peel A 126	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	110	109	109	110	114	Peel B 110	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	181	183	179	179	180	Shear 180	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-8**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	128	123	126	137	130	Peel A 129	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	121	112	124	123	122	Peel B 120	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	180	180	178	179	172	Shear 178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-9**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	126	118	118	120	117	120	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	113	111	117	117	115	115	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	181	181	180	181	184	181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-10**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	121	138	124	143	125	130	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	100	113	112	116	113	111	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	180	180	180	181	181	180	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

PARAMETER		TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-11**							
Weld:	**Heat Fusion**							
							Peel A	
Side A Peel Strength (ppi)		114	115	136	114	131	122	91 min
Side A Peel Incursion (%)		<10	<10	<10	<10	<10		
Side A Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side A Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B Peel Strength (ppi)		114	129	125	126	126	124	91 min
Side B Peel Incursion (%)		<10	<10	<10	<10	<10		
Side B Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side B Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Shear	
Shear Strength (ppi)		173	176	173	175	178	175	120 min
Shear Elongation @ Break (%)		>50	>50	>50	>50	>50		
Sample ID:	**DS-12**							
Weld:	**Heat Fusion**							
							Peel A	
Side A Peel Strength (ppi)		119	121	126	125	122	123	91 min
Side A Peel Incursion (%)		<10	<10	<10	<10	<10		
Side A Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side A Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B Peel Strength (ppi)		117	119	115	116	117	117	91 min
Side B Peel Incursion (%)		<10	<10	<10	<10	<10		
Side B Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side B Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Shear	
Shear Strength (ppi)		176	177	175	176	179	177	120 min
Shear Elongation @ Break (%)		>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-13**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	116	119	121	130	120	121	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	118	116	120	114	125	119	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	176	174	174	174	176	175	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-14**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	143	146	148	151	147	147	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	122	115	121	118	120	119	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	178	173	175	171	173	174	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-66-03

PARAMETER		TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-15**							
Weld:	**Heat Fusion**							
							Peel A	
Side A Peel Strength (ppi)		123	124	123	121	119	122	91 min
Side A Peel Incursion (%)		<10	<10	<10	<10	<10		
Side A Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side A Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B Peel Strength (ppi)		151	120	128	150	127	135	91 min
Side B Peel Incursion (%)		<10	<10	<10	<10	<10		
Side B Peel Locus of Failure Code		SE	SE	SE	SE	SE		
Side B Peel NSF Failure Code		FTB	FTB	FTB	FTB	FTB		
							Shear	
Shear Strength (ppi)		177	176	176	176	176	176	120 min
Shear Elongation @ Break (%)		>50	>50	>50	>50	>50		

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

May 13, 2008

Mail To:

Ms. Sheree Henninger
Waste Management, Inc.
255 W. Keene Road
Apopka, FL 32703

email: shenning@wm.com
cc email: dschauer@geosyntec.com
cc email: cjones@geosyntec.com

Bill To:

<= Same

Dear Ms. Henninger:

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs. TRI is pleased to submit this final report for laboratory testing.

Project:	**Vista Landfill - Cell 1**
TRI Job Reference Number:	E2310-70-06
Material(s) Tested:	23 Heat Fusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)

Codes	
AD	Adhesion failure (100% Peel)
BRK	Break in sheeting away from Seam edge
SE	Break in sheeting at edge of seam
AD-BRK	Break in sheeting after some adhesion failure - partial peel
SIP	Separation in the plane of the sheet (leaving the bond intact)
FTB	Film tearing bond (all non "AD" failures)
NON-FTB	100% peel

If you have any questions or require any additional information, please call us at 1-800-880-8378.

Sincerely,

Jennifer T. Tenney

Jennifer Tenney
Project Manager
Geosynthetic Services Division
www.GeosyntheticTesting.com

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-16**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	122	126	117	126	129	Peel A: 124	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	118	117	108	117	109	Peel B: 114	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	173	179	175	175	176	Shear: 176	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-17**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	139	131	136	137	137	Peel A: 136	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	143	140	147	145	127	Peel B: 140	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	174	171	173	171	171	Shear: 172	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-18**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	121	116	136	126	132	126	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	123	128	132	124	121	126	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	181	184	180	182	181	182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-19**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	130	136	137	127	125	131	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	139	138	138	148	142	141	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	193	193	192	193	193	193	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-20**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	131	126	123	138	137	131	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	117	118	118	116	121	118	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	178	179	177	178	179	178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-21**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	127	133	127	124	129	128	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	111	119	118	110	109	113	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	178	181	179	180	180	180	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-22**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	126	122	127	136	148	132	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	132	136	158	144	132	140	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	176	172	178	177	173	175	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-23**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	120	115	123	119	128	121	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	117	135	113	120	134	124	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	182	181	179	179	182	181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-24**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	114	124	123	120	118	Peel A 120	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	116	119	119	120	119	Peel B 119	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	181	183	182	182	182	Shear 182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-25**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	112	124	128	124	129	Peel A 123	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	118	113	115	117	116	Peel B 116	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	176	178	177	181	178	Shear 178	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-26**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	122	124	126	125	122	Peel A 124	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	128	120	126	127	124	Peel B 125	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	185	183	180	182	181	Shear 182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-27**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	126	118	117	117	121	Peel A 120	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	108	110	110	106	105	Peel B 108	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	174	174	176	175	174	Shear 175	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
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TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-28**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	145	140	136	135	129	137	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	123	123	120	128	119	123	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	183	181	180	184	181	182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-29**							
Weld:	**Heat Fusion**							
							Peel A	
Side A	Peel Strength (ppi)	128	133	126	139	128	131	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Peel B	
Side B	Peel Strength (ppi)	114	115	122	113	117	116	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
							Shear	
	Shear Strength (ppi)	177	174	173	175	173	174	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-30**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	148	149	145	141	149	Peel A: 146	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	130	133	130	127	131	Peel B: 130	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	175	177	176	177	177	Shear: 176	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-31**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	126	131	125	134	129	Peel A: 129	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	123	120	112	121	118	Peel B: 119	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	183	180	176	180	180	Shear: 180	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-32**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	115	136	128	124	126	Peel A: 126	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	125	125	124	126	121	Peel B: 124	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	187	190	183	184	185	Shear: 186	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-33**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	119	116	120	118	120	Peel A: 119	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	142	140	140	144	122	Peel B: 138	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	181	181	180	183	178	Shear: 181	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
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Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-34**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	122	149	124	119	135	Peel A 130	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	120	122	144	126	144	Peel B 131	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	162	163	168	169	164	Shear 165	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-35**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	121	129	112	113	114	Peel A 118	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	127	127	122	126	130	Peel B 126	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	179	182	180	181	186	Shear 182	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-36**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	121	115	121	133	121	Peel A 122	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	115	122	118	118	119	Peel B 118	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	175	175	177	175	175	Shear 175	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		
Sample ID:	**DS-37**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	139	127	142	145	144	Peel A 139	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	132	135	123	126	126	Peel B 128	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	157	155	155	159	157	Shear 157	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

GeosyntheticTesting.com
9063 Bee Caves Road / Austin, TX 78733 / 512 263 2101 / fax: 512 263 2558

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill - Cell 1

Material: 60 mil HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54)
TRI Job Reference:: E2310-70-06

	PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN	PROJ. SPEC.
Sample ID:	**DS-38**							
Weld:	**Heat Fusion**							
Side A	Peel Strength (ppi)	154	158	133	169	167	Peel A: 156	91 min
Side A	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side A	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side A	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
Side B	Peel Strength (ppi)	150	118	137	152	134	Peel B: 138	91 min
Side B	Peel Incursion (%)	<10	<10	<10	<10	<10		
Side B	Peel Locus of Failure Code	SE	SE	SE	SE	SE		
Side B	Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB		
	Shear Strength (ppi)	192	185	182	185	184	Shear: 186	120 min
	Shear Elongation @ Break (%)	>50	>50	>50	>50	>50		

GeosyntheticTesting.com
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Sub Appendix D-9

Daily Field Reports

Geosyntec consultants

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 6, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

07:00 J. Greaves arrived on site to continue Cell 1 construction CQA monitoring.

WEATHER:

Geosyntec observed sunny to partly cloudy skies with a temperature high of 85° F.

SITE CONDITIONS:

The site conditions were dry with some dust.

WORK AREAS:

09:30 ESI (Liner Installer) started liner deployment activities advancing from the south perimeter berm north along the cell floor and west intercell berm. The crew's equipment consisted of a 4 wheel ATV, 3 fusion welding machines, air testing equipment, and a tensiometer.

PLACEMENT ACTIVITIES:

Geosyntec observed installation and welding of 60 mil thick geomembrane panels 1 thru 25. Adjoining 60 mil thick geomembrane panels were seamed with double track wedge machines.

TESTING ACTIVITIES:

J. Greaves observed Trial Weld Testing in the am and pm hours. Destructive sample (DS-1) was marked, field tested and sent to the off-site laboratory for additional destructive testing.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

1. Geosyntec (Juan Quiroz and Joe Greaves) and Waste Management Inc. (Sheree Grant) discussed additional grading deficiencies along the toe of the north slope and crest of the west perimeter berm.
2. A deficiency in positive drainage of the cell floor has been noticed, and the surveyors are taking another round of points. Geosyntec is reviewing the current as-builts and suggestions are being made.
3. The sump is undergoing final grading

COMMENTS and/or CLARIFICATION:

10:30 County officials and CDC engineers have arrived for an on site visit.

17:15 J. Greaves left the site for the day.

COPY TO: File CQA Representative: Joseph Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 7, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

07:00 J. Greaves arrived on site to continue liner CQA monitoring.
10:15 C. Jones arrived on site to over see the liner CQA monitoring.

WEATHER:

Geosyntec observed sunny skies with a temperature high of 85° F.

SITE CONDITIONS:

The site conditions were dry with some dust.

WORK AREAS:

07:30 ESI (Liner Installer) continued liner deployment activities advancing south to north along the cell floor. The crew's equipment consisted of a 4 wheel ATV, 3 fusion welding machines, air testing equipment, and a tensiometer.

PLACEMENT ACTIVITIES:

Geosyntec observed installation and welding of 60 mil thick geomembrane panels 26 thru 50. Adjoining 60 mil thick geomembrane panels were seamed with double track wedge machines.

TESTING ACTIVITIES:

J. Greaves observed Trial Weld Testing in the am and pm hours. Destructive samples (DS-2 thru DS-5) were marked, field tested and sent to the off-site laboratory for additional destructive testing.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

1. Geosyntec (Juan Quiroz and Clarence Jones) and Waste Management Inc. (Sheree Grant) discussed additional grading deficiencies along the toe of the north slope and crest of the west perimeter berm.
2. A deficiency in positive drainage of the cell floor has been noticed, and the surveyors are taking another round of points. Geosyntec is reviewing the current as-builts and suggestions are being made.
3. Geosyntec was alerted by WMI (Sheree Grant) that the previous 24 hour test failed the transmissity test and additional sampling was needed to run another transmissity test.

COMMENTS and/or CLARIFICATION:

15:30 J. Greaves left the site for the day to drive back to Jacksonville. C. Jones is left on site to continue the CQA process.

COPY TO: File CQA Representative: Joseph Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 12, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

07:00 C. Jones arrived on site to continue CQA monitoring.

WEATHER:

Geosyntec observed sunny skies with a temperature high of 90° F.

SITE CONDITIONS:

The site conditions were dry.

WORK AREAS:

07:30 ESI (Liner Installer) begin geocomposite deployment activities starting at the south end of Cell 1 and advancing north. The crew's equipment consisted of a 4 wheel ATV, fusion welding machines, extrusion welding machines, 5 psi vacuum box, tensiometer, and a sewing machine w/ UV grade thread.

PLACEMENT ACTIVITIES:

ESI worked on welding repairs and geocomposite placement. Approximately 35,100 ft^2 of composite was deployed today.

TESTING ACTIVITIES:

C. Jones observed Trial Weld Testing in the am and pm hours. Two additional Destructive samples (DS-36 thru DS-38) were field tested and shipped with previously field tested samples (DS-16 thru DS-35) to the off-site laboratory for testing.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

Initial testing for Transmissity failed to meet site specification requirements for previously ordered geocomposite. Geosyntec and WMI came to an agreement to use a different geocomposite with thicker netting. In-house conformance sampling and testing was arranged with TRI for the new material.

COMMENTS and/or CLARIFICATION:

Two truck loads of geocomposite were delivered to the site yesterday (Sunday 5-11-08).

Sheree Grant (WMI) was informed that no conformance test had been received prior to geocomposite deployment.

16:30 Geosyntec (Clarence Jones) left the site for the day.

COPY TO: File CQA Representative: Clarence Jones Clarence Jones

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 13, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

07:00 C. Jones arrived on site to continue liner system CQA monitoring.

WEATHER:
Geosyntec observed sunny skies with a temperature high near 90° F.

SITE CONDITIONS:
The site conditions were dry.

WORK AREAS:
07:30 ESI (Liner Installer) continued geocomposite deployment activities working from south to north of Cell 1. The crew's equipment consisted of a 4 wheel ATV, extrusion welding machines, 5 psi vacuum box, tensiometer, and a sewing machine w/ UV grade thread.

PLACEMENT ACTIVITIES:
ESI worked on geocomposite placement and vacuum testing of repairs. Approximately 86,400 ft^2 of composite was deployed today.

TESTING ACTIVITIES:
C. Jones observed passing laboratory results for the last round of destructive samples (DS-16 thru DS-38).

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:
Two additional truck loads of geocomposite were delivered to the site.

COMMENTS and/or CLARIFICATION:

19:00 Geosyntec (Clarence Jones) left the site for the day.

COPY TO: File CQA Representative: Clarence Jones Clarence Jones

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 22, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

0700: J. Greaves arrives on site to continue CQA monitoring

WEATHER:

Geosyntec observed cloudy/overcast skies with some rain in the AM hours. Rain clears after noon with a temperature high of 90° F.

SITE CONDITIONS:

Humid and wet after the rain in the AM.

WORK AREAS:

07:15: Total Site Development (TSD) has continued placement of the protective cover layer overtop the liner/geocomposite on the floor of Cell 1. The soils being hauled are being hauled from the stockpile to the West. The stockpile is comprised of soils excavated from the development of Cell 1.The crew's equipment consisted of 1 John Deere 750 LGP bull dozer, two Terex TA27 articulating dump-trucks, and a John Deere excavator.

PLACEMENT ACTIVITIES:

Geosyntec observed the placement of the protective layer soils on top of the liner system. All dump-truck traffic was kept on a minimum of a 3 foot lift as required by the specification. All other traffic (LGP bull dozer traffic) was kept on a minimum of a 2 foot lift. Soils were placed in a manner that keeps liner wrinkles to a minimum (i.e. soils are pushed to the leading edge of the placement then moved forward with an upward motion as to create a "cascading" effect. This ensures that the soils are placed atop the liner and not shoved into the liner). The soils were loaded into the dump-trucks via the excavator then carried to the cell floor where they were dumped, all the while taking care to ensure that the dump-trucks did not venture off the 3 foot lift. After dumping, the soils were then spread out using the method described above.

TESTING ACTIVITIES:

The required 2 foot lifts were noted and recorded. Pictures are available using the data base.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

Sediment in the sump area of cell number 1 may be an issue in the future as it will be after every rain event. Care will be taken when removal of any and all sediment/excess water when the time comes to place the number 4 stone in the sump area.

COMMENTS and/or CLARIFICATION:

17:00 Geosyntec (Joe Greaves) left the site for the day.

COPY TO: File CQA Representative: Joe Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 23, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

0700: J. Greaves arrives on site to continue CQA monitoring

WEATHER:

Geosyntec observed partly cloudy to overcast skies with some rain in the afternoon hours. Temperature high of ~93° F.

SITE CONDITIONS:

Some moisture on the liner system is keeping the dust to a minimum.

WORK AREAS:

07:15: Total Site Development (TSD) has continued placement of the protective cover layer. The soils are being hauled from the protective cover stockpile to the West. ESI placed 57 stone over top of the leachate collection pipe on the floor of cell 1. The crew's equipment consisted of 1 John Deere 750 LGP bull dozer, two Terex TA27 articulating dump-trucks, a John Deere excavator, and a Bobcat posi-track.

PLACEMENT ACTIVITIES:

Geosyntec observed the placement of the protective layer soils on top of the liner system. All dump-truck traffic was kept on a minimum of a 3 foot lift as required by the specifications. All other traffic (LGP bull dozer traffic) was kept on a minimum of a 2 foot lift. Soils were placed in a manner that keeps liner wrinkles to a minimum (i.e. soils are pushed to the leading edge of the placement then moved forward with an upward motion as to create a "cascading" effect. This ensures that the soils are placed atop the liner and not shoved into the liner). The soils were loaded into the dump-trucks via the excavator then carried to the cell floor where they were dumped, all the while taking care to ensure that the dump-trucks did not venture off the 3 foot lift. After dumping, the soils were then spread out using the method described above.

The placement of 57 stone has started. The stone is being hauled from a stockpile located near north-west of the soil stockpile to the cell floor via the haul road created for the protective layer placement process with the Bobcat posi-track.

TESTING ACTIVITIES:

The required 2 foot lifts as well as the design of the 57 stone filter were noted and recorded. Pictures are available using the data base.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

Sediment in the sump area of cell 1 may be an issue after the rain of the previous day. Care will be taken when removal of any and all sediment/excess water

COMMENTS and/or CLARIFICATION:

17:00 Geosyntec (Joe Greaves) left the site for the day.

COPY TO: File CQA Representative: Joe Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 27, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

0830: J. Greaves arrives on site to continue CQA monitoring

WEATHER:

Geosyntec observed mostly sunny skies. Temperature high of ~91° F.

SITE CONDITIONS:

Some moisture on the liner system in the morning.

WORK AREAS:

07:15: Total Site Development (TSD) has continued placement of the protective cover layer. The soils are being hauled from the protective cover stockpile to the West. The crew's equipment consisted of 1 John Deere 750 LGP bull dozer, two Terex TA27 articulating dump-trucks, a John Deere excavator.

PLACEMENT ACTIVITIES:

Geosyntec observed the placement of the protective layer soils on top of the liner system. All dump-truck traffic was kept on a minimum of a 3 foot lift as required by the specifications. All other traffic (LGP bull dozer traffic) was kept on a minimum of a 2 foot lift. Soils were placed in a manner that keeps liner wrinkles to a minimum (i.e. soils are pushed to the leading edge of the placement then moved forward with an upward motion as to create a "cascading" effect. This ensures that the soils are placed atop the liner and not shoved into the liner). The soils were loaded into the dump-trucks via the excavator then carried to the cell floor where they were dumped, all the while taking care to ensure that the dump-trucks did not venture off the 3 foot lift. After dumping, the soils were then spread out using the method described above.

The placement of 57 stone has finished.

TESTING ACTIVITIES:

The required 2 foot lifts were noted and recorded. Pictures are available using the data base. The placement of the 57 stone has finished. All stone is wrapped in geo-textile and sewn as described in the specs.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

Sediment in the sump area of cell 1 may be an issue after the rain over the weekend. Care will be taken when removal of any and all sediment/excess water.

COMMENTS and/or CLARIFICATION:

17:00 Geosyntec (Joe Greaves) left the site for the day.

COPY TO: File CQA Representative: Joe Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	May 28, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

0700: J. Greaves arrives on site to continue CQA monitoring

WEATHER:

Geosyntec observed mostly sunny skies. Temperature high of ~93° F.

SITE CONDITIONS:

Some moisture on the liner system in the morning.

WORK AREAS:

07:15: Total Site Development (TSD) has continued placement of the protective cover layer. The soils are being hauled from the protective cover stockpile to the West. The crew's equipment consisted of 1 John Deere 750 LGP bull dozer, two Terex TA27 articulating dump-trucks, a John Deere excavator, and a Bobcat rubber treaded posi-trac.

PLACEMENT ACTIVITIES:

Geosyntec observed the placement of the protective layer soils on top of the liner system. All dump-truck traffic was kept on a minimum of a 3 foot lift as required by the specifications. All other traffic (LGP bull dozer traffic) was kept on a minimum of a 2 foot lift. Soils were placed in a manner that keeps liner wrinkles to a minimum (i.e. soils are pushed to the leading edge of the placement then moved forward with an upward motion as to create a "cascading" effect. This ensures that the soils are placed atop the liner and not shoved into the liner). The soils were loaded into the dump-trucks via the excavator then carried to the cell floor where they were dumped, all the while taking care to ensure that the dump-trucks did not venture off the 3 foot lift. After dumping, the soils were then spread out using the method described above.

The placement of number 4 stone in the sump area has started. All number 4 stone is confined to the specified area.

TESTING ACTIVITIES:

The required 2 foot lifts were noted and recorded. Pictures are available using the data base. The placement of the 4 stone has started. Care is taken in the placement of the stone as to not disturb the piece of 1inch HDPE solid stock located in the floor of the sump (i.e. number 4 stone is placed on both sides of the perforated leachate sump pipe and atop the 1inch HDPE solid stock).

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

Some protective cover sand has been pushed into the open end of the 57 stone at it northern terminus. The stone had all sand removed with shovels and was brought back to grade.

COMMENTS and/or CLARIFICATION:

Hydrostatic testing of the force-main pipe will start tomorrow (5-29-08).

17:00 Geosyntec (Joe Greaves) left the site for the day.

COPY TO: File CQA Representative: Joe Greaves

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WASTE MANAGEMENT

DAILY FIELD REPORT

PROJECT:	Vista Class III Landfill		
LOCATION:	Apopka, Florida		
PROJECT NO:	FQ1465	TASK NO:	02
DATE:	June 2, 2008		
CONTRACTORS:	Environmental Specialist International (ESI)		

0830: J. Greaves arrives on site to continue CQA monitoring

WEATHER:

Geosyntec observed mostly sunny skies. Temperature high of ~93° F.

SITE CONDITIONS:

Some moisture on the liner system in the morning.

WORK AREAS:

Total Site Development (TSD) has continued placement of the protective cover layer. The soils are being hauled from the protective cover stockpile to the West. The crew's equipment consisted of 1 John Deere 750 LGP bull dozer, two Terex TA27 articulating dump-trucks (one of which is broke down), a John Deere excavator (broke down), and a front end loader.

PLACEMENT ACTIVITIES:

Geosyntec observed the placement of the protective layer soils on top of the liner system. All dump-truck traffic was kept on a minimum of a 3 foot lift as required by the specifications. All other traffic (LGP bull dozer traffic) was kept on a minimum of a 2 foot lift. Soils were placed in a manner that keeps liner wrinkles to a minimum (i.e. soils are pushed to the leading edge of the placement then moved forward with an upward motion as to create a "cascading" effect. This ensures that the soils are placed atop the liner and not shoved into the liner). The soils were loaded into the dump trucks via the excavator (when operational) and front end loader, then carried to the cell floor where they were dumped; all the while taking care to ensure that the dump-trucks did not venture off the 3 foot lift. After dumping, the soils were then spread out using the method described above. The placement process is making slow progress due to the constant 'downing' of equipment. At this point, when the excavator and one Terex truck is broken down, there are only ~10 truck loads being dumped per hour.

TESTING ACTIVITIES:

The required 2 foot lifts were noted and recorded. Pictures are available using the data base.

DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

The placement process is very inefficient due to the constant 'downing' of the TSD equipment. This has been brought to the attention of Sheree Grant of Waste Management (WM).

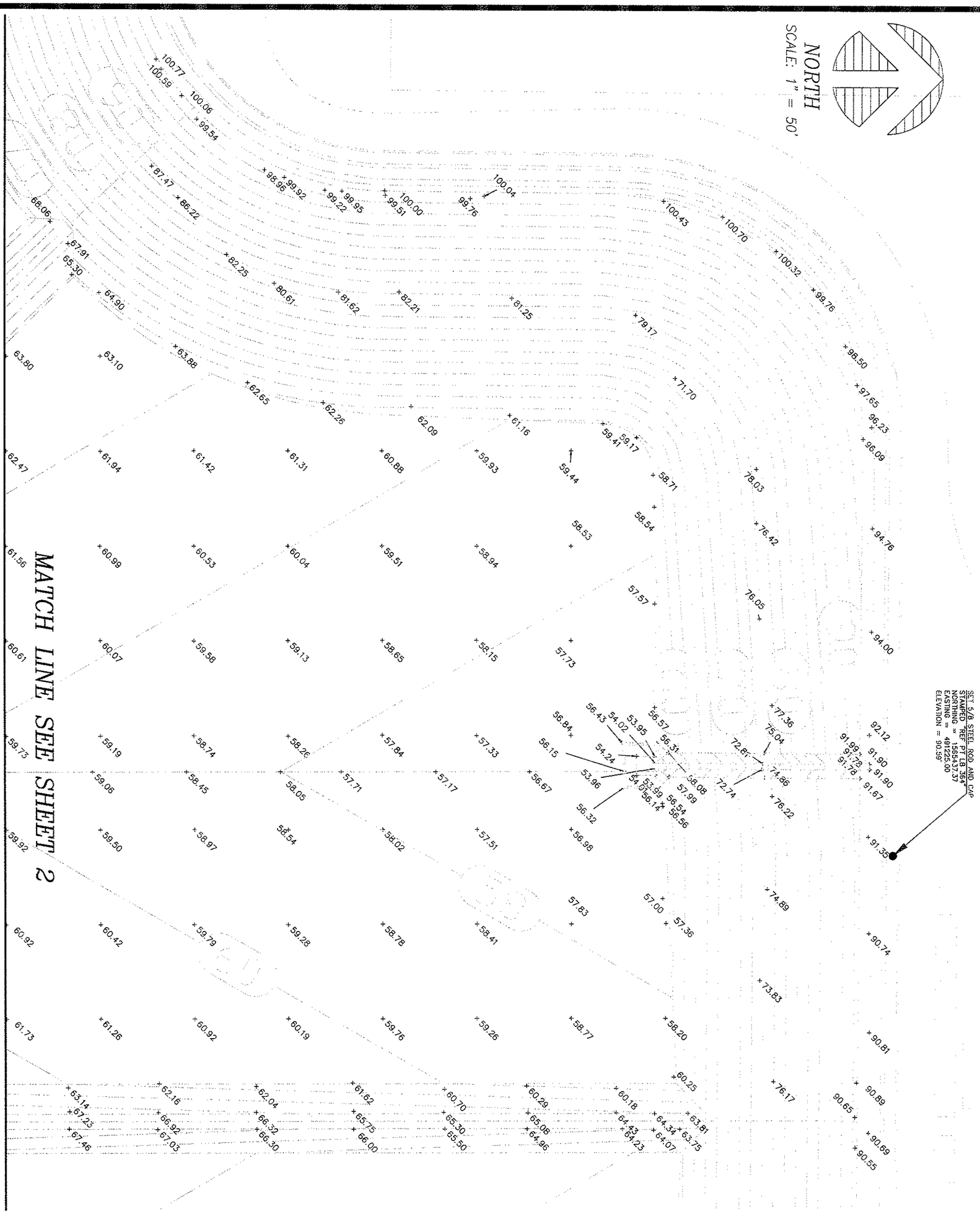
COMMENTS and/or CLARIFICATION:

17:00 Geosyntec (Joe Greaves) left the site for the day.

COPY TO: File CQA Representative: Joe Greaves

APPENDIX E

AS-BUILT SURVEY – TOP OF SUBBASE
GEOMEMBRANE PANEL LAYOUT DRAWING
AS-BUILT SURVEY – TOP OF PROTECTIVE SOIL



SURVEYOR'S NOTES:

1.) North and the Coordinates shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 83, 1990 adjustment, and is based on control provided by client.

2.) Elevations are to National Geodetic Vertical Datum of 1929, and is based on control provided by client.

3.) Underground improvements, encroachments, foundations and/or utilities, if existing, were not located as a part of this survey.

4.) Shaded background shown hereon was provided by the client and is from Auto Cadd drawing file number FL1229.02X101.

GREGORY A. PRATHER P.S.M. FLORIDA REGISTRATION No. 5135
PICKETT & ASSOCIATES, INC., FLORIDA REGISTRATION No. LB 364

09/08/08
DATE OF FIELD SURVEY

AS-BUILT SURVEY

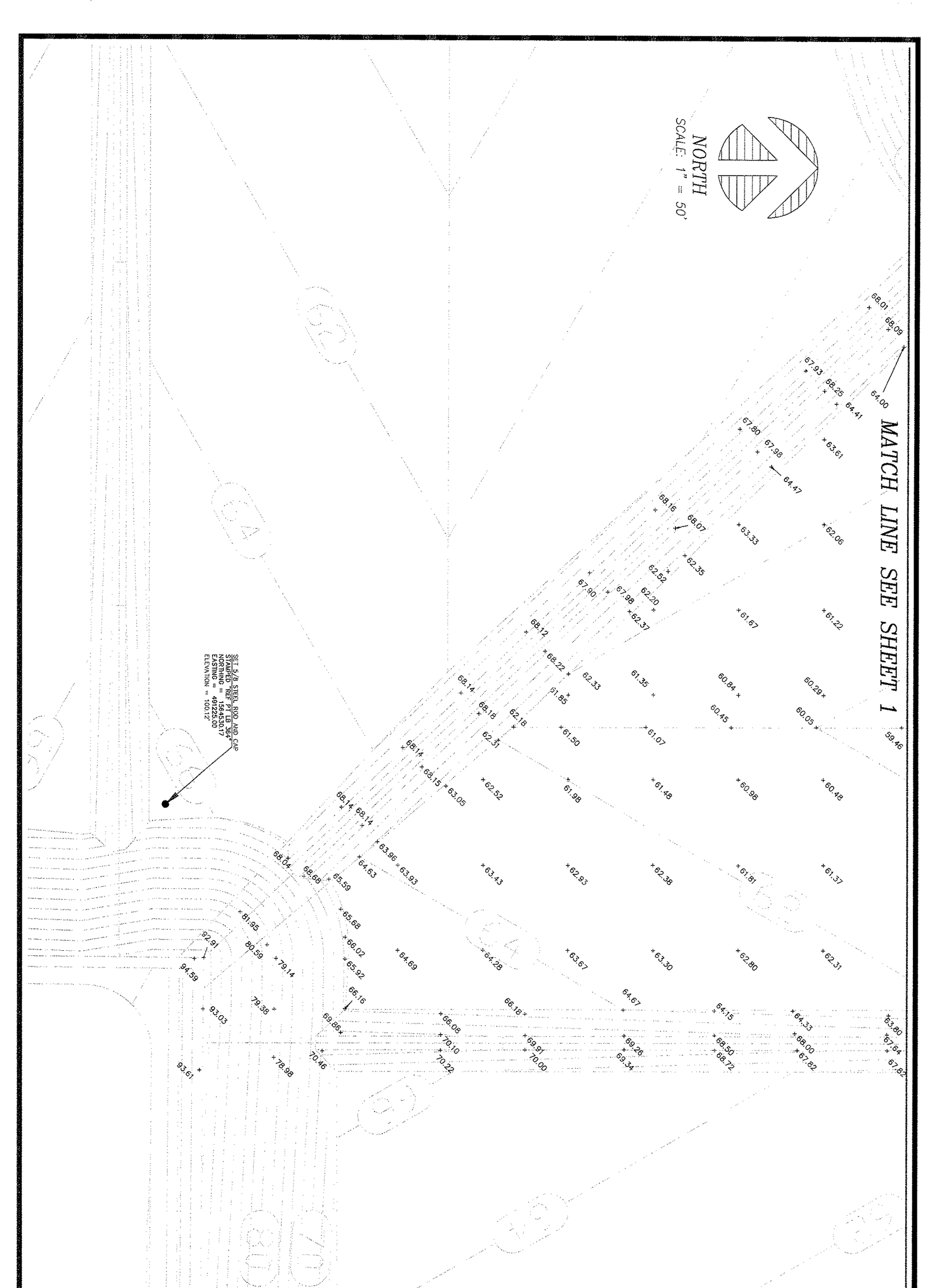
LOCATED IN SECTION 28
TOWNSHIP 28 SOUTH, RANGE 21 EAST,
PREPARED FOR: WASTE MANAGEMENT

PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC. LICENSED BUSINESS No. LB364

475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863)-533-9095
FAX: (863)-534-1484

Sheet No.	Project No.:	Horiz. Scale:	Drawing Name:
1 of 2	15251-1	1" = 50'	15251-ASB-CELL1
Drawn by: WCMF	Drawing No.: SD 2758	Field Book , 616	

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.



AS-BUILT SURVEY

LOCATED IN SECTION 28
TOWNSHIP 28 SOUTH, RANGE 21 EAST,
PREPARED FOR: WASTE MANAGEMENT

PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC. LICENSED BUSINESS No. LB3364

475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863)-533-9095
FAX: (863)-534-1464

Sheet No.	Project No.:	Horiz. Scale:	Drawing Name:
2 of 2	15251-1	1" = 50'	15251-ASB-CELL1
Drawn by: WCMF	Drawing No.: SD 2758	Field Book , 616	

SEE PAGE 1 OF 2 FOR SURVEYOR's SIGNATURE, SEAL, NOTES, AND LEGEND.

REV	DATE	DESCRIPTION	DRN	

Geosyntec consultants
14055 RIVEREDGE DRIVE, SUITE 300
TAMPA, FLORIDA 33637 USA
PH: 813.558.0990 - FX: 813-558.9726
AUTHORIZATION NUMBER 4321

WASTE MANAGEMENT
255 WEST KEENE ROAD
APOPKA, FLORIDA 32703
PH: 407.886.2920

TITLE:

LINER PANEL LAYOUT

PROJECT:

CELL 1 CONSTRUCTION DRAWINGS

SITE:

VISTA CLASS III LANDFILL
APOPKA, FLORIDA

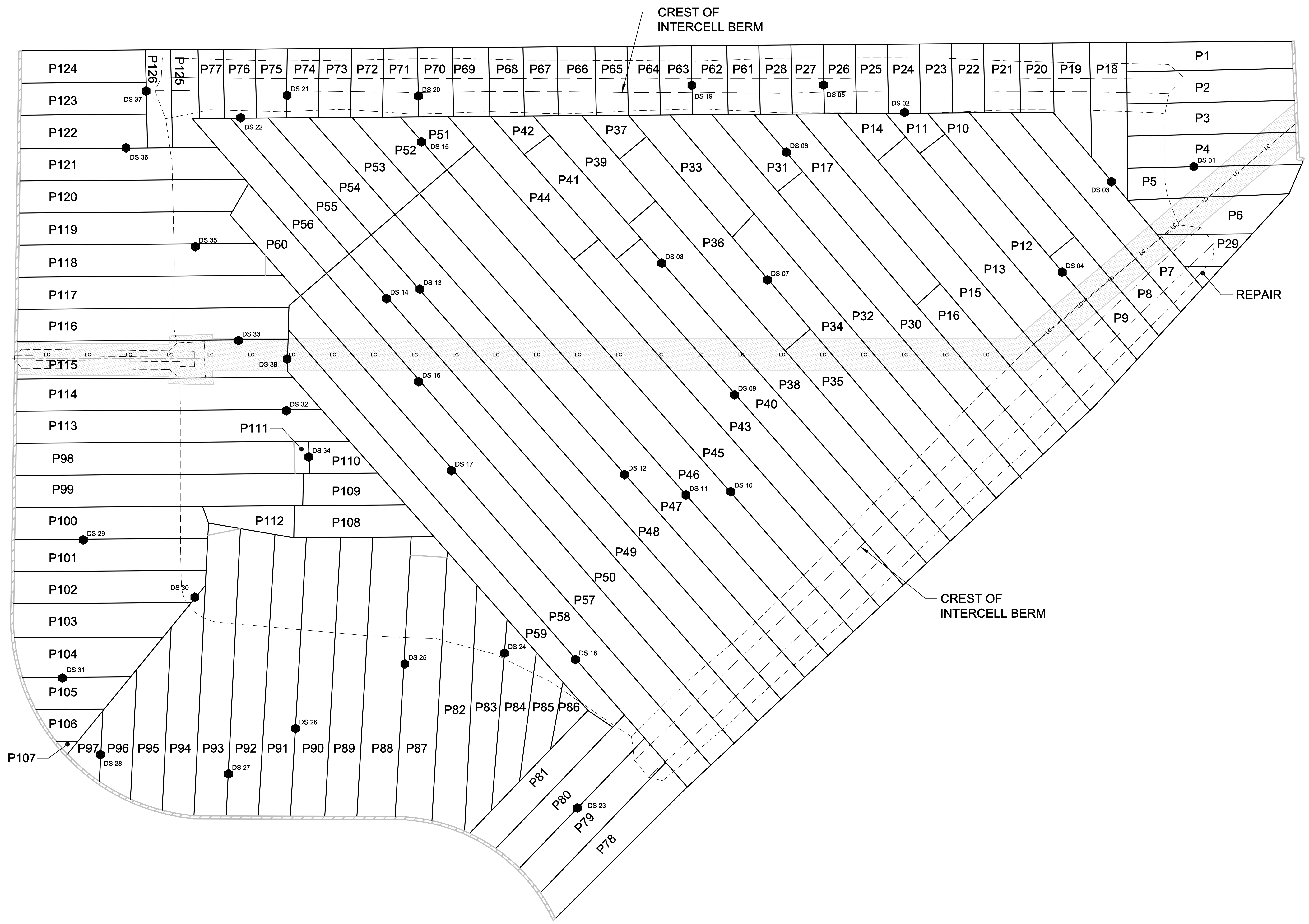
Juan D. Quiroz
SIGNATURE

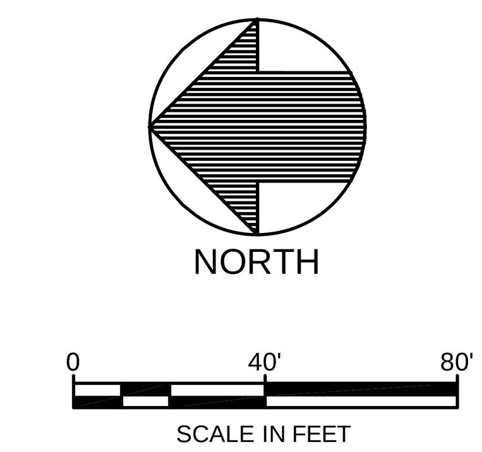
11 Sept 2008
DATE

JUAN D. QUIROZ - LICENSE NO. 65275

DESIGN BY:	—	DATE:	23 JULY 2
DRAWN BY:	CMV	PROJECT NO.:	FQ146
CHECKED BY:	CJ	FILE:	FQ1465.04
REVIEWED BY:	CJ	DRAWING NO.:	
APPROVED BY:	JDQ	1 OF 1	

7 8





LEGEND

P10	GEOMEMBRANE PANEL NUMBER
DS 05	DESTRUCTIVE SAMPLE (PASS)
	FUSION WELDED SEAM
	EXTRUDED SEAM
	ANCHOR TRENCH
	GEOSYNTHETIC CLAY LAYER (GCL)
	CREST OF SLOPE
	TOE OF SLOPE
LC	LEACHATE COLLECTION PIPE
	LEACHATE RISER PIPE

REV	DATE	DESCRIPTION	DRN	APP

Geosyntec consultants
14055 RIVEREDGE DRIVE, SUITE 300
TAMPA, FLORIDA 33637 USA
PH: 813.558.0990 - FX: 813.558.9726
AUTHORIZATION NUMBER 4321

WM WASTE MANAGEMENT
255 WEST KEENE ROAD
APOPKA, FLORIDA 32703
PH: 407.886.2920

TITLE: LINER PANEL LAYOUT AS-BUILT

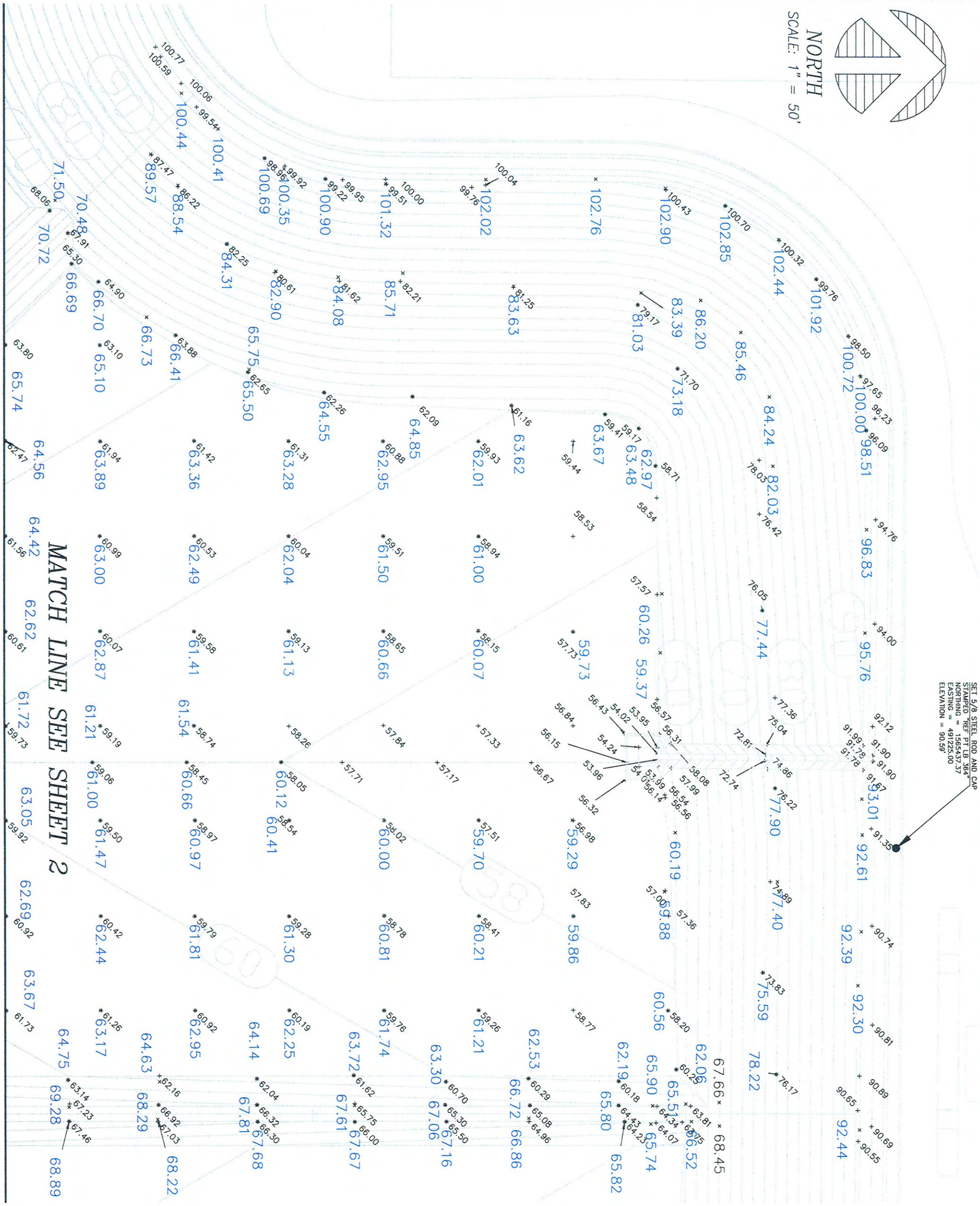
PROJECT: CELL 1 CONSTRUCTION DRAWINGS

SITE: VISTA CLASS III LANDFILL
APOPKA, FLORIDA

DESIGN BY:	--	DATE:	23 JULY 2008
DRAWN BY:	CMV	PROJECT NO.:	FQ1465.04
CHECKED BY:	CJ	FILE:	FQ1465.04P01
REVIEWED BY:	CJ	DRAWING NO.:	
APPROVED BY:	JDQ	1 OF 1	

AS-BUILT DRAWING

P:\FQ1465\FQ1465.04\FQ1465.04P01.DWG (24 July 2008 - 1:33 PM) CVideen



SURVEYOR'S NOTES:

1.) North and the Coordinates shown hereon are referenced to the East Zone of the Florida State Plane Coordinate System, NAD 83, 1990 adjustment, and is based on control provided by client.

2.) Elevations are to National Geodetic Vertical Datum of 1929, and is based on control provided by client.

3.) Underground improvements, encroachments, foundations and/or utilities, if existing, were not located as a part of this survey.

4.) Shaded background shown hereon was provided by the client and is from Auto Cadd drawing file number FL1229.02X101.

5.) The elevations shown in blue and larger font size reflect the two foot cover of sand.

GREGORY A. PRATHER P.S.M. FLORIDA REGISTRATION No. 5135
PICKETT & ASSOCIATES, INC., FLORIDA REGISTRATION No. LB 364

09/08/08
DATE OF FIELD SURVEY

AS-BUILT SURVEY

LOCATED IN SECTION 28
TOWNSHIP 28 SOUTH, RANGE 21 EAST,
PREPARED FOR: WASTE MANAGEMENT

PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC. LICENSED BUSINESS No. LB364
475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863)-533-9095
FAX: (863)-534-1464

Sheet No.	Project No.:	Horiz. Scale:	Drawing Name:
1 of 2	15251-1	1" = 50'	15251-ASB-CELL1
Drawn by: WCMF	Drawing No.: SD 2759	Field Book , 616	

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

MATCH LINE SEE SHEET 1

NORTH
SCALE: 1" = 50'

SET 5/8 STEEL ROD AND CAP
STAMPED "REF PT LB 364"
NORTHING = 1564530.17
EASTING = 491225.00
ELEVATION = 100.12'

SEE PAGE 1 OF 2 FOR SURVEYOR's SIGNATURE, SEAL, NOTES, AND LEGEND.

PICKETT
SURVEYING & PHOTOGRAMMETRY
PICKETT & ASSOCIATES, INC. LICENSED BUSINESS No. LB364
475 SOUTH FIRST AVENUE
BARTOW, FLORIDA 33830
PHONE: (863)533-9085
FAX: (863)534-1464

Sheet No.	Project No.:	Horiz. Scale:	Drawing Name:
2 of 2	15251-1	1" = 50'	15251-ASB-CELL1
Drawn by: WCMF	Drawing No.: SD 2759	Field Book , 616	

AS-BUILT SURVEY

LOCATED IN SECTION 28
TOWNSHIP 28 SOUTH, RANGE 21 EAST,
PREPARED FOR: WASTE MANAGEMENT

APPENDIX F

HYDROSTATIC TESTING RESULTS

SYSTEM HYDROTEST FORM

CUSTOMER : Waste Management - Vista Landfill
DATE :
DESCRIPTION : HDPE Forcemain Piping Dual Contained
JOB NO. : 08-02-1032
TEST NO. : PREPARED BY:
Convert F to C = (degree in F - 32) x 0.556
Ambient Temp in C:
Example: (65 degrees F - 32) x 0.556 = 18 degrees C

TASK COMPLETE YES / NO	PRE-HYDRO CHECKLIST	EXCEPTIONS
YES	VALVE FLOW DIRECTION CORRECT	
YES	REMOVE IN-LINE VALVES IF TEST PRESSURE TO EXCEED 150 PSI	
YES	INSTALL TEST BLINDS	
N/A	STRAINER OR FILTER AT PUMP INLET (IF NEEDED)	
YES	TEST GAUGE - CORRECT RANGE / CALIBRATION	
N/A	INSTALL TEMPORARY BY-PASSES AND JUMPERS	

HYDROTEST

Time in 10 Min. Increment	Temp. Reading Celsius	Gauge Reading (PSI)	Pressure Loss	Gallons Added	Gauge Reading (PSI)	Misc	EXCEPTIONS
START	90°	15psi	N/A	N/A	15psi		
10							
20							
30		Test 1					
40							
50							
1 hr	90°	15 psi			15 psi		
1 hr 10	90°	50psi			50psi		
1 hr 20							
1 hr 30			N/A	N/A			
1 hr 40							
1 hr 50							
2 hr	90°	50psi			50psi		
2 hr 10							
2 hr 20							
2 hr 30							
2 hr 40							
2 hr 50							
3 hr							
3 hr 10							
3 hr 20							
3 hr 30							
3 hr 40							
3 hr 50							
4 hr							
4 hr 10							
4 hr 20							

Test 1 5/29/08 10"

Test 2 6" 5/30/08

HYDROSTATIC TESTING PACKAGE SUMMARY

CUSTOMER : Waste Management - Vista Landfill
DESCRIPTION : HDPE Forcemain Piping Dual Contained
DATE : 5/30/08 ; 5/29/08
JOB NO. : 08-02-1032

TEST NO. : 2
TEST PRESSURE / TEST MEDIA : Hydrostatic 50 psi @ 1 hour, 6" 5/30/08
LINE NUMBER(S) INCLUDED : Hydrostatic 15 psi @ 1 hour 10" 5/29/08

	DESCRIPTION OF ACTIVITY	DATE COMPLETED	VERIFIED BY ESI		VERIFIED BY CUSTOMER		NOTES
			DATE / SUPERVISOR	EXCEPTIONS	DATE / SUPERVISOR	EXCEPTIONS	
1	PRE-HYDRO CHECK	5/30/08	A. Good	N/A			
2	HYDROSTATIC TEST	5/30/08	A. Good				
3	POST-HYDRO CHECK	5/30/08	A. Good				
4	ACCEPTANCE						

EXCEPTIONS

1 Good Test, No Drop in pressure

2 Good test, No Drop in pressure

3

4

ENVIRONMENTAL SPECIALTIES INTERNATIONAL INC.

HYDROSTATIC TESTING
COMPLETENESS - FINAL ACCEPTANCE

CUSTOMER : Waste Management - Vista Landfill

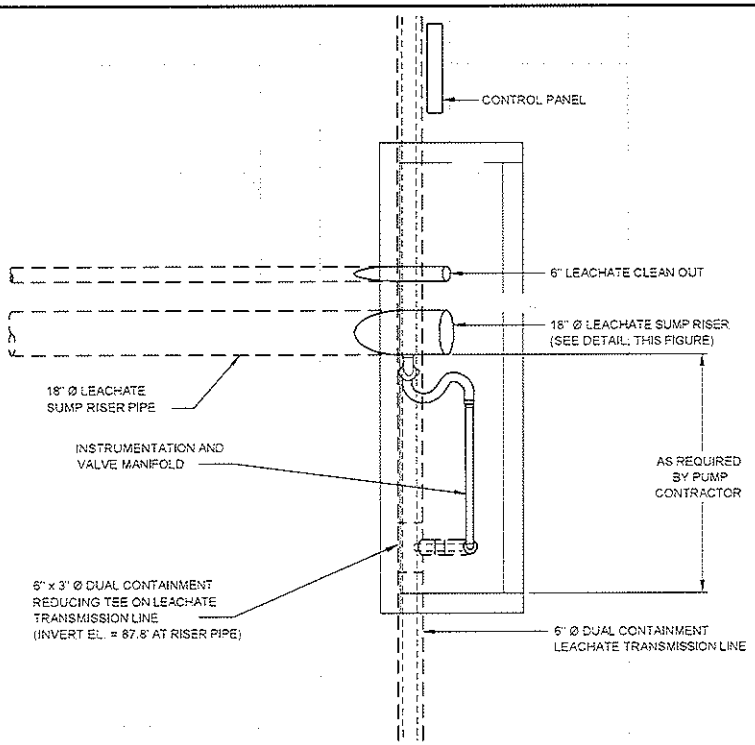
DESCRIPTION : HDPE Forcemain Piping Dual Contained

TEST NO. : L52 PREPARED BY: A. Brandt

DATE : 5/29/08 - 5/30/08

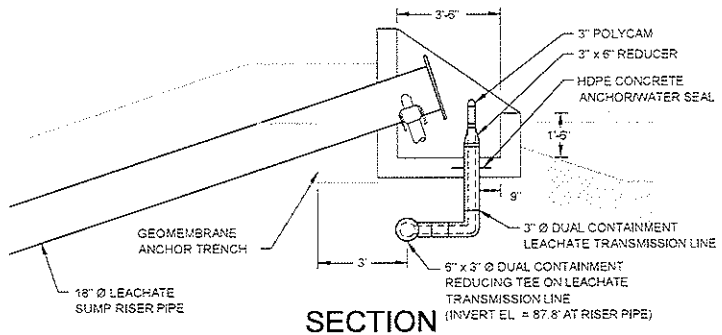
JOB NO. : 08-02-1032

TRANSMIT TO CUSTOMER	ACCEPTED BY ESI	ACCEPTED BY CUSTOMER	EXCEPTIONS
TEST SYSTEM PACKAGE (S)	A. Brandt	Jay D. McE.	
HYDRO TEST RESULTS			
PRE-HYDRO CHECKLIST			
POST-HYDRO CHECKLIST		Geosyntec Consultants	
TEST DOCUMENTATION			
EXCEPTION STATUS			



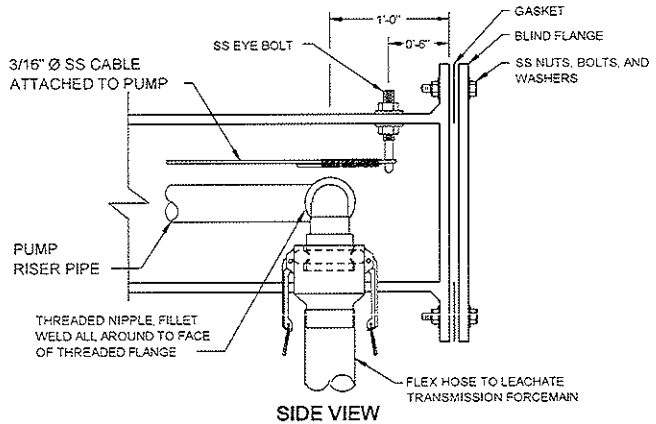
PLAN VIEW

SCALE: 1" = 4'

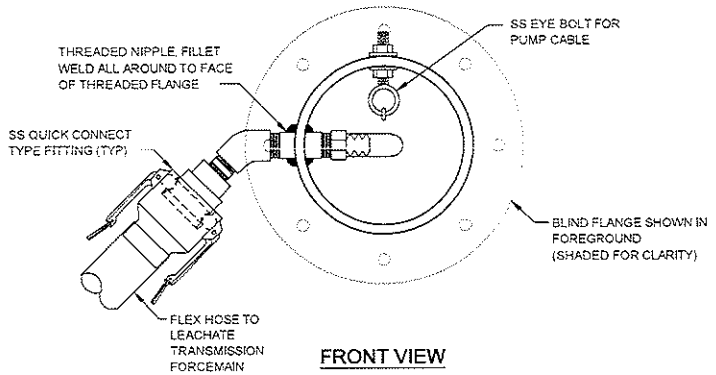


SECTION

SCALE: 1" = 4'



SIDE VIEW



FRONT VIEW

DETAIL

SUMP RISER

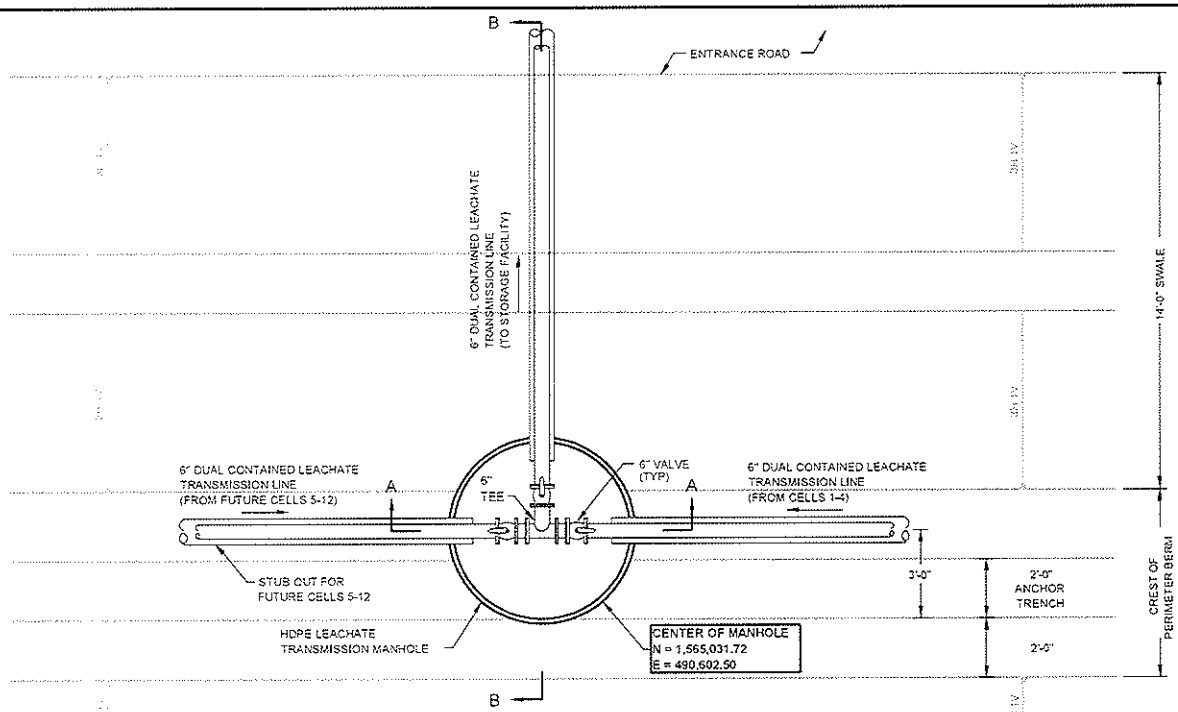
SCALE: 1" = 1'

LEACHATE RISER DETAILS
VISTA LANDFILL (CELL 1)
APOPKA, FLORIDA

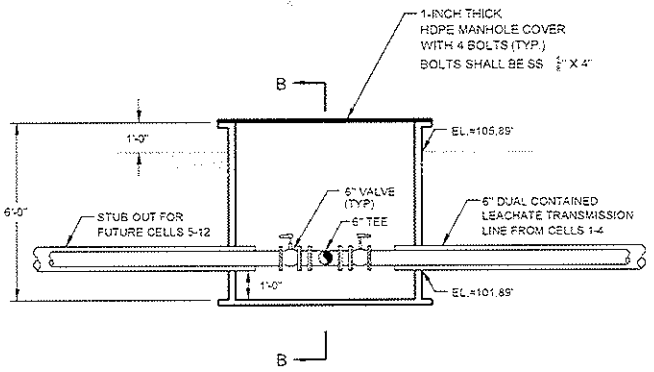
Geosyntec consultants

TAMPA, FL

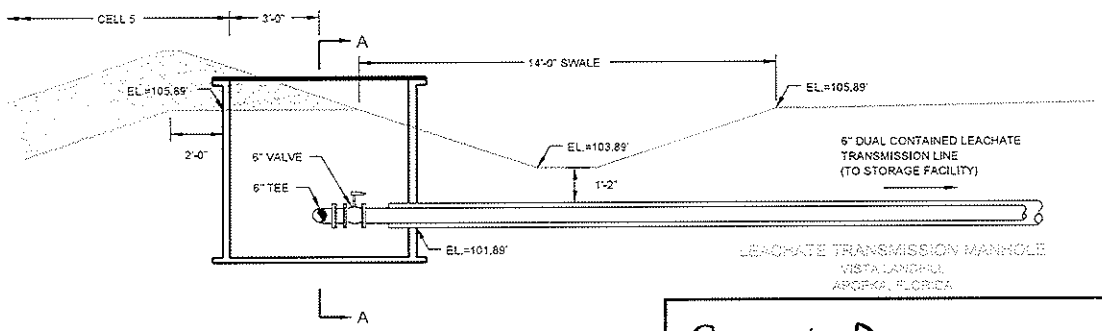
DATE	MAY 2008	FILE NO.	FL1459.03F005
PROJECT NO.	FL1459.03	FIGURE NO.	



PLAN



SECTION A



SECTION B

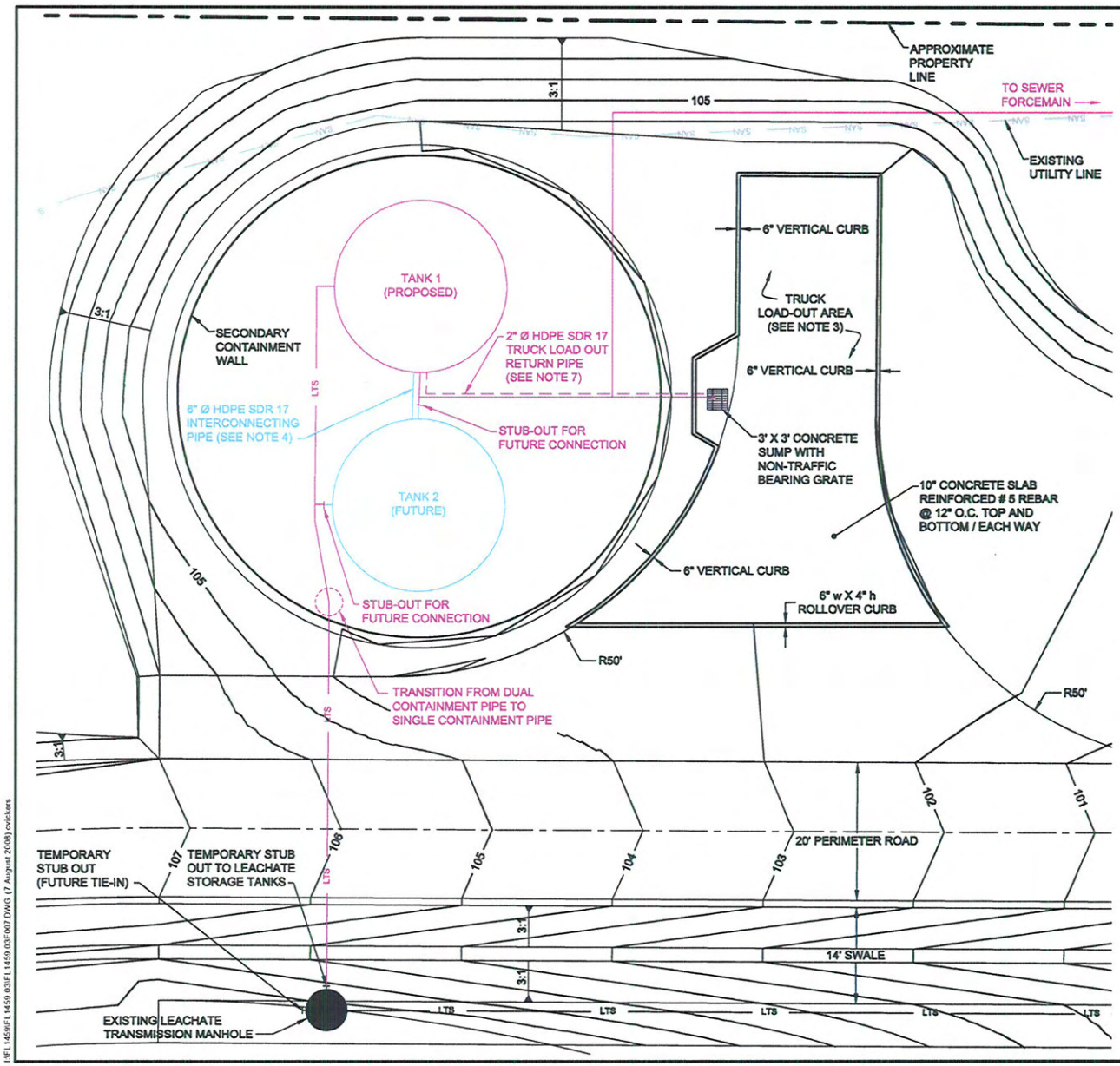
LEACHATE TRANSMISSION MANHOLE
VISTA LANDFILL
ARCADIA, FLORIDA

Geosyntec consultants

TAMPA, FL

DATE	19 MAY 2008	FILE NO.	FL1459.03F001
PROJECT NO.	FL1459.03	FIGURE NO.	-

P:\FL1459\FL1459.03\FL1459.03F001.DWG (19 May 2008) jacboyne



0 15' 30'

SCALE IN FEET

LEGEND

- APPROXIMATE PROPERTY LINE
- 105 — PROPOSED GRADING CONTOUR
- LTS — LEACHATE TRANSMISSION LINE
- PERIMETER ROAD CENTERLINE

NOTES:

1. AERIAL TOPOGRAPHIC SURVEY PROVIDED BY 3001 INC. DATED 18 MARCH 2007.
2. PROPOSED GRADES AND ELEVATIONS ARE FINISH GRADE.
3. ALL GRADES WITHIN THE TRUCK LOAD OUT AREA SHALL BE SLOPED (MINIMUM 2%) FOR POSITIVE DRAINAGE TOWARDS THE SUMP.
4. THE INTERCONNECTING PIPE WILL BE INSTALLED CONCURRENTLY WITH TANK 2. DURING TANK 1 CONSTRUCTION, A BLIND FLANGE WILL BE INSTALLED BY THE TANK MANUFACTURER FOR FUTURE CONNECTION. THE TOP OF THE INTERCONNECTING PIPE WILL BE LOCATED SLIGHTLY BELOW THE INVERT OF THE OVERFLOW PIPE OF EACH TANK.
5. FOR A SCHEMATIC (MECHANICAL FLOW DIAGRAM) OF THE LEACHATE MANAGEMENT SYSTEM IN THE LEACHATE STORAGE TANK AREA, REFER TO SHEET 21 OF THE APPROVED PERMIT DRAWINGS TITLED "PERMIT MODIFICATION DRAWINGS, VISTA CLASS III LANDFILL", DATED JULY 2007. ALL PIPE DIMENSIONS, EXCEPT AS NOTED IN THIS DRAWING, ARE PROVIDED ON SHEET 21 OF THE PERMIT DRAWINGS.
6. ALL PIPING WILL BE INSTALLED UP AND OVER THE SECONDARY CONTAINMENT WALL. THE SECONDARY CONTAINMENT WALL AND TANK FOUNDATION SYSTEM WILL NOT BE PENETRATED.
7. THE TANK ENTRY LOCATION FOR THE TRUCK LOAD OUT RETURN PIPE WILL BE AT THE SAME INVERT ELEVATION (I.E., HIGH ENTRY) AS FOR THE INCOMING PIPES FROM THE LEACHATE TRANSMISSION MANHOLE.

PROPOSED LEACHATE TANK AREA TRUCK LOAD-OUT AND PIPING LAYOUT

VISTA CLASS III LANDFILL
APOPKA, FLORIDA

Geosyntec consultants — TAMPA, FL

DATE:	7 AUGUST 2008	FILE NO.	FL1459.03F007
PROJECT NO.	FL1459	FIGURE NO.	

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Appendix G

Photographic Log

GEOSYNTEC CONSULTANTS
Photographic Record

Site Name: Vista Class III Landfill
Cell 1 Construction

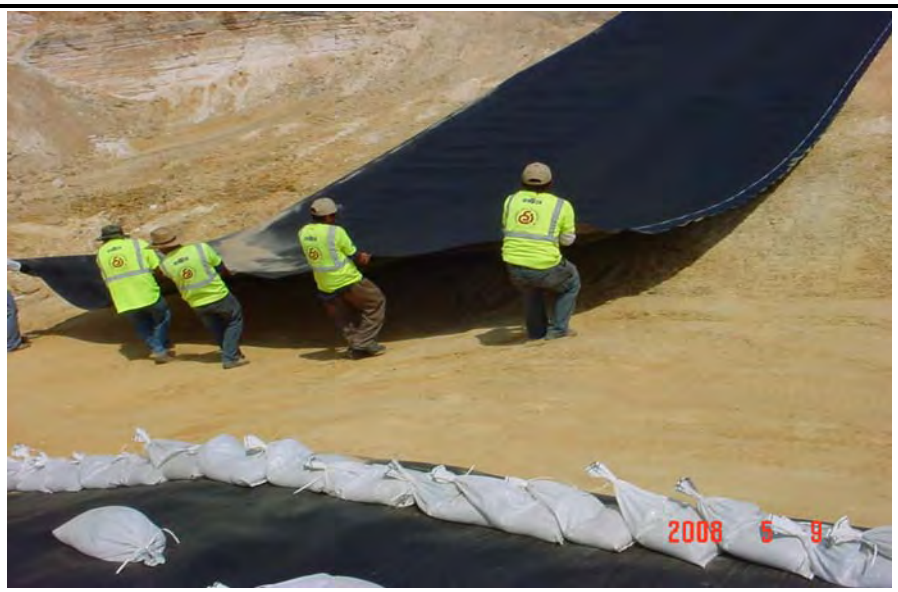
Site Location: 242 West Keene Road
Apopka, Florida 32703

Photograph 1	
Date: 9 May 2008	
Direction: N/A	
Comments: View along the cell floor during air testing a fusion welded seam.	

Photograph 2	
Date: 9 May 2008	
Direction: North	
Comments: View of ESI technician conducting field destructive testing.	

GEOSYNTEC CONSULTANTS
Photographic Record

Client: Vista Landfill, LLC	Project Number: FQ1465
Site Name: Vista Class III Landfill Cell 1 Construction	Site Location: 242 West Keene Road Apopka, Florida 32703

Photograph 3	
Date: 9 May 2008	
Direction: West	
Comments: View of geomembrane deployment along west slope.	

Photograph 4	
Date: 9 May 2008	
Direction: South	
Comments: View of liner deployment along east inter-cell berm of Cell 1.	

GEOSYNTEC CONSULTANTS
Photographic Record

Client: Vista Landfill, LLC	Project Number: FQ1465
Site Name: Vista Class III Landfill Cell 1 Construction	Site Location: 242 West Keene Road Apopka, Florida 32703

Photograph 5	
Date: 9 May 2008	
Direction: South	
Comments: View of geomembrane fusion seaming process.	

Photograph 6	
Date: 9 May 2008	
Direction: East	
Comments: View of geomembrane fusion seaming process.	

GEOSYNTEC CONSULTANTS
Photographic Record

Geosyntec consultants

Client: Vista Landfill, LLC	Project Number: FQ1465
Site Name: Vista Class III Landfill Cell 1 Construction	Site Location: 242 West Keene Road Apopka, Florida 32703

Photograph 7	
Date: 10 May 2008	
Direction: North	
Comments: View of GCL placed in area of leachate collection system sump and slope riser.	

Photograph 8	
Date: 16 May 2008	
Direction: N/A	
Comments: View of geocomposite seam sewing along west slope of Cell 1.	