DOCUMENT RECEIVED IN ELECTRONIC FORMAT FOLLOWS:

FDEP DATE-STAMPED RECEIVED PAGE

SEALED PAGES

CEC

CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS, AIR PERMITTING, AND REGULATORY COMPLIANCE SERVICES

RECEIVED
NOV 19 2012
DEP Central District

November 16, 2012

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
FDEP – Central District
3319 Maguire Blvd, Suite 232
Orlando, FL 32803-3767

Subject: Vista Class III Landfill – Apopka, Florida
DEP Permit Application No. SO48-0165969-019
Certification of Completion
Cell 3 Liner System and Leachate collection System

Dear Mr. Lubozynski:

On behalf of Vista Landfill, LLC (VLF), Carlson Environmental Consultants, PC (CEC) is please to submit the enclosed construction certification documents to the Florida Department of Environmental Protection (FDEP) for the above referenced project. These documents include the FDEP Certificate of Construction Completion Form 62-701.900(2)2 and CEC's Final Construction Quality Certification report and associated As-Built Drawings.

If you have any questions regarding the submittal please contact me via email snunes@cecenv.com or telephone at (863) 634-7185.

Respectfully Submitted,

Seth A. Nunes, P.E.
Principal
Carlson Environmental Consultants, PC

Copies To: Sheree Grant, Site Engineer, VLF
Deborah Perez, District Manager, VLF
Jay Davoll, P.E., City of Apopka
John Ladner, P.E. CDM
Peter J. Walls, P.E., CEC

305 SOUTH MAIN STREET
MONROE, NC 28112
704.283.9765 OFFICE
704.283.9755 FAX

1479 SCILLY CAY LANE
JUPITER, FL 33458
OFFICE 863.634.7185

Reset Form   Print Form

Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: SC48-0165969-019 County: Orange

Name of Project: Cell 3 Construction

Name of Owner: Vista Landfill, LLC

Name of Engineer: Seth A. Nunes, PE

Type of Project: Class III Landfill Cell Construction

Cost: Estimate $960,000 Actual $ 960,000

Site Design Quantity: 2500 ton/day Site Acreage: 150 (total site)/ 7.6 (Cell 3) Acres

Deviations from Plans and Application Approved by DEP (attach additional pages as needed):

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: As soon as possible

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.: SC48-0165969-019 Dated: October 30, 2012

Date: November 16, 2012

Signature of Professional Engineer

SETH A. NUNES No. 60437 STATE OF FLORIDA PROFESSIONAL ENGINEER 11-16-12

6.0 CONSTRUCTION CERTIFICATION

CEC was retained by WMI to provide CQA monitoring services during the construction of the Cell 3 at VLF in Apopka, Florida. Construction activities were observed and documented by qualified CQA technicians. The installation of structural fill, subbase layer, protective cover sand and aggregate materials were observed during installation and were tested as required to confirm/verify the material suitability and proper installation. The installation of the geosynthetic composite liner materials were observed, documented, and tested; as required, to confirm/verify material suitability and proper installation with construction documents. The leachate collection and transmitting pipes were installed according to the cell construction drawings and specifications and the CQA Plan.

Based on our professional opinion, and the information obtained through on-site observation of installation/construction, from laboratory test results, and from design and record drawings; the construction of the Cell 3 is considered to have been constructed in general accordance with the approved permit, construction drawings and specifications, CQA Plan, FDEP Solid Waste Rules, and accepted industry engineering best practices.

11-16-12

Seth A. Nunes, P.E.
Certifying Engineer
Florida Registration No. 069457

Peter J. Walls, P.E.
Project Manager
11/16/12

CONSTRUCTION QUALITY ASSURANCE CERTIFICATION REPORT

For the:

CELL 3 CONSTRUCTION PROJECT

At the:

VISTA LANDFILL - APOPKA, FLORIDA

SC48-0165969-019
Prepared for:

VISTA LANDFILL, LLC
Vista Landfill
242 W. Keene Road
Apopka, Florida 32703

Prepared by:

CARLSON ENVIRONMENTAL CONSULTANTS, PC
305 South Main Street
Monroe, NC 28112
(704) 283-9765

November 2012

November 16, 2012

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
FDEP – Central District
3319 Maguire Blvd, Suite 232
Orlando, FL 32803-3767

Subject: Vista Class III Landfill – Apopka, Florida
DEP Permit Application No. SO48-0165969-019
Certification of Completion
Cell 3 Liner System and Leachate collection System

Dear Mr. Lubozynski:

On behalf of Vista Landfill, LLC (VLF), Carlson Environmental Consultants, PC (CEC) is please to submit the enclosed construction certification documents to the Florida Department of Environmental Protection (FDEP) for the above referenced project. These documents include the FDEP Certificate of Construction Completion Form 62-701.900(2)2 and CEC's Final Construction Quality Certification report and associated As-Built Drawings.

If you have any questions regarding the submittal please contact me via email snunes@cecenv.com or telephone at (863) 634-7185.

Respectfully Submitted,

Seth A. Nunes, P.E.
Principal
Carlson Environmental Consultants, PC

Copies To: Sheree Grant, Site Engineer, VLF
Deborah Perez, District Manager, VLF
Jay Davoll, P.E., City of Apopka
John Ladner, P.E. CDM
Peter J. Walls, P.E., CEC

Reset Form | Print Form

Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: SC48-0165969-019 County: Orange

Name of Project: Cell 3 Construction

Name of Owner: Vista Landfill, LLC

Name of Engineer: Seth A. Nunes, PE

Type of Project: Class III Landfill Cell Construction

Cost: Estimate $960,000 Actual $ 960,000

Site Design Quantity: 2500 ton/day Site Acreage: 150 (total site)/ 7.6 (Cell 3) Acres

Deviations from Plans and Application Approved by DEP (attach additional pages as needed):

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: As soon as possible

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.: SC48-0165969-019 Dated: October 30, 2012

Date: November 16, 2012

Signature of Professional Engineer

11-16-12

Northwest District	Northeast District	Central District	Southwest District	South District	Southeast District
160 Governmental Center	7825 Baymeadows Way, Ste. B200	3319 Maguire Blvd., Ste. 232	3804 Coconut Palm Dr.	2295 Victoria Ave., Ste. 364	400 North Congress Ave.
Pensacola, FL 32501-5794	Jacksonville, FL 32256-7590	Orlando, FL 32803-3767	Tampa, FL 33619	Fort Myers, FL 33901-3881	West Palm Beach, FL 33401
850-595-8360	904-448-4300	407-894-7555	813-744-6100	941-332-6975	561-681-6600

TABLE OF CONTENTS

Page

1.0 INTRODUCTION....1

2.0 REFERENCE DOCUMENTS....1

3.0 PERSONNEL....1

4.0 SCOPE OF SERVICES....4

4.1 PROJECT MANAGEMENT/CERTIFYING ENGINEERING....4
4.2 FIELD CQA SERVICES....5
4.2.1 Preconstruction Activities....6
4.2.2 Construction Activities....6
4.3 GEOTECHNICAL/GEOSYNTHETIC LABORATORY TESTING....7
4.4 SOILS & GEOSYNTHETICS DOCUMENTATION REPORT....9

5.0 CONSTRUCTION ACTIVITIES....9

5.1 INITIAL CELL CONSTRUCTION....9
5.2 CELL SUBBASE CONSTRUCTION....10
5.3 GEOSYNTHETIC PRECONSTRUCTION ACTIVITIES....11
5.3.1 Geosynthetic Material and Quality Control....11
5.3.2 Geosynthetic Conformance Testing....11
5.3.3 Subgrade Acceptance....12
5.3.4 Geosynthetic Installation and Documentation....12
5.4 PROTECTIVE COVER SAND....17
5.5 LEACHATE COLLECTION SYSTEM INSTALLATION....17

6.0 CONSTRUCTION CERTIFICATION....19

LIST OF APPENDICES

A. SOIL CONSTRUCTION DATA

A.1 STRUCTURAL FILL CONFORMANCE TESTS
A.2 STRUCTURAL FILL AND SUBBASE FIELD DENSITY TESTS
A.3 PROTECTIVE COVER CONFORMANCE TESTS
A.4 STONE AGGREGATE CONFORMANCE TESTS
A.5 SUBGRADE ACCEPTANCE FORMS

B. GEOSYNTHETIC PRECONSTRUCTION DATA

B.1 GEOMEMBRANE – TEXTURED
Inventory/Manufacturer's Certifications/Conformance Tests
B.2 GEOTEXTILE – 8 Ounce
Inventory/Manufacturer's Certifications/Conformance Tests
B.3 GEOTEXTILE – 6 Ounce
Inventory/Manufacturer's Certifications/Conformance Tests
B.4 GEOSYNTHETIC CLAY LINER
Inventory/Manufacturer's Certifications/Conformance Tests
B.5 GEOCOMPOSITE – TN300
Inventory/Manufacturer's Certifications/Conformance Tests
B.6 INTERFACE FRICTION TESTING

C. GEOMEMBRANE CONSTRUCTION DATA

C.1 TENSIOMETER CALIBRATION
C.2 TRIAL WELD
C.3 PANEL PLACEMENT LOGS
C.4 PANEL SEAMING LOGS
C.5 NONDESTRUCTIVE TEST LOGS
C.6 DESTRUCTIVE TEST DATA
C.7 REPAIR LOGS

D. SUPPORTIVE DATA

D.1 CERTIFICATE OF COMPLETION
D.2 LEACHATE FORCE MAIN TESTING
D.3 DAILY FIELD LOGS
D.4 MEETING MINUTES

E. PHOTOGRAPHIC RECORD

F. RECORD DRAWINGS

1.0 INTRODUCTION

This report documents the construction, testing, and observations performed for the construction of the Cell 3 at Vista Landfill, LLC (VLF), which is a subsidiary of Waste Management of Florida, Inc. (WMIF), in Apopka, Florida. Cell 3 has a total area of 7.6 acres and ties into the adjacent Cell 2. WMIF retained Carlson Environmental Consultants , PC (CEC) of Monroe, North Carolina to perform CQA duties with regards to this construction project. These CQA duties included field observations, field testing, review of field testing reports, laboratory results and record drawings prepared in accordance with the project design and permit requirements.

2.0 REFERENCE DOCUMENTS

- Technical Specifications for Vista Landfill Class III Facility, prepared by Geosyntec, dated July 2012.
- Construction Quality Assurance Plan for Vista Landfill Class III Facility, prepared by Geosyntec, dated July 2012.
- Cell 3 Construction Drawings for Vista Class III Landfill, prepared by Geosyntec, dated July 2012.

3.0 PERSONNEL

The key personnel and companies involved with the construction of Cell 3 of VCHLF are:

1. OPERATOR & CONSTRUCTION MANAGER:

   Vista Landfill, LLC. (407) 553-4939
   242 West Keene Road
   Apopka, Florida 32703

<u>Name</u>	<u>Title</u>
Sheree Grant	Market Area Engineer

2. DESIGN ENGINEER:

Geosyntec Consultants (813) 379-4394
13101 Telecom Drive, Suite 120
Temple Terrace, Florida 33637

Name	Title
Victor M. Damasceno, P.E.	Design Engineer
Victor M. Damasceno, P.E.	Project Manager

3. CONSTRUCTION QUALITY ASSURANCE (CQA):

Carlson Environmental Consultants, PC (704) 283-9765
305 S Main Street
Monroe, North Carolina 28112

Name	Title
Seth A, Nunes, P.E.	Certifying Engineer
Peter J. Walls, P.E.	Project Manager
Tommy Bradford	CQA Site Manager

4. GENERAL CONTRACTOR:

ERC General Contracting Services, Inc. (407) 656-3900
890 Carter Road, Suite 170
Winter Garden, Florida 34787

Name	Title
Jerry L. Pinder	Project Manager
Jack Wiggins	Superintendent

5. GEOMEMBRANE MANUFACTURER:

ARGU/America, Inc. (843) 546-0600
500 Garrison Road
Georgetown, South Carolina 29440

Name	Title
Danny Newton	Project Manager
Grant Palmer	Plant and Shipping Manager

6. GEOSYNTHETIC CLAY LINER MANUFACTURER:

CETCO, Inc. (770) 387-7700
218 Industrial Park
Cartersville, GA 30121

Name	Title
Gary Ezell	Project Manager
Maria Martinez	Quality Manager

7. GEOCOMPOSITE AND GEOTEXTILE MANUFACTURER:

SKAPS Industries, Inc. (706) 354-3700
335 Athena Drive
Athens, Georgia 30601

Name	Title
Brent Beckham	Project Manager
Anurag Shah	Quality Manager

8. GEOSYNTHETICS INSTALLER:

Environmental Specialties International, Inc. (225) 291-2700
7943 Pecue Lane, Suite A
Baton Rouge, LA 70809

Name	Title
Robert Gant	Project Manager
Soullgna Phinthisene (Arizona)	Superintendent

9. SOILS TESTING LABORATORY:

Genesis Testing Services, Inc. (678) 413-9332
1070 Iris Drive, Suite C
Conyers, Georgia 30094

Name	Title
Jeff Akandu	Laboratory Manager

10. GEOSYNTHETICS TESTING LABORATORY:

TRI Environmental, Inc. (512) 263-6201
9063 Bee Caves Road
Austin, Texas 78733

Name	Title
Jennifer Tenney	Project Manager

11. PROJECT SURVEYOR:

Peavey and Associates Surveying & Mapping, PA (863) 738-4960
690 Alice Place
Bartow, Florida 33830

Name	Title
Deborah Peavey	Registered Land Surveyor

4.0 SCOPE OF SERVICES

The scope of services for the CQA work is summarized below. Work was performed in conformance with the project design and permit requirements.

4.1 PROJECT MANAGEMENT/CERTIFYING ENGINEERING

A. Project management activities consisted of:

1. Reviewing project plans, specifications and permit requirements.
2. Scheduling field staff and site visits to ensure work has progressed in a satisfactory manner.
3. Attending the preconstruction meetings, which identified roles and responsibilities of parties, involved and established lines of communication.
4. Reviewing quality control data, conformance test data and daily field reports.
5. Assisting in the preparation of the construction documentation report.

B. Certifying Engineer activities included:

1. Reviewing documentation, plans, specifications, test procedures, and test data.
2. Performing site visits to ensure the construction and CQA are progressing as per the design and specification.
3. Assuring documentation compliance with design and permit requirements.
4. Observing field activities on a periodic basis and at critical design points.
5. Assisting the preparation of the construction documentation report.
6. Signing and sealing the certification report for Cell 3 construction as a Professional Engineer registered in the State of Florida.

4.2 FIELD CQA SERVICES

This project is constructing the 7.6-acre cell construction project. The construction project included this cell construction as well as the construction of the forcemain for Cell 3. This cell construction consisted of: 1) excavating, placing and preparing the subgrade surface for the cell area, the perimeter berm for this cell, and sediment control structures; 2) placing and preparing structural fill and the subbase layer for the cell; 3) installing geosynthetic clay liner (GCL) on top of the subbase in the areas of the sump and along the leachate trench; 4) installing textured 60-mil high density polyethylene (HDPE) liner over the cell (covering the GCL where designed immediately after it was placed); 5) installing the geocomposite drainage layer over the geomembrane; 6) placing the 2-foot minimum thickness of protective cover sand; 7) installing leachate riser and leachate pipes with aggregate and wrapping with geotextile in the sump and along the design leachate trench alignment.

Field CQA services were generally subdivided into two activities, preconstruction and construction.

4.2.1 PRECONSTRUCTION ACTIVITIES

Preconstruction activities included the following:

1. Conformance sampling and testing of the soils and drainage media utilized for the project.
2. Review of all contractor submittals for materials and structures that will be used for construction.
3. Taking inventory and review of sampling and test results for conformance testing of geosynthetic components utilized for this project.
4. Review of the geosynthetic manufacturers' QC submittals.

4.2.2 CONSTRUCTION ACTIVITIES

Construction activities included the following:

1. Observation of the excavation required to achieve the landfill cell's subgrade.
2. Observation and documentation of all fill placement to bring the subgrade up to subbase elevations with structural fill.
3. Observation, documentation and testing of all geosynthetic materials being installed: Geosynthetic Clay Liner (GCL), geomembrane, geocomposite, and geotextile. This included the geomembrane documentation for trial welds, panel placement, panel seaming, seam nondestructive testing, seam destructive testing, repairs and retests for the HDPE geomembrane liner installation.
4. Observation and documentation of the placement of the protective cover sand layer.
5. Observation of the HDPE pipe for Cell 3 leachate collection with the stone aggregate. The pipe and stone was then wrapped with geotextile.
6. Observation, testing and installation of the forcemain for this cell.

4.3 GEOTECHNICAL/GEOSYNTHETIC LABORATORY TESTING

The Genesis Testing Services (GTS) and TRI Environmental (TRI) laboratories listed in Section 3.0 provided geotechnical and geosynthetic laboratory testing services, respectively. Test results were provided to the Senior Site Quality Assurance Manager and the Certifying Engineer to ensure the results were in compliance with the project specifications. The tests and test methods associated with the geotechnical and geosynthetics portion of the project are listed below:

<u>Structural Fill and Subbase Soil Layer</u>

1.	Soil Classification	ASTM D 2487
2.	Particle Size	ASTM D 422
3.	Atterberg Limits	ASTM D 4318
4.	Moisture-Density Relationship (Standard Proctor)	ASTM D 698

<u>Protective Cover Sand Layer</u>

1.	Particle Size (sieve only)	ASTM C 136
2.	Hydraulic Conductivity	ASTM D 2434
3.	Calcium Carbonate	ASTM D 4373

<u>Stone Aggregate</u>

1.	Particle Size (sieve only)	ASTM C 136
2.	Hydraulic Conductivity	ASTM D 2434
3.	Calcium Carbonate	ASTM D 3042

<u>60-mil HDPE Geomembrane</u>

1.	Thickness	ASTM D 5994
2.	Density	ASTM D 1505
3.	Tensile Properties	ASTM D 6693
4.	Carbon Black Content	ASTM D 1603
5.	Carbon Black Dispersion	ASTM D 5596
6.	Interface Shear Strength	ASTM D 5321

<u>8-ounce Non-woven Geotextile</u>

1.	Mass/Unit Area	ASTM D 5261
2.	Grab Tensile Strength	ASTM D 4632

3.	Static Puncture Strength	ASTM D 6241
4.	Puncture Resistance	ASTM D 4833
5.	Trapezoidal Tear	ASTM D 4533
6.	AOS	ASTM D 4751
7.	Permittivity	ASTM D 4491

<u>6-ounce Woven Geotextile</u>

1.	Mass/Unit Area	ASTM D 5261
2.	Grab Tensile Strength	ASTM D 4632
3.	Static Puncture Strength	ASTM D 6241
4.	Puncture Resistance	ASTM D 4833
5.	Trapezoidal Tear	ASTM D 4533

<u>Geosynthetic Clay Liner</u>

1.	Hydraulic Conductivity	ASTM D 5887
2.	Internal Shear Strength	ASTM D 5321

<u>Geocomposite TN-300</u>

Geotextile:

1.	Mass/Unit Area	ASTM D 5261
2.	Grab Tensile Strength	ASTM D 4632
3.	Trapezoidal Tear	ASTM D 4533
4.	AOS	ASTM D 4751
5.	Permittivity	ASTM D 4491

Geocomposite:

1.	Transmissivity	ASTM D 4716
2.	Ply Adhesion	ASTM D 7005
3.	Interface Shear Strength	ASTM D 5321

The tests and test methods shown conform to the requirements of the site permit and the Construction Quality Assurance Plan.

4.4 SOILS & GEOSYNTHETICS DOCUMENTATION REPORT

This documentation report contains the following sections:

1. A narrative describing the construction sequence, certification and testing programs utilized on the project. A statement certifying that construction was in accordance with the permit drawings and the quality assurance plan.

2 A series of appendices documenting the following:
- Soil laboratory test results for structural fill and low permeable soil liner
- Field test results for structural fill and low permeable soil liner
- Subgrade acceptance of low permeable soil liner surface before geomembrane liner placement
- Manufacturer's geosynthetic quality control documentation
- Geosynthetic conformance testing results
- Geomembrane installation documentation data
- Soils laboratory test results for the protective cover sand and leachate collection stone
- Construction photographs

3. A set of record drawings containing the following:
- Top of subbase and protective cover elevations
- Location of HDPE leachate pipes within the cell
- Location of HDPE liner panels, seams, destructive samples, repairs and anchor trench alignment.

5.0 CONSTRUCTION ACTIVITIES

5.1 INITIAL CELL CONSTRUCTION

ERC General Contracting Services, Inc. (ERC) started construction during mid-

August 2012. ERC started stripping the Cell 3 construction area and began excavating areas of the cell to achieve sub-base grades. Conformance testing on this source and alternate materials were performed by GTS and are presented in Appendix A.1. Structural fill was placed in the fill areas to bring up the cell, the sediment pond and the surrounding berms up to the design subgrade. Prior to placing any structural fill all areas were proof rolled with a loaded hauling truck and any loose or overly wet areas were removed. Each lift of structural fill was moisture conditioned as required and then mixed with a bulldozer. The one foot lift of structural fill was then compacted with the Ingersoll Rand SD100 smooth drum roller. Soil compaction of each lift was checked and verified to have at least the minimum compaction required in the CQA Plan. Density/moisture readings were determined in the field by our CQA site manager using a drive cylinder density apparatus. Results of these density tests are included in Appendix A.2. In addition to the construction discussed above, structural fill was being placed as needed for road access required for this construction.

Placing and compacting structural fill progressed in 12-inch lifts, and was moisture conditioned as required and then mixed with a bulldozer. The lift of structural fill was then compacted with the Ingersoll Rand SD100 smooth drum roller. These activities were continued until the cell was brought up to design subgrade elevation.

5.2 CELL SUBBASE CONSTRUCTION

The subbase soil material was the same material used for structural fill. Conformance samples for subbase material were the same samples for structural fill and results are included in Appendix A.1. ERC placed, conditioned and compacted the 6-inch subbase soil lift over the area requiring subbase for this Cell 3 construction. Results of the density moisture tests are presented in Appendix A.2. Once ERC constructed the cell to design subbase elevations, they fine-graded the surface with a GPS dozer and a smooth drum roller. The top of subgrade elevations were then certified by a survey crew from Peavey and Associates Surveying & Mapping, PA (Peavey) prior to installing any geosynthetics (see the drawings in the Appendix F). The surface of the liner had to be maintained by moisture conditioning and rolling until the geosynthetic materials were installed over it. This was performed so that the sand would not dry out and become powdery. Once the subbase surface had been certified, then ESI was able to begin installing the geosynthetic clay liner (GCL) and the geomembrane liner.

5.3 GEOSYNTHETIC PRECONSTRUCTION ACTIVITIES

5.3.1 GEOSYNTHETIC MATERIAL AND QUALITY CONTROL

The geosynthetic manufacturers provided quality control certificates for all material used on this project. This information was reviewed and found to be in compliance with the approved Quality Assurance Plan found in the site's operating permit. The geosynthetic system consisted of four types of materials. The components of the geosynthetic system included the following:

1. 60-mil textured high-density polyethylene (HDPE) geomembrane, Agru
2. Geotextile, SKAPS (two different weights)
3. Bentomat (GCL), CETCO
4. Geocomposite, SKAPS

A geotextile product was installed as a filter material between the leachate sump and trench stone and the protective cover sand. Another geotextile product (woven) was used as a separation component for the stone and soil and as an added strength component for the road. Textured geomembrane liner was installed for the cell and was placed over a geosynthetic clay liner (GCL) which was installed under the leachate trench and sump as part of the geosynthetic liner system for Cell 3. The geosynthetic materials were delivered, stockpiled and inventoried prior to or during the installation of the liner system.

5.3.2 GEOSYNTHETIC CONFORMANCE TESTING

Prior to shipment of the geosynthetics, the materials were sampled in the plant by TRI and sent to the laboratory for conformance testing. Conformance testing was conducted in accordance with industry standards and the Quality Assurance Plan and project specifications. All test results met or exceeded the project requirements for all four different materials. In addition to these tests interface shear testing was also run on a layered liner sequence with both the GCL and without the GCL. The testing results were also greater than the minimum required results. These results are all shown in Appendix B.

5.3.3 SUBGRADE ACCEPTANCE

Prior to the deployment of the geomembrane and GCL, CEC's CQA Site Manager and the ESI's Superintendent conducted a final walkover of the subbase surface. The walkover was to identify any unacceptable areas to be addressed prior to its coverage with the GCL and the geomembrane. Once the area was deemed acceptable, both the ESI's Superintendent and CEC's representative would complete the subgrade acceptance form. These forms are included in Appendix A.5.

5.3.4 GEOSYNTHETIC INSTALLATION AND DOCUMENTATION

Upon arrival to the site, ESI supplied a current tensiometer calibration record for the tensiometer used. This document is included in the Appendix C.1.

Geosynthetic installation began at the west end of the north slope of Cell 3. ESI's deployment consisted of pulling HDPE liner (geomembrane) panels down the north slope. A GCL panel was laid down the center of the leachate trench along the floor from the north slope down to the sump. GCL panels were placed within the sump and at least 5 feet beyond its boundary. Another panel width of GCL was brought up the leachate riser trench on the south slope. The GCL panels were overlapped according to the specifications for this material which included the placing of bentonite powder between all butt seams. The GCL panels were only placed as far as they could be covered with geomembrane liner that day and prior to any possible precipitation. The GCL material was always protected from being hydrated. For this reason, the placement and sequencing of GCL for the leachate collection system was completed as the panels could be covered with geomembrane panels.

The geomembrane rolls were 23 feet wide by about 500 feet long. The geomembrane was a 60-mil textured HDPE liner. Each geomembrane panel was pulled from the roll which was supported by a spreader bar attached to a skid-steer. The skid-steer was also used to bring the rolls around from their storage area up to the staging area. The panels were pulled into place by ESI technicians using both a LGP rubber-tired four-wheeler (ATV) and their hands. Additional ESI staff would help position the panels for seaming. This activity was closely monitored to ensure that no damage occurred to the geomembrane or any underlying GCL. Panels were generally positioned to minimize the quantity of seams in the cell and leachate trench. Seams were shingled with at least a 4 inch overlap down the cell grade.

Prior to the deployment of the geomembrane, the anchor trench was excavated with a track-hoe on the north and south berms. The anchor trench was cut to a minimum of two feet deep and approximately two feet wide. The anchor trench was verified to be clear of any debris prior to deployment. Once the installation of all geosynthetic materials and testing was completed, the anchor trench was then backfilled and compacted. The backfill material consisted of on-site soils which would not damage the geosynthetic materials.

CEC's CQA technician was responsible for documenting panel placement, trial weld testing, seam welding, testing (destructive and nondestructive) of completed seams and repairs, as well as visual inspection of the geomembrane installation. Field activities and observations were recorded on daily field reports and field logs. The data associated with the installation of the geosynthetics are presented in Appendix C. The CQA technician included the daily activities in the Daily Field Reports which are presented in Appendix D.3 of this report.

Panel placement information included documenting the date of placement, the time of placement, panel number, panel location (slope or floor), source roll number, panel length, observer's identification and any pertinent comments. Once panels had been pulled into place, they were manually adjusted so that there was a minimum 4-inch overlap for adjoining panels.

Panel seaming information included the date of seaming, time the seam was started, seam's ID number, seam location, operator's ID number, seaming unit ID number, seam length, observer's ID and any pertinent comments. ESI utilized a double-wedge type fusion welder to perform most seaming. The double-wedge type fusion welder creates two fused welds split by an air channel. Extrusion welding was also performed using an extrusion gun and HDPE welding rod. The extrusion welding process was only used on some tie-in seams and all repairs.

Trial weld information included date of test, time of test, sample ID number, seamer's ID number, seaming unit ID number, seaming unit settings, test values, sample pass or fail, observer's ID number and any pertinent comments. Trial welds were conducted at a minimum of one for every five hours of machine/welder use, which is usually at the beginning of each morning and then after lunch. Occasionally, another trial weld would be carried out later in the evening if the seaming was to be continued beyond the five hour period designated in the CQA Plan. Additional trial welds were conducted if machine operators changed, if machine settings changed, if the power supply was interrupted or if personnel on site determined that the seam quality had degraded to an unacceptable level. Trial weld specimens were tested on a calibrated field tensiometer. Each trial weld sample test series consisted of testing two one-inch wide specimens for peel adhesion and two one-inch wide specimens for shear strength.

Nondestructive testing information included date of test, seam ID number, seam location, seam station, tester's ID number, air test times and pressures, air test pass or fail, vacuum test pass or fail, test observer ID and any pertinent comments. Nondestructive testing was conducted to verify seam continuity and integrity.
Air pressure testing was conducted on fusion-welded seams. The testing involved sealing both ends of the air channel, inserting a hollow needle attached to a pressure gauge into the air channel, and pressurizing the seam to 25 to 30 psi. A seam was accepted if it exhibited a pressure loss of not more than 3 psi over a 5 minute period after allowing the pressure to stabilize and if total pressure loss was observed when the air channel was cut at the end of the seam opposite the test gauge. Seams exhibiting acceptable pressure loss were recorded as passing, and seams exhibiting unacceptable pressure loss were tested in segments until there was acceptable pressure loss and the flawed seam was marked for repair.

Vacuum testing was conducted on all extrusion welds in the module (repairs and extruded seams). Vacuum testing consisted of wetting the seam segment to be tested with a soapy solution then applying a vacuum to the surface of the seam segment with a venturi-jet vacuum box powered by an external air compressor. While under vacuum, the area was observed for approximately 20 seconds to see if any bubbling occurred which would indicate a leak in the seam. If no bubbling was found the area was marked approved and the testing moved to the next segment. If a leak was found, it was marked for repair and a subsequent vacuum box test was conducted on the repaired area to clear the failure.

Destructive seam sample information included sample ID number, date sample was designated, date sample was tested, sample location (seam ID number and station), seamer ID number, machine ID number, field test pass/fail, laboratory test pass/fail and any pertinent comments. Destructive seam samples were designated and sampled from welded seams at a minimum rate of one per 500 linear feet seamed over this project. The goal of this testing program was two-fold: first, to obtain samples representative of the overall quality of the installation; and second, to test suspect areas.

Each destructive sample measured approximately 42 inches along the seam by 12 inches wide across the seam and was cut into three sections. ESI selected 10 samples from one section to conduct field testing prior to submittal of another section to TRI for laboratory testing. The third section was kept on site for the duration of the project as an archive sample. If the specimens passed the field test, the sample was submitted to the geosynthetic laboratory for testing. If the specimens had failed the field test, then additional samples welded by the same machine and operator on that day, would be tracked on either side of the failed seam sample until passing results were achieved. The same process would be repeated if a seam failed during a laboratory test. The seam would be tracked on either side until there were passing results for both field and laboratory samples. These tracked samples would be called bounding samples and they would define the limits of the unacceptable seam. The seams between these passing bounding samples would be repaired in accordance with the project design requirements.

For Cell 3 construction, 34 destructive seam samples were selected on wedge (fusion) welds and 4 destructive seam samples were selected on extrusion welds. Out of these destructive tests there were no failing tests. Since there were no failing tests there were no bounding samples or tests. No seams had to be capped between because of failing destructive samples. All test data, including data from TRI, is included in Appendix C.5.

Repair information included the repair number, date of repair, repair location, description of damage, size and type of repair, repair crew ID, date repair was tested, tester ID, observer ID and any pertinent comments. Typical repairs of the geomembrane included:

1. Patching locations of destructive seam samples and nondestructive air-testing holes,
2. Patching damage to the liner created during the transportation and installation process,
3. Repairing of any seams or segments of seams rejected due to nondestructive and destructive testing,
4. Repairing of any seams or segments of seams rejected by ESI's QC.
5. Patching of all "T" seam locations.

The CEC CQA Site Manager and ESI Geosynthetic Superintendent conducted a final walkthrough prior to acceptance of each segment of geomembrane. The final walkthroughs were conducted to assure that necessary repairs and testing had been completed and that no additional damage had occurred during installation. Any areas requiring attention were noted and repaired and tested as appropriate prior to the certification of completion. A geomembrane panel layout drawing showing the panels and seams, all repairs and destructive sample locations is included in Appendix F.

After the walkthrough of each geomembrane segment, geocomposite panels were deployed over the exposed geomembrane liner. The geotextile panels were overlapped by 6 inches for adjacent panels and then by 12 inches for butt seams. All geocomposite repairs were overlapped by 12 inches. The geocomposite seams had the geonet portions tied with plastic ties and the upper geotextile portions were sewn. Another walkthrough was done on the finished geocomposite prior to placing protective cover sand so that both CEC and ESI assures that all necessary repairs and testing had been completed and that no additional damage had occurred during installation. Any areas requiring additional attention were noted, repaired, and tested as appropriate prior to the certification of completion.

5.4 PROTECTIVE COVER SAND

The protective cover sand was from soil that was already on site. Conformance samples were submitted to GTS for the testing of its particle size gradation, hydraulic conductivity, hydraulic conductivity and calcium carbonate content. These tests passed all requirements for this material prior to its installation into the cell (Refer to results in Appendix A.3). Off-road haul trucks were loaded with sand and the sand was hauled to the southwest corner of the cell where a 3 to 4 foot thick access road was established so that sand could be pushed out across the cell and up the slopes. Areas for the leachate trench were initially left uncovered. The minimum 3-foot thick haul roads were established within the cell using protective cover sand so that the off-road haul trucks could travel in the cell without damaging the geosynthetic liner system underneath. A LGP GPS bulldozer was then used for spreading the 2-foot protective cover sand layer. Once the leachate trench and sump areas have been completed, then the protective cover sand was then placed over the trench as designed. An additional sand layer of 6 to 12 inches was placed over the geotextile wrap of the sump to protect it from UV degradation.

When this was complete, the top of protective cover elevations, from the established grid points, were then certified by a survey crew from Peavey (See the drawings in the Appendix F). The certification was verified that a layer thickness of at least two feet of protective cover was established over the geosynthetic liner system.

5.5 LEACHATE COLLECTION SYSTEM INSTALLATION

ERC also began construction of the leachate collection system during the installation of the protective cover sand. A panel of 8-ounce per square yard nonwoven geotextile was laid down the middle of the proposed trench as a filter medium between the sand and the No. 57 stone. The perforated leachate pipe and No. 57 stone was then welded and placed on the 8-ounce fabric in the proposed trench area. Samples of the leachate stone were sent to the GTS laboratory for conformance testing. The stone was not carbonaceous and complied with the permeability and gradation requirements for this project. The stone was hauled from the on-site stock pile to the leachate trench area being constructed. The stone was placed on the geotextile around the perforated pipe. This was continued across the floor to the base of the north slope. The top of pipe was surveyed by a survey crew from Peavey at 50-foot intervals (the as-built drawing is included in Appendix F). The geotextile seam was sewn together using an industrial grade sewing machine and a polypropylene fiber.

At the south end of the cell, the sump and the riser trench had to have the geotextile, pipes and stone aggregate installed. Panels of 8-ounce per square yard nonwoven geotextile were laid down to cover the sump area and to be able to enclose the stone. The panel seams were sewn together using an industrial grad sewing machine and a polypropylene fiber. The perforated/solid leachate riser (18" diam. SDR 11) and collection (6" diam. SDR 11) pipe for the sump was welded and then No. 4 stone placed in the sump and up the riser trench. Samples of the leachate stone were sent to the GTS laboratory for conformance testing. The stone was not carbonaceous and complied with the permeability and with a slightly coarser gradation to the requirements for this project. The stone was hauled from the on-site stock pile to the sump during construction. The stone was placed on the geotextile around the piping. The geotextile was then wrapped and sewn once the stone had been brought up to the top of the designed protective cover. A layer of protective cover sand was then pushed over the sump area to protect the geotextile from UV degradation.

The force main for Cell 3 was constructed. The existing permanent force main was extended from behind Cell 2 across the north end of Cell 3. A temporary forcemain is 'T'ed into the permanent force main at the northeast corner and extends down the east side of Cell 3 where it is 'T'ed again into a new permanent force main that extends from the southeast corner to the Cell 3 riser. The permanent force main is made up of a 6 inch SDR 11 carrier pipe with a 10 inch SDR 17 containment pipe. The temporary force main is made up of a 3 inch SDR 11 carrier pipe with a 6 inch SDR 17 containment pipe. These HDPE pipes were all welded together with appropriate reducers and then placed in their trenches where both carrier and containment pipes were leaked tested prior to the force main being connected. The pipe testing passed and the paper work is included in Appendix D.2

6.0 CONSTRUCTION CERTIFICATION

CEC was retained by WMI to provide CQA monitoring services during the construction of the Cell 3 at VLF in Apopka, Florida. Construction activities were observed and documented by qualified CQA technicians. The installation of structural fill, subbase layer, protective cover sand and aggregate materials were observed during installation and were tested as required to confirm/verify the material suitability and proper installation. The installation of the geosynthetic composite liner materials were observed, documented, and tested; as required, to confirm/verify material suitability and proper installation with construction documents. The leachate collection and transmitting pipes were installed according to the cell construction drawings and specifications and the CQA Plan.

Based on our professional opinion, and the information obtained through on-site observation of installation/construction, from laboratory test results, and from design and record drawings; the construction of the Cell 3 is considered to have been constructed in general accordance with the approved permit, construction drawings and specifications, CQA Plan, FDEP Solid Waste Rules, and accepted industry engineering best practices.

11-16-12

Seth A. Nunes, P.E.
Certifying Engineer
Florida Registration No. 069457

Peter J. Walls, P.E. 11/16/12
Project Manager

A.1 STRUCTURAL FILL CONFORMANCE TESTS

Sep-12

VISTA CLASS III LANDFILL - CELL 3
SUMMARY OF SOIL DATA

2012-26

Sample ID	Sample Type	Sample Depth	Soil Classi-fication	In-Situ Moisture (%)	Atterberg Limits			Grain Size Distribution			Standard Proctor		Gs	Unit Weight		Permeability (cm/sec)	Additional Test (see notes)
					L.L.	P.L.	P.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm Sieve	Maximum Dry Density (lb/cu.ft)	Optimum Moisture Content (%)		Dry Density (lb/cu.ft)	Moisture Content (%)		
SF-2	Bulk	-	SP	1.1	NP	NP	NP	100.0	4.5	-	109.5	10.0	-	-	-	-	-
SF-3	Bulk	-	SP-SM	10.0	NP	NP	NP	100.0	7.7	-	111.5	15.9	-	-	-	-	-
SF-4	Bulk	-	SP	5.6	NP	NP	NP	100.0	1.3	-	107.9	8.2	-	-	-	-	-
SF-5	Bag	-	SP	4.9	NP	NP	NP	100.0	4.7	-	-	-	-	-	-	-	-
SF-6	Bag	-	SP-SM	5	NP	NP	NP	100.0	7.9	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SF-1	Bulk	TRI/Environmental			-	-	-	-	-	-	107.8	12.1	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ABBREVIATIONS: LIQUID LIMIT (L.L.)
PLASTIC LIMIT (P.L.)
PLASTICITY INDEX (P.I.)
NON-PLASTIC (N/P)
SPECIFIC GRAVITY (Gs)
MOISTURE CONTENT (Mc)

NOTES: T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
CC = CARBONATE CONTENT

Genesis Testing Services, Inc.

MOISTURE DENSITY CURVE
ASTM D698 & D1557

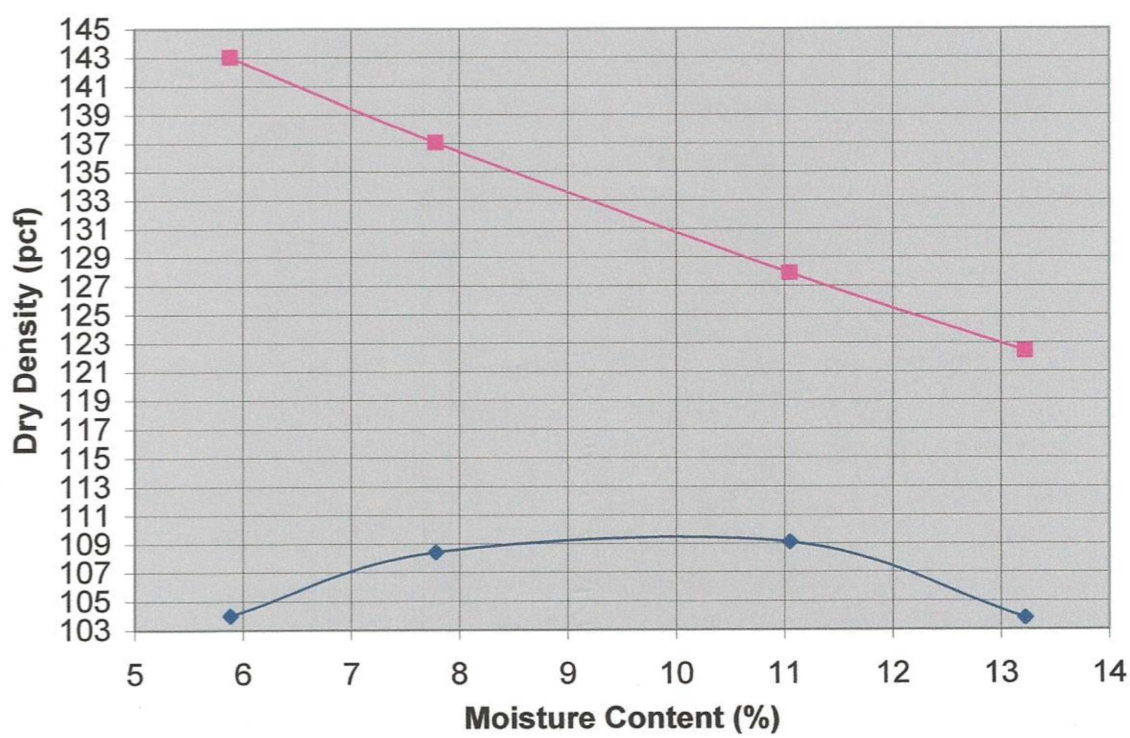
MOLD NUMBER:	PM-2
MOLD WEIGHT:	2040.8 gm

PROJECT TITLE: VISTA CLASS III LANDFILL	TEST TYPE: ASTM D698
PROJECT NUMBER: 2012-26	PROCEDURE: METHOD A
SAMPLE NUMBER: SF-2	VOLUME MOLD: 0.0332 cu. ft.
DESCRIPTION: LIGHT BROWN SAND	

POINT RESULTS	1	2	3	4	5
Wet Wt. Soil & Mold (gm)	3699.10	3800.90	3865.70	3810.60	
Wt. Mold (gm)	2040.80	2040.80	2040.80	2040.80	
Wet Wt. Soil (gm)	1658.30	1760.10	1824.90	1769.80	
Wet Density (pcf)	110.12	116.88	121.18	117.52	
WATER CONTENTS					
Wet Wt. Soil + Tare (gm)	240.50	350.20	216.50	274.00	
Dry Wt. Soil + Tare (gm)	227.60	325.40	195.80	242.80	
Weight of Tare (gm)	8.40	6.80	8.50	6.90	
Weight of Water (gm)	12.90	24.80	20.70	31.20	
Wt. Dry Soil (gm)	219.20	318.60	187.30	235.90	
Moisture Content (%)	5.89	7.78	11.05	13.23	
Dry Density (pcf)	104.00	108.44	109.12	103.79	
Zero Air Void Den. (pcf) SG=2.65	143.04	137.07	127.89	122.43	

MAXIMUM DRY DENSITY (pcf):	**109.5**
OPTIMUM MOISTURE CONTENT (%):	**10.0**
Corrected Maximum Dry Density (pcf):	
Corrected Optimum Moisture Content (%):	

Liquid Limit:	NP
Plastic Limit	NP
Plasticity Index:	NP
In-Situ Moisture:	1.1%
USCS Classification:	SP



Genesis Testing Services, Inc.

DATE:	8/31/12
REVIEW:	AAG

PARTICLE SIZE ANALYSIS (ASTM D 422)

PROJECT TITLE: VISTA CLASS III LANDFILL	SAMPLE NUMBER: SF-2
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE

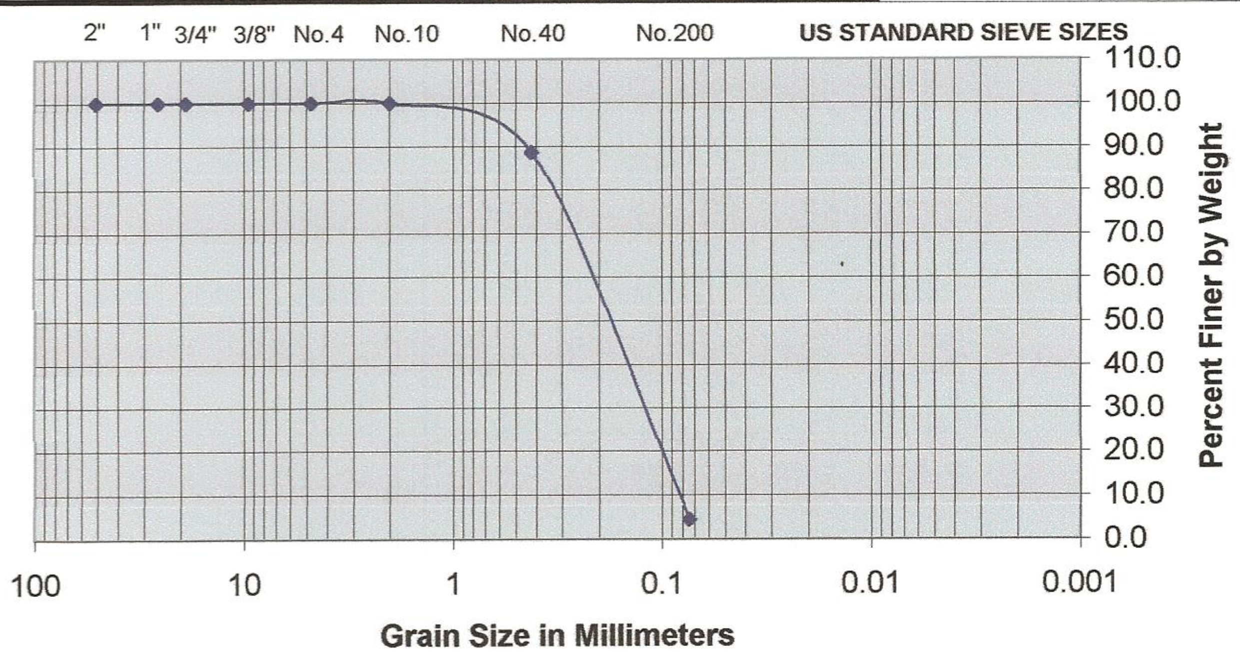
Wet Wt. Soil + Tare(gm)	1037.7
Dry Wt. Soil + Tare (gm)	1029.9
Weight of Tare (gm)	304.4
Weight of Water (gm)	7.8
Weight of Dry Soil (gm)	725.5
Moisture Content (%)	1.1

TOTAL WEIGHT OF SAMPLE USED

Weight of Sample + Tare gm)	1029.9
Weight of Tare (gm)	304.4
Weight of Sample (gm)	725.5

DESCRIPTION: LIGHT BROWN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	82.9	11.43	11.43	88.6
No. 200	0.074	610.2	84.11	95.53	4.5
Pan	-	32.1	4.42	99.96	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

Genesis Testing Services, Inc.

DATE: 8/31/12

REVIEW: AAG

MOISTURE DENSITY CURVE
ASTM D698 & D1557

MOLD NUMBER: PM-2
MOLD WEIGHT: 2040.8 gm

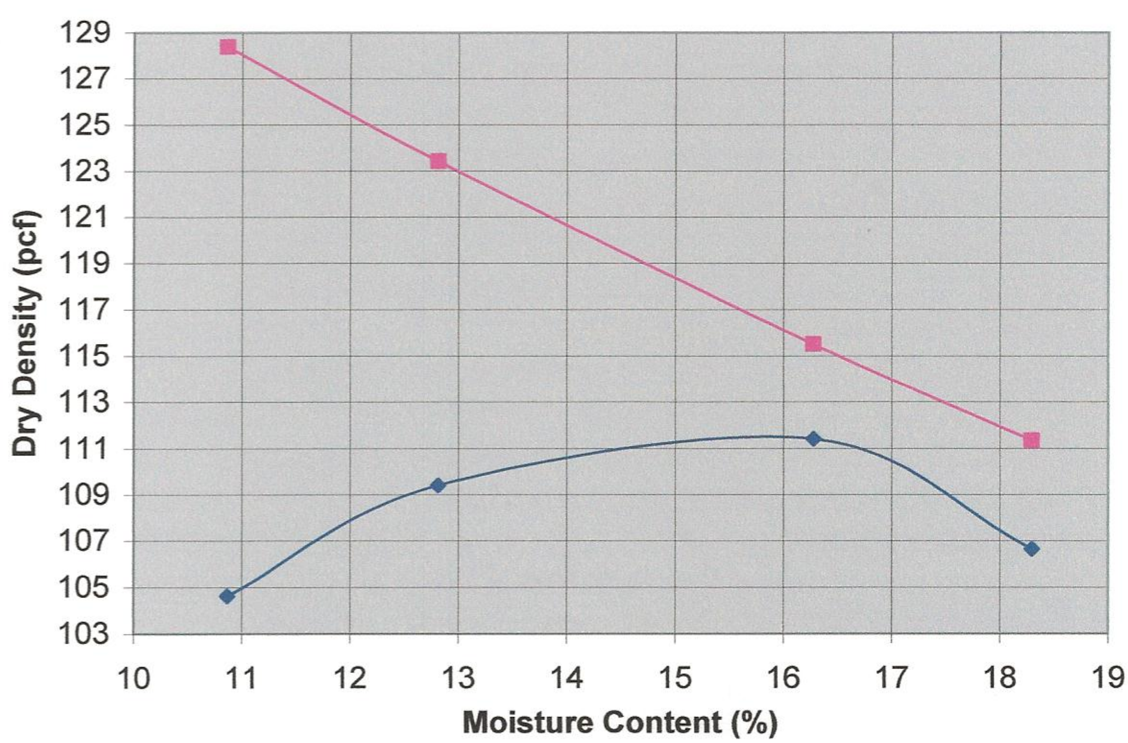
PROJECT TITLE: VISTA CLASS III LANDFILL
PROJECT NUMBER: 2012-26
SAMPLE NUMBER: SF-3
DESCRIPTION: TAN SAND WITH SILT

TEST TYPE: ASTM D698
PROCEDURE: METHOD A
VOLUME MOLD: 0.0332 cu. ft.

POINT RESULTS	1	2	3	4	5
Wet Wt. Soil & Mold (gm)	3787.60	3899.60	3991.80	3940.80	
Wt. Mold (gm)	2040.80	2040.80	2040.80	2040.80	
Wet Wt. Soil (gm)	1746.80	1858.80	1951.00	1900.00	
Wet Density (pcf)	115.99	123.43	129.55	126.17	
WATER CONTENTS					
Wet Wt. Soil + Tare (gm)	228.80	272.70	248.50	287.50	
Dry Wt. Soil + Tare (gm)	207.20	242.50	214.90	244.10	
Weight of Tare (gm)	8.40	6.80	8.50	6.90	
Weight of Water (gm)	21.60	30.20	33.60	43.40	
Wt. Dry Soil (gm)	198.80	235.70	206.40	237.20	
Moisture Content (%)	10.87	12.81	16.28	18.30	
Dry Density (pcf)	104.63	109.41	111.42	106.65	
Zero Air Void Den. (pcf) SG=2.65	128.38	123.44	115.51	111.36	

MAXIMUM DRY DENSITY (pcf): **111.5**
OPTIMUM MOISTURE CONTENT (%): **15.9**
Corrected Maximum Dry Density (pcf):
Corrected Optimum Moisture Content (%):

Liquid Limit:	NP
Plastic Limit	NP
Plasticity Index:	NP
In-Situ Moisture:	10.0%
USCS Classification:	SP-SM



DATE: 8/31/12
REVIEW: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

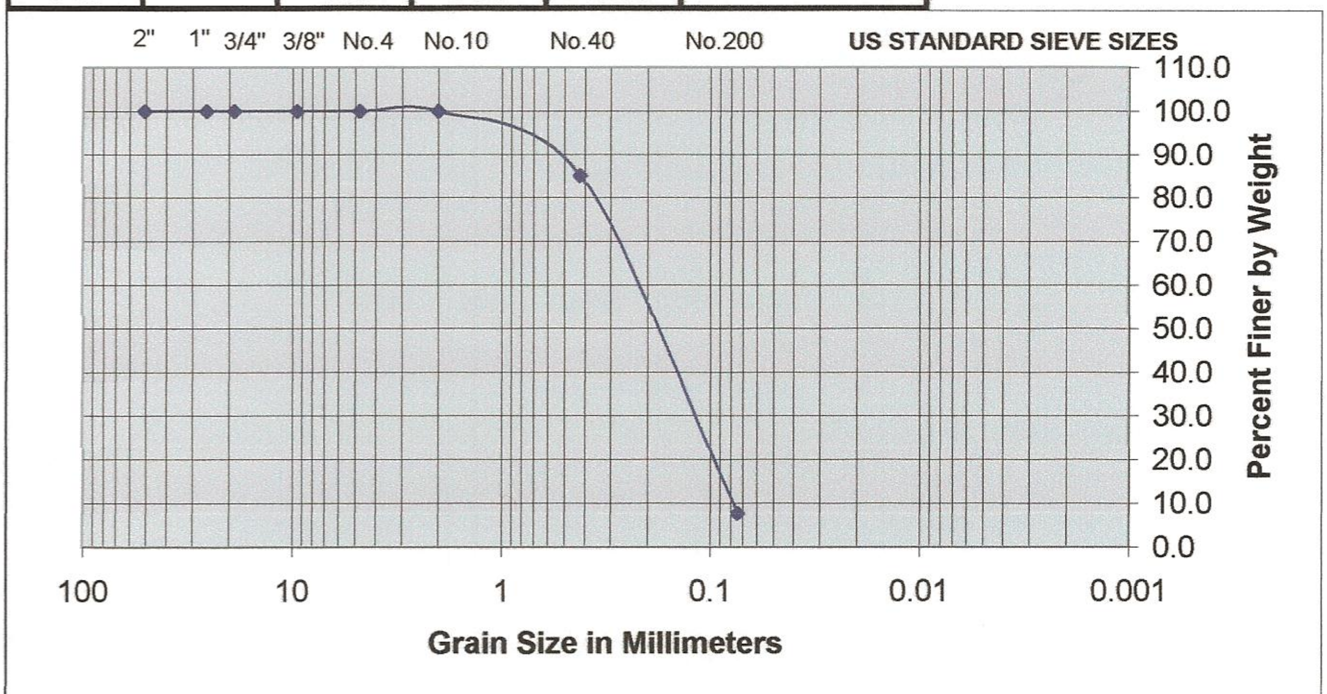
PROJECT TITLE: VISTA CLASS III LANDFILL		SAMPLE NUMBER:	SF-3
PROJECT NUMBER: 2012-26		SAMPLE TYPE:	Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	787.6
Dry Wt. Soil + Tare (gm)	732.6
Weight of Tare (gm)	180.4
Weight of Water (gm)	55.0
Weight of Dry Soil (gm)	552.2
Moisture Content (%)	10.0

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	732.6
Weight of Tare (gm)	180.4
Weight of Sample (gm)	552.2

DESCRIPTION: TAN SAND WITH SILT

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	81.6	14.78	14.78	85.2
No. 200	0.074	428.3	77.56	92.34	7.7
Pan	-	42.2	7.64	99.98	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 8/31/12

REVIEW: AAG

Genesis Testing Services, Inc.

MOISTURE DENSITY CURVE
ASTM D698 & D1557

MOLD NUMBER:	PM-2
MOLD WEIGHT:	2040.8 gm

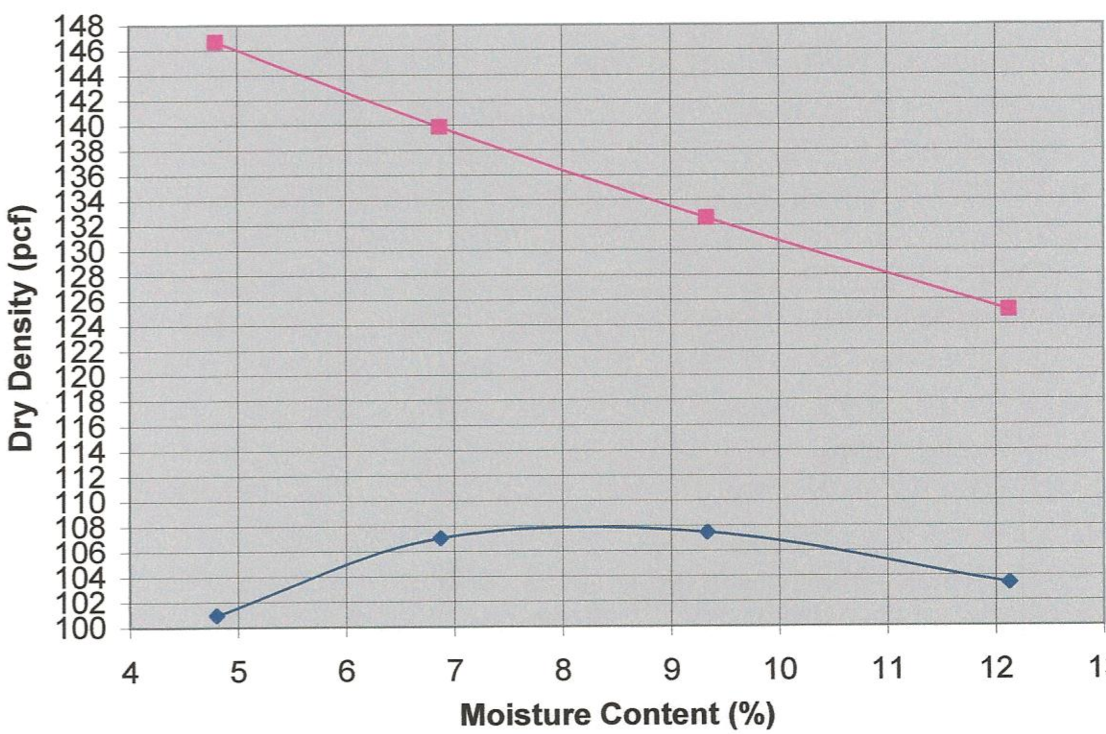
PROJECT TITLE: VISTA CLASS III LANDFILL
PROJECT NUMBER: 2012-26
SAMPLE NUMBER: SF-4
DESCRIPTION: TAN SAND

TEST TYPE:	ASTM D698
PROCEDURE:	METHOD A
VOLUME MOLD:	0.0332 cu. ft.

POINT RESULTS	1	2	3	4	5
Wet Wt. Soil & Mold (gm)	3634.10	3764.10	3810.30	3786.50	
Wt. Mold (gm)	2040.80	2040.80	2040.80	2040.80	
Wet Wt. Soil (gm)	1593.30	1723.30	1769.50	1745.70	
Wet Density (pcf)	105.80	114.43	117.50	115.92	
WATER CONTENTS					
Wet Wt. Soil + Tare (gm)	281.30	322.50	250.40	234.00	
Dry Wt. Soil + Tare (gm)	268.80	302.20	229.60	209.60	
Weight of Tare (gm)	8.50	6.80	6.80	8.40	
Weight of Water (gm)	12.50	20.30	20.80	24.40	
Wt. Dry Soil (gm)	260.30	295.40	222.80	201.20	
Moisture Content (%)	4.80	6.87	9.34	12.13	
Dry Density (pcf)	100.95	107.07	107.47	103.38	
Zero Air Void Den. (pcf) SG=2.65	146.68	139.87	132.55	125.13	

MAXIMUM DRY DENSITY (pcf):	**107.9**
OPTIMUM MOISTURE CONTENT (%):	**8.2**
Corrected Maximum Dry Density (pcf):	
Corrected Optimum Moisture Content (%):	

Liquid Limit:	NP
Plastic Limit	NP
Plasticity Index:	NP
In-Situ Moisture:	5.6%
USCS Classification:	SP



Genesis Testing Services, Inc.

DATE: 9/5/2012
REVIEW: AAG

PARTICLE SIZE ANALYSIS (ASTM D 422)

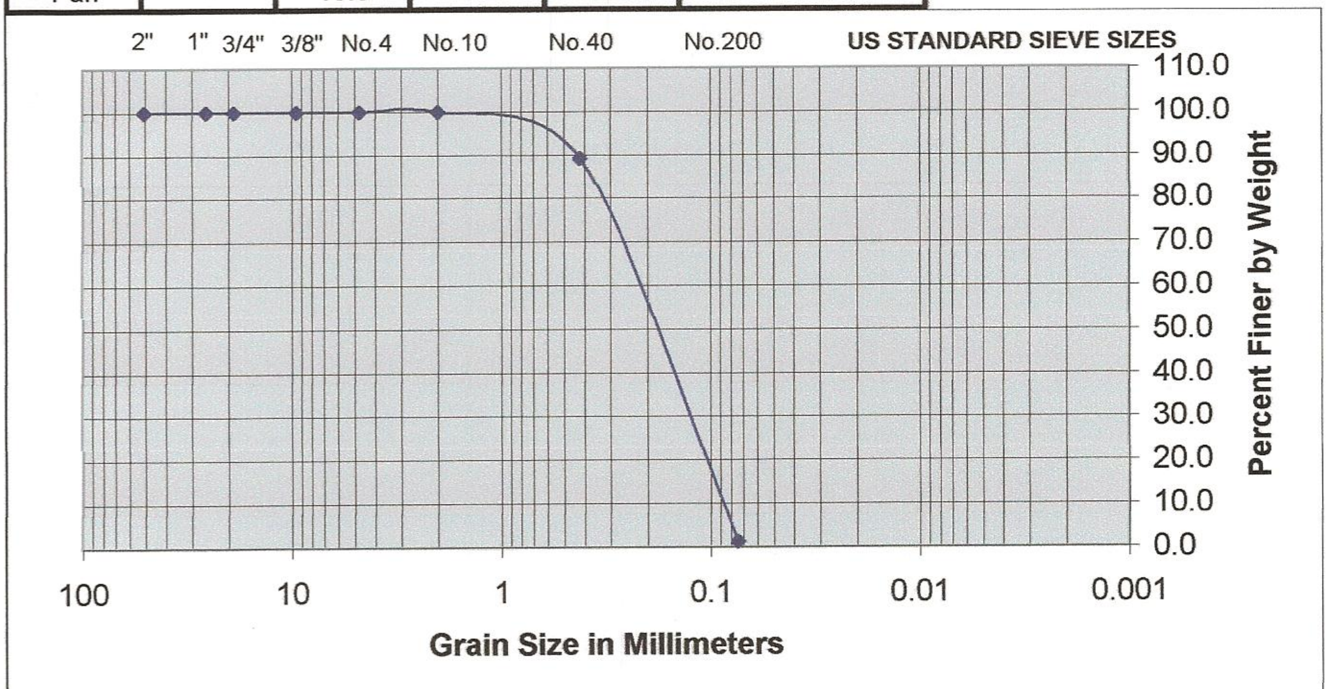
PROJECT TITLE: VISTA CLASS III LANDFILL		SAMPLE NUMBER:	SF-4
PROJECT NUMBER: 2012-26		SAMPLE TYPE:	Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	1265.7
Dry Wt. Soil + Tare (gm)	1215.0
Weight of Tare (gm)	309.1
Weight of Water (gm)	50.7
Weight of Dry Soil (gm)	905.9
Moisture Content (%)	5.6

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	1215.0
Weight of Tare (gm)	309.1
Weight of Sample (gm)	905.9

DESCRIPTION: TAN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	97.8	10.80	10.80	89.2
No. 200	0.074	796.7	87.95	98.74	1.3
Pan	-	10.8	1.19	99.93	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 9/5/2012

REVIEW: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

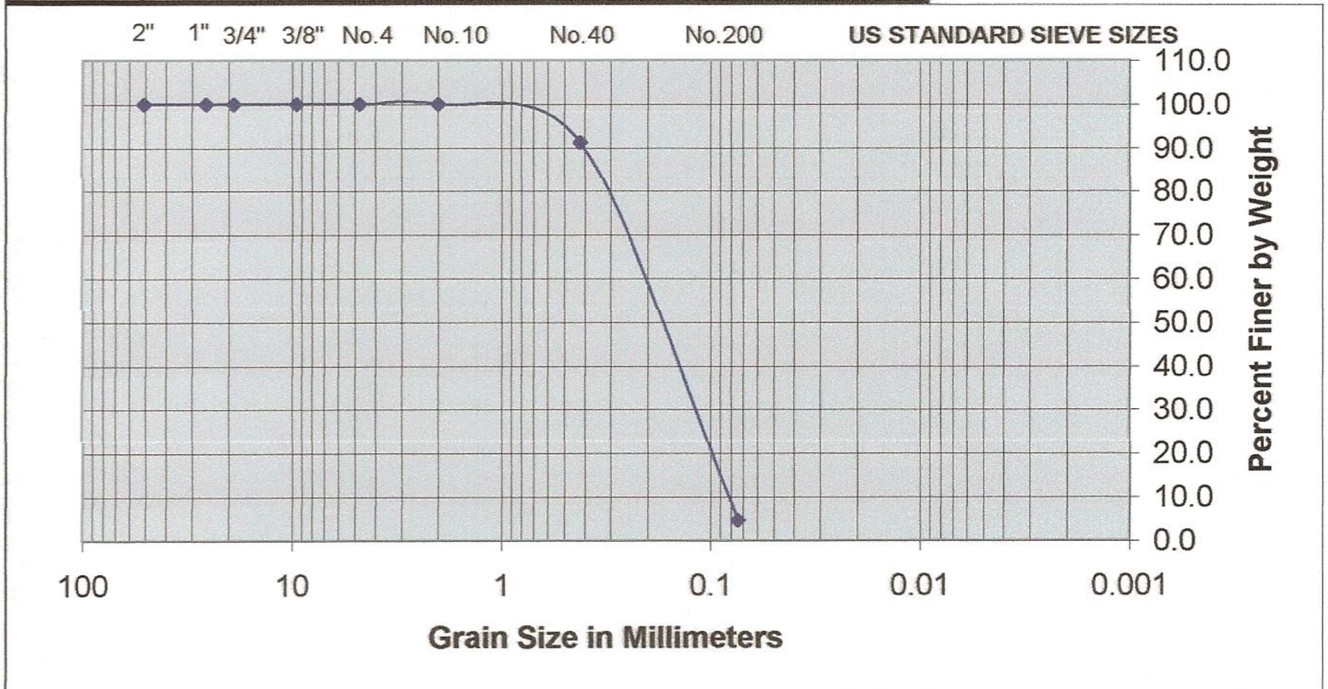
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: SF-5
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	909.8
Dry Wt. Soil + Tare (gm)	875.8
Weight of Tare (gm)	181.5
Weight of Water (gm)	34.0
Weight of Dry Soil (gm)	694.3
Moisture Content (%)	4.9

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	875.8
Weight of Tare (gm)	181.5
Weight of Sample (gm)	694.3

DESCRIPTION: BROWN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	61.0	8.79	8.79	91.2
No. 200	0.074	600.9	86.55	95.33	4.7
Pan	-	32.1	4.62	99.96	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

Genesis Testing Services, Inc.

DATE: 9/28/12

REVIEW: AAG

PARTICLE SIZE ANALYSIS (ASTM D 422)

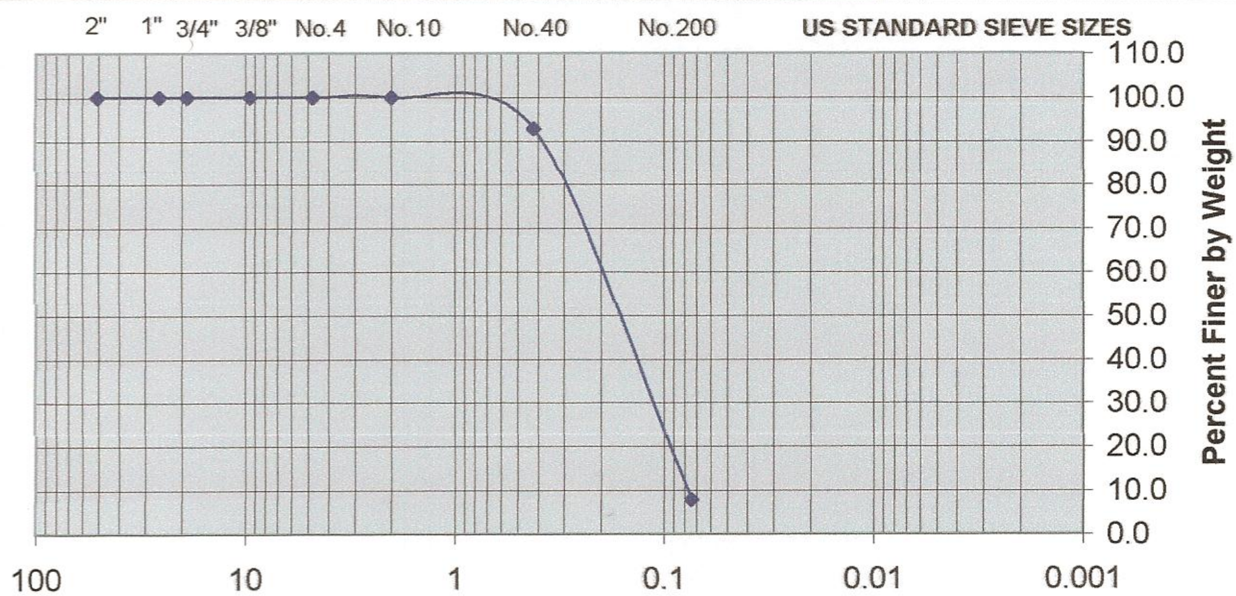
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: SF-6
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	913.1
Dry Wt. Soil + Tare (gm)	878.3
Weight of Tare (gm)	180.6
Weight of Water (gm)	34.8
Weight of Dry Soil (gm)	697.7
Moisture Content (%)	5.0

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	878.3
Weight of Tare (gm)	180.6
Weight of Sample (gm)	697.7

DESCRIPTION: **TAN SAND WITH SILT**

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	50.0	7.17	7.17	92.8
No. 200	0.074	592.5	84.92	92.09	7.9
Pan	-	51.9	7.44	99.53	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 9/28/12

Genesis Testing Services, Inc.

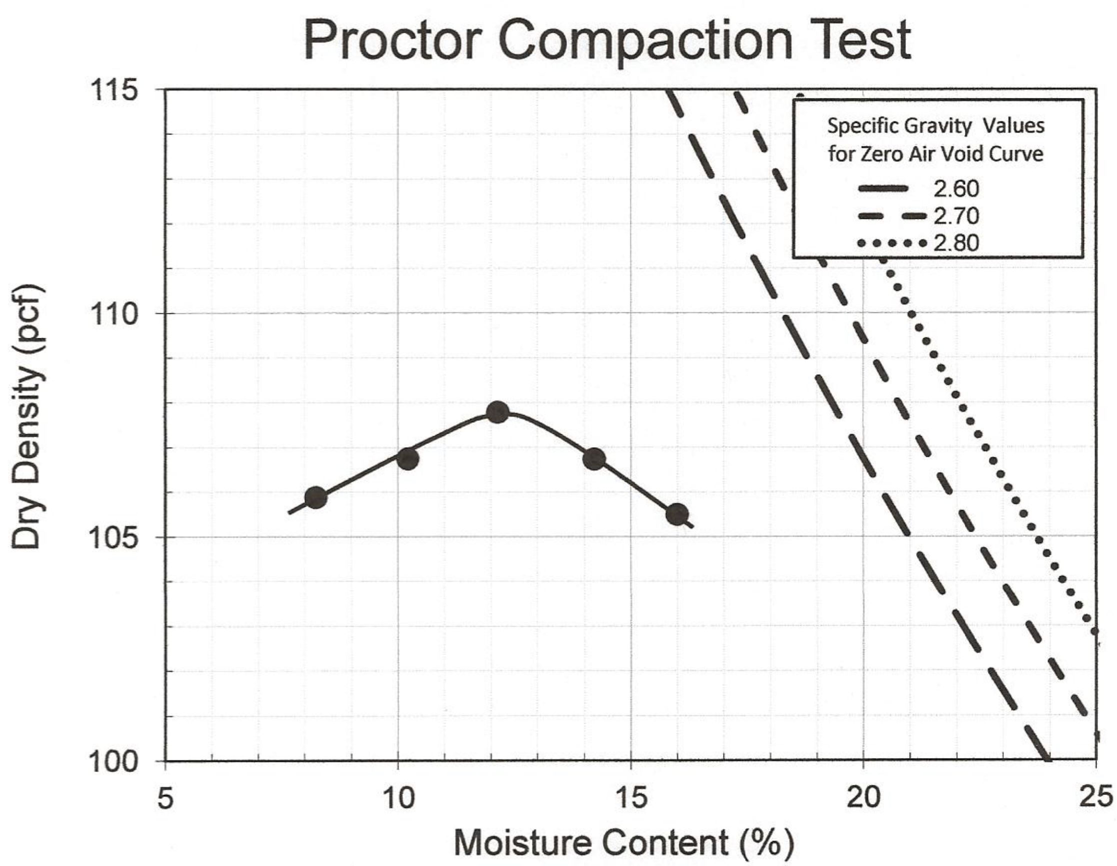
REVIEW: AAG

TRI/ENVIRONMENTAL, INC.

A Texas Research International Company

Client	WMI
Project	Vista Landfill, Cell 3
TRI Log No.	E2365-73-09
Sample Number	SF-1
Test Method	ASTM D698 - Method A
Rammer Type	Automatic

Maximum Dry Density (pcf)	107.8
Optimum Water Content (%)	12.1



Jeffrey A. Kuhn, E.I.T., Ph.D. 08/17/2012

Quality Review/Date

Tested By:Joe Vasquez

A.2 STRUCTURAL FILL AND SUBBASE FIELD DENSITY TESTS

CEC

Field Density Test Report (Drive ylinder T

Page 1 of 26

Date: 08/15/2012
Daily Report No.: 3
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactic	
3-1		E. Berm	5.35	1.16	4.19	361.3	342.8	18.5	10.2	.0341	122.9	111.5	109.5	10.0	101.8	
3-2	3-5	E Berm	5.29	1.16	4.13	360.2	335.3	24.9	14.2	.0341	121.1	106.0	109.5	10.0	96.8	*
3-3		E Berm	5.11	1.16	3.95	361.3	342.2	19.1	10.6	.0341	115.8	104.7	109.5	10.0	95.6	
3-4		E Berm	5.31	1.16	4.15	359.9	343.0	16.9	9.2	.0341	121.7	111.4	109.5	10.0	101.7	
3-5	3-2	E Berm	5.49	1.16	4.33	359.9	338.0	21.9	12.3	.0341	127.0	112.4	109.5	10.0	102.6	
3-6		E Berm	5.13	1.16	3.97	360.2	342.3	17.9	9.8	.0341	116.4	106.0	109.5	10.0	96.8	
3-7		E Berm	5.11	1.16	3.95	361.3	342.5	18.8	10.4	.0341	115.8	104.9	109.5	10.0	95.8	
3-8		E Berm	5.18	1.16	4.02	361.3	339.2	22.1	12.5	.0341	117.9	104.8	109.5	10.0	95.7	
3-9		E Berm	5.29	1.16	4.13	360.2	344.3	15.9	8.6	.0341	121.1	111.5	109.5	10.0	101.8	

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/16/2012
Daily Report No.: 4
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	Mass b Wgt. of Cylinder (lb)	Mass c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	Moisture e Dry Wgt. w/Pan (gm)	Moisture f Water Content (gm)	Moisture g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	Density i Wet Density of Soil (lb/cu. ft.)	Density j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compaction
4-1		E Berm	5.14	1.16	3.98	361.3	340.9	20.4	11.4	.0341	116.7	104.8	10.0	109.5	95.7
4-2		E. Berm	5.47	1.16	4.31	361.3	339.7	21.6	12.1	.0341	126.4	112.8	10.0	109.5	103.0
4-3		E. Berm	5.17	1.16	4.01	360.2	340.7	19.5	10.8	.0341	117.6	106.1	10.0	109.5	96.9
4-4		E. Berm	5.11	1.16	3.95	359.9	341.8	18.1	10.0	.0341	115.8	105.3	10.0	109.5	96.2
4-5		E Berm	5.27	1.16	4.11	361.3	347.4	13.9	7.7	.0341	120.5	111.9	10.0	109.5	102.2
4-6		E Berm	5.22	1.16	4.06	360.2	341.9	18.3	10.1	.0341	119.1	108.2	10.0	109.5	98.8
4-7		E Berm	5.12	1.16	3.96	360.2	342.4	17.8	9.8	.0341	116.1	105.7	10.0	109.5	96.5
4-8		E Berm	5.21	1.16	4.05	360.2	341.4	18.8	10.4	.0341	118.8	107.6	10.0	109.5	98.3
4-9		E Berm	5.25	1.16	4.09	359.9	340.6	19.3	10.7	.0341	119.9	108.3	10.0	109.5	98.9
4-10		E Berm	5.28	1.16	4.12	360.2	338.5	21.7	12.2	.0341	120.8	107.7	10.0	109.5	98.4
4-11		E Berm	5.30	1.16	4.14	360.2	339.9	20.3	11.3	.0341	121.4	109.1	10.0	109.5	99.6
4-12		E Berm	5.23	1.16	4.07	359.9	338.1	21.8	12.2	.0341	119.4	106.4	10.0	109.5	97.2

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: _______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/17/2012
Daily Report No.: 5
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density					
			a	b	c	d	e	f	g	h	i	j	k	l	m
			Wet Wgt. w/Cyl. (lb)	Wgt. of Cylinder (lb)	Wet Wgt. of Soil (lb)	Wet Wgt. w/Pan (gm)	Dry Wgt. w/Pan (gm)	Water Content (gm)	Moisture Content (%)	Vol. of Cyl. (cu. ft.)	Wet Density of Soil (lb/cu. ft.)	Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Compactio
5-1		E Berm	5.18	1.16	4.02	360.2	343.9	16.3	8.9	.0341	117.9	108.3	10.0	109.5	98.9
5.2		E Berm	5.23	1.16	4.07	359.9	338.3	21.6	12.1	.0341	119.4	106.5	10.0	109.5	97.3
5-3		E Berm	5.14	1.16	3.98	361.3	340.4	20.9	11.7	.0341	116.7	104.5	10.0	109.5	95.4
5-4		E Berm	5.16	1.16	4.0	360.2	341.8	18.4	10.1	.0341	117.3	106.5	10.0	109.5	97.3
5-5		E Berm	5.29	1.16	4.13	359.9	345.6	14.3	7.7	.0341	121.1	112.4	10.0	109.5	102.6
5-6		E Berm	5.36	1.16	4.20	359.9	337.8	22.1	12.4	.0341	123.2	109.6	10.0	109.5	100.1
5-7		E Berm	5.33	1.16	4.17	359.9	341.4	18.5	10.2	.0341	122.3	111.8	10.0	109.5	102.1
5-8		E Berm	5.31	1.16	4.15	361.3	340.8	20.5	11.4	.0341	121.7	109.2	10.0	109.5	99.7
5-9		E Berm	5.19	1.16	4.03	360.2	338.2	22.0	12.4	.0341	118.2	105.2	10.0	109.5	96.1
5-10		Floor	5.62	1.16	4.46	359.9	334.9	25.0	14.3	.0341	130.8	114.4	15.9	111.5	102.6
5-11		Floor SB	5.53	1.16	4.37	361.3	337.1	24.2	13.8	.0341	128.2	112.7	15.9	111.5	101.1
5-12		Floor SB	5.26	1.16	4.1	359.9	340.2	19.7	10.9	.0341	120.2	108.4	10.0	109.5	99.0

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

F202

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/20/2012
Daily Report No.: 6
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density			k	l	m
			a	b	c	d	e	f	g	h	i	j			
			Wet Wgt. w/Cyl. (lb)	Wgt. of Cylinder (lb)	Wet Wgt. of Soil (lb)	Wet Wgt. w/Pan (gm)	Dry Wgt. w/Pan (gm)	Water Content (gm)	Moisture Content (%)	Vol. of Cyl. (cu. ft.)	Wet Density of Soil (lb/cu. ft.)	Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Compactio
6-1		E Berm	5.39	1.16	4.23	360.2	341.4	18.8	10.4	.0341	124.0	112.3	10.0	109.5	102.6
6-2		E Berm	5.42	1.16	4.26	360.2	336.9	23.3	13.2	.0341	124.9	110.3	15.9	111.5	98.9
6-3		E Berm	5.29	1.16	4.13	361.3	339.9	21.4	12.0	.0341	121.1	108.1	10.0	109.5	98.7
6-4		E Berm	5.18	1.16	4.02	359.9	340.1	19.8	11.0	.0341	117.9	106.2	10.0	109.5	97.0
6-5	6-7	E Berm	5.24	1.16	4.08	360.2	332.2	28.0	16.3	.0341	119.6	102.8	10.0	109.5	93.9 *
6-6		E Berm	5.17	1.16	4.01	361.3	341.8	19.5	10.8	.0341	117.6	106.1	10.0	109.5	96.9
6-7	6-5	E Berm	5.21	1.16	4.05	359.9	338.2	21.7	12.2	.0341	118.8	105.9	10.0	109.5	96.7
6-8		Floor SB	5.32	1.16	4.16	360.2	339.5	20.7	11.5	.0341	122.0	109.4	10.0	109.5	99.9
6-9		Floor SB	5.33	1.16	4.17	360.2	339.8	20.4	11.4	.0341	122.3	109.8	10.0	109.5	100.3
6-10		Floor SB	5.25	1.16	4.09	359.9	338.2	21.7	12.2	.0341	119.9	106.9	10.0	109.5	97.6
6-11		Floor SB	5.22	1.16	4.06	361.3	340.6	20.7	11.5	.0341	119.1	106.8	10.0	109.5	97.5
6-12		Floor SB	5.18	1.16	4.02	361.3	342.1	19.2	10.6	.0341	117.9	106.6	10.0	109.5	97.4
6-13		Floor SB	5.42	1.16	4.26	361.3	331.1	30.2	11.2	.0341	124.9	112.3	10.0	109.5	102.6

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/21/2012
Daily Report No.: 7
Technician:

Site: Vista Landfill
Project: Cell 3
Project No.:

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	Mass b Wgt. of Cylinder (lb)	Mass c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	Moisture e Dry Wgt. w/Pan (gm)	Moisture f Water Content (gm)	Moisture g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	Density i Wet Density of Soil (lb/cu. ft.)	Density j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactic
7-1	7-5	N. Berm SB	4.95	1.16	3.79	360.2	344.5	15.7	8.5	.0341	111.1	102.4	10.0	109.5	93.5 *
7-2		N. Berm SB	5.19	1.16	4.03	359.9	336.4	23.5	13.3	.0341	118.2	104.3	12.1	107.8	96.8
7-3		N. Berm SB	5.36	1.16	4.2	361.3	341.4	19.9	11.0	.0341	123.2	111.0	10.0	109.5	101.4
7-4		N. Berm SB	5.20	1.16	4.04	359.9	340.6	19.3	10.1	.0341	118.5	107.0	12.1	107.8	99.3
7-5	7-1	N. Berm SB	5.16	1.16	4.0	361.3	340.5	20.8	11.6	.0341	117.3	105.1	10.0	109.5	96.0
7-6		Floor SB	5.31	1.16	4.15	360.2	340.6	19.6	10.9	.0341	121.7	109.7	10.0	109.5	100.2
7-7		Floor SB	5.30	1.16	4.14	360.2	339.3	20.9	11.7	.0341	121.4	108.7	10.0	109.5	99.3
7-8		Floor SB	5.29	1.16	4.13	361.3	339.9	21.4	12.0	.0341	121.1	108.1	10.0	109.5	98.7
7-9		Floor SB	5.22	1.16	4.06	359.9	342.1	17.8	9.8	.0341	119.1	108.5	10.0	109.5	99.1
7-10		E Berm	5.14	1.16	3.98	359.9	339.1	20.8	11.6	.0341	116.7	104.6	12.1	107.8	97.0
7-11		E Berm	5.20	1.16	4.04	361.3	338.8	22.5	12.7	.0341	118.5	105.1	12.1	107.8	97.5
7-12		E Berm	5.26	1.16	4.1	360.2	339.9	20.3	11.3	.0341	120.2	108.0	10.0	109.5	98.6

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e\text{-}pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

CEC

Date: 08/22/2012
Daily Report No.: 8
Technician: T. Bradford

Site: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	**Mass** a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	**Moisture** d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	**Density** h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactic
8-1		Floor SB	5.33	1.16	4.17	359.9	335.2	24.7	14.1	.0341	122.3	107.2	15.9	111.5	96.1
8-2		Floor SB	5.49	1.16	4.33	360.2	337.4	22.8	12.9	.0341	127.0	112.5	15.9	111.5	100.9
8-3		Floor SB	5.21	1.16	4.05	361.3	335.2	26.1	15.0	.0341	118.8	103.3	12.1	107.8	95.8
8-4		Floor SB	5.21	1.16	4.05	361.3	336.8	24.5	14.0	.0341	118.8	104.2	12.1	107.8	96.7
8-5		E Berm	5.22	1.16	4.06	359.9	341.2	18.7	10.3	.0341	119.1	108.0	10.0	109.5	98.6
8-6		E Berm	5.54	1.16	4.38	360.2	336.9	23.3	13.2	.0341	128.4	113.4	15.9	111.5	101.7
8-7		E Berm	5.36	1.16	4.2	361.3	335.7	25.6	14.7	.0341	123.2	107.4	15.9	111.5	96.3
8-8		E Berm	5.28	1.16	4.12	359.9	337.4	22.5	12.7	.0341	120.8	107.2	10.0	109.5	97.9
8-9		E Berm	5.17	1.16	4.01	361.3	340.7	20.6	11.5	.0341	117.6	105.5	10.0	109.5	96.3
8-10		E Berm	5.19	1.16	4.03	361.3	341.3	20.0	11.1	.0341	118.2	106.4	10.0	109.5	97.2

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e\text{-}pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CFC

Field Density Test Report (Drive ~ylinder T

Date: 08/23/2012
Daily Report No.: 9
Technician: T Bradford

Site: Vista Land fill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	Mass: b Wgt. of Cylinder (lb)	Mass: c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	Moisture: e Dry Wgt. w/Pan (gm)	Moisture: f Water Content (gm)	Moisture: g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	Density: i Wet Density of Soil (lb/cu. ft.)	Density: j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Com pactic
9-1		Pipe Removal	5.16	1.16	4.0	359.9	339.2	20.7	11.5	.0341	117.3	105.2	12.1	107.8	97.6
9-2		Pipe Removal	5.22	1.16	4.06	361.3	341.2	20.1	11.2	.0341	119.1	107.1	10.0	109.5	97.8
9-3		Pipe Removal	5.27	1.16	4.11	360.2	341.0	19.2	10.6	.0341	120.5	109.0	10.0	109.5	99.5
9-4		Pipe Removal	5.15	1.16	3.99	360.2	342.4	17.8	9.8	.0341	117.0	106.6	10.0	109.5	97.4
9-5		Pipe Removal	5.14	1.16	3.98	359.9	341.8	18.1	10.0	.0341	116.7	106.1	10.0	109.5	96.9
9-6		Pipe Remo	5.18	1.16	4.02	360.2	342.9	17.3	9.5	.0341	117.9	107.7	10.0	109.5	98.4
9-7		Floor SB	5.14	1.16	3.98	361.3	342.9	18.4	10.1	.0341	116.7	106.0	10.0	109.5	96.8
9-8		Floor SB	5.15	1.16	3.99	359.9	342.1	17.8	9.8	.0341	117.0	106.6	10.0	109.5	97.4
9-9		Floor SB	5.17	1.16	4.01	360.2	341.8	18.4	10.1	.0341	117.6	106.8	10.0	109.5	97.5
9-10		Floor SB	5.31	1.16	4.15	361.3	340.1	21.2	11.9	.0341	121.7	108.8	10.0	109.5	99.4

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CFC

Field Density Test Report (Drive Cylinder T

Date: 08/24/2012

Daily Report No.: 10

Technician: T. Bradford

Site: Vista Landfill

Project: G11-3

Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: *a* Wet Wgt. w/Cyl. (lb)	*b* Wgt. of Cylinder (lb)	*c* Wet Wgt. of Soil (lb)	Moisture: *d* Wet Wgt. w/Pan (gm)	*e* Dry Wgt. w/Pan (gm)	*f* Water Content (gm)	*g* Moisture Content (%)	Density: *h* Vol. of Cyl. (cu. ft.)	*i* Wet Density of Soil (lb/cu. ft.)	*j* Dry Density of Soil (lb/cu.ft.)	*k* Opt. Moisture Req. (%)	*l* Proctor Density (Pcf)	*m* % Compaction
10-1		Floor SB	5.22	1.16	4.06	359.9	339.8	20.1	11.7	.0341	119.1	106.6	10.0	109.5	97.4
10-2		Floor SB	5.20	1.16	4.04	360.2	342.2	18.0	9.9	.0341	118.5	107.8	10.0	109.5	98.4
10-3		Floor SB	5.19	1.16	4.03	361.3	341.8	19.5	10.8	.0341	118.2	106.7	10.0	109.5	97.4
10-4		Floor	5.29	1.16	4.13	359.9	338.4	21.5	12.0	.0341	121.1	108.1	10.0	109.5	98.7
10-5		Floor	5.27	1.16	4.11	360.2	339.6	20.6	11.5	.0341	120.5	108.1	10.0	109.5	98.7
10-6		Pipe Removal	5.18	1.16	4.02	361.3	340.0	21.3	11.9	.0341	117.9	105.4	10.0	109.5	96.3
10-7		Pipe Removal	5.16	1.16	4.0	359.9	342.8	17.1	9.3	.0341	117.3	107.3	10.0	109.5	98.0
10-8		Pipe Removal	5.44	1.16	4.28	360.2	335.8	24.4	13.9	.0341	125.5	110.2	15.9	111.5	98.8
10-9		S. Berm	5.25	1.16	4.09	360.2	340.8	19.4	10.7	.0341	119.9	108.3	10.0	109.5	98.9

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

Rev. 08/03

F202

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/25/2012
Daily Report No.: 11
Technician: T. Bradford

Site: Vista Landfill
Project: Cell - 3
Project No.: 101. 07. 08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactio
11-1		S. Berm	5.44	1.16	4.28	359.9	330.2	29.7	17.4	.0341	125.5	106.9	15.9	111.5	95.9
11-2		S. Berm	5.22	1.16	4.06	361.3	335.2	26.1	15.0	.0341	119.1	103.6	12.1	107.8	96.1

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

F202

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/28/2012
Daily Report No.: 13
Technician: T. Bradford

Site: Vista Landfill
Project: Cell - 3
Project No.: 201.07608

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactio
13-1		S. Berm	5.14	1.16	3.99	330.0	315.5	15.0	8.1	.0341	117.0	108.2	10.0	109.5	98.8
13-2		S. Berm	5.22	1.16	4.06	335.7	316.4	19.3	10.7	.0341	119.1	107.6	10.0	109.5	98.3
13-3		S. Berm	5.11	1.16	3.95	332.5	311.6	20.9	11.7	.0341	115.8	103.7	12.1	107.8	96.2
13-4		S. Berm	5.08	1.16	3.92	330.0	310.9	19.1	10.6	.0341	115.0	104.0	12.1	107.8	96.5
13-5		S. Berm	5.20	1.16	4.04	335.7	315.2	20.5	11.4	.0341	118.5	106.4	10.0	109.5	97.2
13-6		S. Berm	5.17	1.16	4.01	332.5	309.6	22.9	12.9	.0341	117.6	104.2	10.0	109.5	95.2

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

Rev. 08/03

F202

Field Density Test Report (Drive Cylinder T

CEC

Date: 08/29/2012
Daily Report No.: 14
Technician: T. Bradford

Site: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: *a* Wet Wgt. w/Cyl. (lb)	Mass: *b* Wgt. of Cylinder (lb)	Mass: *c* Wet Wgt. of Soil (lb)	Moisture: *d* Wet Wgt. w/Pan (gm)	Moisture: *e* Dry Wgt. w/Pan (gm)	Moisture: *f* Water Content (gm)	Moisture: *g* Moisture Content (%)	Density: *h* Vol. of Cyl. (cu. ft.)	Density: *i* Wet Density of Soil (lb/cu. ft.)	Density: *j* Dry Density of Soil (lb/cu.ft.)	*k* Opt. Moisture Req. (%)	*l* Proctor Density (Pcf)	*m* % Compaction
14-1		S. Berm	5.16	1.16	4.0	335.7	320.7	15.0	8.1	.0341	117.3	108.5	10.0	109.5	99.1
14-2		S. Berm	5.04	1.16	3.88	330.0	310.7	19.3	10.7	.0341	113.8	102.8	12.1	107.8	95.4
14-3		S. Berm	5.48	1.16	4.32	332.5	304.1	28.4	16.6	.0341	126.7	108.7	15.9	111.5	97.5
14-4		S. Berm	5.12	1.16	3.96	330.0	308.6	21.4	12.0	.0341	116.1	103.7	12.1	107.8	96.2
14-5		S. Berm	5.05	1.16	3.89	332.5	313.0	19.5	10.8	.0341	114.1	103.0	12.1	107.8	95.5
14-6	14-8	S. Berm	4.91	1.16	3.75	332.5	312.9	19.6	10.9	.0341	110.0	99.2	12.1	107.8	92.0 *
14-7		S. Berm	5.09	1.16	3.93	330.0	314.1	15.9	8.6	.0341	115.2	106.1	10.0	109.5	97.4
14-8	14-6	S. Berm	5.02	1.16	3.86	330.0	311.8	18.2	10.0	.0341	113.2	102.9	12.1	107.8	95.5

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Date: 08/30/2012
Daily Report No.: 15
Technician: T. Bradford

Site: Vista landfill
Project: Cell-3
Project No.: 101107.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	Mass: b Wgt. of Cylinder (lb)	Mass: c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	Moisture: e Dry Wgt. w/Pan (gm)	Moisture: f Water Content (gm)	Moisture: g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	Density: i Wet Density of Soil (lb/cu. ft.)	Density: j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactio
15-1		S. Berm	5.22	1.16	4.06	330.0	313.2	16.8	9.2	.0341	119.1	109.1	10.0	109.5	99.6
15-2		S. Berm	5.02	1.16	3.86	330.0	314.8	15.2	8.2	.0341	113.2	104.6	10.0	109.5	95.5
15-3		S. Berm	5.17	1.16	4.01	332.5	310.8	21.7	12.2	.0341	117.6	104.8	10.0	109.5	95.7
15-4		S. Berm	5.10	1.16	3.94	335.7	316.0	19.7	10.9	.0341	115.5	104.1	10.0	109.5	95.0
15-5		S. Berm	5.09	1.16	3.93	330.0	316.8	13.2	7.1	.0341	115.2	107.6	10.0	109.5	98.3
15-6		S. Berm	5.27	1.16	4.11	332.5	313.0	19.5	10.8	.0341	120.5	108.8	10.0	109.5	99.4
15-7		S. Berm	5.13	1.16	3.97	330.0	310.1	19.9	11.0	.0341	116.4	104.9	10.0	109.5	95.8

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

CEC

Field Density Test Report (Drive Cylinder T

Date: 08/31/2012
Daily Report No.: 16
Technician: T. Bradford

Site: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density			k	l	m
			a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Com pactic
16-1		E Berm	5.37	1.16	4.21	335.7	312.2	23.5	13.3	.0341	123.5	109.0	15.9	111.5	97.8
16-2		E Berm	5.22	1.16	4.06	332.5	310.4	22.1	12.4	.0341	119.1	106.0	10.0	109.5	96.8
16-3	16-4	E Berm	5.33	1.16	4.17	335.7	323.8	11.9	6.3	.0341	122.3	115.1	15.9	111.5	103.0 *
16-4	16-3	E Berm	5.34	1.16	4.18	359.0	336.3	22.7	12.9	.0341	122.6	108.6	15.9	111.5	97.4
16-5		E Berm	5.19	1.16	4.03	330.0	308.8	21.2	11.9	.0341	118.2	105.6	10.0	109.5	96.4
16-6		E Berm	5.24	1.16	4.08	332.5	312.1	20.4	11.4	.0341	119.6	107.4	15.9	111.5	96.3
16-7		E Berm	5.33	1.16	4.17	335.7	311.6	24.1	13.7	.0341	122.3	107.6	15.9	111.5	96.5
16-8		E Berm	5.35	1.16	4.19	330.0	305.0	25.0	14.3	.0341	122.9	107.5	15.9	111.5	96.4
16-9		E Berm	5.19	1.16	4.03	332.5	309.4	23.1	13.1	.0341	118.2	104.5	12.1	107.8	96.9
16-10		S. Berm	5.44	1.16	4.28	335.7	309.9	25.8	14.8	.0341	125.5	109.3	15.9	111.5	98.0
16-11		S. Berm	5.06	1.16	3.9	332.5	316.3	16.2	8.8	.0341	114.4	105.1	10.0	109.5	96.0
16-12		S. Berm	5.26	1.16	4.1	332.5	317.4	15.1	8.2	.0341	120.2	111.1	10.0	109.5	101.5
16-13		S. Berm	5.44	1.16	4.28	335.7	305.9	29.8	17.5	.0341	125.5	106.8	15.9	111.5	95.8

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

F202

CFC

Field Density Test Report (Drive Cylinder T

Page 14 of 26

Date: 09/04/2012
Daily Report No.: 17
Technician: T. Bradford

Site: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density			k	l	m
			a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Compactio
17-1		E Berm	5.02	1.16	3.86	332.5	314.2	18.3	10.1	.0341	113.2	102.8	12.1	107.8	95.4
17-2		E Berm	5.01	1.16	3.85	335.7	318.4	17.3	9.5	.0341	112.9	103.1	8.2	107.9	95.6
17-3		E Berm	5.29	1.16	4.13	335.7	312.8	22.9	12.9	.0341	121.1	107.3	10.0	109.5	98.0
17-4		E Berm	5.01	1.16	3.85	330.5	317.6	12.9	6.9	.0341	112.9	105.6	8.2	107.9	97.9
17-5		E Berm	5.45	1.16	4.29	332.5	303.0	29.5	17.3	.0341	125.8	107.2	15.9	111.5	96.1
17-6		E Berm	5.50	1.16	4.34	332.5	308.1	24.4	13.9	.0341	127.3	111.8	15.9	111.5	100.3

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

Rev. 08/03

F202

CEC

Field Density Test Report (Drive Cylinder T

Date: 09/05/2012
Daily Report No.: 18
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compaction
18-1	18-3	S. Berm	5.0	1.16	3.84	332.5	303.9	28.6	16.7	.0341	112.6	96.5	12.1	107.8	89.5 *
18-2		S. Berm	5.06	1.16	3.9	335.7	323.4	12.3	6.6	.0341	114.4	107.3	8.2	107.9	99.4
18-3	18-1	S. Berm	5.19	1.16	4.03	335.7	311.4	24.3	13.8	.0341	118.2	103.9	12.1	107.8	96.4
18-4		S. Berm	5.17	1.16	4.01	335.7	314.3	21.4	12.0	.0341	117.6	105.0	10.0	109.5	95.9
18-5		S. Berm	5.24	1.16	4.08	335.7	315.4	20.3	11.3	.0341	119.6	107.5	10.0	109.5	98.2
18-6		S. Berm	5.56	1.16	4.4	332.5	306.6	25.9	14.9	.0341	129.0	112.3	15.9	111.5	100.7
18-7		S. Berm	4.96	1.16	3.80	330.0	316.8	13.2	7.1	.0341	111.4	104.0	8.2	107.9	96.4
18-8		S. Berm	5.12	1.16	3.96	335.7	316.8	18.9	10.4	.0341	116.1	105.2	10.0	109.5	96.1
18-9		S. Berm	5.15	1.16	3.99	330.0	314.3	15.7	8.5	.0341	117.0	107.8	10.0	109.5	98.4
18-10		S. Berm	5.45	1.16	4.29	330.0	306.7	23.3	13.2	.0341	125.8	111.1	15.9	111.5	99.6
18-11		S. Berm	5.06	1.16	3.9	332.5	316.4	16.1	8.8	.0341	114.4	105.1	10.0	109.5	96.0
18-12		S. Berm	5.29	1.16	4.13	332.5	304.7	27.8	16.1	.0341	121.1	104.3	12.1	107.8	96.8
18-13		S. Berm	5.22	1.16	4.06	335.7	310.4	25.3	14.5	.0341	119.1	104.0	12.1	107.8	96.5
18-14		S. Berm	5.50	1.16	4.34	330.0	301.8	28.2	16.4	.0341	127.3	98.2	15.9	111.5	98.2

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CFC

Field Density Test Report (Drive Cylinder T

Page 16 of 26

Date: 09/06/2012
Daily Report No.: 19
Technician: T. Bradford

Site: Vista Landfill
Project: Cell - 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactio
19-1		S. Berm	5.41	1.16	4.25	335.7	310.2	25.5	14.6	.0341	124.6	108.7	15.9	111.5	97.5
19-2		S. Berm	5.11	1.16	3.95	332.5	312.3	20.2	11.2	.0341	115.8	104.1	8.2	102.9	96.5
19-3		S. Berm	5.31	1.16	4.15	330.0	309.3	20.7	11.5	.0341	121.7	109.1	10.0	109.5	99.6
19-4		S. Berm	5.49	1.16	4.33	332.5	304.8	27.7	16.1	.0341	127.0	109.4	15.9	111.5	98.1
19-5		S. Berm	5.17	1.16	4.01	330.0	311.5	18.5	10.2	.0341	117.6	106.7	10.0	109.5	97.4
19-6		S. Berm	5.43	1.16	4.27	330.0	299.9	30.1	17.7	.0341	125.2	106.4	15.9	111.5	95.4
19-7		S. Berm	5.53	1.16	4.37	332.5	302.6	29.9	17.6	.0341	128.2	109.0	15.9	111.5	97.8
19-8		S. Berm	5.49	1.16	4.33	330.0	301.1	28.9	16.9	.0341	127.0	108.6	15.9	111.5	95.8
19-9		S. Berm	5.19	1.16	4.03	332.5	311.3	21.2	11.9	.0341	118.2	105.6	10.0	109.5	96.4
19-10		S. Berm	5.47	1.16	4.31	335.7	308.1	27.6	16.0	.0341	126.4	109.0	15.9	111.5	97.8
19-11		S. Berm	5.06	1.16	3.9	335.7	320.4	15.3	8.3	.0341	114.4	105.6	10.0	109.5	96.4
19-12		S. Berm	5.45	1.16	4.29	330.0	301.7	28.3	16.5	.0341	125.8	108.0	15.9	111.5	96.9
19-13		S. Berm	5.41	1.16	4.25	335.7	311.2	24.5	14.0	.0341	124.6	109.3	15.9	111.5	98.0

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CFC

Field Density Test Report (Drive ‿ylinder T

Date: 09/07/2012

Daily Report No.: 20

Technician: T. Bradford

Site: Vista Landfill

Project: Cell - 3

Project No.: 101.07.08

Page 17 of 26

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density					
			a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Com pactic
20-1		S Berm	5.07	1.16	3.91	330.0	309.6	20.4	11.4	.0341	114.7	103.0	12.1	107.8	95.5
20-2		S Berm	5.30	1.16	4.14	332.5	314.0	18.5	10.2	.0341	121.4	110.2	10.3	109.5	100.6
20-3		S. Berm	5.0	1.16	3.84	335.7	319.7	16.0	8.7	.0341	112.6	103.6	8.2	107.9	96.0
20-4		S. Berm	5.08	1.16	3.92	335.7	316.9	18.8	10.4	.0341	115.0	104.2	8.2	107.9	96.6
20-5		S. Berm	5.18	1.16	4.02	332.5	313.9	18.6	10.3	.0341	117.9	106.9	10.0	109.5	97.6
20-6		S. Berm	5.28	1.16	4.12	330.0	304.3	25.7	14.7	.0341	120.8	105.3	12.1	107.8	97.7
20-7		S. Berm	4.99	1.16	3.83	330.0	316.8	13.2	7.1	.0341	112.3	104.9	8.2	107.9	97.2
20-8		S. Berm	5.09	1.16	3.93	332.5	315.6	16.9	9.2	.0341	115.2	105.5	8.2	107.9	97.8
20-9		S. Berm	5.16	1.16	4.0	335.7	311.4	24.3	13.8	.0341	117.3	103.1	12.1	107.8	95.6
20-10		S. Berm	5.41	1.16	4.25	335.7	313.2	26.5	15.3	.0341	124.6	108.1	15.9	111.5	96.6
20-11		S. Berm	5.33	1.16	4.17	332.5	311.7	20.8	11.6	.0341	122.3	109.6	10.0	109.5	100.1
20-12		S. Berm	5.38	1.16	4.22	330.0	304.1	25.9	14.9	.0341	123.8	107.7	15.9	111.5	96.4

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: _______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder T

Date: 09/10/2012
Daily Report No.: 22
Technician: T. Bradford

Site: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactic
22-1		S. Bem	5.12	1.16	3.96	332.5	309.9	22.6	12.7	.0341	116.1	103.0	12.1	107.8	95.5
22-2		S. Bem	5.19	1.16	4.03	335.7	316.5	19.2	10.6	.0341	118.2	106.9	10.0	109.5	97.6
22-3		S. Bem	5.11	1.16	3.95	330.0	314.0	16.0	8.7	.0341	115.8	106.5	10.0	109.5	97.3
22-4		S. Bem	5.27	1.16	4.11	332.5	309.8	22.7	12.8	.0341	120.5	106.8	12.1	107.8	99.1
22-5		S. Bem	5.42	1.16	4.26	335.7	310.0	25.7	14.7	.0341	124.9	109.4	15.9	111.5	98.1
22-6		S. Bem	5.01	1.16	3.85	330.0	313.9	16.2	8.8	.0341	112.9	103.8	8.2	107.9	96.2

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: _______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder Test)

Date: 09/11/2012
Daily Report No.: 23
Technician: T. Bradford

Site: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Com-paction
23-1		S. Berm	5.07	1.16	3.91	335.7	314.5	21.2	11.9	.0341	114.7	102.5	12.1	107.8	95.0
23-2		S. Berm	5.45	1.16	4.29	330.0	301.1	28.9	16.9	.0341	125.8	107.6	15.9	111.5	96.5
23-3		S. Berm	5.47	1.16	4.31	332.5	300.9	31.6	18.8	.0341	126.4	106.4	15.9	111.5	95.4
23-4		S. Berm SB	4.99	1.16	3.83	335.7	321.3	14.1	7.6	.0341	112.3	104.4	8.2	107.9	96.8
23-5		S. Berm SB	4.98	1.16	3.82	330.0	317.8	12.2	6.5	.0341	112.0	105.2	8.2	107.9	97.5
23-6		S. Berm SB	5.08	1.16	3.92	332.5	316.6	15.9	8.8	.0341	115.0	105.7	8.2	107.9	98.0
23-7		S. Berm	5.03	1.16	3.87	335.7	319.0	16.7	9.1	.0341	113.5	104.0	8.2	107.9	96.4
23-8		S. Berm	5.38	1.16	4.22	332.5	306.8	25.7	14.7	.0341	123.8	107.9	15.9	111.5	96.8

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e\text{-}pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

Rev. 08/03

F202/CPS

CEC

Field Density Test Report (Drive Cylinder Test)

Date: 09/12/2012

Daily Report No.: 24

Technician: T. Bradford

Site: Vista Landfill

Project: Cell-3

Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass: a Wet Wgt. w/Cyl. (lb)	Mass: b Wgt. of Cylinder (lb)	Mass: c Wet Wgt. of Soil (lb)	Moisture: d Wet Wgt. w/Pan (gm)	Moisture: e Dry Wgt. w/Pan (gm)	Moisture: f Water Content (gm)	Moisture: g Moisture Content (%)	Density: h Vol. of Cyl. (cu. ft.)	Density: i Wet Density of Soil (lb/cu. ft.)	Density: j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compaction
24-1		S. Berm	5.47	1.16	4.31	339.0	298.6	31.4	18.5	.0341	126.4	106.7	15.9	111.5	95.7
24-2		S. Berm	5.50	1.16	4.34	335.7	304.1	31.6	18.8	.0341	127.3	107.2	15.9	111.5	96.1
24-3		S. Berm	5.57	1.16	4.41	335.7	306.9	28.8	16.8	.0341	129.3	110.7	15.9	111.5	99.3
24-4		S. Berm	5.62	1.16	4.46	332.5	304.4	28.1	16.3	.0341	130.8	112.5	15.9	111.5	100.9
24-5		S. Berm	5.53	1.16	4.37	335.7	304.5	31.2	18.5	.0341	128.2	108.2	15.9	111.5	97.0
24-6		S. Berm	5.51	1.16	4.35	330.0	306.5	23.5	13.3	.0341	127.6	112.6	15.9	111.5	101.0

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CFC

Field Density Test Report (Drive Cylinder T

Date: 09/13/2012

Daily Report No.: 25

Technician: T. Bradford

Site: Vista Landfill

Project: G11-3

Project No.: 101. 07. 08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	Mass b Wgt. of Cylinder (lb)	Mass c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	Moisture e Dry Wgt. w/Pan (gm)	Moisture f Water Content (gm)	Moisture g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	Density i Wet Density of Soil (lb/cu. ft.)	Density j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactio
25-1		S. Berm	5.54	1.16	4.38	332.5	308.6	23.9	13.6	.0341	128.4	113.0	15.9	111.5	101.3
25-2		S. Berm	5.53	1.16	4.37	335.7	304.5	31.2	18.5	.0341	128.2	108.2	15.9	111.5	97.0
25-3	25-4	S. Berm	5.0	1.16	3.84	330.0	303.3	26.7	15.4	.0341	112.6	97.6	8.2	107.9	90.5 *
25-4	25-3	S. Berm	5.14	1.16	3.98	332.5	313.7	18.8	10.4	.0341	116.7	105.7	8.2	107.9	98.0
25-5		S. Berm	5.44	1.16	4.28	332.5	306.9	25.6	14.7	.0341	125.5	109.4	15.9	111.5	98.1
25-6		S Berm	5.03	1.16	3.87	335.7	322.0	13.7	7.4	.0341	113.5	105.7	8.2	107.9	98.0
25-7		S. Berm	5.29	1.16	4.13	335.7	311.1	24.6	14.0	.0341	121.1	106.2	15.9	111.5	95.2
25-8		S. Berm	5.22	1.16	4.06	330.0	305.5	24.5	14.0	.0341	119.1	105.5	12.1	107.8	97.9

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder T

Date: 09/14/2012

Daily Report No.: 26

Technician: T. Bradford

Site: Vista landfill

Project: Cell-3

Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density			k	l	m
			a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Compactic
26-1		S. Berm	5.19	1.16	4.03	330.0	305.1	24.9	14.2	.0341	118.2	103.5	12.1	107.8	96.0
26-2		S. Berm	5.17	1.16	4.01	332.5	307.8	24.7	14.1	.0341	117.6	103.1	12.1	107.8	95.6
26-3		S Berm SB	5.15	1.16	3.99	335.7	322.2	13.5	7.2	.0341	117.0	109.1	10.0	109.5	99.6
26-4		S Berm	5.36	1.16	4.2	330.0	305.9	24.1	13.7	.0341	123.2	108.4	10.0	109.5	99.0

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Field Density Test Report (Drive Cylinder T

Date: 09/17/2012

Daily Report No.: 29

Technician: T. Bradford

Site: Vista Landfill

Project: Cell - 3

Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Compactic
29-1		Floor SB	5.09	1.16	3.93	330.0	309.8	20.2	11.2	.0341	115.2	103.6	12.1	107.8	96.1
29.2		Floor SB	5.06	1.16	3.90	332.5	313.4	19.1	10.6	.0341	114.4	103.4	12.1	107.8	95.9
29.3		Floor SB	5.03	1.16	3.87	335.7	319.8	15.9	8.6	.0341	113.5	104.5	8.2	107.9	96.8

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e\text{-}pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

CEC

Date: 09/18/2012

Daily Report No.: 30

Technician: T. Bradford

Site: Vista Landfill

Project: Cell-3

Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass			Moisture				Density			k	l	m
			a	b	c	d	e	f	g	h	i	j			
			Wet Wgt. w/Cyl. (lb)	Wgt. of Cylinder (lb)	Wet Wgt. of Soil (lb)	Wet Wgt. w/Pan (gm)	Dry Wgt. w/Pan (gm)	Water Content (gm)	Moisture Content (%)	Vol. of Cyl. (cu. ft.)	Wet Density of Soil (lb/cu. ft.)	Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Com pactic
30-1		Run out	5.0	1.16	3.84	330.0	316.4	13.6	7.3	.0341	112.6	104.9	8.2	107.9	97.2
30-2		E Berm SB	5.2	1.16	4.04	335.7	320.2	15.5	8.4	.0341	118.5	109.3	10.0	109.5	99.8
30-3		Run out	5.0	1.16	3.84	332.5	321.0	11.5	6.1	.0341	112.6	106.1	8.2	107.9	98.3
30-4		E Berm SB	5.04	1.16	3.88	332.5	316.8	15.7	8.5	.0341	113.8	104.9	10.0	109.5	95.8
30-5		Run out	5.0	1.16	3.84	330.0	315.8	14.2	7.6	.0341	112.6	104.6	8.2	107.9	96.9
30-6		Run out SB	4.99	1.16	3.83	335.7	321.0	14.7	7.9	.0341	112.3	104.1	8.2	107.9	96.5
30-7		E Berm SB	5.11	1.16	3.95	335.7	320.6	15.1	8.2	.0341	115.8	107.0	10.0	109.5	97.7
30-8		E Berm SB	5.22	1.16	4.06	335.7	317.5	18.2	10.0	.0341	119.1	108.3	10.0	109.5	98.9

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a\text{-}b$ $f = d\text{-}e$ $g = f/(e\text{-}pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction _______ Min. % Moisture Req.

CEC

Date: 10/01/2012
Daily Report No.: 42
Technician: T. Bradford

Site: Vista Landfill
Project: Cell - 3
Project No.: 101.07.08

Test No.	Retest Ref. No.	Location/Description	Mass a Wet Wgt. w/Cyl. (lb)	b Wgt. of Cylinder (lb)	c Wet Wgt. of Soil (lb)	Moisture d Wet Wgt. w/Pan (gm)	e Dry Wgt. w/Pan (gm)	f Water Content (gm)	g Moisture Content (%)	Density h Vol. of Cyl. (cu. ft.)	i Wet Density of Soil (lb/cu. ft.)	j Dry Density of Soil (lb/cu.ft.)	k Opt. Moisture Req. (%)	l Proctor Density (Pcf)	m % Com pactic
42-1		Anchor Trench	5.15	1.16	3.99	332.5	309.2	23.3	13.2	.0341	117.0	103.4	12.1	107.8	95.9
42-2		Anchor Trench	5.24	1.16	4.08	335.7	320.0	15.7	8.5	.0341	119.6	110.2	10.0	109.5	100.6
42-3		Anchor Trench	5.26	1.16	4.1	330.0	306.5	23.5	13.3	.0341	120.2	106.1	15.9	111.5	95.2
42-4		Anchor Trench	5.30	1.16	4.14	332.5	308.9	23.6	13.4	.0341	121.4	107.1	15.9	111.5	96.4
42-5		Anchor Trench	5.18	1.16	4.02	335.7	316.1	19.6	10.9	.0341	117.9	106.3	10.0	109.5	97.1
42-6		Anchor Trench	5.20	1.16	4.04	330.0	307.1	22.9	12.9	.0341	118.5	105.0	12.1	107.8	97.4
42-7		Anchor Trench	5.33	1.16	4.17	332.5	306.7	25.8	14.8	.0341	122.3	106.5	15.9	111.5	95.5
42-8		Anchor Trench	5.16	1.16	4.0	335.7	322.4	13.3	7.1	.0341	117.3	109.5	10.0	109.5	100.0

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3= ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

Rev. 08/03

F202

CEC

Date: 10/02/2012

Daily Report No.: 43

Technician: T. Bradford

Site: Vista Landfill

Project: Cell-3

Project No.: 101.07.08

			Mass			Moisture				Density					
			a	b	c	d	e	f	g	h	i	j	k	l	m
Test No.	Retest Ref. No.	Location/Description	Wet Wgt. w/Cyl. (lb)	Wgt. of Cylinder (lb)	Wet Wgt. of Soil (lb)	Wet Wgt. w/Pan (gm)	Dry Wgt. w/Pan (gm)	Water Content (gm)	Moisture Content (%)	Vol. of Cyl. (cu. ft.)	Wet Density of Soil (lb/cu. ft.)	Dry Density of Soil (lb/cu.ft.)	Opt. Moisture Req. (%)	Proctor Density (Pcf)	% Compactio
43-1		Anchor Trench	5.39	1.16	4.23	335.7	311.1	24.6	14.0	.0341	124.0	108.8	15.9	111.5	97.6
43-2		Anchor Trench	5.27	1.16	4.11	330.0	303.8	26.2	15.1	.0341	120.5	104.7	12.1	107.8	97.1

h_1= ___ cu.ft. h_2= ___ cu.ft. h_3= ___ cu.ft.

pan_1 = ___ gm pan_2 = ___ gm pan_3 = ___ gm $c = a-b$ $f = d-e$ $g = f/(e-pan)$ $i = c/h$ $j = i/(1 + g/100)$ $m = j/l$

* Project Requirements: ______ Min. % Compaction ______ Min. % Moisture Req.

Rev. 08/03

CEC

Drive Cylinder Test Report

Page 1 of 221

Project: Vista landfill Cell-3
Project No.: 101.07.08
Test No.: 3-1 (L-1)
Location: N1,565,075 E 492,295
Nuclear Density Test No.: N/A
Report No.: 3

Date: 08/15/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.35 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 18.5}{(E)\ 342.8 - (C)\ 181.5}\right) \times 100$	(G) 10.2 %	___ %
Wet Density: $\frac{(B)\ 5.35 - (A)\ 4.19}{((F)\ .0341)}$	(H) 122.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 122.9}{\left[1+\left(\frac{(G)\ 10.2}{100'}\right)\right]}$	(I) 111.5 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 111.5}{(J)\ 109.5}\right) \times 100$	101.8 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 2 of 221

Project: Vista landfill Cell-3
Project No.: 101.07.08
Test No.: 3-2 (L-1)
Location: N1,564,950 E 492,270 E Berm
Nuclear Density Test No.: N/A
Report No.: 3

Date: 08/15/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 24.9}{(E)\ 335.3 - (C)\ 175.1}\right) \times 100$	(G) 14.2 %	___ %
Wet Density: $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 14.2}{100'}\right)\right]}$	(I) 106.0 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.0}{(J)\ 109.5}\right) \times 100$	96.8 %	___ %

Pass/Fail: Fail Moisture Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest = 3-5

CEC

Drive Cylinder Test Report

Page 3 of 221

Project: Cell-3
Project No.: 101.07.08
Test No.: 3-3 L-1
Location: N1,564,775 E492,275 E Berm
Nuclear Density Test No.: NA
Report No.: 3

Date: 08/15/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 19.1}{(E)\ 342.2 - (C)\ 180.9}\right) \times 100$	(G) 10.6 %	___ %
Wet Density: $\frac{(B)\ 5.11 - (A)\ 3.95}{((F)\ .0341)}$	(H) 115.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 115.8}{\left[1+\left(\frac{(G)\ 10.6}{100'}\right)\right]}$	(I) 104.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 104.7}{(J)\ 109.5}\right) \times 100$	95.6 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 4 of 221

Project: Cell-3
Project No.: 101.07.08
Test No.: 3-4 L-2
Location: N1,565,075 E492,295 E Berm
Nuclear Density Test No.: NA
Report No.: 3

Date: 08-15-2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.31 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 343.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 16.9}{(E)\ 343.0 - (C)\ 183.1}\right) \times 100$	(G) 9.2 %	___ %
Wet Density: $\frac{(B)\ 5.31 - (A)\ 4.15}{((F)\ .0341)}$	(H) 121.7 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.7}{\left[1+\left(\frac{(G)\ 9.2}{100'}\right)\right]}$	(I) 111.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 111.4}{(J)\ 109.5}\right) \times 100$	101.7 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Retest

CEC

Drive Cylinder Test Report

Page 5 of 221

Project: Vista Landfill Cell 3 | Date: 08/15/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 3-5 L-2 | Proctor Value (J): 109.5 pcf
Location: | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: | Optimum Moisture Content: 10.0 %
Report No.: | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.1 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.49 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 338.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 359.9 − (E) 21.9) / ((E) 338.0 − (C) 178.1) x 100	(G) 12.3 %	___ %
Wet Density: ((B) 5.49 − (A) 4.33) / ((F) .0341)	(H) 127.0 pcf	___ pcf
Dry Density: (H) 127.0 / [1+((G) 12.3 / 100')]	(I) 112.4 pcf	___ pcf
Compaction: ((I) 112.4 / (J) 109.5) x 100	102.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest for 3-2.

CEC

Drive Cylinder Test Report

Page 6 of 221

Project: Vista Landfill Cell-3 | Date: 08/15/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 3-6 L-2 | Proctor Value (J): 109.5 pcf
Location: N1,564,775 E1,492,275 E Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: | Optimum Moisture Content: 10.0 %
Report No.: 3 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.13 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 − (E) 17.9) / ((E) 342.3 − (C) 182.1) x 100	(G) 9.8 %	___ %
Wet Density: ((B) 5.13 − (A) 3.97) / ((F) .0341)	(H) 116.4 pcf	___ pcf
Dry Density: (H) 116.4 / [1+((G) 9.8 / 100')]	(I) 106.0 pcf	___ pcf
Compaction: ((I) 106.0 / (J) 109.5) x 100	96.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 7 of 221

Project: Vista Landfill Cell-3 | Date: 8/15/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 3-7 L-3 | Proctor Value (J): 109.5 pcf
Location: N1,565,075 E492,245 E Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 3 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 − (E) 18.8) / ((E) 342.5 − (C) 181.2) x 100	(G) 10.4 %	___ %
Wet Density: ((B) 5.11 − (A) 3.95) / ((F) .0341)	(H) 115.8 pcf	___ pcf
Dry Density: (H) 115.8 / [1+((G) 10.4 / 100')]	(I) 104.9 pcf	___ pcf
Compaction: ((I) 104.9 / (J) 109.5) x 100	95.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 8 of 221

Project: Vista Landfill Cell 3 | Date: 08/15/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 3-8 L-3 | Proctor Value (J): 109.5 pcf
Location: N1,564,775, E492,275 E Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 10.0 %
Report No.: 3 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 − (E) 22.1) / ((E) 339.2 − (C) 177.5) x 100	(G) 12.5 %	___ %
Wet Density: ((B) 5.18 − (A) 4.02) / ((F) .0341)	(H) 117.9 pcf	___ pcf
Dry Density: (H) 117.9 / [1+((G) 12.5 / 100')]	(I) 104.8 pcf	___ pcf
Compaction: ((I) 104.8 / (J) 109.5) x 100	95.7 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 9 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 3-9 L-4
Location: N1,565,075 E492,295 E Berm
Nuclear Density Test No.: N/A
Report No.: 3

Date: 08/15/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
___ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 344.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 −(E) 15.9) / ((E) 344.3 −(C) 184.1) x 100	(G) 8.6 %	___ %
Wet Density: ((B) 5.29 −(A) 4.13) / ((F) .0341)	(H) 121.1 pcf	___ pcf
Dry Density: (H) 121.1 / [1+((G) 8.6 / 100)]	(I) 111.5 pcf	___ pcf
Compaction: ((I) 111.5 / (J) 109.5) x 100	101.8 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 10 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 4-1 L-1
Location: N1,565,280 E492,280 E Berm
Nuclear Density Test No.: N A
Report No.: 4

Date: 8/16/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 −(E) 20.4) / ((E) 340.9 −(C) 179.6) x 100	(G) 11.4 %	___ %
Wet Density: ((B) 5.14 −(A) 3.98) / ((F) .0341)	(H) 116.7 pcf	___ pcf
Dry Density: (H) 116.7 / [1+((G) 11.4 / 100)]	(I) 104.8 pcf	___ pcf
Compaction: ((I) 104.8 / (J) 109.5) x 100	95.7 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 11 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 4-2 L-4
Location: N1,565,030 E492,280 E.B.
Nuclear Density Test No.: N A
Report No.: 4

Date: 08/16/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ~~___~~ lbs 1.16	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.47 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) ~~___~~ 339.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 −(E) 21.6) / ((E) 339.7 −(C) 178.4) x 100	(G) 12.1 %	___ %
Wet Density: ((B) 5.47 −(A) 4.31) / ((F) .0341)	(H) 126.4 pcf	___ pcf
Dry Density: (H) 126.4 / [1+((G) 12.1 / 100)]	(I) 112.8 pcf	___ pcf
Compaction: ((I) 112.9 / (J) 109.5) x 100	103.0 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 12 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 4-3 L-4
Location: N1,564,860 E492,280 E Berm
Nuclear Density Test No.: N A
Report No.:

Date: 08/16/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 −(E) 19.5) / ((E) 340.7 −(C) 180.5) x 100	(G) 10.8 %	___ %
Wet Density: ((B) 5.17 −(A) 4.01) / ((F) .0341)	(H) 117.6 pcf	___ pcf
Dry Density: (H) 117.6 / [1+((G) 10.8 / 100)]	(I) 106.1 pcf	___ pcf
Compaction: ((I) 106.1 / (J) 109.5) x 100	96.9 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-4 L-2	Proctor Value (J): 109.5 pcf
Location: N 1,565,200, E 492,250 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 18.1}{(E)\ 341.8 - (C)\ 181.9}\right) \times 100$	(G) 10.0 %	___ %
Wet Density $\frac{(B)\ 5.11 - (A)\ 3.95}{((F)\ .0341)}$	(H) 115.8 pcf	___ pcf
Dry Density $\frac{(H)\ 115.8}{\left[1+\left(\frac{(G)\ 10.0}{100}\right)\right]}$	(I) 105.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.3}{(J)\ 109.5}\right) \times 100$	96.2 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101 07.08	Soil Type: SF
Test No.: 4-5 L-5	Proctor Value (J): 109.5 pcf
Location: N1,565,000 E492,280 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N A	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.27 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 347.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 13.9}{(E)\ 347.4 - (C)\ 186.1}\right) \times 100$	(G) 7.7 %	___ %
Wet Density $\frac{(B)\ 5.27 - (A)\ 4.11}{((F)\ .0341)}$	(H) 120.5 pcf	___ pcf
Dry Density $\frac{(H)\ 120.5}{\left[1+\left(\frac{(G)\ 7.7}{100}\right)\right]}$	(I) 111.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 111.9}{(J)\ 109.5}\right) \times 100$	102.2 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 4-6 L-5	Proctor Value (J): 109.5 pcf
Location: N-1,564,480 E492,280 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N A	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 18.3}{(E)\ 341.9 - (C)\ 181.7}\right) \times 100$	(G) 10.1 %	___ %
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 10.1}{100}\right)\right]}$	(I) 108.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.2}{(J)\ 109.5}\right) \times 100$	98.8 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 4-7 L-6	Proctor Value (J): 109.5 pcf
Location: N-1,565,075, E 492,295 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N A	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.12 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 342.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 17.8}{(E)\ 342.4 - (C)\ 182.2}\right) \times 100$	(G) 9.8 %	___ %
Wet Density $\frac{(B)\ 5.12 - (A)\ 3.96}{((F)\ .0341)}$	(H) 116.1 pcf	___ pcf
Dry Density $\frac{(H)\ 116.1}{\left[1+\left(\frac{(G)\ 9.8}{100}\right)\right]}$	(I) 105.7 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.7}{(J)\ 109.5}\right) \times 100$	96.5 %	___ %

Pass/Fail: Pass Reviewed By: ______________ Date: ________

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-8 L-6	Proctor Value (J): 109.5 pcf
Location: N1,564,800 E 492,280 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.21 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 18.8}{(E)\ 341.4 - (C)\ 181.2}\right) \times 100$	(G) 10.4 %	%
Wet Density: $\frac{(B)\ 5.21 - (A)\ 4.05}{((F)\ .0341)}$	(H) 118.8 pcf	pcf
Dry Density: $\frac{(H)\ 118.8}{\left[1+\left(\frac{(G)\ 10.4}{100'}\right)\right]}$	(I) 107.6 pcf	pcf
Compaction: $\left(\frac{(I)\ 107.6}{(J)\ 109.5}\right) \times 100$	98.3 %	%

Pass/Fail: Pass Reviewed By: ______ Date: ______

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-9 L-7	Proctor Value (J): 109.5 pcf
Location: N1,565,075 E 492,295 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ~~5.25~~ 4.13 g 5.25 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 340.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 19.3}{(E)\ 340.6 - (C)\ 180.7}\right) \times 100$	(G) 10.7 %	%
Wet Density: $\frac{(B)\ 5.25 - (A)\ 4.09}{((F)\ .0341)}$	(H) 119.9 pcf	pcf
Dry Density: $\frac{(H)\ 119.9}{\left[1+\left(\frac{(G)\ 10.7}{100'}\right)\right]}$	(I) 108.3 pcf	pcf
Compaction: $\left(\frac{(I)\ 108.3}{(J)\ 109.5}\right) \times 100$	98.9 %	%

Pass/Fail: Pass Reviewed By: ______ Date: ______

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 8/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-10 L-7	Proctor Value (J): 109.5 pcf
Location: N1,564,775 E, 492,275 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.28 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 338.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 21.7}{(E)\ 338.5 - (C)\ 178.3}\right) \times 100$	(G) 12.2 %	%
Wet Density: $\frac{(B)\ 5.28 - (A)\ 4.12}{((F)\ .0341)}$	(H) 120.8 pcf	pcf
Dry Density: $\frac{(H)\ 120.8}{\left[1+\left(\frac{(G)\ 12.2}{100'}\right)\right]}$	(I) 107.7 pcf	pcf
Compaction: $\left(\frac{(I)\ 107.7}{(J)\ 109.5}\right) \times 100$	98.4 %	%

Pass/Fail: Pass Reviewed By: ______ Date: ______

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-11 L-8	Proctor Value (J): 109.5 pcf
Location: N1565,090 E, 492,280 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.30 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 339.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 20.3}{(E)\ 339.9 - (C)\ 179.7}\right) \times 100$	(G) 11.3 %	%
Wet Density: $\frac{(B)\ 5.30 - (A)\ 4.14}{((F)\ .0341)}$	(H) 121.4 pcf	pcf
Dry Density: $\frac{(H)\ 121.4}{\left[1+\left(\frac{(G)\ 11.3}{100'}\right)\right]}$	(I) 109.1 pcf	pcf
Compaction: $\left(\frac{(I)\ 109.1}{(J)\ 109.5}\right) \times 100$	99.6 %	%

Pass/Fail: Pass Reviewed By: ______ Date: ______

CEC — *Drive Cylinder Test Report*

Page 21 of 221

Project: Vista Landfill Cell-3	Date: 08/16/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 4-12 L-4	Proctor Value (J): 109.5 pcf
Location: N 1,565,280 E, 442,280 E-Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 4	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.23 lbs	Weight of Pan and Wet Soil (D) 359.9 g ____ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 338.1 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9\ -(E)\ 21.8}{(E)\ 338.1\ -(C)\ 178.2}\right) \times 100$	(G) 12.2 %	____ %
Wet Density $\frac{(B)\ 5.23\ -(A)\ 4.07}{((F)\ .0341)}$	(H) 119.4 pcf	____ pcf
Dry Density $\frac{(H)\ 119.4}{\left[1+\left(\frac{(G)\ 12.2}{100'}\right)\right]}$	(I) 106.4 pcf	____ pcf
Compaction $\left(\frac{(I)\ 106.4}{(J)\ 109.5}\right) \times 100$	97.2 %	____ %

Pass/Fail: PASS Reviewed By: ____ Date: ____

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 22 of 221

Project: Vista Landfill Cell-3	Date: 08/17/2012
Project No.: 101.07.05	Soil Type: SP
Test No.: 5-1 L-9	Proctor Value (J): 109.5 pcf
Location: N 1,564,400, E 442,300	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: ____ %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.18 lbs	Weight of Pan and Wet Soil (D) 360.2 g ____ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 343.9 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2\ -(E)\ 16.3}{(E)\ 343.9\ -(C)\ 183.7}\right) \times 100$	(G) 8.9 %	____ %
Wet Density $\frac{(B)\ 5.18\ -(A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	____ pcf
Dry Density $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 8.9}{100'}\right)\right]}$	(I) 108.3 pcf	____ pcf
Compaction $\left(\frac{(I)\ 108.3}{(J)\ 109.5}\right) \times 100$	98.9 %	____ %

Pass/Fail: PASS Reviewed By: ____ Date: ____

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 23 of 221

Project: Vista Landfill Cell-3	Date: 08/17/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 5-2 Lift 8	Proctor Value (J): 109.5 pcf
Location: N 1,565,025 E 442,300 E-Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.23 lbs	Weight of Pan and Wet Soil (D) 359.9 g ____ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 338.3 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9\ -(E)\ 21.6}{(E)\ 338.3\ -(C)\ 178.4}\right) \times 100$	(G) 12.1 %	____ %
Wet Density $\frac{(B)\ 5.23\ -(A)\ 4.07}{((F)\ .0341)}$	(H) 119.4 pcf	____ pcf
Dry Density $\frac{(H)\ 119.4}{\left[1+\left(\frac{(G)\ 12.1}{100'}\right)\right]}$	(I) 106.5 pcf	____ pcf
Compaction $\left(\frac{(I)\ 106.5}{(J)\ 109.5}\right) \times 100$	97.3 %	____ %

Pass/Fail: PASS Reviewed By: ____ Date: ____

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 24 of 221

Project: Vista Landfill Cell-3	Date: 08/17/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 5-3 L-5	Proctor Value (J): 109.5 pcf
Location: N 1,565,300 E 442,300. E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.14 lbs	Weight of Pan and Wet Soil (D) 361.3 g ____ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 340.4 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3\ -(E)\ 20.9}{(E)\ 340.4\ -(C)\ 179.1}\right) \times 100$	(G) 11.7 %	____ %
Wet Density $\frac{(B)\ 5.14\ -(A)\ 3.98}{((F)\ .0341)}$	(H) 116.7 pcf	____ pcf
Dry Density $\frac{(H)\ 116.7}{\left[1+\left(\frac{(G)\ 11.7}{100'}\right)\right]}$	(I) 104.5 pcf	____ pcf
Compaction $\left(\frac{(I)\ 104.5}{(J)\ 109.5}\right) \times 100$	95.4 %	____ %

Pass/Fail: PASS Reviewed By: ____ Date: ____

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 25 of 221

Project:	Vista Landfill Cell - 3	Date:	08/17/2012
Project No.:	101 07.08	Soil Type:	SF
Test No.:	5-4 L-9	Proctor Value (J):	109.5 pcf
Location:	N 1,565,025 E 492,300 E Br	✓ Standard ASTM D698	___ Modified ASTM 1557
Nuclear Density Test No.:	N/A	Optimum Moisture Content:	10.0 %
Report No.:	5	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 310.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 310.2 - (E)\ 18.4}{(E)\ 341.8 - (C)\ 181.6}\right) \times 100$	(G) 10.1 %	___ %
Wet Density $\frac{(B)\ 5.16 - (A)\ 4.0}{((F)\ .0341)}$	(H) 117.3 pcf	___ pcf
Dry Density $\frac{(H)\ 117.3}{\left[1+\left(\frac{(G)\ 10.1}{100'}\right)\right]}$	(I) 106.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.5}{(J)\ 109.5}\right) \times 100$	97.3 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 26 of 221

Project:	Vista Landfill Cell - 3	Date:	08/17/2012
Project No.:	101 07.08	Soil Type:	SF
Test No.:	5-5 L-9	Proctor Value (J):	109.5 pcf
Location:	N1564,800 E, 492,300 E Berm	✓ Standard ASTM D698	___ Modified ASTM 1557
Nuclear Density Test No.:	NA	Optimum Moisture Content:	10.0 %
Report No.:	5	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 1.59 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 345.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 14.3}{(E)\ 345.6 - (C)\ 185.7}\right) \times 100$	(G) 7.7 %	___ %
Wet Density $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 7.7}{100'}\right)\right]}$	(I) 112.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 112.4}{(J)\ 109.5}\right) \times 100$	102.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 27 of 221

Project:	Vista Landfill Cell 3	Date:	8/17/2012
Project No.:	101. 07. 08	Soil Type:	SF
Test No.:	5-6 L-5	Proctor Value (J):	109.5 pcf
Location:	N1,565,300, E492,300 E. Berm	✓ Standard ASTM D698	___ Modified ASTM 1557
Nuclear Density Test No.:	N/A	Optimum Moisture Content:	10.0 %
Report No.:	5	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.36 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 337.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 22.1}{(E)\ 337.8 - (C)\ 177.9}\right) \times 100$	(G) 12.4 %	___ %
Wet Density $\frac{(B)\ 5.36 - (A)\ 4.20}{((F)\ .0341)}$	(H) 123.2 pcf	___ pcf
Dry Density $\frac{(H)\ 123.2}{\left[1+\left(\frac{(G)\ 12.4}{100'}\right)\right]}$	(I) 109.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.6}{(J)\ 109.5}\right) \times 100$	100.1 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 28 of 221

Project:	Vista Landfill Cell 3	Date:	08/17/2012
Project No.:	101-07-08	Soil Type:	SF
Test No.:	5-7 L-10	Proctor Value (J):	109.5 pcf
Location:	N1564,800 E492,300 E. Berm	✓ Standard ASTM D698	___ Modified ASTM 1557
Nuclear Density Test No.:	N/A	Optimum Moisture Content:	10.0 %
Report No.:	5	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 18.5}{(E)\ 341.4 - (C)\ 181.5}\right) \times 100$	(G) 10.2 %	___ %
Wet Density $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	___ pcf
Dry Density $\frac{(H)\ 123.2}{\left[1+\left(\frac{(G)\ 10.2}{100'}\right)\right]}$	(I) 111.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 111.8}{(J)\ 109.5}\right) \times 100$	102.1 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 29 of 221

Project: Vista Landfill Cell-3	Date: 08/17/2012
Project No.: 101.07/08	Soil Type: SP
Test No.: S-8 L-10	Proctor Value (J): 109.5 pcf
Location: N 1,565,025 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) 1.16 g ___ lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.31 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 20.5}{(E)\ 340.8 - (C)\ 179.5}\right) \times 100$	(G) 11.4 %	%
Wet Density $\frac{(B)\ 5.31 - (A)\ 4.15}{((F)\ .0341)}$	(H) 121.7 pcf	pcf
Dry Density $\frac{(H)\ 121.7}{\left[1+\left(\frac{(G)\ 11.4}{100'}\right)\right]}$	(I) 109.2 pcf	pcf
Compaction $\left(\frac{(I)\ 109.2}{(J)\ 109.5}\right) \times 100$	99.7 %	%

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 30 of 221

Project: Vista Landfill Cell 3	Date: 08/17/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: S-9 L-6	Proctor Value (J): 109.5 pcf
Location: N 1,565,300 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 338.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 22.0}{(E)\ 338.2 - (C)\ 178.0}\right) \times 100$	(G) 12.4 %	%
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 12.4}{100'}\right)\right]}$	(I) 105.2 pcf	pcf
Compaction $\left(\frac{(I)\ 105.2}{(J)\ 109.5}\right) \times 100$	96.1 %	%

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 31 of 221

Project: Vista Landfill Cell-3	Date: 8/17/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: S-10 L-1	Proctor Value (J): 111.5 pcf
Location: N 1,564,850 E 492,200 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.62 lbs	Weight of Pan and Wet Soil (D) 357.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 334.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 357.9 - (E)\ 25.0}{(E)\ 334.9 - (C)\ 175.0}\right) \times 100$	(G) 14.3 %	%
Wet Density $\frac{(B)\ 5.62 - (A)\ 4.46}{((F)\ .0341)}$	(H) 130.8 pcf	pcf
Dry Density $\frac{(H)\ 130.8}{\left[1+\left(\frac{(G)\ 14.3}{100'}\right)\right]}$	(I) 114.4 pcf	pcf
Compaction $\left(\frac{(I)\ 114.4}{(J)\ 111.5}\right) \times 100$	102.6 %	%

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 32 of 221

Project: Vista Landfill Cell 3	Date: 08/17/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: S-11 L-1 (SB)	Proctor Value (J): 111.5 pcf
Location: N 1,564,950 E 492,200 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.53 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 337.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 24.2}{(E)\ 337.1 - (C)\ 175.8}\right) \times 100$	(G) 13.8 %	%
Wet Density $\frac{(B)\ 5.53 - (A)\ 4.37}{((F)\ .0341)}$	(H) 128.2 pcf	pcf
Dry Density $\frac{(H)\ 128.2}{\left[1+\left(\frac{(G)\ 13.8}{100'}\right)\right]}$	(I) 112.7 pcf	pcf
Compaction $\left(\frac{(I)\ 112.7}{(J)\ 111.5}\right) \times 100$	101.1 %	%

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/17/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 5-12 L-1 SB	Proctor Value (J): 109.5 pcf
Location: N1565050 E492,200 E-Ber	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 5	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.26 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 19.7}{(E)\ 340.2 - (C)\ 180.3}\right) \times 100$	(G) 10.9 %	___ %
Wet Density: $\frac{(B)\ 5.26 - (A)\ 4.1}{((F)\ .0341)}$	(H) 120.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 120.2}{\left[1+\left(\frac{(G)\ 10.9}{100'}\right)\right]}$	(I) 108.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.4}{(J)\ 109.5}\right) \times 100$	99.0 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-1 L-6	Proctor Value (J): 109.5 pcf
Location: N1,565,300 E492,300 E B	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.39 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 18.8}{(E)\ 341.4 - (C)\ 181.2}\right) \times 100$	(G) 10.4 %	___ %
Wet Density: $\frac{(B)\ 5.39 - (A)\ 4.23}{((F)\ .0341)}$	(H) 124.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 124.0}{\left[1+\left(\frac{(G)\ 10.4}{100'}\right)\right]}$	(I) 112.3 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 112.3}{(J)\ 109.5}\right) \times 100$	102.6 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 8/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-2 L-11	Proctor Value (J): 111.5 pcf
Location: N1,565,000 E492,300 E Ber	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.42 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 336.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 23.3}{(E)\ 336.9 - (C)\ 176.7}\right) \times 100$	(G) 13.2 %	___ %
Wet Density: $\frac{(B)\ 5.42 - (A)\ 4.26}{((F)\ .0341)}$	(H) 124.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 124.9}{\left[1+\left(\frac{(G)\ 13.2}{100'}\right)\right]}$	(I) 110.3 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 110.3}{(J)\ 111.5}\right) \times 100$	98.9 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-3 L-11	Proctor Value (J): 109.5 pcf
Location: N1,564,800 E492,700 E Ber	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 21.4}{(E)\ 339.9 - (C)\ 178.6}\right) \times 100$	(G) 12.0 %	___ %
Wet Density: $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 12.0}{100'}\right)\right]}$	(I) 108.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.1}{(J)\ 109.5}\right) \times 100$	98.7 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 37 of 221

Project: Vista Landfill Cell 3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-4 L-7	Proctor Value (J): 109.5 pcf
Location: N1,565,300 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 359.9 − (E) 19.8) / ((E) 340.1 − (C) 180.2) x 100	(G) 11.0 %	___ %
Wet Density: ((B) 5.18 − (A) 4.02) / ((F) .0341)	(H) 117.9 pcf	___ pcf
Dry Density: (H) 117.9 / [1+((G) 11.0 / 100)]	(I) 106.2 pcf	___ pcf
Compaction: ((I) 106.2 / (J) 109.5) x 100	97.0 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 38 of 221

Project: Vista Landfill Cell 3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-5 L-12	Proctor Value (J): 109.5 pcf
Location: N1,565,000 E492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.24 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 332.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 − (E) 28.0) / ((E) 332.2 − (C) 172.0) x 100	(G) 16.3 %	___ %
Wet Density: ((B) 5.24 − (A) 4.08) / ((F) .0341)	(H) 119.6 pcf	___ pcf
Dry Density: (H) 119.6 / [1+((G) 16.3 / 100)]	(I) 102.8 pcf	___ pcf
Compaction: ((I) 102.8 / (J) ___) x 100	93.9 %	___ %

Pass/Fail: FAIL Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest 6-7

CEC — *Drive Cylinder Test Report*

Page 39 of 221

Project: Vista Landfill Cell 3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-6 L-12	Proctor Value (J): 109.5 pcf
Location: N1,564,800 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 − (E) 19.5) / ((E) 341.8 − (C) 180.5) x 100	(G) 10.8 %	___ %
Wet Density: ((B) 5.17 − (A) 4.01) / ((F) .0341)	(H) 117.6 pcf	___ pcf
Dry Density: (H) 117.6 / [1+((G) 10.8 / 100)]	(I) 106.1 pcf	___ pcf
Compaction: ((I) 106.1 / (J) 109.5) x 100	96.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report* — Retest

Page 40 of 221

Project: Vista Landfill Cell 3	Date: 08/20/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 6-7 L-12	Proctor Value (J): 109.5 pcf
Location: N1,565,000 E492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 6	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.21 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 338.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 359.9 − (E) 21.7) / ((E) 338.2 − (C) 178.3) x 100	(G) 12.2 %	___ %
Wet Density: ((B) 5.21 − (A) 4.05) / ((F) .0341)	(H) 118.8 pcf	___ pcf
Dry Density: (H) 118.8 / [1+((G) 12.2 / 100)]	(I) 105.9 pcf	___ pcf
Compaction: ((I) 105.9 / (J) 109.5) x 100	96.7 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest for 6-5

CEC

Drive Cylinder Test Report

Page 41 of 221

Project: Vista Landfill Cll-3 | Date: 08/20/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 6-8 L-1 SB | Proctor Value (J): 109.5 pcf
Location: N-1,565,150 E 492,200 Floor | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 6 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.32 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 20.7}{(E)\ 339.5 - (C)\ 179.3}\right) \times 100$	(G) 11.5 %	%
Wet Density: $\frac{(B)\ 5.32 - (A)\ 4.16}{((F)\ .0341)}$	(H) 122.0 pcf	pcf
Dry Density: $\frac{(H)\ 122.0}{\left[1+\left(\frac{(G)\ 11.5}{100'}\right)\right]}$	(I) 109.4 pcf	pcf
Compaction: $\left(\frac{(I)\ 109.4}{(J)\ 109.5}\right) \times 100$	99.9 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 42 of 221

Project: Vista Landfill Cll-3 | Date: 08/20/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 6-9 L-1 SB | Proctor Value (J): 109.5 pcf
Location: N1,564,900 E492,150 | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 6 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 20.4}{(E)\ 339.8 - (C)\ 179.6}\right) \times 100$	(G) 11.4 %	%
Wet Density: $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	pcf
Dry Density: $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 11.4}{100'}\right)\right]}$	(I) 109.8 pcf	pcf
Compaction: $\left(\frac{(I)\ 109.8}{(J)\ 109.5}\right) \times 100$	100.3 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 43 of 221

Project: Vista Landfill Cll-3 | Date: 08/20/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 6-10 L-1 SB | Proctor Value (J): 109.5 pcf
Location: N1,565,100 E492,100 Floor | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 10.0 %
Report No.: 6 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.25 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 338.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 21.7}{(E)\ 338.2 - (C)\ 178.3}\right) \times 100$	(G) 12.2 %	%
Wet Density: $\frac{(B)\ 5.25 - (A)\ 4.09}{((F)\ .0341)}$	(H) 119.9 pcf	pcf
Dry Density: $\frac{(H)\ 119.9}{\left[1+\left(\frac{(G)\ 12.2}{100'}\right)\right]}$	(I) 106.9 pcf	pcf
Compaction: $\left(\frac{(I)\ 106.9}{(J)\ 109.5}\right) \times 100$	97.6 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 44 of 221

Project: Vista Landfill Cll-3 | Date: 08/20/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 6-11 L-1 SB | Proctor Value (J): 109.5 pcf
Location: N1,565,100 E492,190 Floor | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 10.0 %
Report No.: 6 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 20.7}{(E)\ 340.6 - (C)\ 179.3}\right) \times 100$	(G) 11.5 %	%
Wet Density: $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	pcf
Dry Density: $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 11.5}{100'}\right)\right]}$	(I) 106.8 pcf	pcf
Compaction: $\left(\frac{(I)\ 106.8}{(J)\ 109.5}\right) \times 100$	97.5 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 45 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 6-12 L-1 SB
Location: N1,565,200' E492,150 Floor
Nuclear Density Test No.: N/A
Report No.: 6

Date: 08/20/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 19.2}{(E)\ 342.1 - (C)\ 180.8}\right) \times 100$	(G) 10.6 %	___ %
Wet Density $\frac{(B)\ 5.18 - (A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	___ pcf
Dry Density $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 10.6}{100'}\right)\right]}$	(I) 106.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.6}{(J)\ 109.5}\right) \times 100$	97.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 46 of 221

Project: Vista Landfill
Project No.: 101.07.08
Test No.: 6-13 L-1 SB
Location: N1,565,250 E,492,200 Floor
Nuclear Density Test No.: N/A
Report No.: 6

Date: 08/20/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.42 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 331.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 30.2}{(E)\ 331.1 - (C)\ 169.8}\right) \times 100$	(G) 11.2 %	___ %
Wet Density $\frac{(B)\ 5.42 - (A)\ 4.26}{((F)\ .0341)}$	(H) 124.9 pcf	___ pcf
Dry Density $\frac{(H)\ 124.9}{\left[1+\left(\frac{(G)\ 11.2}{100'}\right)\right]}$	(I) 112.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 112.3}{(J)\ 109.5}\right) \times 100$	102.6 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 47 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 7-1
Location: N-1565,350 E492,250 L-1 SB
Nuclear Density Test No.: N/A
Report No.: 7

Date: 8/21/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.95 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 344.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 15.7}{(E)\ 344.5 - (C)\ 184.3}\right) \times 100$	(G) 8.5 %	___ %
Wet Density $\frac{(B)\ 4.95 - (A)\ 3.79}{((F)\ .0341)}$	(H) 111.1 pcf	___ pcf
Dry Density $\frac{(H)\ 111.1}{\left[1+\left(\frac{(G)\ 8.5}{100'}\right)\right]}$	(I) 102.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 102.4}{(J)\ 109.5}\right) \times 100$	93.5 %	___ %

Pass/Fail: FAIL Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

✱ Retest is 7.5

CEC

Drive Cylinder Test Report

Page 48 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 7.2 SB
Location: N1,565,350/E492,150 L-1
Nuclear Density Test No.: N/A
Report No.: 7-2

Date: 08/21/2012
Soil Type: SB
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 336.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 23.5}{(E)\ 336.4 - (C)\ 176.5}\right) \times 100$	(G) 13.3 %	___ %
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 13.3}{100'}\right)\right]}$	(I) 104.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.3}{(J)\ 107.8}\right) \times 100$	96.8 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 49 of 221

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-3 L-1 SB	Proctor Value (J): 109.5 pcf
Location: N1,561,350 E492,050 N.B...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.36 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 −(E) 19.9) / ((E) 341.4 −(C) 180.1) x 100	(G) 11.0 %	___ %
Wet Density: ((B) 5.36 −(A) 4.2) / ((F) .0341)	(H) 123.2 pcf	___ pcf
Dry Density: (H) 123.2 / [1+((G) 11.0 / 100')]	(I) 111.0 pcf	___ pcf
Compaction: ((I) 111.0 / (J) 109.5) x 100	101.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 50 of 221

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-4 L-1 SB	Proctor Value (J): 107.8 pcf
Location: N1,565,350 E491,950 N. ...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N4	Optimum Moisture Content: 12.1 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.20 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 359.9 −(E) 19.3) / ((E) 340.6 −(C) 180.7) x 100	(G) 10.7 %	___ %
Wet Density: ((B) 5.20 −(A) 4.04) / ((F) .0341)	(H) 118.5 pcf	___ pcf
Dry Density: (H) 118.5 / [1+((G) 10.7 / 100')]	(I) 107.0 pcf	___ pcf
Compaction: ((I) 107.0 / (J) 107.8) x 100	99.3 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Retest

Page 51 of 221

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-5 Retest 7-1 L-1	Proctor Value (J): 109.5 pcf
Location: N1565,350 E492,250 L-1 SB	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0344 ft³	Weight of Pan and Dry Soil (E) 340.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 −(E) 20.8) / ((E) 340.5 −(C) 179.2) x 100	(G) 11.6 %	___ %
Wet Density: ((B) 5.16 −(A) 4.0) / ((F) .0341)	(H) 117.3 pcf	___ pcf
Dry Density: (H) 117.3 / [1+((G) 11.6 / 100')]	(I) 105.1 pcf	___ pcf
Compaction: ((I) 105.1 / (J) 109.5) x 100	96.0 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

* Retest for 7-1

CEC — Drive Cylinder Test Report

Page 52 of 221

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-6 L-1 SB	Proctor Value (J): 109.5 pcf
Location: N1,565,250 E492,100	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N4	Optimum Moisture Content: 10 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.31 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 −(E) 19.6) / ((E) 340.6 −(C) 180.4) x 100	(G) 10.9 %	___ %
Wet Density: ((B) 5.31 −(A) 4.15) / ((F) .0341)	(H) 121.7 pcf	___ pcf
Dry Density: (H) 121.7 / [1+((G) 10.9 / 100')]	(I) 109.7 pcf	___ pcf
Compaction: ((I) 109.7 / (J) 109.5) x 100	100.2 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-7 L-1	Proctor Value (J): 109.5 pcf
Location: N1,565,250, E492,000 SB	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.14 lbs	Drying Pan Tare (C) 179.1 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.30 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 20.9}{(E)\ 339.3 - (C)\ 179.1}\right) \times 100$	(G) 11.7 %	%
Wet Density $\frac{(B)\ 5.30 - (A)\ 4.14}{((F)\ .0341)}$	(H) 121.4 pcf	pcf
Dry Density $\frac{(H)\ 121.4}{\left[1+\left(\frac{(G)\ 11.7}{100'}\right)\right]}$	(I) 108.7 pcf	pcf
Compaction $\left(\frac{(I)\ 108.7}{(J)\ 109.5}\right) \times 100$	99.3 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-8 L-1	Proctor Value (J): 109.5 pcf
Location: N1,565,300 E491,900 SB	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.13 lbs	Drying Pan Tare (C) 178.6 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 21.4}{(E)\ 339.9 - (C)\ 178.6}\right) \times 100$	(G) 12.0 %	%
Wet Density $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	pcf
Dry Density $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 12.0}{100'}\right)\right]}$	(I) 108.1 pcf	pcf
Compaction $\left(\frac{(I)\ 108.1}{(J)\ 109.5}\right) \times 100$	98.7 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 7-9 L-1	Proctor Value (J): 109.5 pcf
Location: N1,565,200 E491,900 SB	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.06 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 17.8}{(E)\ 342.1 - (C)\ 182.2}\right) \times 100$	(G) 9.8 %	%
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 9.8}{100'}\right)\right]}$	(I) 108.5 pcf	pcf
Compaction $\left(\frac{(I)\ 108.5}{(J)\ 109.5}\right) \times 100$	99.1 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/21/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 7-10 L-8	Proctor Value (J): 107.8 pcf
Location: N1,565,300 E492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 12.1 %
Report No.: 7	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 20.8}{(E)\ 339.1 - (C)\ 179.2}\right) \times 100$	(G) 11.6 %	%
Wet Density $\frac{(B)\ 5.14 - (A)\ 3.98}{((F)\ .0341)}$	(H) 116.7 pcf	pcf
Dry Density $\frac{(H)\ 116.7}{\left[1+\left(\frac{(G)\ 11.6}{100'}\right)\right]}$	(I) 104.6 pcf	pcf
Compaction $\left(\frac{(I)\ 104.6}{(J)\ 107.8}\right) \times 100$	97.0 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 7-11 L-13
Location: N1,565,000 E 492,300 E Berm
Nuclear Density Test No.: NA
Report No.: 7

Date: 08/21/2012
Soil Type: SF
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 111.3 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.20 lbs	Weight of Pan and Wet Soil (D) 361.3 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 338.8 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 22.5}{(E)\ 338.8 - (C)\ 177.5}\right) \times 100$	(G) 12.7 %	____ %
Wet Density $\frac{(B)\ 5.20 - (A)\ 4.04}{((F)\ .0341)}$	(H) 118.5 pcf	____ pcf
Dry Density $\frac{(H)\ 118.5}{\left[1+\left(\frac{(G)\ 12.7}{100'}\right)\right]}$	(I) 105.1 pcf	____ pcf
Compaction $\left(\frac{(I)\ 105.1}{(J)\ 107.8}\right) \times 100$	97.5 %	____ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 7-12 L-13
Location: N 564,800 E 492,300 E Berm
Nuclear Density Test No.: NA
Report No.: 7

Date: 08/21/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.26 lbs	Weight of Pan and Wet Soil (D) 360.2 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.9 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 20.3}{(E)\ 339.9 - (C)\ 179.7}\right) \times 100$	(G) 11.3 %	____ %
Wet Density $\frac{(B)\ 5.26 - (A)\ 4.1}{((F)\ .0341)}$	(H) 120.2 pcf	____ pcf
Dry Density $\frac{(H)\ 120.2}{\left[1+\left(\frac{(G)\ 11.3}{100'}\right)\right]}$	(I) 108.0 pcf	____ pcf
Compaction $\left(\frac{(I)\ 108.0}{(J)\ 109.5}\right) \times 100$	98.6 %	____ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-1 L-1
Location: N 1,565,200 E 492,050 SB
Nuclear Density Test No.: N/A
Report No.: 8

Date: 08/22/2012
Soil Type: SB
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 157.9 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.33 lbs	Weight of Pan and Wet Soil (D) 359.9 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.2 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 24.7}{(E)\ 335.2 - (C)\ 175.3}\right) \times 100$	(G) 14.1 %	____ %
Wet Density $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	____ pcf
Dry Density $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 14.1}{100'}\right)\right]}$	(I) 107.2 pcf	____ pcf
Compaction $\left(\frac{(I)\ 107.2}{(J)\ 111.5}\right) \times 100$	96.1 %	____ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-2 L-1
Location: N1565,000 E 492,050 SB
Nuclear Density Test No.: N/A
Report No.: 8

Date: 08/22/2012
Soil Type: SB
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.49 lbs	Weight of Pan and Wet Soil (D) 360.2 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 337.4 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 22.8}{(E)\ 337.4 - (C)\ 177.2}\right) \times 100$	(G) 12.9 %	____ %
Wet Density $\frac{(B)\ 5.49 - (A)\ 4.33}{((F)\ .0341)}$	(H) 127.0 pcf	____ pcf
Dry Density $\frac{(H)\ 127.0}{\left[1+\left(\frac{(G)\ 12.9}{100'}\right)\right]}$	(I) 112.5 pcf	____ pcf
Compaction $\left(\frac{(I)\ 112.5}{(J)\ 111.5}\right) \times 100$	100.9 %	____ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 08/22/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 8-3 SB L-1	Proctor Value (J): 107.8 pcf
Location: N 1,565,150 E 492,100 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.:	Optimum Moisture Content: 12.1 %
Report No.: 8	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.21 lbs	Weight of Pan and Wet Soil (D) 361.3 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.2 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 26.1}{(E)\ 335.2 - (C)\ 173.9}\right) \times 100$	(G) 15.0 %	____ %
Wet Density $\frac{(B)\ 5.21 - (A)\ 4.05}{((F)\ .0341)}$	(H) 118.8 pcf	____ pcf
Dry Density $\frac{(H)\ 118.8}{\left[1+\left(\frac{(G)\ 15.0}{100'}\right)\right]}$	(I) 103.3 pcf	____ pcf
Compaction $\left(\frac{(I)\ 103.3}{(J)\ 107.8}\right) \times 100$	95.8 %	____ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 08/22/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 8-4 SB L-1	Proctor Value (J): 107.8 pcf
Location: 1,565,150 E 492,000 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 8	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.21 lbs	Weight of Pan and Wet Soil (D) 361.3 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 336.8 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 361.3 - (E)\ 24.5}{(E)\ 336.8 - (C)\ 175.5}\right) \times 100$	(G) 14.0 %	____ %
Wet Density $\frac{(B)\ 5.21 - (A)\ 4.05}{((F)\ .0341)}$	(H) 118.8 pcf	____ pcf
Dry Density $\frac{(H)\ 118.8}{\left[1+\left(\frac{(G)\ 14.0}{100'}\right)\right]}$	(I) 104.2 pcf	____ pcf
Compaction $\left(\frac{(I)\ 104.2}{(J)\ 107.8}\right) \times 100$	96.7 %	____ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 8/22/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 8-5 L-9	Proctor Value (J): 109.5 pcf
Location: N 1,565,250 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 8	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.22 lbs	Weight of Pan and Wet Soil (D) 359.9 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.2 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 18.7}{(E)\ 341.2 - (C)\ 181.3}\right) \times 100$	(G) 10.3 %	____ %
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	____ pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 10.3}{100'}\right)\right]}$	(I) 108.0 pcf	____ pcf
Compaction $\left(\frac{(I)\ 108.0}{(J)\ 109.5}\right) \times 100$	98.6 %	____ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 08/22/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 8-6 L-14	Proctor Value (J): 111.5 pcf
Location: N1,565,000 E 492,300 E Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 8	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ____ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ____ lbs
Weight of Cylinder and Soil (B) ____ g 5.54 lbs	Weight of Pan and Wet Soil (D) 360.2 g ____ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 336.9 g ____ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 23.3}{(E)\ 336.9 - (C)\ 176.7}\right) \times 100$	(G) 13.2 %	____ %
Wet Density $\frac{(B)\ 5.54 - (A)\ 4.38}{((F)\ .0341)}$	(H) 128.4 pcf	____ pcf
Dry Density $\frac{(H)\ 128.4}{\left[1+\left(\frac{(G)\ 13.2}{100'}\right)\right]}$	(I) 113.4 pcf	____ pcf
Compaction $\left(\frac{(I)\ 113.4}{(J)\ 111.5}\right) \times 100$	101.7 %	____ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-7 L-14
Location: N1,564,800 E492,300 E Bern
Nuclear Density Test No.: N/A
Report No.: 8

Date: 08/22/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.36 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 25.6}{(E)\ 335.7 - (C)\ 174.4}\right) \times 100$	(G) 14.7 %	___ %
Wet Density: $\frac{(B)\ 5.36 - (A)\ 4.2}{((F)\ .0341)}$	(H) 123.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 123.2}{\left[1+\left(\frac{(G)\ 14.7}{100'}\right)\right]}$	(I) 107.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.4}{(J)\ 111.5}\right) \times 100$	96.3 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-8 L-10
Location: N1,565,250 E492,300 E Bern
Nuclear Density Test No.: N/A
Report No.: 8

Date: 08/22/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 157.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.28 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 337.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 22.5}{(E)\ 337.4 - (C)\ 177.5}\right) \times 100$	(G) 12.7 %	___ %
Wet Density: $\frac{(B)\ 5.28 - (A)\ 4.12}{((F)\ .0341)}$	(H) 120.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 120.8}{\left[1+\left(\frac{(G)\ 12.7}{100'}\right)\right]}$	(I) 107.2 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.2}{(J)\ 109.5}\right) \times 100$	97.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-9 L-15
Location: N1,565,000 E492,300 E Bern
Nuclear Density Test No.: NA
Report No.: 8

Date: 08/22/12
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 20.6}{(E)\ 340.7 - (C)\ 179.4}\right) \times 100$	(G) 11.5 %	___ %
Wet Density: $\frac{(B)\ 5.17 - (A)\ 4.01}{((F)\ .0341)}$	(H) 117.6 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.6}{\left[1+\left(\frac{(G)\ 11.5}{100'}\right)\right]}$	(I) 105.5 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.5}{(J)\ 109.5}\right) \times 100$	96.3 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 8-10 L-15
Location: N1,564,800 E492,300 E Bern
Nuclear Density Test No.: NA
Report No.: 8

Date: 8/22/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 20.0}{(E)\ 341.3 - (C)\ 180.0}\right) \times 100$	(G) 11.1 %	___ %
Wet Density: $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 11.1}{100'}\right)\right]}$	(I) 106.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.4}{(J)\ 109.5}\right) \times 100$	97.2 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 9-1 L-2
Location: N 1,564,763 E 492,025
Nuclear Density Test No.: NA
Report No.: 9

Date: 08/23/2012
Soil Type: SF
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By: T Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 359.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 359.5 −(E) 20.7 / (E) 339.2 −(C) 179.3) x 100	(G) 11.5 %	___ %
Wet Density: (B) 5.16 −(A) 4.0 / ((F) .0341)	(H) 117.3 pcf	___ pcf
Dry Density: (H) 117.3 / [1+((G) 11.5 / 100')]	(I) 105.2 pcf	___ pcf
Compaction: ((I) 105.2 / (J) 107.8) x 100	97.6 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Pipe Removal

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 9-2 L-4
Location: N 1,564,760 E 492,025
Nuclear Density Test No.: NA
Report No.: 9

Date: 08/23/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 361.3 −(E) 20.1 / (E) 341.2 −(C) 179.9) x 100	(G) 11.2 %	___ %
Wet Density: (B) 5.22 −(A) 4.06 / ((F) .0341)	(H) 119.1 pcf	___ pcf
Dry Density: (H) 119.1 / [1+((G) 11.2 / 100')]	(I) 107.1 pcf	___ pcf
Compaction: ((I) 107.1 / (J) 109.5) x 100	97.8 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Pipe Removal

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 9-3 L-6
Location: N 1,564,770 E 491,975
Nuclear Density Test No.: NA
Report No.: 9

Date: 08/23/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.27 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 −(E) 19.2 / (E) 341.0 −(C) 180.8) x 100	(G) 10.6 %	___ %
Wet Density: (B) 5.27 −(A) 4.11 / ((F) .0341)	(H) 120.5 pcf	___ pcf
Dry Density: (H) 120.5 / [1+((G) 10.6 / 100')]	(I) 109.0 pcf	___ pcf
Compaction: ((I) 109.0 / (J) 109.5) x 100	99.5 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Pipe Removal

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 9-4 L-8
Location: N 1,564,763 E 492,025
Nuclear Density Test No.: NA
Report No.: 9

Date: 8/23/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.15 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 360.2 −(E) 17.8 / (E) 342.4 −(C) 182.2) x 100	(G) 9.8 %	___ %
Wet Density: (B) 5.15 −(A) 3.99 / ((F) .0341)	(H) 117.0 pcf	___ pcf
Dry Density: (H) 117.0 / [1+((G) 9.8 / 100')]	(I) 106.6 pcf	___ pcf
Compaction: ((I) 106.6 / (J) 109.5) x 100	97.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Pipe Removal

CEC

Drive Cylinder Test Report

Page 73 of 221

Project: Vista Landfill Cell 3	Date: 08/23/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 9-5 L-10	Proctor Value (J): 109.5 pcf
Location: N 1,564,760 E 492-025	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 9	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 18.1}{(E)\ 341.8 - (C)\ 181.9}\right) \times 100$	(G) 10.0 %	___ %
Wet Density: $\frac{(B)\ 5.14 - (A)\ 3.98}{((F)\ .0341)}$	(H) 116.7 pcf	___ pcf
Dry Density: $\frac{(H)\ 116.7}{\left[1+\left(\frac{(G)\ 10.0}{100'}\right)\right]}$	(I) 106.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.1}{(J)\ 109.5}\right) \times 100$	96.9 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Pick Removal

CEC

Drive Cylinder Test Report

Page 74 of 221

Project: Vista Landfill Cell 3	Date: 08/23/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 9-6 L-11	Proctor Value (J): 109.5 pcf
Location: N 1,564,760 E 492,025	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 9	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 17.3}{(E)\ 342.9 - (C)\ 182.7}\right) \times 100$	(G) 9.5 %	___ %
Wet Density: $\frac{(B)\ 5.18 - (A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 9.5}{100'}\right)\right]}$	(I) 107.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.7}{(J)\ 109.5}\right) \times 100$	98.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 75 of 221

Project: Vista Landfill Cell 3	Date: 08/23/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 9-7 L-1 SB	Proctor Value (J): 109.5 pcf
Location: N 1,565,100 E 491-900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 9	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 18.4}{(E)\ 342.9 - (C)\ 181.6}\right) \times 100$	(G) 10.1 %	___ %
Wet Density: $\frac{(B)\ 5.14 - (A)\ 3.98}{((F)\ .0341)}$	(H) 116.7 pcf	___ pcf
Dry Density: $\frac{(H)\ 116.7}{\left[1+\left(\frac{(G)\ 10.1}{100'}\right)\right]}$	(I) 106.0 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.0}{(J)\ 109.5}\right) \times 100$	96.8 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 76 of 221

Project: Vista Landfill	Date: 08/23/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 9-8 L-1 SB	Proctor Value (J): 109.5 pcf
Location: N 1,565,050 E 492,000	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 9	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.15 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 17.8}{(E)\ 342.1 - (C)\ 182.2}\right) \times 100$	(G) 9.8 %	___ %
Wet Density: $\frac{(B)\ 5.15 - (A)\ 3.99}{((F)\ .0341)}$	(H) 117.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.0}{\left[1+\left(\frac{(G)\ 9.8}{100'}\right)\right]}$	(I) 106.6 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.6}{(J)\ 109.5}\right) \times 100$	97.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill
Project No.: 101.07.08
Test No.: 9-9 L-1
Location: N 1,565,000 E 491,900 SB
Nuclear Density Test No.:
Report No.: 9

Date: 08/23/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content ((D) 360.2 − (E) 18.4) / ((E) 341.8 − (C) 181.6) x 100	(G) 10.1 %	%
Wet Density ((B) 5.17 − (A) 4.01) / ((F) .0341)	(H) 117.6 pcf	pcf
Dry Density (H) 117.6 / [1+((G) 10.1 / 100')]	(I) 106.8 pcf	pcf
Compaction ((I) 106.8 / (J) 109.5) x 100	97.5 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 9-10 SB L-1
Location: N 1,564,950 E 492,000
Nuclear Density Test No.: N/A
Report No.: 9

Date: 08/23/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
___ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.31 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content ((D) 361.3 − (E) 21.2) / ((E) 340.1 − (C) 178.8) x 100	(G) 11.9 %	%
Wet Density ((B) 5.31 − (A) 4.15) / ((F) .0341)	(H) 121.7 pcf	pcf
Dry Density (H) 121.7 / [1+((G) 11.9 / 100')]	(I) 108.8 pcf	pcf
Compaction ((I) 108.8 / (J) 109.5) x 100	99.4 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-1 SB L-1
Location: N 1,565,050 E 492,100
Nuclear Density Test No.: N/A
Report No.: 10

Date: 8/24/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 339.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content ((D) 359.9 − (E) 20.1) / ((E) 339.8 − (C) 179.9) x 100	(G) 11.7 %	%
Wet Density ((B) 5.22 − (A) 4.06) / ((F) .0341)	(H) 119.1 pcf	pcf
Dry Density (H) 119.1 / [1+((G) 11.7 / 100')]	(I) 106.6 pcf	pcf
Compaction ((I) 106.6 / (J) 109.5) x 100	97.4 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-2 L-1 SB
Location: N 1,564,950 E 492,100
Nuclear Density Test No.: N/A
Report No.: 10

Date: 08/24/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.20 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content ((D) 360.2 − (E) 18.0) / ((E) 342.2 − (C) 182.0) x 100	(G) 9.9 %	%
Wet Density ((B) 5.20 − (A) 4.04) / ((F) .0341)	(H) 118.5 pcf	pcf
Dry Density (H) 118.5 / [1+((G) 9.9 / 100')]	(I) 107.8 pcf	pcf
Compaction ((I) 107.8 / (J) 109.5) x 100	98.4 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 81 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-3 L-1
Location: N 1,564,900 E491,900 SB
Nuclear Density Test No.: N/A
Report No.: 10
Date: 08/24/2012
Soil Type: SB
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.11 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 341.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 19.5}{(E)\ 341.8 - (C)\ 180.5}\right) \times 100$	(G) 10.8 %	___ %
Wet Density: $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 10.8}{100'}\right)\right]}$	(I) 106.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.7}{(J)\ 109.5}\right) \times 100$	97.4 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 82 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-4 L-1
Location: N-1,564,850 E492,000
Nuclear Density Test No.: N/A
Report No.: 10
Date: 08/24/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.11 lbs	Drying Pan Tare (C) 159.4 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 338.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 359.9 - (E)\ 21.5}{(E)\ 338.4 - (C)\ 178.5}\right) \times 100$	(G) 12.0 %	___ %
Wet Density: $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 12.0}{100'}\right)\right]}$	(I) 108.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.1}{(J)\ 109.5}\right) \times 100$	98.7 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 83 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-5 L-1
Location: N1,564,800 E491,900
Nuclear Density Test No.: ___
Report No.: 10
Date: 08/24/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.27 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 339.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 360.2 - (E)\ 20.6}{(E)\ 339.6 - (C)\ 179.4}\right) \times 100$	(G) 11.5 %	___ %
Wet Density: $\frac{(B)\ 5.27 - (A)\ 4.11}{((F)\ .0341)}$	(H) 120.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 120.5}{\left[1+\left(\frac{(G)\ 11.5}{100'}\right)\right]}$	(I) 108.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.1}{(J)\ 109.5}\right) \times 100$	98.7 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — Drive Cylinder Test Report

Page 84 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 10-6 L-2
Location: N1,564,750 E492,130
Nuclear Density Test No.: N/A
Report No.: 10
Date: 08/24/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 340.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 21.3}{(E)\ 340.0 - (C)\ 178.7}\right) \times 100$	(G) 11.9 %	___ %
Wet Density: $\frac{(B)\ 5.18 - (A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 11.9}{100'}\right)\right]}$	(I) 105.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.4}{(J)\ 109.5}\right) \times 100$	96.3 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Pipe removal

CEC

Drive Cylinder Test Report

Page 85 of 221

Project: Vista Landfill Cell 3	Date: 08/24/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 10-7 L-2	Proctor Value (J): 109.5 pcf
Location: N 1564,750 E 492,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.:	Optimum Moisture Content: 10.0 %
Report No.: 10	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.12 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 342.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 17.1}{(E)\ 342.8 - (C)\ 182.9}\right) \times 100$	(G) 9.3 %	%
Wet Density $\frac{(B)\ 5.16 - (A)\ 4.0}{((F)\ .0341)}$	(H) 117.3 pcf	pcf
Dry Density $\frac{(H)\ 117.3}{\left[1+\left(\frac{(G)\ 9.3}{100'}\right)\right]}$	(I) 107.3 pcf	pcf
Compaction $\left(\frac{(I)\ 107.3}{(J)\ 109.5}\right) \times 100$	98.0 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

Pipe Removal

CEC

Drive Cylinder Test Report

Page 86 of 221

Project: Vista Landfill Cell 3	Date: 08/24/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 10-8 L-3	Proctor Value (J): 111.5 pcf
Location: N 1564,750 E 492,130	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.:	Optimum Moisture Content: 15.9 %
Report No.: 10	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.44 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 24.4}{(E)\ 335.8 - (C)\ 175.6}\right) \times 100$	(G) 13.9 %	%
Wet Density $\frac{(B)\ 5.44 - (A)\ 4.28}{((F)\ .0341)}$	(H) 125.5 pcf	pcf
Dry Density $\frac{(H)\ 125.5}{\left[1+\left(\frac{(G)\ 13.9}{100'}\right)\right]}$	(I) 110.2 pcf	pcf
Compaction $\left(\frac{(I)\ 110.2}{(J)\ 111.5}\right) \times 100$	98.8 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 87 of 221

Project: Vista Landfill Cell 3	Date: 08/24/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 10-9 L-4	Proctor Value (J): 109.5 pcf
Location: N 1,564,750, E 492,000	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.:	Optimum Moisture Content: 10.0 %
Report No.: 10	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 160.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.25 lbs	Weight of Pan and Wet Soil (D) 360.2 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 340.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 360.2 - (E)\ 19.4}{(E)\ 340.8 - (C)\ 180.6}\right) \times 100$	(G) 10.7 %	%
Wet Density $\frac{(B)\ 5.25 - (A)\ 4.09}{((F)\ .0341)}$	(H) 119.9 pcf	pcf
Dry Density $\frac{(H)\ 119.9}{\left[1+\left(\frac{(G)\ 10.7}{100'}\right)\right]}$	(I) 108.3 pcf	pcf
Compaction $\left(\frac{(I)\ 108.3}{(J)\ 109.5}\right) \times 100$	98.9 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 88 of 221

Project: Vista Landfill Cell 3	Date: 08/25/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 11-1 L-5	Proctor Value (J): 111.5 pcf
Location: N 1,564,730 E 492,250	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 11	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.44 lbs	Weight of Pan and Wet Soil (D) 359.9 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 330.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.9 - (E)\ 29.7}{(E)\ 330.2 - (C)\ 170.3}\right) \times 100$	(G) 17.4 %	%
Wet Density $\frac{(B)\ 5.44 - (A)\ 4.28}{((F)\ .0341)}$	(H) 125.5 pcf	pcf
Dry Density $\frac{(H)\ 125.5}{\left[1+\left(\frac{(G)\ 17.4}{100'}\right)\right]}$	(I) 106.9 pcf	pcf
Compaction $\left(\frac{(I)\ 106.9}{(J)\ 111.5}\right) \times 100$	95.9 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 89 of 221

Project: Vista Landfill	Date: 08/25/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 11-2 L-6	Proctor Value (J): 107.8 pcf
Location: N1,564,730 E492,125	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 11	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 161.3 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 361.3 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 335.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 361.3 - (E)\ 26.1}{(E)\ 335.2 - (C)\ 173.9}\right) \times 100$	(G) 15.0 %	___ %
Wet Density: $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 15.0}{100'}\right)\right]}$	(I) 103.6 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 103.6}{(J)\ 107.8}\right) \times 100$	96.1 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 90 of 221

Project: Vista Landfill Cell 3	Date: 8/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-1 L-6	Proctor Value (J): 109.5 pcf
Location: N1,564,750 E492,250	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .034 ft³	Weight of Pan and Dry Soil (E) 315.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 15.0}{(E)\ 315.5 - (C)\ 185.5}\right) \times 100$	(G) 8.1 %	___ %
Wet Density: $\frac{(B)\ 5.14 - (A)\ 3.99}{((F)\ .0341)}$	(H) 117.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.0}{\left[1+\left(\frac{(G)\ 8.1}{100'}\right)\right]}$	(I) 108.2 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.2}{(J)\ 109.5}\right) \times 100$	98.8 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 91 of 221

Project: Vista Landfill Cell 3	Date: 08/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-2 L-2	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,500	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: ______	Optimum Moisture Content: 10.0 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 19.3}{(E)\ 316.4 - (C)\ 180.7}\right) \times 100$	(G) 10.7 %	___ %
Wet Density: $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 10.7}{100'}\right)\right]}$	(I) 107.6 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.6}{(J)\ 109.5}\right) \times 100$	98.3 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 92 of 221

Project: Vista Landfill Cell 3	Date: 08/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-3 L-3	Proctor Value (J): 107.8 pcf
Location: N1,564,800 E491,900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 20.9}{(E)\ 311.6 - (C)\ 179.1}\right) \times 100$	(G) 11.7 %	___ %
Wet Density: $\frac{(B)\ 5.11 - (A)\ 3.95}{((F)\ .0341)}$	(H) 115.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 115.8}{\left[1+\left(\frac{(G)\ 11.7}{100'}\right)\right]}$	(I) 103.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 103.7}{(J)\ 107.8}\right) \times 100$	96.2 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-4 L-3	Proctor Value (J): 107.8 pcf
Location: N1,564,600 E491,900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.08 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 19.1}{(E)\ 310.9 - (C)\ 180.9}\right) \times 100$	(G) 10.6 %	___ %
Wet Density $\frac{(B)\ 5.08 - (A)\ 3.92}{((F)\ .0341)}$	(H) 115.0 pcf	___ pcf
Dry Density $\frac{(H)\ 115.0}{\left[1+\left(\frac{(G)\ 10.6}{100'}\right)\right]}$	(I) 104.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.0}{(J)\ 107.8}\right) \times 100$	96.5 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-5 L-4	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.20 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 315.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 20.5}{(E)\ 315.2 - (C)\ 179.5}\right) \times 100$	(G) 11.4 %	___ %
Wet Density $\frac{(B)\ 5.20 - (A)\ 4.04}{((F)\ .0341)}$	(H) 118.5 pcf	___ pcf
Dry Density $\frac{(H)\ 118.5}{\left[1+\left(\frac{(G)\ 11.4}{100'}\right)\right]}$	(I) 106.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.4}{(J)\ 109.5}\right) \times 100$	97.2 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 08/28/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 13-6 L-5	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 13	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 22.9}{(E)\ 309.6 - (C)\ 177.1}\right) \times 100$	(G) 12.9 %	___ %
Wet Density $\frac{(B)\ 5.17 - (A)\ 4.01}{((F)\ .0341)}$	(H) 117.6 pcf	___ pcf
Dry Density $\frac{(H)\ 117.6}{\left[1+\left(\frac{(G)\ 12.9}{100'}\right)\right]}$	(I) 104.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.2}{(J)\ 109.5}\right) \times 100$	95.2 ~~96.3~~ TC %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 8/29/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 14-1 L-1	Proctor Value (J): 109.5 pcf
Location: N1,564,750 E491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 14	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 320.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 15.0}{(E)\ 320.7 - (C)\ 185.0}\right) \times 100$	(G) 8.1 %	___ %
Wet Density $\frac{(B)\ 5.16 - (A)\ 4.0}{((F)\ .0341)}$	(H) 117.3 pcf	___ pcf
Dry Density $\frac{(H)\ 117.3}{\left[1+\left(\frac{(G)\ 8.1}{100'}\right)\right]}$	(I) 108.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.5}{(J)\ 109.5}\right) \times 100$	99.1 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project:	Vista Landfill Cell 3	Date:	08/29/2012
Project No.:	101.07.08	Soil Type:	SP
Test No.:	14-2 L-2	Proctor Value (J):	107.8 pcf
Location:	N1,564,725 E491,950	✓ Standard ASTM D698	__ Modified ASTM 1557
Nuclear Density Test No.:	NA	Optimum Moisture Content:	12.1 %
Report No.:	14	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.04 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 310.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 19.3}{(E)\ 310.7 - (C)\ 180.7}\right) \times 100$	(G) 10.7 %	%
Wet Density: $\frac{(B)\ 5.04 - (A)\ 3.88}{((F)\ .0341)}$	(H) 113.8 pcf	pcf
Dry Density: $\frac{(H)\ 113.8}{\left[1+\left(\frac{(G)\ 10.7}{100'}\right)\right]}$	(I) 102.8 pcf	pcf
Compaction: $\left(\frac{(I)\ 102.8}{(J)\ 107.8}\right) \times 100$	95.4 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ______

CEC

Drive Cylinder Test Report

Project:	Vista Landfill Cell 3	Date:	08/29/2012
Project No.:	101.07.08	Soil Type:	SP
Test No.:	14-3 L-3	Proctor Value (J):	111.5 pcf
Location:	N1,564,725 E492,000	✓ Standard ASTM D698	__ Modified ASTM 1557
Nuclear Density Test No.:	N/A	Optimum Moisture Content:	15.9 %
Report No.:	14	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.48 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 304.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 28.4}{(E)\ 304.1 - (C)\ 171.6}\right) \times 100$	(G) 16.6 %	%
Wet Density: $\frac{(B)\ 5.48 - (A)\ 4.32}{((F)\ .0341)}$	(H) 126.7 pcf	pcf
Dry Density: $\frac{(H)\ 126.7}{\left[1+\left(\frac{(G)\ 16.6}{100'}\right)\right]}$	(I) 108.7 pcf	pcf
Compaction: $\left(\frac{(I)\ 108.7}{(J)\ 111.5}\right) \times 100$	97.5 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ______

CEC

Drive Cylinder Test Report

Project:	Vista Landfill Cell 3	Date:	08/29/2012
Project No.:	101.07.08	Soil Type:	SP
Test No.:	14-4 L-4	Proctor Value (J):	107.8 pcf
Location:	N1,564,750 E491,950	✓ Standard ASTM D698	__ Modified ASTM 1557
Nuclear Density Test No.:	NA	Optimum Moisture Content:	12.1 %
Report No.:	14	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.12 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 308.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 21.4}{(E)\ 308.6 - (C)\ 178.6}\right) \times 100$	(G) 12.0 %	%
Wet Density: $\frac{(B)\ 5.12 - (A)\ 3.96}{((F)\ .0341)}$	(H) 116.1 pcf	pcf
Dry Density: $\frac{(H)\ 116.1}{\left[1+\left(\frac{(G)\ 12.0}{100'}\right)\right]}$	(I) 103.7 pcf	pcf
Compaction: $\left(\frac{(I)\ 103.7}{(J)\ 107.8}\right) \times 100$	96.2 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ______

CEC

Drive Cylinder Test Report

Project:	Vista Landfill Cell 3	Date:	08/29/2012
Project No.:	101.07.08	Soil Type:	SP
Test No.:	14-5 L-5	Proctor Value (J):	107.8 pcf
Location:	N1,564,725 E492,000	✓ Standard ASTM D698	__ Modified ASTM 1557
Nuclear Density Test No.:	NA	Optimum Moisture Content:	12.1 %
Report No.:	14	Sampled By:	T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.05 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 313.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 19.5}{(E)\ 313.0 - (C)\ 180.5}\right) \times 100$	(G) 10.8 %	%
Wet Density: $\frac{(B)\ 5.05 - (A)\ 3.89}{((F)\ .0341)}$	(H) 114.1 pcf	pcf
Dry Density: $\frac{(H)\ 114.1}{\left[1+\left(\frac{(G)\ 10.8}{100'}\right)\right]}$	(I) 103.0 pcf	pcf
Compaction: $\left(\frac{(I)\ 103.0}{(J)\ 107.8}\right) \times 100$	95.5 %	%

Pass/Fail: PASS Reviewed By: ________ Date: ______

CEC

Drive Cylinder Test Report

Page 101 of 221

Project: Vista Landfill Cell 3	Date: 08/29/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 14-6 L-6	Proctor Value (J): 107.8 pcf
Location: N1,514,750 E491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 12.1 %
Report No.: 14	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.91 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 312.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 19.6}{(E)\ 312.9 - (C)\ 180.4}\right) \times 100$	(G) 10.9 %	___ %
Wet Density $\frac{(B)\ 4.91 - (A)\ 3.75}{((F)\ .0341)}$	(H) 110.0 pcf	___ pcf
Dry Density $\frac{(H)\ 110.0}{\left[1+\left(\frac{(G)\ 10.9}{100'}\right)\right]}$	(I) 99.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 99.2}{(J)\ 107.8}\right) \times 100$	92.0 %	___ %

Pass/Fail: Fail Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest is 14-8

CEC

Drive Cylinder Test Report

Page 102 of 221

Project: Vista Landfill Cell 3	Date: 8/29/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 14-7 L-7	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: ___	Optimum Moisture Content: 10.0 %
Report No.: 14	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.09 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 314.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 15.9}{(E)\ 314.1 - (C)\ 184.9}\right) \times 100$	(G) 8.6 %	___ %
Wet Density $\frac{(B)\ 5.09 - (A)\ 3.93}{((F)\ .0341)}$	(H) 115.2 pcf	___ pcf
Dry Density $\frac{(H)\ 115.2}{\left[1+\left(\frac{(G)\ 8.6}{100'}\right)\right]}$	(I) 106.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.1}{(J)\ 109.5}\right) \times 100$	97.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Retest

CEC

Drive Cylinder Test Report

Page 103 of 221

Project: Vista Landfill Cell 3	Date: 08/29/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 14-8 L-6	Proctor Value (J): 107.8 pcf
Location: N1,564,750 E491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 14	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.02 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 18.2}{(E)\ 311.8 - (C)\ 181.8}\right) \times 100$	(G) 10.0 %	___ %
Wet Density $\frac{(B)\ 5.02 - (A)\ 3.86}{((F)\ .0341)}$	(H) 113.2 pcf	___ pcf
Dry Density $\frac{(H)\ 113.2}{\left[1+\left(\frac{(G)\ 10.0}{100'}\right)\right]}$	(I) 102.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 102.9}{(J)\ 107.8}\right) \times 100$	95.5 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

* Retest for 14-6

CEC

Drive Cylinder Test Report

Page 104 of 221

Project: Vista Landfill Cell 3	Date: 8/30/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 15-1 L-6	Proctor Value (J): 109.5 pcf
Location: N1,514,730 E492,250 S.Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 10.0 %
Report No.: 15	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 313.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 16.8}{(E)\ 313.2 - (C)\ 183.2}\right) \times 100$	(G) 9.2 %	___ %
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 9.2}{100'}\right)\right]}$	(I) 109.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.1}{(J)\ 109.5}\right) \times 100$	99.6 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 08/30/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 15-2 L-6	Proctor Value (J): 109.5 pcf
Location: N 1,564,730 E 492,125 S.Berm	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.:	Optimum Moisture Content: 10.0 %
Report No.: 15	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.02 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 314.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 15.2}{(E)\ 314.8 - (C)\ 184.8}\right) \times 100$	(G) 8.2 %	___ %
Wet Density $\frac{(B)\ 5.02 - (A)\ 3.86}{((F)\ .0341)}$	(H) 113.2 pcf	___ pcf
Dry Density $\frac{(H)\ 113.2}{\left[1+\left(\frac{(G)\ 8.2}{100'}\right)\right]}$	(I) 104.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.6}{(J)\ 109.5}\right) \times 100$	95.5 %	___ %

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 08/30/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 15-3 L-6	Proctor Value (J): 109.5 pcf
Location: N 1,564,725 E 492,000 S.Berm	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 15	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 21.7}{(E)\ 310.8 - (C)\ 178.3}\right) \times 100$	(G) 12.2 %	___ %
Wet Density $\frac{(B)\ 5.17 - (A)\ 4.01}{((F)\ .0341)}$	(H) 117.6 pcf	___ pcf
Dry Density $\frac{(H)\ 117.6}{\left[1+\left(\frac{(G)\ 12.2}{100'}\right)\right]}$	(I) 104.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.8}{(J)\ 109.5}\right) \times 100$	95.7 %	___ %

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 08/30/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 15-4 L-6	Proctor Value (J): 109.5 pcf
Location: N 1,564,600 E 491,900 S.Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 15	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.10 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 19.7}{(E)\ 316.0 - (C)\ 180.3}\right) \times 100$	(G) 10.9 %	___ %
Wet Density $\frac{(B)\ 5.10 - (A)\ 3.94}{((F)\ .0341)}$	(H) 115.5 pcf	___ pcf
Dry Density $\frac{(H)\ 115.5}{\left[1+\left(\frac{(G)\ 10.9}{100'}\right)\right]}$	(I) 104.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.1}{(J)\ 109.5}\right) \times 100$	95.0 %	___ %

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 08/30/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 15-5 L-7	Proctor Value (J): 109.5 pcf
Location: N 1,564,730 E 492,250 S.Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 15	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.09 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 13.2}{(E)\ 316.8 - (C)\ 186.8}\right) \times 100$	(G) 7.1 %	___ %
Wet Density $\frac{(B)\ 5.09 - (A)\ 3.93}{((F)\ .0341)}$	(H) 115.2 pcf	___ pcf
Dry Density $\frac{(H)\ 115.2}{\left[1+\left(\frac{(G)\ 7.1}{100'}\right)\right]}$	(I) 107.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.6}{(J)\ 109.5}\right) \times 100$	98.3 %	___ %

Pass/Fail: Pass Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3 | Date: 08/30/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 15-6 L-7 | Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,000 S.Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 15 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.27 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 313.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 19.5}{(E)\ 313.0 - (C)\ 180.5}\right) \times 100$	(G) 10.8 %	___ %
Wet Density $\frac{(B)\ 5.27 - (A)\ 4.11}{((F)\ .0341)}$	(H) 120.5 pcf	___ pcf
Dry Density $\frac{(H)\ 120.5}{\left[1+\left(\frac{(G)\ 10.8}{100'}\right)\right]}$	(I) 108.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.8}{(J)\ 109.5}\right) \times 100$	99.4 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 08/30/2011
Project No.: 101.07.08 | Soil Type: SF
Test No.: 15-7 L-7 | Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900 S Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 15 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.13 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 19.9}{(E)\ 310.1 - (C)\ 180.1}\right) \times 100$	(G) 11.0 %	___ %
Wet Density $\frac{(B)\ 5.13 - (A)\ 3.97}{((F)\ .0341)}$	(H) 116.4 pcf	___ pcf
Dry Density $\frac{(H)\ 116.4}{\left[1+\left(\frac{(G)\ 11.0}{100'}\right)\right]}$	(I) 104.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.9}{(J)\ 109.5}\right) \times 100$	95.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3 | Date: 08/31/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 16-1 L-16 | Proctor Value (J): 111.5 pcf
Location: N1,564,850 E492,300 E Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 15.9 %
Report No.: 16 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.37 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 312.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 23.5}{(E)\ 312.2 - (C)\ 176.5}\right) \times 100$	(G) 13.3 %	___ %
Wet Density $\frac{(B)\ 5.37 - (A)\ 4.21}{((F)\ .0341)}$	(H) 123.5 pcf	___ pcf
Dry Density $\frac{(H)\ 123.5}{\left[1+\left(\frac{(G)\ 13.3}{100'}\right)\right]}$	(I) 109.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.0}{(J)\ 111.5}\right) \times 100$	97.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 08/31/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 16-2 L-16 | Proctor Value (J): 109.5 pcf
Location: N1,565,050 E492,300 E Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA | Optimum Moisture Content: 10.0 %
Report No.: 16 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 22.1}{(E)\ 310.4 - (C)\ 177.9}\right) \times 100$	(G) 12.4 %	___ %
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 12.4}{100'}\right)\right]}$	(I) 106.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.0}{(J)\ 109.5}\right) \times 100$	96.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 16-3 L-11
Location: N 1,565,250 E 492,300
Nuclear Density Test No.: N/A
Report No.: 16

Date: 08/31/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ~~4.16~~ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 323.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 11.9}{(E)\ 323.8 - (C)\ 188.1}\right) \times 100$	(G) 6.3 %	___ %
Wet Density $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	___ pcf
Dry Density $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 6.3}{100'}\right)\right]}$	(I) 115.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 115.1}{(J)\ 111.5}\right) \times 100$	103.6 %	___ %

Pass/Fail: FAIL Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

* Retest is 16-4

CEC — *Drive Cylinder Test Report*

Retest for 16-3

Project: Vista Landfill
Project No.: 101.07.08
Test No.: 16-4 L-11 Retest
Location: N 1,565,250 E 492,300
Nuclear Density Test No.: N/A
Report No.: 16

Date: 08/31/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 159.9 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.34 lbs	Weight of Pan and Wet Soil (D) 359.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 336.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 359.0 - (E)\ 22.7}{(E)\ 336.3 - (C)\ 176.4}\right) \times 100$	(G) 12.9 %	___ %
Wet Density $\frac{(B)\ 5.34 - (A)\ 4.18}{((F)\ .0341)}$	(H) 122.6 pcf	___ pcf
Dry Density $\frac{(H)\ 122.6}{\left[1+\left(\frac{(G)\ 12.9}{100'}\right)\right]}$	(I) 108.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.6}{(J)\ 111.5}\right) \times 100$	97.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

* Retest for 16-3

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill
Project No.: 101.07.08
Test No.: 16-5 L-17
Location: N 1,564,850 E 492,300
Nuclear Density Test No.: N/A
Report No.: 16

Date: 08/31/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
___ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 16.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 308.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 21.2}{(E)\ 308.8 - (C)\ 178.8}\right) \times 100$	(G) 11.9 %	___ %
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 11.9}{100'}\right)\right]}$	(I) 105.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.6}{(J)\ 109.5}\right) \times 100$	96.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 16-6 L-17
Location: N 1,565,050 E 492,300
Nuclear Density Test No.: N/A
Report No.: 16

Date: 08/31/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.24 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 312.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 20.4}{(E)\ 312.1 - (C)\ 179.6}\right) \times 100$	(G) 11.4 %	___ %
Wet Density $\frac{(B)\ 5.24 - (A)\ 4.08}{((F)\ .0341)}$	(H) 119.6 pcf	___ pcf
Dry Density $\frac{(H)\ 119.6}{\left[1+\left(\frac{(G)\ 11.4}{100'}\right)\right]}$	(I) 107.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.4}{(J)\ 111.5}\right) \times 100$	96.3 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 117 of 221

Project: Vista Landfill Cell 3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 16-7 L-12	Proctor Value (J): 111.5 pcf
Location: N1,565,250 E 442,300	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 24.1}{(E)\ 311.6 - (C)\ 175.9}\right) \times 100$	(G) 13.7 %	___ %
Wet Density $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	___ pcf
Dry Density $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 13.7}{100'}\right)\right]}$	(I) 107.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.6}{(J)\ 111.5}\right) \times 100$	96.5 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 118 of 221

Project: Vista Landfill Cell 3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 16-8 L-18	Proctor Value (J): 111.5 pcf
Location: N1,564,850 E 442,700 E-Bu..	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.35 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 305.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 25.0}{(E)\ 305.0 - (C)\ 175.0}\right) \times 100$	(G) 14.3 %	___ %
Wet Density $\frac{(B)\ 5.35 - (A)\ 4.19}{((F)\ .0341)}$	(H) 122.9 pcf	___ pcf
Dry Density $\frac{(H)\ 122.9}{\left[1+\left(\frac{(G)\ 14.3}{100'}\right)\right]}$	(I) 107.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.5}{(J)\ 111.5}\right) \times 100$	96.4 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 119 of 221

Project: Vista Landfill Cell 3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 16-9 L-18	Proctor Value (J): 107.8 pcf
Location: N1,565,050 E 442,300	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 23.1}{(E)\ 309.4 - (C)\ 176.9}\right) \times 100$	(G) 13.1 %	___ %
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 13.1}{100'}\right)\right]}$	(I) 104.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.5}{(J)\ 107.8}\right) \times 100$	96.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 120 of 221

Project: Vista Landfill Cell 3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 16-10 L-8	Proctor Value (J): 111.5 pcf
Location: N1,564,730 E 442,250 S.Ber..	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.44 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 25.8}{(E)\ 309.9 - (C)\ 174.2}\right) \times 100$	(G) 14.8 %	___ %
Wet Density $\frac{(B)\ 5.44 - (A)\ 4.28}{((F)\ .0341)}$	(H) 125.5 pcf	___ pcf
Dry Density $\frac{(H)\ 125.5}{\left[1+\left(\frac{(G)\ 14.8}{100'}\right)\right]}$	(I) 109.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.3}{(J)\ 111.5}\right) \times 100$	98.0 %	___ %

Pass/Fail: Poss Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 121 of 221

Project: Vista Landfill Cell-3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 16-11 L-8	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,030	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.10 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.06 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 16.2}{(E)\ 316.3 - (C)\ 183.8}\right) \times 100$	(G) 8.8 %	___ %
Wet Density: $\frac{(B)\ 5.06 - (A)\ 3.9}{((F)\ .0341)}$	(H) 114.4 pcf	___ pcf
Dry Density: $\frac{(H)\ 114.4}{\left[1+\left(\frac{(G)\ 8.8}{100}\right)\right]}$	(I) 105.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.1}{(J)\ 109.5}\right) \times 100$	96.0 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 122 of 221

Project: Vista Landfill Cell-3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 16-12 L-8	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E491,900 S. Bo	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.26 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 317.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 15.1}{(E)\ 317.4 - (C)\ 184.9}\right) \times 100$	(G) 8.2 %	___ %
Wet Density: $\frac{(B)\ 5.26 - (A)\ 4.1}{((F)\ .0341)}$	(H) 120.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 120.2}{\left[1+\left(\frac{(G)\ 8.2}{100}\right)\right]}$	(I) 111.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 111.1}{(J)\ 109.5}\right) \times 100$	101.5 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 123 of 221

Project: Vista Landfill Cell-3	Date: 08/31/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 16-13	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,900 E. Bo	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 16	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.44 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 305.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 29.8}{(E)\ 305.9 - (C)\ 170.2}\right) \times 100$	(G) 17.5 %	___ %
Wet Density: $\frac{(B)\ 5.44 - (A)\ 4.28}{((F)\ .0341)}$	(H) 125.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 125.5}{\left[1+\left(\frac{(G)\ 17.5}{100}\right)\right]}$	(I) 106.8 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.8}{(J)\ 111.5}\right) \times 100$	95.8 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 124 of 221

Project: Vista Landfill Cell 3	Date: 09/04/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 17-1 L-19	Proctor Value (J): 107.8 pcf
Location: N1,564,800 E492,300 E.B.	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 17	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.02 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 314.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 18.3}{(E)\ 314.2 - (C)\ 181.7}\right) \times 100$	(G) 10.1 %	___ %
Wet Density: $\frac{(B)\ 5.02 - (A)\ 3.86}{((F)\ .0341)}$	(H) 113.2 pcf	___ pcf
Dry Density: $\frac{(H)\ 113.2}{\left[1+\left(\frac{(G)\ 10.1}{100}\right)\right]}$	(I) 102.8 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 102.8}{(J)\ 107.8}\right) \times 100$	95.4 %	___ %

Pass/Fail: PASS Reviewed By: ________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 125 of 221

Project: Vista Landfill Cell-3	Date: 09/04/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 17-2 L-19	Proctor Value (J): 107.9 pcf
Location: N1,565,000 E 492,300 E Bm	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 17	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.01 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 318.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 17.3}{(E)\ 318.4 - (C)\ 182.7}\right) \times 100$	(G) 9.5 %	___ %
Wet Density: $\frac{(B)\ 5.01 - (A)\ 3.85}{((F)\ .0341)}$	(H) 112.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.9}{\left[1+\left(\frac{(G)\ 9.5}{100'}\right)\right]}$	(I) 103.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 103.1}{(J)\ 107.9}\right) \times 100$	95.6 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 126 of 221

Project: Vista Landfill Cell-3	Date: 09/04/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 17-3 L-13	Proctor Value (J): 109.5 pcf
Location: N1565,250 E 492,300 E Bm	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 17	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 312.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 22.9}{(E)\ 312.8 - (C)\ 177.1}\right) \times 100$	(G) 12.9 %	___ %
Wet Density: $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 12.9}{100'}\right)\right]}$	(I) 107.3 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.3}{(J)\ 109.5}\right) \times 100$	98.0 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 127 of 221

Project: Vista Landfill Cell-3	Date: 09/04/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 17-4 L-20	Proctor Value (J): 107.9 pcf
Location: N1,564,800 E492,300 E Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 8.2 %
Report No.: 17	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.01 lbs	Weight of Pan and Wet Soil (D) 330.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 317.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.5 - (E)\ 12.9}{(E)\ 317.6 - (C)\ 187.1}\right) \times 100$	(G) 6.9 %	___ %
Wet Density: $\frac{(B)\ 5.01 - (A)\ 3.85}{((F)\ .0341)}$	(H) 112.9 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.9}{\left[1+\left(\frac{(G)\ 6.9}{100'}\right)\right]}$	(I) 105.6 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.6}{(J)\ 107.9}\right) \times 100$	97.9 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 128 of 221

Project: Vista Landfill Cell 3	Date: 09/04/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 17-5 L-20	Proctor Value (J): 111.5 pcf
Location: N1,565,000 E 492,330 E Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 17	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.45 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 303.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 29.5}{(E)\ 303.0 - (C)\ 170.5}\right) \times 100$	(G) 17.3 %	___ %
Wet Density: $\frac{(B)\ 5.45 - (A)\ 4.29}{((F)\ .0341)}$	(H) 125.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 125.8}{\left[1+\left(\frac{(G)\ 17.3}{100'}\right)\right]}$	(I) 107.2 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.2}{(J)\ 111.5}\right) \times 100$	96.1 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 129 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 17-6 L-14
Location: N1,565,250 E492,300 E Bm
Nuclear Density Test No.: N/A
Report No.: 17

Date: 09/04/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.50 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 308.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 24.4}{(E)\ 308.1 - (C)\ 175.6}\right) \times 100$	(G) 13.9 %	___ %
Wet Density $\frac{(B)\ 5.50 - (A)\ 4.34}{((F)\ .0341)}$	(H) 127.3 pcf	___ pcf
Dry Density $\frac{(H)\ 127.3}{\left[1+\left(\frac{(G)\ 13.9}{100'}\right)\right]}$	(I) 111.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 111.8}{(J)\ 111.5}\right) \times 100$	100.3 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 130 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 18-1 L-9
Location: N1,564,725 E492,200
Nuclear Density Test No.: N/A
Report No.: 18

Date: 09/05/2012
Soil Type: SF
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By:

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 303.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 28.6}{(E)\ 303.9 - (C)\ 171.4}\right) \times 100$	(G) 16.7 %	___ %
Wet Density $\frac{(B)\ 5.0 - (A)\ 3.84}{((F)\ .0341)}$	(H) 112.6 pcf	___ pcf
Dry Density $\frac{(H)\ 112.6}{\left[1+\left(\frac{(G)\ 16.7}{100'}\right)\right]}$	(I) 96.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 96.5}{(J)\ 107.8}\right) \times 100$	89.5 %	___ %

Pass/Fail: FAIL Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Retest is 18-3

CEC — *Drive Cylinder Test Report*

Page 131 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 18-2 L-9
Location: N1,564,725 E492,050 S.Bm
Nuclear Density Test No.: N/A
Report No.: 18

Date: 09/05/2012
Soil Type: SF
Proctor Value (J): 107.9 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 8.2 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.06 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 323.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 12.3}{(E)\ 323.4 - (C)\ 187.7}\right) \times 100$	(G) 6.6 %	___ %
Wet Density $\frac{(B)\ 5.06 - (A)\ 3.9}{((F)\ .0341)}$	(H) 114.4 pcf	___ pcf
Dry Density $\frac{(H)\ 114.4}{\left[1+\left(\frac{(G)\ 6.6}{100'}\right)\right]}$	(I) 107.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.3}{(J)\ 107.9}\right) \times 100$	99.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Retest

CEC — *Drive Cylinder Test Report*

Page 132 of 221

Project: Vista Landfill Cell 3
Project No.: 101.07.08
Test No.: 18-3
Location: N1,564,725 E452,200 S.Bm
Nuclear Density Test No.: N/A
Report No.: 18

Date: 09/05/2012
Soil Type: SF
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 24.3}{(E)\ 311.4 - (C)\ 175.7}\right) \times 100$	(G) 13.8 %	___ %
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	___ pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 13.8}{100'}\right)\right]}$	(I) 103.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.9}{(J)\ 107.8}\right) \times 100$	96.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Retest for 18-1

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 18-4	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E491,950 S.Bor.	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g ___ lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g ___ lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) ___ ft^3	Weight of Pan and Dry Soil (E) 314.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 21.4}{(E)\ 314.3 - (C)\ 178.6}\right) \times 100$	(G) 12.0 %	___ %
Wet Density $\frac{(B)\ 5.17 - (A)\ 4.01}{((F)\ .0341)}$	(H) 117.6 pcf	___ pcf
Dry Density $\frac{(H)\ 117.6}{\left[1+\left(\frac{(G)\ 12.0}{100'}\right)\right]}$	(I) 105.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.0}{(J)\ 109.5}\right) \times 100$	95.9 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 18-5 L-8	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900 S.Bor.	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.24 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 315.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 20.3}{(E)\ 315.4 - (C)\ 179.7}\right) \times 100$	(G) 11.3 %	___ %
Wet Density $\frac{(B)\ 5.24 - (A)\ 4.08}{((F)\ .0341)}$	(H) 119.6 pcf	___ pcf
Dry Density $\frac{(H)\ 119.6}{\left[1+\left(\frac{(G)\ 11.3}{100'}\right)\right]}$	(I) 107.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.5}{(J)\ 109.5}\right) \times 100$	98.2 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 18-6 L-9	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,900 S.Bor.	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.56 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 306.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 25.9}{(E)\ 306.6 - (C)\ 174.1}\right) \times 100$	(G) 14.9 %	___ %
Wet Density $\frac{(B)\ 5.56 - (A)\ 4.4}{((F)\ .0341)}$	(H) 129.0 pcf	___ pcf
Dry Density $\frac{(H)\ 129.0}{\left[1+\left(\frac{(G)\ 14.9}{100'}\right)\right]}$	(I) 112.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 112.3}{(J)\ 111.5}\right) \times 100$	100.7 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 18-7 L-10	Proctor Value (J): 107.9 pcf
Location: N1,564,725 E492,200 S.Bor.	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 8.2 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.96 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 316.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 13.2}{(E)\ 316.8 - (C)\ 186.8}\right) \times 100$	(G) 7.1 %	___ %
Wet Density $\frac{(B)\ 4.96 - (A)\ 3.80}{((F)\ .0341)}$	(H) 111.4 pcf	___ pcf
Dry Density $\frac{(H)\ 111.4}{\left[1+\left(\frac{(G)\ 7.1}{100'}\right)\right]}$	(I) 104.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.0}{(J)\ 107.9}\right) \times 100$	96.4 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 137 of 221

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-8 L-10	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E 492,050	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.12 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 316.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 18.9}{(E)\ 316.8 - (C)\ 181.8}\right) \times 100$	(G) 10.4 %	___ %
Wet Density $\frac{(B)\ 5.12 - (A)\ 3.96}{((F)\ .0341)}$	(H) 116.1 pcf	___ pcf
Dry Density $\frac{(H)\ 116.1}{\left[1+\left(\frac{(G)\ 10.4}{100'}\right)\right]}$	(I) 105.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.2}{(J)\ 109.5}\right) \times 100$	96.1 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 138 of 221

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-9 L-10	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E 491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.15 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 314.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 15.7}{(E)\ 314.3 - (C)\ 184.3}\right) \times 100$	(G) 8.5 %	___ %
Wet Density $\frac{(B)\ 5.15 - (A)\ 3.99}{((F)\ .0341)}$	(H) 117.0 pcf	___ pcf
Dry Density $\frac{(H)\ 117.0}{\left[1+\left(\frac{(G)\ 8.5}{100'}\right)\right]}$	(I) 107.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.8}{(J)\ 109.5}\right) \times 100$	98.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 139 of 221

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-10	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E 491,900 S. Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.45 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 306.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 23.3}{(E)\ 306.7 - (C)\ 176.7}\right) \times 100$	(G) 13.2 %	___ %
Wet Density $\frac{(B)\ 5.45 - (A)\ 4.29}{((F)\ .0341)}$	(H) 125.8 pcf	___ pcf
Dry Density $\frac{(H)\ 125.8}{\left[1+\left(\frac{(G)\ 13.2}{100'}\right)\right]}$	(I) 111.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 111.1}{(J)\ 111.5}\right) \times 100$	99.6 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 140 of 221

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-11 L-11	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E 492,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.06 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 316.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 16.1}{(E)\ 316.4 - (C)\ 183.9}\right) \times 100$	(G) 8.8 %	___ %
Wet Density $\frac{(B)\ 5.06 - (A)\ 3.9}{((F)\ .0341)}$	(H) 114.4 pcf	___ pcf
Dry Density $\frac{(H)\ 114.4}{\left[1+\left(\frac{(G)\ .88}{100'}\right)\right]}$	(I) 105.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.1}{(J)\ 109.5}\right) \times 100$	96.0 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-12	Proctor Value (J): 107.8 pcf
Location: N1,564,725 E492,050	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 172.2 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 27.8}{(E)\ 304.7 - (C)\ 172.2}\right) \times 100$	(G) 16.1 %	%
Wet Density $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	pcf
Dry Density $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 16.1}{100}\right)\right]}$	(I) 104.3 pcf	pcf
Compaction $\left(\frac{(I)\ 104.3}{(J)\ 107.8}\right) \times 100$	96.8 %	%

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-13	Proctor Value (J): 107.8 pcf
Location: N1,564,725 E491,950 S.Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 25.3}{(E)\ 310.4 - (C)\ 174.7}\right) \times 100$	(G) 14.5 %	%
Wet Density $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	pcf
Dry Density $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 14.5}{100}\right)\right]}$	(I) 104.0 pcf	pcf
Compaction $\left(\frac{(I)\ 104.0}{(J)\ 107.8}\right) \times 100$	96.5 %	%

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell 3	Date: 09/05/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 18-14 L-11	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,900 S.Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 18	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.50 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 301.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 28.2}{(E)\ 301.8 - (C)\ 171.8}\right) \times 100$	(G) 16.4 %	%
Wet Density $\frac{(B)\ 5.50 - (A)\ 4.34}{((F)\ .0341)}$	(H) 127.3 pcf	pcf
Dry Density $\frac{(H)\ 127.3}{\left[1+\left(\frac{(G)\ 16.4}{100}\right)\right]}$	(I) 109.4 pcf	pcf
Compaction $\left(\frac{(I)\ 109.4}{(J)\ 111.5}\right) \times 100$	98.2 %	%

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-1 L-12	Proctor Value (J): 111.5 pcf
Location: N1,564,725 E492,200 S Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.41 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 310.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 25.5}{(E)\ 310.2 - (C)\ 174.5}\right) \times 100$	(G) 14.6 %	%
Wet Density $\frac{(B)\ 5.41 - (A)\ 4.25}{((F)\ .0341)}$	(H) 124.6 pcf	pcf
Dry Density $\frac{(H)\ 124.6}{\left[1+\left(\frac{(G)\ 14.6}{100}\right)\right]}$	(I) 108.7 pcf	pcf
Compaction $\left(\frac{(I)\ 108.7}{(J)\ 111.5}\right) \times 100$	97.5 %	%

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-2 L-12	Proctor Value (J): 107.9 pcf
Location: N1,564,725 E492,000 S. Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 312.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 20.2) / ((E) 312.3 − (C) 179.8) x 100	(G) 11.2 %	___ %
Wet Density: ((B) 5.11 − (A) 3.95) / ((F) .0341)	(H) 115.8 pcf	___ pcf
Dry Density: (H) 115.8 / [1+((G) 11.2 / 100')]	(I) 104.1 pcf	___ pcf
Compaction: ((I) 104.1 / (J) 107.9) x 100	96.5 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-3 L-12	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900 S. Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.31 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 309.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 20.7) / ((E) 309.3 − (C) 179.3) x 100	(G) 11.5 %	___ %
Wet Density: ((B) 5.31 − (A) 4.15) / ((F) .0341)	(H) 121.7 pcf	___ pcf
Dry Density: (H) 121.7 / [1+((G) 11.5 / 100')]	(I) 109.1 pcf	___ pcf
Compaction: ((I) 109.1 / (J) 109.5) x 100	99.6 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 19-4 L-13	Proctor Value (J): 111.5 pcf
Location: N1,564,725 E492,200 S Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.49 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 304.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 27.7) / ((E) 304.8 − (C) 172.3) x 100	(G) 16.1 %	___ %
Wet Density: ((B) 5.49 − (A) 4.33) / ((F) .0341)	(H) 127.0 pcf	___ pcf
Dry Density: (H) 127.0 / [1+((G) 16.1 / 100')]	(I) 109.4 pcf	___ pcf
Compaction: ((I) 109.4 / (J) 111.5) x 100	98.1 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: Cell-3	Soil Type: SF
Test No.: 19-5 L-13	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,000 S. Berm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 311.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 18.5) / ((E) 311.5 − (C) 181.5) x 100	(G) 10.2 %	___ %
Wet Density: ((B) 5.17 − (A) 4.01) / ((F) .0341)	(H) 117.6 pcf	___ pcf
Dry Density: (H) 117.6 / [1+((G) 10.2 / 100')]	(I) 106.7 pcf	___ pcf
Compaction: ((I) 106.7 / (J) 109.5) x 100	97.4 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 149 of 221

Project: Vista Landfill Cell 3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-6 L-13	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,900 S Bou	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 4.27 lbs	Drying Pan Tare (C) 130.0 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.43 lbs	Weight of Pan and Wet Soil (D) 330.0 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 299.9 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 30.1}{(E)\ 299.9 - (C)\ 169.9}\right) \times 100$	(G) 17.7 %	______ %
Wet Density $\frac{(B)\ 5.43 - (A)\ 4.27}{((F)\ .0341)}$	(H) 125.2 pcf	______ pcf
Dry Density $\frac{(H)\ 125.2}{\left[1+\left(\frac{(G)\ 17.7}{100'}\right)\right]}$	(I) 106.4 pcf	______ pcf
Compaction $\left(\frac{(I)\ 106.4}{(J)\ 111.5}\right) \times 100$	95.4 %	______ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 150 of 221

Project: Vista Landfill Cell 3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-7 L-14	Proctor Value (J): 111.5 pcf
Location: N1,564,725 E492,200 S. Bou	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 4.37 lbs	Drying Pan Tare (C) 132.5 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.53 lbs	Weight of Pan and Wet Soil (D) 332.5 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 302.6 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 29.9}{(E)\ 302.6 - (C)\ 170.1}\right) \times 100$	(G) 17.6 %	______ %
Wet Density $\frac{(B)\ 5.53 - (A)\ 4.37}{((F)\ .0341)}$	(H) 128.2 pcf	______ pcf
Dry Density $\frac{(H)\ 128.2}{\left[1+\left(\frac{(G)\ 17.6}{100'}\right)\right]}$	(I) 109.0 pcf	______ pcf
Compaction $\left(\frac{(I)\ 109.0}{(J)\ 111.5}\right) \times 100$	97.8 %	______ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 151 of 221

Project: Vista Landfill Cell 3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-8 L-14	Proctor Value (J): 111.5 pcf
Location: N1,564,725 E492,603 S. Bou	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 4.33 lbs	Drying Pan Tare (C) 130.0 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.49 lbs	Weight of Pan and Wet Soil (D) 330.0 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 301.1 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 28.9}{(E)\ 301.1 - (C)\ 171.1}\right) \times 100$	(G) 16.9 %	______ %
Wet Density $\frac{(B)\ 5.49 - (A)\ 4.33}{((F)\ .0341)}$	(H) 127.0 pcf	______ pcf
Dry Density $\frac{(H)\ 127.0}{\left[1+\left(\frac{(G)\ 16.9}{100'}\right)\right]}$	(I) 108.6 pcf	______ pcf
Compaction $\left(\frac{(I)\ 108.6}{(J)\ 111.5}\right) \times 100$	95.8 %	______ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 152 of 221

Project: Vista Landfill Cell-3	Date: 09/06/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 19-9 L-14	Proctor Value (J): 109.5 pcf
Location: N1,564,600 E491,900 S Bou	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 19	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 4.03 lbs	Drying Pan Tare (C) 132.5 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.19 lbs	Weight of Pan and Wet Soil (D) 332.5 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.3 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 21.2}{(E)\ 311.3 - (C)\ 178.8}\right) \times 100$	(G) 11.9 %	______ %
Wet Density $\frac{(B)\ 5.19 - (A)\ 4.03}{((F)\ .0341)}$	(H) 118.2 pcf	______ pcf
Dry Density $\frac{(H)\ 118.2}{\left[1+\left(\frac{(G)\ 11.9}{100'}\right)\right]}$	(I) 105.6 pcf	______ pcf
Compaction $\left(\frac{(I)\ 105.6}{(J)\ 109.5}\right) \times 100$	96.4 %	______ %

Pass/Fail: PASS Reviewed By: ____________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 09/06/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 19-10 L-15 | Proctor Value (J): 111.5 pcf
Location: N 1,564,720 E 492,200 S. Bern | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 15.9 %
Report No.: 19 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.47 lbs	Weight of Pan and Wet Soil (D) 335.7 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 308.1 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 27.6}{(E)\ 308.1 - (C)\ 172.4}\right) \times 100$	(G) 16.0 %	______ %
Wet Density $\frac{(B)\ 5.47 - (A)\ 4.31}{((F)\ .0341)}$	(H) 126.4 pcf	______ pcf
Dry Density $\frac{(H)\ 126.4}{\left[1+\left(\frac{(G)\ 16.0}{100}\right)\right]}$	(I) 109.0 pcf	______ pcf
Compaction $\left(\frac{(I)\ 109.0}{(J)\ 111.5}\right) \times 100$	97.8 %	______ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 09/06/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 19-11 L-15 | Proctor Value (J): 109.5 pcf
Location: N 1,564,720 E 492,000 S. Bern | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 10.0 %
Report No.: 19 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.06 lbs	Weight of Pan and Wet Soil (D) 335.7 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 320.4 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 15.3}{(E)\ 320.4 - (C)\ 184.7}\right) \times 100$	(G) 8.3 %	______ %
Wet Density $\frac{(B)\ 5.06 - (A)\ 3.9}{((F)\ .0341)}$	(H) 114.4 pcf	______ pcf
Dry Density $\frac{(H)\ 114.4}{\left[1+\left(\frac{(G)\ 8.3}{100}\right)\right]}$	(I) 105.6 pcf	______ pcf
Compaction $\left(\frac{(I)\ 105.6}{(J)\ 109.5}\right) \times 100$	96.4 %	______ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 09/06/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 19-12 L-15 | Proctor Value (J): 111.5 pcf
Location: N 564,600 E 491,900 S. Bern | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 15.9 %
Report No.: 19 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 1.16 lbs	Drying Pan Tare (C) 130.3 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.45 lbs	Weight of Pan and Wet Soil (D) 330.0 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 301.7 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 28.3}{(E)\ 301.7 - (C)\ 171.1}\right) \times 100$	(G) 16.5 %	______ %
Wet Density $\frac{(B)\ 5.45 - (A)\ 4.29}{((F)\ .0341)}$	(H) 125.8 pcf	______ pcf
Dry Density $\frac{(H)\ 125.8}{\left[1+\left(\frac{(G)\ 16.5}{100}\right)\right]}$	(I) 108.0 pcf	______ pcf
Compaction $\left(\frac{(I)\ 108.0}{(J)\ 111.5}\right) \times 100$	96.9 %	______ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3 | Date: 09/06/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 19-13 L-16 | Proctor Value (J): 111.5 pcf
Location: N 1,564,600 E 491,900 S. Bern | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 15.9 %
Report No.: 19 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.41 lbs	Weight of Pan and Wet Soil (D) 335.7 g ______ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.2 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 24.5}{(E)\ 311.2 - (C)\ 175.5}\right) \times 100$	(G) 14.0 %	______ %
Wet Density $\frac{(B)\ 5.41 - (A)\ 4.25}{((F)\ .0341)}$	(H) 124.6 pcf	______ pcf
Dry Density $\frac{(H)\ 124.6}{\left[1+\left(\frac{(G)\ 14.0}{100}\right)\right]}$	(I) 109.3 pcf	______ pcf
Compaction $\left(\frac{(I)\ 109.3}{(J)\ 111.5}\right) \times 100$	98.0 %	______ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-1 L-16 S.Berm	Proctor Value (J): 107.8 pcf
Location: N1,564,725 E 492,200 L-16	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.07 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 20.4}{(E)\ 309.6 - (C)\ 179.6}\right) \times 100$	(G) 11.4 %	___ %
Wet Density $\frac{(B)\ 5.07 - (A)\ 3.91}{((F)\ .0341)}$	(H) 114.7 pcf	___ pcf
Dry Density $\frac{(H)\ 114.7}{\left[1+\left(\frac{(G)\ 11.4}{100'}\right)\right]}$	(I) 103.0 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.0}{(J)\ 107.8}\right) \times 100$	95.5 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 20-2	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E 491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.3 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.30 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 314.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 18.5}{(E)\ 314.0 - (C)\ 181.5}\right) \times 100$	(G) 10.2 %	___ %
Wet Density $\frac{(B)\ 5.30 - (A)\ 4.14}{((F)\ .0341)}$	(H) 121.4 pcf	___ pcf
Dry Density $\frac{(H)\ 121.4}{\left[1+\left(\frac{(G)\ 10.2}{100'}\right)\right]}$	(I) 110.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 110.2}{(J)\ 109.5}\right) \times 100$	100.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-3 L-17	Proctor Value (J): 107.9 pcf
Location: N1,564,725 E 492,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 319.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 16.0}{(E)\ 319.7 - (C)\ 184.0}\right) \times 100$	(G) 8.7 %	___ %
Wet Density $\frac{(B)\ 5.0 - (A)\ 3.84}{((F)\ .0341)}$	(H) 112.6 pcf	___ pcf
Dry Density $\frac{(H)\ 112.6}{\left[1+\left(\frac{(G)\ 8.7}{100'}\right)\right]}$	(I) 103.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.6}{(J)\ 107.9}\right) \times 100$	96.0 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-4 L-17	Proctor Value (J): 107.9 pcf
Location: N1,564,725 E 491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.08 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 18.8}{(E)\ 316.9 - (C)\ 181.2}\right) \times 100$	(G) 10.4 %	___ %
Wet Density $\frac{(B)\ 5.08 - (A)\ 3.92}{((F)\ .0341)}$	(H) 115.0 pcf	___ pcf
Dry Density $\frac{(H)\ 115.0}{\left[1+\left(\frac{(G)\ 10.4}{100'}\right)\right]}$	(I) 104.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.2}{(J)\ 107.9}\right) \times 100$	96.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 161 of 221

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-5 L-18	Proctor Value (J): 109.5 pcf
Location: N1,584,725 E452,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 313.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5-(E)\ 18.6}{(E)\ 313.9-(C)\ 181.4}\right) \times 100$	(G) 10.3 %	___ %
Wet Density $\frac{(B)\ 5.18-(A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	___ pcf
Dry Density $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 10.3}{100'}\right)\right]}$	(I) 106.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.9}{(J)\ 109.5}\right) \times 100$	97.6 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 162 of 221

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-6 L-18	Proctor Value (J): 107.8 pcf
Location: N1,584,725 E452,000	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.28 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 304.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0-(E)\ 25.7}{(E)\ 304.3-(C)\ 174.3}\right) \times 100$	(G) 14.7 %	___ %
Wet Density $\frac{(B)\ 5.28-(A)\ 4.12}{((F)\ .0341)}$	(H) 120.8 pcf	___ pcf
Dry Density $\frac{(H)\ 120.8}{\left[1+\left(\frac{(G)\ 14.7}{100'}\right)\right]}$	(I) 105.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.3}{(J)\ 107.8}\right) \times 100$	97.7 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 163 of 221

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-7 L-17	Proctor Value (J): 107.9 pcf
Location: N1,564,100 E491,900	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.99 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 316.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0-(E)\ 13.2}{(E)\ 316.8-(C)\ 186.8}\right) \times 100$	(G) 7.1 %	___ %
Wet Density $\frac{(B)\ 4.99-(A)\ 3.83}{((F)\ .0341)}$	(H) 112.3 pcf	___ pcf
Dry Density $\frac{(H)\ 112.3}{\left[1+\left(\frac{(G)\ 7.1}{100'}\right)\right]}$	(I) 104.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.9}{(J)\ 107.9}\right) \times 100$	97.2 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 164 of 221

Project: Vista Landfill Cell 3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-8 L-19	Proctor Value (J): 107.9 pcf
Location: N1,864,725, E452,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.09 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 315.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5-(E)\ 16.9}{(E)\ 315.6-(C)\ 183.1}\right) \times 100$	(G) 9.2 %	___ %
Wet Density $\frac{(B)\ 5.09-(A)\ 3.93}{((F)\ .0341)}$	(H) 115.2 pcf	___ pcf
Dry Density $\frac{(H)\ 115.2}{\left[1+\left(\frac{(G)\ 9.2}{100'}\right)\right]}$	(I) 105.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 105.5}{(J)\ 107.9}\right) \times 100$	97.8 %	___ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-9 L-19	Proctor Value (J): 107.8 pcf
Location: N1,564,725 E492,000	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 24.3}{(E)\ 311.4 - (C)\ 175.7}\right) \times 100$	(G) 13.8 %	___ %
Wet Density $\frac{(B)\ 5.16 - (A)\ 4.0}{((F)\ .0341)}$	(H) 117.3 pcf	___ pcf
Dry Density $\frac{(H)\ 117.3}{\left[1+\left(\frac{(G)\ 13.8}{100'}\right)\right]}$	(I) 103.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.1}{(J)\ \_\_\_}\right) \times 100$	95.6 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-10 L-20	Proctor Value (J): 111.5 pcf
Location: N1,564,725 E492,200	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.5 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.41 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 313.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 26.5}{(E)\ 309.2 - (C)\ 173.5}\right) \times 100$	(G) 15.3 %	___ %
Wet Density $\frac{(B)\ 5.41 - (A)\ 4.25}{((F)\ .0341)}$	(H) 124.6 pcf	___ pcf
Dry Density $\frac{(H)\ 124.6}{\left[1+\left(\frac{(G)\ 15.3}{100'}\right)\right]}$	(I) 108.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.1}{(J)\ 111.5}\right) \times 100$	96.6 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-11 L-20	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,000	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 20.8}{(E)\ 311.7 - (C)\ 179.2}\right) \times 100$	(G) 11.6 %	___ %
Wet Density $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	___ pcf
Dry Density $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 11.6}{100'}\right)\right]}$	(I) 109.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.6}{(J)\ 109.5}\right) \times 100$	100.1 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill Cell-3	Date: 09/07/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 20-12	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,950	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 20	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.38 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 25.9}{(E)\ 304.1 - (C)\ 174.1}\right) \times 100$	(G) 14.9 %	___ %
Wet Density $\frac{(B)\ 5.38 - (A)\ 4.22}{((F)\ .0341)}$	(H) 123.8 pcf	___ pcf
Dry Density $\frac{(H)\ 123.8}{\left[1+\left(\frac{(G)\ 14.9}{100'}\right)\right]}$	(I) 107.7 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.7}{(J)\ 111.5}\right) \times 100$	96.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill G11-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-1 L-1	Proctor Value (J): 107.8 pcf
Location: N1,564,650 E 491,875 S.Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.12 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 −(E) 22.6 / (E) 309.9 −(C) 177.4) x 100	(G) 12.7 %	___ %
Wet Density: (B) 5.12 −(A) 3.96 / ((F) .0341)	(H) 116.1 pcf	___ pcf
Dry Density: (H) 116.1 / [1+((G) 12.7 / 100)]	(I) 103.0 pcf	___ pcf
Compaction: ((I) 103.0 / (J) 107.8) x 100	95.5 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill G11-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-2 L-2	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,200 S.Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 335.7 −(E) 19.2 / (E) 316.5 −(C) 180.8) x 100	(G) 10.6 %	___ %
Wet Density: (B) 5.19 −(A) 4.03 / ((F) .0341)	(H) 118.2 pcf	___ pcf
Dry Density: (H) 118.2 / [1+((G) 10.6 / 100)]	(I) 106.9 pcf	___ pcf
Compaction: ((I) 106.9 / (J) ___) x 100	97.6 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill G11-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-3	Proctor Value (J): 109.5 pcf
Location: N1,564,725 E492,000 S.Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 180.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 314.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 −(E) 16.0 / (E) 314.0 −(C) 184.0) x 100	(G) 8.7 %	___ %
Wet Density: (B) 5.11 −(A) 3.95 / ((F) .0341)	(H) 115.8 pcf	___ pcf
Dry Density: (H) 115.8 / [1+((G) 8.7 / 100)]	(I) 106.5 pcf	___ pcf
Compaction: ((I) 106.5 / (J) 109.5) x 100	97.3 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Project: Vista Landfill G11-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-4 L-4	Proctor Value (J): 107.8 pcf
Location: N1,564,650 E491,875 S.Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N A	Optimum Moisture Content: 12.1 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 182.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.27 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 −(E) 22.7 / (E) 309.8 −(C) 177.3) x 100	(G) 12.8 %	___ %
Wet Density: (B) 5.27 −(A) 4.11 / ((F) .0341)	(H) 120.5 pcf	___ pcf
Dry Density: (H) 120.5 / [1+((G) 12.8 / 100)]	(I) 106.8 pcf	___ pcf
Compaction: ((I) 106.8 / (J) 107.8) x 100	99.1 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

Drive Cylinder Test Report

CEC

Page 173 of 221

Project: Vista Landfill Cell-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-5 L-6	Proctor Value (J): 111.5 pcf
Location: N1,564,650, E491,875 S. Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.26 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.42 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 310.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 25.7}{(E)\ 310.0 - (C)\ 174.3}\right) \times 100$	(G) 14.7 %	___ %
Wet Density $\frac{(B)\ 5.42 - (A)\ 4.26}{((F)\ .0341)}$	(H) 124.9 pcf	___ pcf
Dry Density $\frac{(H)\ 124.9}{\left[1+\left(\frac{(G)\ 14.2}{100}\right)\right]}$	(I) 109.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 109.4}{(J)\ 111.5}\right) \times 100$	98.1 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Drive Cylinder Test Report

CEC

Page 174 of 221

Project: Vista Landfill Cell-3	Date: 09/10/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 22-6 L-8	Proctor Value (J): 107.9 pcf
Location: N-564650 E491875 S. Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 8.2 %
Report No.: 22	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.01 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 313.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 16.2}{(E)\ 313.9 - (C)\ 183.9}\right) \times 100$	(G) 8.8 %	___ %
Wet Density $\frac{(B)\ 5.01 - (A)\ 3.85}{((F)\ .0341)}$	(H) 112.9 pcf	___ pcf
Dry Density $\frac{(H)\ 112.9}{\left[1+\left(\frac{(G)\ 8.8}{100}\right)\right]}$	(I) 103.8 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.8}{(J)\ 107.9}\right) \times 100$	96.2 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Drive Cylinder Test Report

CEC

Page 175 of 221

Project: Vista Landfill Cell-3	Date: 09/11/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 23-1	Proctor Value (J): 107.8 pcf
Location: N1,564,700 E491.875 S. Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 23	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.07 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 314.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 21.2}{(E)\ 314.5 - (C)\ 178.8}\right) \times 100$	(G) 11.9 %	___ %
Wet Density $\frac{(B)\ 5.07 - (A)\ 3.91}{((F)\ .0341)}$	(H) 114.7 pcf	___ pcf
Dry Density $\frac{(H)\ 114.7}{\left[1+\left(\frac{(G)\ 11.9}{100}\right)\right]}$	(I) 102.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 102.5}{(J)\ 107.8}\right) \times 100$	95.0 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Drive Cylinder Test Report

CEC

Page 176 of 221

Project: Vista Landfill Cell-3	Date: 09/11/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 23-2 L-22	Proctor Value (J): 111.5 pcf
Location: N1,564,700 E492,300 S Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 23	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.45 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 301.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 28.9}{(E)\ 301.1 - (C)\ 171.1}\right) \times 100$	(G) 16.9 %	___ %
Wet Density $\frac{(B)\ 5.45 - (A)\ 4.29}{((F)\ .0341)}$	(H) 125.8 pcf	___ pcf
Dry Density $\frac{(H)\ 125.8}{\left[1+\left(\frac{(G)\ 16.9}{100}\right)\right]}$	(I) 107.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.6}{(J)\ 111.5}\right) \times 100$	96.5 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 177 of 221

Project: Vista Landfill Cell 3 | Date: 09/11/2012
Project No.: 101.07.08 | Soil Type: SF
Test No.: 23-3 | Proctor Value (J): 111.5 pcf
Location: N1,564,700 E492,100 S Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 15.9 %
Report No.: 23 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.47 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 300.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 31.6}{(E)\ 300.9 - (C)\ 168.4}\right) \times 100$	(G) 18.8 %	___ %
Wet Density: $\frac{(B)\ 5.47 - (A)\ 4.31}{((F)\ .0341)}$	(H) 126.4 pcf	___ pcf
Dry Density: $\frac{(H)\ 126.4}{\left[1+\left(\frac{(G)\ 18.8}{100'}\right)\right]}$	(I) 106.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.4}{(J)\ 111.5}\right) \times 100$	95.4 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 178 of 221

Project: Vista Landfill Cell 3 | Date: 09/11/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 23-4 SB | Proctor Value (J): 107.9 pcf
Location: N1,564,700 E492,240 S Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 8.2 %
Report No.: 23 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.99 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 321.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 14.1}{(E)\ 321.3 - (C)\ 185.6}\right) \times 100$	(G) 7.6 %	___ %
Wet Density: $\frac{(B)\ 4.99 - (A)\ 3.83}{((F)\ .0341)}$	(H) 112.3 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.3}{\left[1+\left(\frac{(G)\ 7.6}{100'}\right)\right]}$	(I) 104.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 104.4}{(J)\ 107.9}\right) \times 100$	96.8 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 179 of 221

Project: Vista Landfill Cell 3 | Date: 09/11/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 23-5 SB | Proctor Value (J): 107.9 pcf
Location: N1,564,710 E492,120 S Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 8.2 %
Report No.: 23 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.98 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 317.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 12.2}{(E)\ 317.8 - (C)\ 187.0}\right) \times 100$	(G) 6.5 %	___ %
Wet Density: $\frac{(B)\ 4.98 - (A)\ 3.82}{((F)\ .0341)}$	(H) 112.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.0}{\left[1+\left(\frac{(G)\ 6.5}{100'}\right)\right]}$	(I) 105.2 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.2}{(J)\ 107.9}\right) \times 100$	97.5 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 180 of 221

Project: Vista Landfill Cell 3 | Date: 09/11/2012
Project No.: 101.07.08 | Soil Type: SB
Test No.: 23-6 SB | Proctor Value (J): 107.9 pcf
Location: N1,564,710 E491,900 S Berm | ✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A | Optimum Moisture Content: 8.2 %
Report No.: 23 | Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.08 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 15.9}{(E)\ 316.6 - (C)\ 181.4}\right) \times 100$	(G) 8.8 %	___ %
Wet Density: $\frac{(B)\ 5.08 - (A)\ 3.92}{((F)\ .0341)}$	(H) 115.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 115.0}{\left[1+\left(\frac{(G)\ 8.8}{100'}\right)\right]}$	(I) 105.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.7}{(J)\ 107.9}\right) \times 100$	98.0 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Page 181 of 221

Project: Vista Landfill Cell 3	Date: 09/11/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 23-7	Proctor Value (J): 107.9 pcf
Location: N1,564,700 E491,895 5' Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 23	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.03 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 319.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 335.7 − (E) 16.7) / ((E) 319.0 − (C) 183.3) x 100	(G) 9.1 %	___ %
Wet Density: ((B) 5.03 − (A) 3.87) / ((F) .0341)	(H) 113.5 pcf	___ pcf
Dry Density: (H) 113.5 / [1+((G) 9.1 / 100')]	(I) 104.0 pcf	___ pcf
Compaction: ((I) 104.0 / (J) 107.9) x 100	96.4 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Page 182 of 221

Project: Vista Landfill Cell 3	Date: 09/11/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 23-8	Proctor Value (J): 111.5 pcf
Location: N1564,650 E491,880 5' Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 23	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.38 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 25.7) / ((E) 306.8 − (C) 174.3) x 100	(G) 14.7 %	___ %
Wet Density: ((B) 5.38 − (A) 4.22) / ((F) .0341)	(H) 123.8 pcf	___ pcf
Dry Density: (H) 123.8 / [1+((G) 14.7 / 100')]	(I) 107.9 pcf	___ pcf
Compaction: ((I) 107.9 / (J) 111.5) x 100	96.8 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Page 183 of 221

Project: Vista Landfill Cell 3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 24-1 L-23	Proctor Value (J): 111.5 pcf
Location: N1,564,675 E 492,275 5' Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.47 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 298.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 31.4) / ((E) 298.6 − (C) 168.6) x 100	(G) 18.5 %	___ %
Wet Density: ((B) 5.47 − (A) 4.31) / ((F) .0341)	(H) 126.4 pcf	___ pcf
Dry Density: (H) 126.4 / [1+((G) 18.5 / 100')]	(I) 106.7 pcf	___ pcf
Compaction: ((I) 106.7 / (J) 111.5) x 100	95.7 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC *Drive Cylinder Test Report*

Page 184 of 221

Project: Vista Landfill Cell 3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 24-2 L-23	Proctor Value (J): 111.5 pcf
Location: N1,564,660 E 492,150 5' Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.50 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 335.7 − (E) 31.6) / ((E) 304.1 − (C) 168.4) x 100	(G) 18.8 %	___ %
Wet Density: ((B) 5.50 − (A) 4.34) / ((F) .0341)	(H) 127.3 pcf	___ pcf
Dry Density: (H) 127.3 / [1+((G) 18.8 / 100')]	(I) 107.2 pcf	___ pcf
Compaction: ((I) 107.2 / (J) 111.5) x 100	96.1 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 185 of 221

Project: Vista Landfill Cell-3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 24-3 L-23	Proctor Value (J): 111.5 pcf
Location: N1,564,675 E491,975 S.Bu	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.57 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 28.8}{(E)\ 306.9 - (C)\ 171.2}\right) \times 100$	(G) 16.8 %	___ %
Wet Density $\frac{(B)\ 5.57 - (A)\ 4.41}{((F)\ .0341)}$	(H) 129.3 pcf	___ pcf
Dry Density $\frac{(H)\ 129.3}{\left[1+\left(\frac{(G)\ 16.8}{100'}\right)\right]}$	(I) 110.7 pcf	___ pcf
Compaction $\left(\frac{(I)\ 110.7}{(J)\ 111.5}\right) \times 100$	99.3 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 186 of 221

Project: Vista Landfill Cell 3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 24-4	Proctor Value (J): 111.5 pcf
Location: N1,564,700 E491,875 S.Bm	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.62 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 28.1}{(E)\ 304.4 - (C)\ 171.9}\right) \times 100$	(G) 16.3 %	___ %
Wet Density $\frac{(B)\ 5.62 - (A)\ 4.46}{((F)\ .0341)}$	(H) 130.8 pcf	___ pcf
Dry Density $\frac{(H)\ 130.8}{\left[1+\left(\frac{(G)\ 16.3}{100'}\right)\right]}$	(I) 112.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 112.5}{(J)\ 111.5}\right) \times 100$	100.9 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 187 of 221

Project: Vista Landfill Cell 3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 24-5 L-21	Proctor Value (J): 111.5 pcf
Location: N1,564,600 E491,930	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.53 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 31.2}{(E)\ 304.5 - (C)\ 168.8}\right) \times 100$	(G) 18.5 %	___ %
Wet Density $\frac{(B)\ 5.53 - (A)\ 4.37}{((F)\ .0341)}$	(H) 128.2 pcf	___ pcf
Dry Density $\frac{(H)\ 128.2}{\left[1+\left(\frac{(G)\ 18.5}{100'}\right)\right]}$	(I) 108.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 108.2}{(J)\ 111.5}\right) \times 100$	97.0 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 188 of 221

Project: Vista Landfill Cell-3	Date: 09/12/2012
Project No.: 101.07.08	Soil Type: SP
Test No.: 24-6	Proctor Value (J): 111.5 pcf
Location: N1,564,650 E491,875 S.Bu	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 24	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.51 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 23.5}{(E)\ 306.5 - (C)\ 176.5}\right) \times 100$	(G) 13.3 %	___ %
Wet Density $\frac{(B)\ 5.51 - (A)\ 4.35}{((F)\ .0341)}$	(H) 127.6 pcf	___ pcf
Dry Density $\frac{(H)\ 127.6}{\left[1+\left(\frac{(G)\ 13.3}{100'}\right)\right]}$	(I) 112.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 112.6}{(J)\ 111.5}\right) \times 100$	101.0 %	___ %

Pass/Fail: PASS Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 189 of 221

Project: Vista Landfill Cll-3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-1	Proctor Value (J): 111.5 pcf
Location: N1,564,650 E491,850	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.5 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 152.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.54 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 308.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 23.9) / ((E) 308.6 − (C) 176.1) x 100	(G) 13.6 %	%
Wet Density: ((B) 5.54 − (A) 4.38) / ((F) .0341)	(H) 128.4 pcf	pcf
Dry Density: (H) 128.4 / [1+((G) 13.6 / 100)]	(I) 113.0 pcf	pcf
Compaction: ((I) 113.0 / (J) 111.5) x 100	101.3 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 190 of 221

Project: Vista Landfill Cll-3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-2	Proctor Value (J): 111.5 pcf
Location: N1,564,650 E491,880	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.53 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 304.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 335.7 − (E) 31.2) / ((E) 304.5 − (C) 168.8) x 100	(G) 18.5 %	%
Wet Density: ((B) 5.53 − (A) 4.37) / ((F) .0341)	(H) 128.2 pcf	pcf
Dry Density: (H) 128.2 / [1+((G) 18.5 / 100)]	(I) 108.2 pcf	pcf
Compaction: ((I) 108.2 / (J) 111.5) x 100	97.0 %	%

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 191 of 221

Project: Vista Landfill Cll-3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-3	Proctor Value (J): 107.9 pcf
Location: N1,564,700 E491,875	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 303.3 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 26.7) / ((E) 303.3 − (C) 173.3) x 100	(G) 15.4 %	%
Wet Density: ((B) 5.0 − (A) 3.84) / ((F) .0341)	(H) 112.6 pcf	pcf
Dry Density: (H) 112.6 / [1+((G) 15.4 / 100)]	(I) 97.6 pcf	pcf
Compaction: ((I) 97.6 / (J) 107.9) x 100	90.5 %	%

Pass/Fail: Fail Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Retest is 25-4

Retest for 25-3

CEC

Drive Cylinder Test Report

Page 192 of 221

Project: Vista Landfill Cll-3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-4	Proctor Value (J): 107.9 pcf
Location: N1,564,700 E491,875	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.14 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 313.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 18.8) / ((E) 313.7 − (C) 181.2) x 100	(G) 10.4 %	%
Wet Density: ((B) 5.14 − (A) 3.98) / ((F) .0341)	(H) 116.7 pcf	pcf
Dry Density: (H) 116.7 / [1+((G) 10.4 / 100)]	(I) 105.7 pcf	pcf
Compaction: ((I) 105.7 / (J) 107.9) x 100	98.0 %	%

Pass/Fail: ______ Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

Retest for 25-3

CEC — *Drive Cylinder Test Report*

Page 193 of 221

Project: Vista Landfill Cell 3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-5	Proctor Value (J): 111.5 pcf
Location: N1,564,650 E491,880	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: NA	Optimum Moisture Content: 15.9 %
Report No.: 25	Sampled By: T Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.44 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 25.6}{(E)\ 306.9 - (C)\ 174.4}\right) \times 100$	(G) 14.7 %	___ %
Wet Density: $\frac{(B)\ 5.44 - (A)\ 4.28}{((F)\ .0341)}$	(H) 125.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 125.5}{\left[1+\left(\frac{(G)\ 14.7}{100'}\right)\right]}$	(I) 109.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 109.4}{(J)\ 111.5}\right) \times 100$	98.1 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 194 of 221

Project: Vista Landfill Cell 3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-6	Proctor Value (J): 107.9 pcf
Location: N1,564,550 E 491,900	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.03 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 322.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 13.7}{(E)\ 322.0 - (C)\ 186.3}\right) \times 100$	(G) 7.4 %	___ %
Wet Density: $\frac{(B)\ 5.03 - (A)\ 3.87}{((F)\ .0341)}$	(H) 113.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 113.5}{\left[1+\left(\frac{(G)\ 7.4}{100'}\right)\right]}$	(I) 105.7 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.7}{(J)\ 107.9}\right) \times 100$	98.0 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 195 of 221

Project: Vista Landfill Cell-3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-7	Proctor Value (J): 111.5 pcf
Location: N1564,650 E491,880	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 15.9 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.29 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 24.6}{(E)\ 311.1 - (C)\ 175.4}\right) \times 100$	(G) 14.0 %	___ %
Wet Density: $\frac{(B)\ 5.29 - (A)\ 4.13}{((F)\ .0341)}$	(H) 121.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 121.1}{\left[1+\left(\frac{(G)\ 14.0}{100'}\right)\right]}$	(I) 106.2 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.2}{(J)\ 111.5}\right) \times 100$	95.2 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 192 of 221

Project: Vista Landfill Cell 3	Date: 09/13/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 25-8	Proctor Value (J): 107.8 pcf
Location: N1,564,350 E 491,800	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 25	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 305.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 24.5}{(E)\ 305.5 - (C)\ 175.5}\right) \times 100$	(G) 14.0 %	___ %
Wet Density: $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 14.0}{100'}\right)\right]}$	(I) 105.5 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.5}{(J)\ 107.8}\right) \times 100$	97.9 %	___ %

Pass/Fail: Pass Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 197 of 221

Project: Vista Landfill Cll-3	Date: 09/14/2012
Project No.: 101-07.08	Soil Type: SF
Test No.: 26-1	Proctor Value (J): 107.8 pcf
Location: N1,564,700 E491,860	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 26	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.19 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .03441 ft³	Weight of Pan and Dry Soil (E) 305.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 24.9) / ((E) 305.1 − (C) 175.1) x 100	(G) 14.2 %	___ %
Wet Density: ((B) 5.19 − (A) 4.03) / ((F) .0341)	(H) 118.2 pcf	___ pcf
Dry Density: (H) 118.2 / [1+((G) 14.2 / 100')]	(I) 103.5 pcf	___ pcf
Compaction: ((I) 103.5 / (J) 107.8) x 100	96.0 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 198 of 221

Project: Vista Landfill Cll-3	Date: 09/14/2012
Project No.: 101, 07, 08	Soil Type: SF
Test No.: 26-2	Proctor Value (J): 107.8 pcf
Location: N1,564,650 E491,875	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 26	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.17 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 307.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 332.5 − (E) 24.7) / ((E) 307.8 − (C) 175.3) x 100	(G) 14.1 %	___ %
Wet Density: ((B) 5.17 − (A) 4.01) / ((F) .0341)	(H) 117.6 pcf	___ pcf
Dry Density: (H) 117.6 / [1+((G) 14.1 / 100')]	(I) 103.1 pcf	___ pcf
Compaction: ((I) 103.1 / (J) 107.8) x 100	95.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 199 of 221

Project: Vista Landfill Cll-3	Date: 09/14/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 26-3 SB	Proctor Value (J): 109.5 pcf
Location: N1,564,550 E491,900	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 26	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.15 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 322.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 335.7 − (E) 13.5) / ((E) 322.2 − (C) 186.5) x 100	(G) 7.2 %	___ %
Wet Density: ((B) 5.15 − (A) 3.99) / ((F) .0341)	(H) 117.0 pcf	___ pcf
Dry Density: (H) 117.0 / [1+((G) 7.2 / 100')]	(I) 109.1 pcf	___ pcf
Compaction: ((I) 109.1 / (J) 109.5) x 100	99.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC — *Drive Cylinder Test Report*

Page 200 of 221

Project: Vista Landfill Cll-3	Date: 09/14/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 26-4	Proctor Value (J): 109.5 pcf
Location: N1,564,700 E491,880	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 26	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.36 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 305.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: ((D) 330.0 − (E) 24.1) / ((E) 305.9 − (C) 175.9) x 100	(G) 13.7 %	___ %
Wet Density: ((B) 5.36 − (A) 4.2) / ((F) .0341)	(H) 123.2 pcf	___ pcf
Dry Density: (H) 123.2 / [1+((G) 13.7 / 100')]	(I) 108.4 pcf	___ pcf
Compaction: ((I) 108.4 / (J) 109.5) x 100	99.0 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 201 of 221

Project: Vista Landfill Cell-3	Date: 09/17/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 29-1 SB	Proctor Value (J): 107.8 pcf
Location: N 1564825 E 492,200 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 29	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.09 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 20.2}{(E)\ 309.8 - (C)\ 179.8}\right) \times 100$	(G) 11.2 %	___ %
Wet Density $\frac{(B)\ 5.09 - (A)\ 3.93}{((F)\ .0341)}$	(H) 115.2 pcf	___ pcf
Dry Density $\frac{(H)\ 115.2}{\left[1+\left(\frac{(G)\ 11.2}{100'}\right)\right]}$	(I) 103.6 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.6}{(J)\ 107.8}\right) \times 100$	96.1 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 202 of 221

Project: Vista Landfill Cell-3	Date: 09/17/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 29-2 SB	Proctor Value (J): 107.8 pcf
Location: N 1564,850 E 492,050 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 29	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.06 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 313.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 19.1}{(E)\ 313.4 - (C)\ 180.9}\right) \times 100$	(G) 10.6 %	___ %
Wet Density $\frac{(B)\ 5.06 - (A)\ 3.9}{((F)\ .0341)}$	(H) 114.4 pcf	___ pcf
Dry Density $\frac{(H)\ 114.4}{\left[1+\left(\frac{(G)\ 10.6}{100'}\right)\right]}$	(I) 103.4 pcf	___ pcf
Compaction $\left(\frac{(I)\ 103.4}{(J)\ 107.8}\right) \times 100$	95.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 203 of 221

Project: Vista Landfill Cell-3	Date: 09/17/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 29-3 SB	Proctor Value (J): 107.9 pcf
Location: N 1564,860 E 491,950 Floor	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 29	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.03 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 319.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 15.9}{(E)\ 319.8 - (C)\ 184.1}\right) \times 100$	(G) 8.6 %	___ %
Wet Density $\frac{(B)\ 5.03 - (A)\ 3.87}{((F)\ .0341)}$	(H) 113.5 pcf	___ pcf
Dry Density $\frac{(H)\ 113.5}{\left[1+\left(\frac{(G)\ 8.6}{100'}\right)\right]}$	(I) 104.5 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.5}{(J)\ 107.9}\right) \times 100$	96.8 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 204 of 221

Project: Vista Landfill Cell-3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-1	Proctor Value (J): 107.9 pcf
Location: N 1565,060 E 492,337 Road	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 13.6}{(E)\ 316.4 - (C)\ 186.4}\right) \times 100$	(G) 7.3 %	___ %
Wet Density $\frac{(B)\ 5.0 - (A)\ 3.84}{((F)\ .0341)}$	(H) 112.6 pcf	___ pcf
Dry Density $\frac{(H)\ 112.6}{\left[1+\left(\frac{(G)\ 7.3}{100'}\right)\right]}$	(I) 104.9 pcf	___ pcf
Compaction $\left(\frac{(I)\ 104.9}{(J)\ 107.9}\right) \times 100$	97.2 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 205 of 221

Project: Vista Landfill Cell 3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-2 SB	Proctor Value (J): 109.5 pcf
Location: N1,565,300 E 492,377 ...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.2 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .03411 ft³	Weight of Pan and Dry Soil (E) 320.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 15.5}{(E)\ 320.2 - (C)\ 184.3}\right) \times 100$	(G) 8.4 %	___ %
Wet Density: $\frac{(B)\ 5.2 - (A)\ 4.04}{((F)\ .03411)}$	(H) 118.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 118.5}{\left[1+\left(\frac{(G)\ 8.4}{100'}\right)\right]}$	(I) 109.3 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 109.3}{(J)\ 109.5}\right) \times 100$	99.8 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 206 of ___

Project: Vista Landfill Cell 3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 30-3	Proctor Value (J): 107.9 pcf
Location: N1,564,800 E 492,330 ...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .03411 ft³	Weight of Pan and Dry Soil (E) 321.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 11.5}{(E)\ 321.0 - (C)\ 188.5}\right) \times 100$	(G) 6.1 %	___ %
Wet Density: $\frac{(B)\ 5.0 - (A)\ 3.84}{((F)\ .03411)}$	(H) 112.6 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.6}{\left[1+\left(\frac{(G)\ 6.1}{100'}\right)\right]}$	(I) 106.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.1}{(J)\ 107.9}\right) \times 100$	98.3 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 207 of 221

Project: Vista Landfill Cell 3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-4 SB	Proctor Value (J): 109.5 pcf
Location: N1,564,900 E 492,320 ...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.04 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .03411 ft³	Weight of Pan and Dry Soil (E) 316.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 15.7}{(E)\ 316.8 - (C)\ 184.3}\right) \times 100$	(G) 8.5 %	___ %
Wet Density: $\frac{(B)\ 5.04 - (A)\ 3.88}{((F)\ .03411)}$	(H) 113.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 113.8}{\left[1+\left(\frac{(G)\ 8.5}{100'}\right)\right]}$	(I) 104.9 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 104.9}{(J)\ 109.5}\right) \times 100$	95.8 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 208 of 221

Project: Vista Landfill Cell 3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-5	Proctor Value (J): 107.9 pcf
Location: N1,564,900 E 492,380 ...	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.0 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .03411 ft³	Weight of Pan and Dry Soil (E) 315.8 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 14.2}{(E)\ 315.8 - (C)\ 185.8}\right) \times 100$	(G) 7.6 %	___ %
Wet Density: $\frac{(B)\ 5.0 - (A)\ 3.84}{((F)\ .03411)}$	(H) 112.6 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.6}{\left[1+\left(\frac{(G)\ 7.6}{100'}\right)\right]}$	(I) 104.6 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 104.6}{(J)\ 107.9}\right) \times 100$	96.9 %	___ %

Pass/Fail: PASS Reviewed By: ______ Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 209 of 221

Project: Vista Landfill Cell 3	Date: 08/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-6 SB	Proctor Value (J): 107.9 pcf
Location: N1565,250 E 492,330 Ramp	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 8.2 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 4.99 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 321.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 14.7}{(E)\ 321.0 - (C)\ 185.3}\right) \times 100$	(G) 7.9 %	___ %
Wet Density: $\frac{(B)\ 4.99 - (A)\ 3.83}{((F)\ .0341)}$	(H) 112.3 pcf	___ pcf
Dry Density: $\frac{(H)\ 112.3}{\left[1+\left(\frac{(G)\ 7.9}{100}\right)\right]}$	(I) 104.1 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 104.1}{(J)\ 107.9}\right) \times 100$	96.5 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 210 of 221

Project: Vista Landfill Cell-3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-7 SB	Proctor Value (J): 109.5 pcf
Location: N1,565,100 E 492 320 EB	___ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 10.0 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.11 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 320.6 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 15.1}{(E)\ 320.6 - (C)\ 184.9}\right) \times 100$	(G) 8.2 %	___ %
Wet Density: $\frac{(B)\ 5.11 - (A)\ 3.95}{((F)\ .0341)}$	(H) 115.8 pcf	___ pcf
Dry Density: $\frac{(H)\ 115.8}{\left[1+\left(\frac{(G)\ 8.2}{100}\right)\right]}$	(I) 107.0 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 107.0}{(J)\ 109.5}\right) \times 100$	97.7 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 211 of 221

Project: Vista Landfill Cell-3	Date: 09/18/2012
Project No.: 101.07.08	Soil Type: SB
Test No.: 30-8 SB	Proctor Value (J): 109.5 pcf
Location: N1,314,750 E 492,320 E-Dam	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N A	Optimum Moisture Content: 10.0 %
Report No.: 30	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.22 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 317.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 18.2}{(E)\ 317.5 - (C)\ 181.8}\right) \times 100$	(G) 10.0 %	___ %
Wet Density: $\frac{(B)\ 5.22 - (A)\ 4.06}{((F)\ .0341)}$	(H) 119.1 pcf	___ pcf
Dry Density: $\frac{(H)\ 119.1}{\left[1+\left(\frac{(G)\ 10.0}{100}\right)\right]}$	(I) 108.3 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.3}{(J)\ 109.5}\right) \times 100$	98.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 212 of 221

Project: Vista Landfill Cell-3	Date: 10/01/2012
Project No.: 101.07.08	Soil Type: SF
Test No.: 42-1 Anchor Trench	Proctor Value (J): 107.8 pcf
Location: N1,564,650 E 491085	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 42	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 1.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.15 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 309.2 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 23.3}{(E)\ 309.2 - (C)\ 176.7}\right) \times 100$	(G) 13.2 %	___ %
Wet Density: $\frac{(B)\ 5.15 - (A)\ 3.99}{((F)\ .0341)}$	(H) 117.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.0}{\left[1+\left(\frac{(G)\ 13.2}{100}\right)\right]}$	(I) 103.4 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 103.4}{(J)\ 107.8}\right) \times 100$	95.9 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill
Project No.: 101.07.08
Test No.: 42-2 Anchor Trench
Location: N 1,564,715 E 491,950
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.1 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.24 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 320.0 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 15.7}{(E)\ 320.0 - (C)\ 184.3}\right) \times 100$	(G) 8.5 %	___ %
Wet Density $\frac{(B)\ 5.24 - (A)\ 4.08}{((F)\ .0341)}$	(H) 119.6 pcf	___ pcf
Dry Density $\frac{(H)\ 119.6}{\left[1+\left(\frac{(G)\ 8.5}{100'}\right)\right]}$	(I) 110.2 pcf	___ pcf
Compaction $\left(\frac{(I)\ 110.2}{(J)\ 109.5}\right) \times 100$	100.6 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-3 Anchor Trench
Location: N 1,564,720 E 492,050
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.26 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.5 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 23.5}{(E)\ 306.5 - (C)\ 176.5}\right) \times 100$	(G) 13.3 %	___ %
Wet Density $\frac{(B)\ 5.26 - (A)\ 4.1}{((F)\ .0341)}$	(H) 120.2 pcf	___ pcf
Dry Density $\frac{(H)\ 120.2}{\left[1+\left(\frac{(G)\ 13.3}{100'}\right)\right]}$	(I) 106.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.1}{(J)\ 111.5}\right) \times 100$	95.2 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-4 Anchor Trench
Location: N 1,564,720 E 492,150
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.30 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 308.9 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 332.5 - (E)\ 23.6}{(E)\ 308.9 - (C)\ 176.4}\right) \times 100$	(G) 13.4 %	___ %
Wet Density $\frac{(B)\ 5.30 - (A)\ 4.14}{((F)\ .0341)}$	(H) 121.4 pcf	___ pcf
Dry Density $\frac{(H)\ 121.4}{\left[1+\left(\frac{(G)\ 13.4}{100'}\right)\right]}$	(I) 107.1 pcf	___ pcf
Compaction $\left(\frac{(I)\ 107.1}{(J)\ 111.5}\right) \times 100$	96.4 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-5 Anchor Trench
Location: N 1,564,725 E 492,250
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.18 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 316.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 335.7 - (E)\ 19.6}{(E)\ 316.1 - (C)\ 180.4}\right) \times 100$	(G) 10.9 %	___ %
Wet Density $\frac{(B)\ 5.18 - (A)\ 4.02}{((F)\ .0341)}$	(H) 117.9 pcf	___ pcf
Dry Density $\frac{(H)\ 117.9}{\left[1+\left(\frac{(G)\ 10.9}{100'}\right)\right]}$	(I) 106.3 pcf	___ pcf
Compaction $\left(\frac{(I)\ 106.3}{(J)\ 109.5}\right) \times 100$	97.1 %	___ %

Pass/Fail: Pass Reviewed By: ___ Date: ___

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 217 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-6 Anchor Trench
Location: N1,565,415 E 491,900
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 107.8 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 12.1 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 130.0 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.20 lbs	Weight of Pan and Wet Soil (D) 330.0 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 307.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 330.0 - (E)\ 22.9}{(E)\ 307.1 - (C)\ 177.1}\right) \times 100$	(G) 12.9 %	___ %
Wet Density: $\frac{(B)\ 5.20 - (A)\ 4.04}{((F)\ .0341)}$	(H) 118.5 pcf	___ pcf
Dry Density: $\frac{(H)\ 118.5}{\left[1+\left(\frac{(G)\ 12.9}{100'}\right)\right]}$	(I) 105.0 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 105.0}{(J)\ 107.8}\right) \times 100$	97.4 %	___ %

Pass/Fail: Pass   Reviewed By: ______   Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 218 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-7 Anchor Trench
Location: N1,565,415 E 492,000
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 132.5 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.33 lbs	Weight of Pan and Wet Soil (D) 332.5 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 306.7 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 332.5 - (E)\ 25.8}{(E)\ 306.7 - (C)\ 174.2}\right) \times 100$	(G) 14.8 %	___ %
Wet Density: $\frac{(B)\ 5.33 - (A)\ 4.17}{((F)\ .0341)}$	(H) 122.3 pcf	___ pcf
Dry Density: $\frac{(H)\ 122.3}{\left[1+\left(\frac{(G)\ 14.8}{100'}\right)\right]}$	(I) 106.5 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 106.5}{(J)\ 111.5}\right) \times 100$	95.5 %	___ %

Pass/Fail: Pass   Reviewed By: ______   Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 219 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 42-8 Anchor Trench
Location: N1,565,415 E 492,100
Nuclear Density Test No.: N/A
Report No.: 42

Date: 10/01/2012
Soil Type: SF
Proctor Value (J): 109.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 10.0 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.16 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 322.4 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ 335.7 - (E)\ 13.3}{(E)\ 322.4 - (C)\ 186.7}\right) \times 100$	(G) 7.1 %	___ %
Wet Density: $\frac{(B)\ 5.16 - (A)\ 4.0}{((F)\ .0341)}$	(H) 117.3 pcf	___ pcf
Dry Density: $\frac{(H)\ 117.3}{\left[1+\left(\frac{(G)\ 7.1}{100'}\right)\right]}$	(I) 109.5 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 109.5}{(J)\ 109.5}\right) \times 100$	100.0 %	___ %

Pass/Fail: Pass   Reviewed By: ______   Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Page 220 of 221

Project: Vista Landfill Cell-3
Project No.: 101.07.08
Test No.: 43-1 Anchor Trench
Location: N1,565,415 E 492,200
Nuclear Density Test No.: N/A
Report No.: 43

Date: 10/02/2012
Soil Type: SF
Proctor Value (J): 111.5 pcf
✓ Standard ASTM D698 ___ Modified ASTM 1557
Optimum Moisture Content: 15.9 %
Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ___ g 4.16 lbs	Drying Pan Tare (C) 135.7 g ___ lbs
Weight of Cylinder and Soil (B) ___ g 5.39 lbs	Weight of Pan and Wet Soil (D) 335.7 g ___ lbs
Cylinder Volume (F) .0341 ft³	Weight of Pan and Dry Soil (E) 311.1 g ___ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content: $\left(\frac{(D)\ [illegible] - (E)\ 24.6}{(E)\ 311.1 - (C)\ 175.4}\right) \times 100$	(G) 14.0 %	___ %
Wet Density: $\frac{(B)\ 5.39 - (A)\ 4.23}{((F)\ .0341)}$	(H) 124.0 pcf	___ pcf
Dry Density: $\frac{(H)\ 124.0}{\left[1+\left(\frac{(G)\ 14.0}{100'}\right)\right]}$	(I) 108.8 pcf	___ pcf
Compaction: $\left(\frac{(I)\ 108.8}{(J)\ 111.5}\right) \times 100$	97.6 %	___ %

Pass/Fail: Pass   Reviewed By: ______   Date: ______

Rev.10/98 CF223/CPS

CEC

Drive Cylinder Test Report

Project: Vista Landfill Cell - 3	Date: 10/02/2012
Project No.: 1010708	Soil Type: SF
Test No.: 43 - 2	Proctor Value (J): 107.8 pcf
Location: N1,565,415 E 492,300	✓ Standard ASTM D698 ___ Modified ASTM 1557
Nuclear Density Test No.: N/A	Optimum Moisture Content: 12.1 %
Report No.: 43	Sampled By: T. Bradford

Drive Cylinder Information	Moisture Content Sample
Weight of Cylinder (A) ______ g 4.11 lbs	Drying Pan Tare (C) 130.0 g ______ lbs
Weight of Cylinder and Soil (B) ______ g 5.27 lbs	Weight of Pan and Wet Soil (D) 330.0 g ______ lbs
Cylinder Volume (F) .0341 ft^3	Weight of Pan and Dry Soil (E) 303.8 g ______ lbs

	Drive Cylinder	Nuclear Gauge
Moisture Content $\left(\frac{(D)\ 330.0 - (E)\ 26.2}{(E)\ 303.8 - (C)\ 173.8}\right) x\ 100$	(G) 15.1 %	______ %
Wet Density $\frac{(B)\ 5.27 - (A)\ 4.11}{((F)\ .0341)}$	(H) 120.5 pcf	______ pcf
Dry Density $\frac{(H)\ 120.5}{\left[1+\left(\frac{(G)\ 15.1}{100'}\right)\right]}$	(I) 104.7 pcf	______ pcf
Compaction $\left(\frac{(I)\ 104.7}{(J)\ 107.8}\right) x\ 100$	97.1 %	______ %

Pass/Fail: PASS Reviewed By: ______________ Date: ________

Rev.10/98 CF223/CPS

A.3 PROTECTIVE COVER CONFORMANCE TESTS

VISTA CLASS III LANDFILL - CELL 3
SUMMARY OF SOIL DATA

Sample ID	Sample Type	Sample Depth	Soil Classi-fication	In-Situ Moisture (%)	Atterberg Limits L.L.	Atterberg Limits P.L.	Atterberg Limits P.I.	Grain Size Distribution % Finer No. 4 Sieve	Grain Size Distribution % Finer No. 200 Sieve	Grain Size Distribution % Finer .005 mm Sieve	Standard Proctor Maximum Dry Density (lb/cu.ft)	Standard Proctor Optimum Moisture Content (%)	Gs	Unit Weight Dry Density (lb/cu.ft)	Unit Weight Moisture Content (%)	Permeability (cm/sec)	Carbonate Content (%)
PC-2	Bag	-	SP	3.7	-	-	-	100.0	2.5	-	-	-	-	91.1	4.1	9.85E-03	0.7
PC-3	Bag	-	SP	4.5	-	-	-	100.0	1.6	-	-	-	-	89.3	4.4	1.14E-02	1.5
PC-4	Bag	-	SP	3.6	-	-	-	100.0	0.9	-	-	-	-	87.0	3.5	4.95E-02	-
PC-5	Bag	-	SP	4.7	-	-	-	100.0	0.5	-	-	-	-	89.1	4.0	2.48E-02	1.1
PC-6	Bag	-	SP-SM	11.2	-	-	-	100.0	12.0	-	-	-	-	88.1	10.7	5.91E-03	-
PC-7	Bag	-	SP	4.5	-	-	-	100.0	1.6	-	-	-	-	90.4	4.5	1.15E-02	-
PC-8	Bag	-	SP	4.7	-	-	-	100.0	0.3	-	-	-	-	86.4	4.3	2.68E-02	0.0
PC-9	Bag	-	SP	4.8	-	-	-	100.0	2.0	-	-	-	-	86.6	5.3	1.86E-02	-
PC-10	Bag	-	SP	5.9	-	-	-	100.0	2.3	-	-	-	-	90.3	5.8	2.57E-03	0.8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ABBREVIATIONS:
LIQUID LIMIT (L.L.)
PLASTIC LIMIT (P.L.)
PLASTICITY INDEX (P.I.)
NON-PLASTIC (N/P)
SPECIFIC GRAVITY (Gs)
MOISTURE CONTENT (Mc)

NOTES:
T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
CC = CARBONATE CONTENT

PARTICLE SIZE ANALYSIS (ASTM D 422)

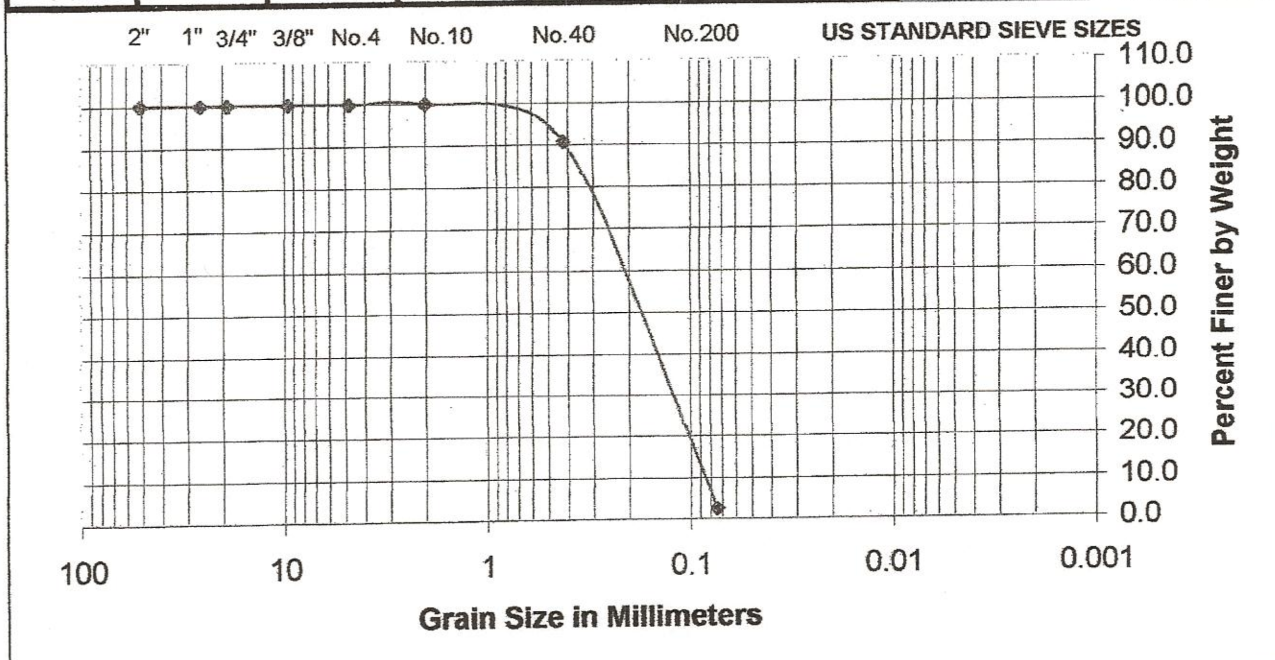
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-2
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	919.6
Dry Wt. Soil + Tare (gm)	893.2
Weight of Tare (gm)	180.1
Weight of Water (gm)	26.4
Weight of Dry Soil (gm)	713.1
Moisture Content (%)	3.7

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	893.2
Weight of Tare (gm)	180.1
Weight of Sample (gm)	713.1

DESCRIPTION: BROWN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	66.6	9.34	9.34	90.7
No. 200	0.074	628.6	88.15	97.49	2.5
Pan	-	17.1	2.40	99.89	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	9/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-2	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	BROWN SAND	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

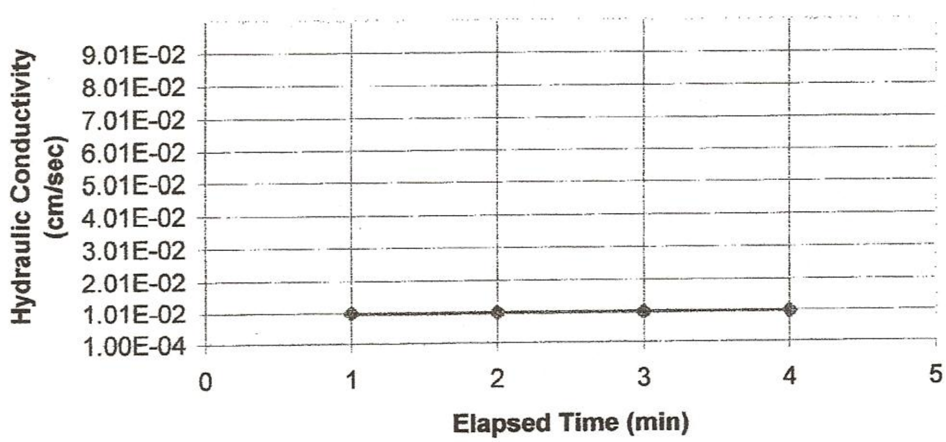
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	4.1%
DRY WEIGHT (pcf):	91.1
SATURATION (%):	13.3%
VOID RATIO:	0.82

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	30.9%
DRY WEIGHT (pcf):	91.1
SATURATION:	100.0%
VOID RATIO:	0.82
ROOM TEMP. (°C):	24.44

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.367
QUANTITY OF FLOW:	44.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	9.85E-03	9.85E-03	9.85E-03	9.85E-03

HYDRAULIC CONDUCTIVITY @ 20 oC 9.85E-03 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

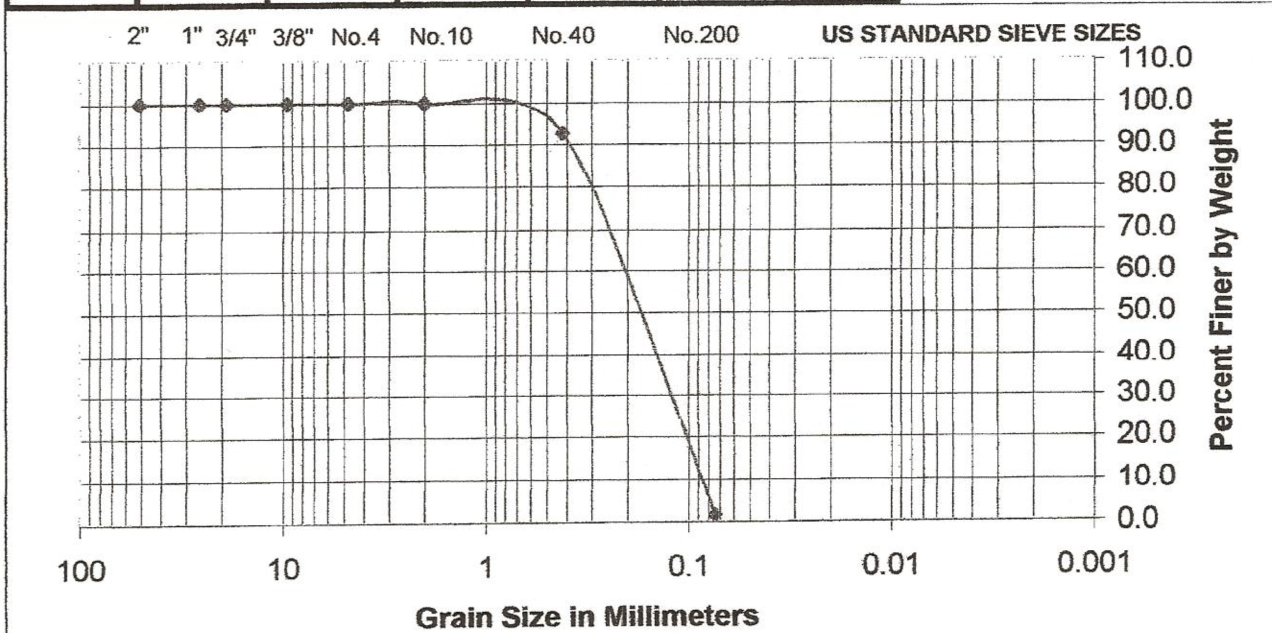
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-3
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	932.3
Dry Wt. Soil + Tare (gm)	899.9
Weight of Tare (gm)	180.4
Weight of Water (gm)	32.4
Weight of Dry Soil (gm)	719.5
Moisture Content (%)	4.5

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	899.9
Weight of Tare (gm)	180.4
Weight of Sample (gm)	719.5

DESCRIPTION: ORANGE AND TAN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	53.1	7.38	7.38	92.6
No. 200	0.074	654.8	91.01	98.39	1.6
Pan	-	11.3	1.57	99.96	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

Genesis Testing Services, Inc.

REVIEW: AAG

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	9/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-3	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	ORANGE AND TAN SAND	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

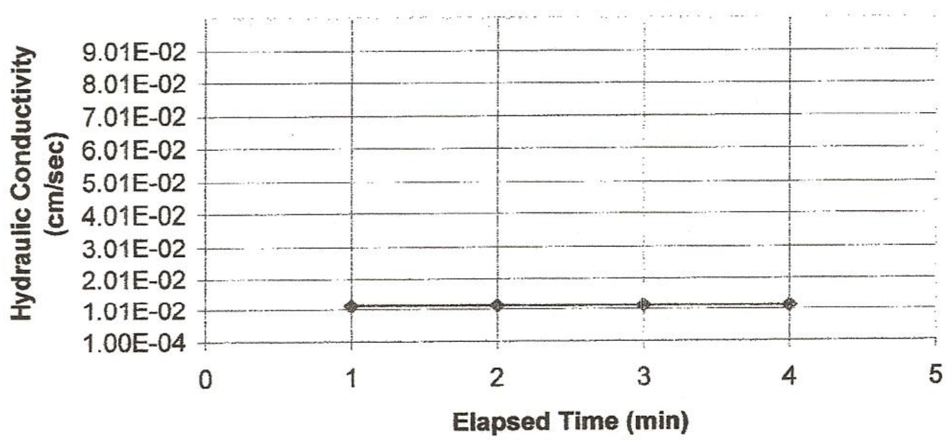
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	4.4%
DRY WEIGHT (**pcf**):	89.3
SATURATION (%):	13.6%
VOID RATIO:	0.86

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	32.3%
DRY WEIGHT (**pcf**):	89.3
SATURATION:	100.0%
VOID RATIO:	0.86
ROOM TEMP. (^{o}C):	25

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.315
QUANTITY OF FLOW:	44.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	1.14E-02	1.14E-02	1.14E-02	1.14E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 1.14E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

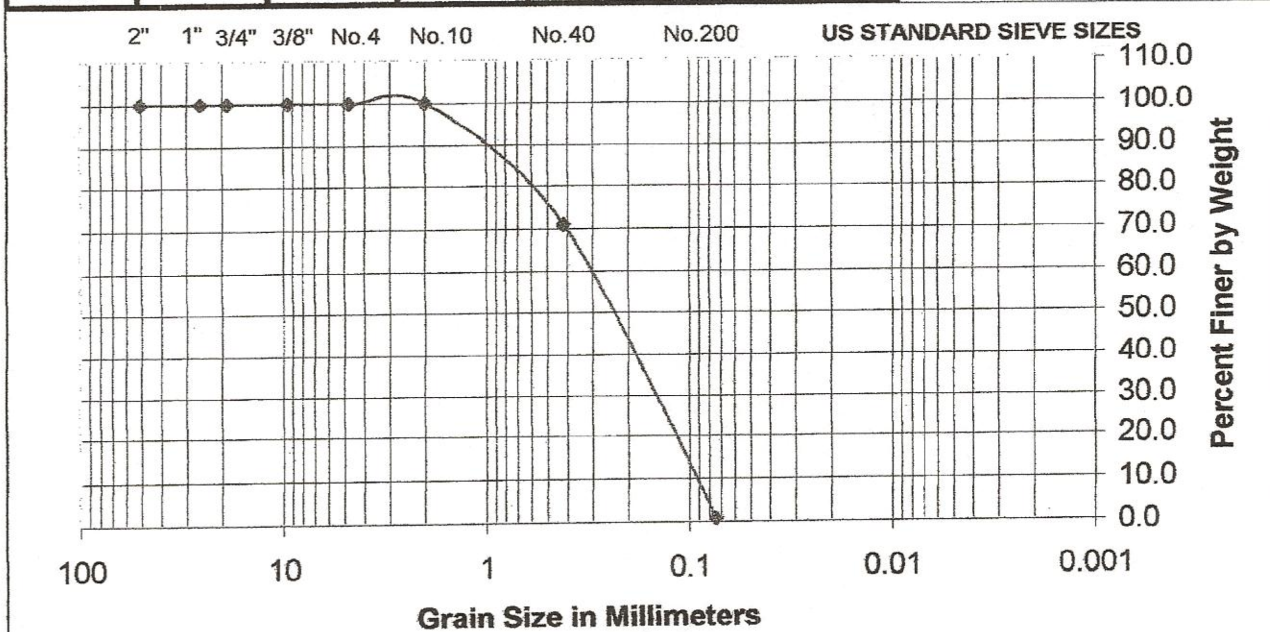
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-4
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	1027.7
Dry Wt. Soil + Tare (gm)	1000.9
Weight of Tare (gm)	249.8
Weight of Water (gm)	26.8
Weight of Dry Soil (gm)	751.1
Moisture Content (%)	3.6

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	1000.9
Weight of Tare (gm)	249.8
Weight of Sample (gm)	751.1

DESCRIPTION: TAN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	216.9	28.88	28.88	71.1
No. 200	0.074	527.7	70.26	99.13	0.9
Pan	-	4.7	0.63	99.76	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

Genesis Testing Services, Inc.

DATE: 10/25/12

REVIEW: AAG

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	9/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-4	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	TAN SAND	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

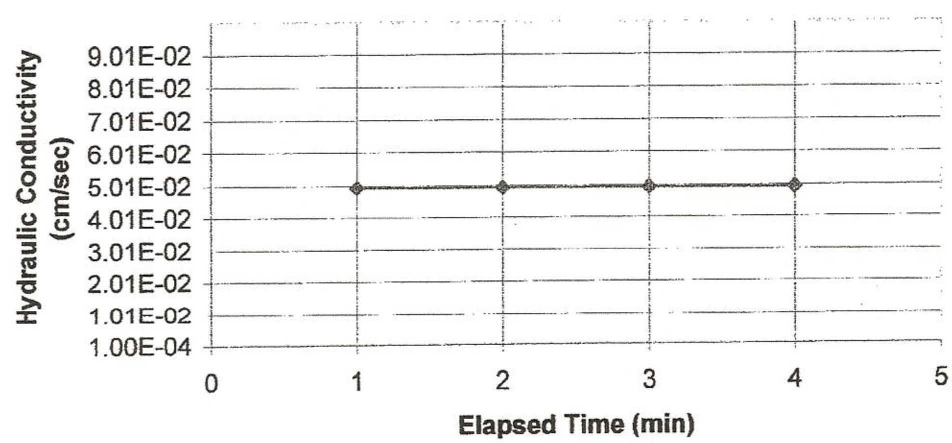
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	3.5%
DRY WEIGHT (pcf):	87.0
SATURATION (%):	10.3%
VOID RATIO:	0.91

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	34.1%
DRY WEIGHT (pcf):	87.0
SATURATION:	100.0%
VOID RATIO:	0.91
ROOM TEMP. (°C):	25

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.079
QUANTITY OF FLOW:	48.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	4.95E-02	4.95E-02	4.95E-02	4.95E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 4.95E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

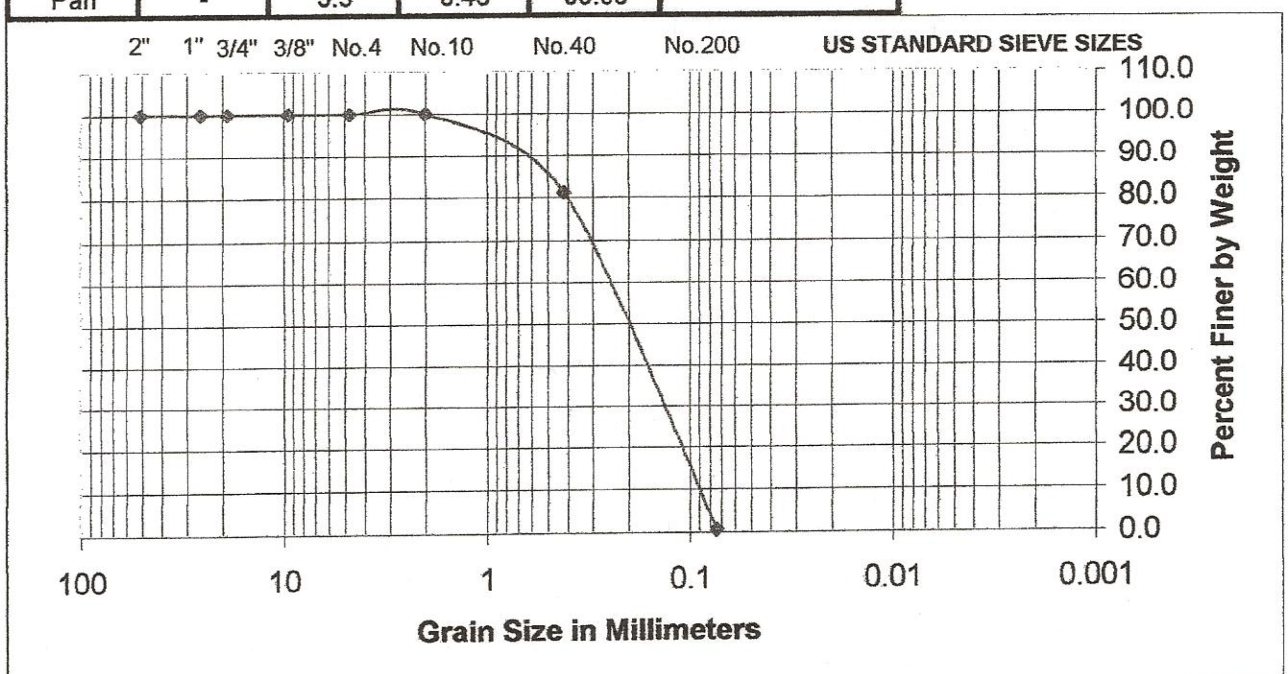
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-5
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	1077.1
Dry Wt. Soil + Tare (gm)	1039.8
Weight of Tare (gm)	253.8
Weight of Water (gm)	37.3
Weight of Dry Soil (gm)	786.0
Moisture Content (%)	4.7

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	1039.8
Weight of Tare (gm)	253.8
Weight of Sample (gm)	786.0

DESCRIPTION: **TAN SAND**

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	147.8	18.80	18.80	81.2
No. 200	0.074	633.9	80.65	99.45	0.5
Pan	-	3.5	0.45	99.90	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	9/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-5	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	TAN SAND	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

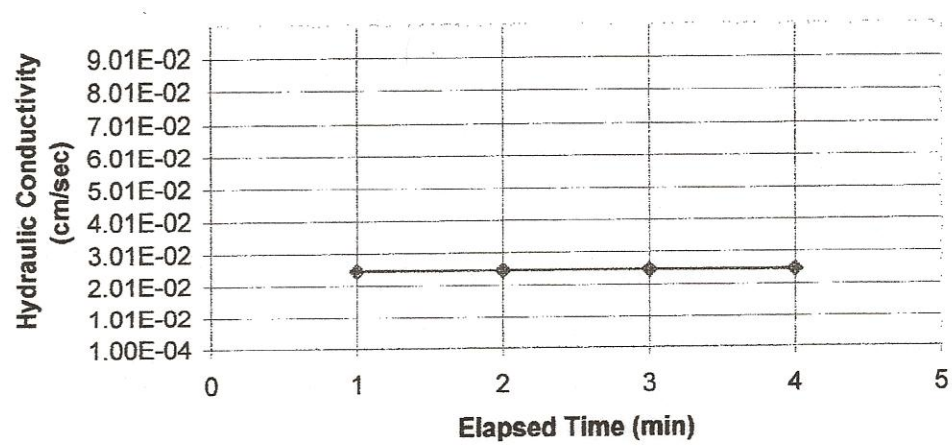
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	4.0%
DRY WEIGHT (**pcf**):	89.1
SATURATION (%):	12.3%
VOID RATIO:	0.86

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	32.4%
DRY WEIGHT (**pcf**):	89.1
SATURATION:	100.0%
VOID RATIO:	0.86
ROOM TEMP. (°C):	25

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.144
QUANTITY OF FLOW:	44.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	2.48E-02	2.48E-02	2.48E-02	2.48E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 2.48E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

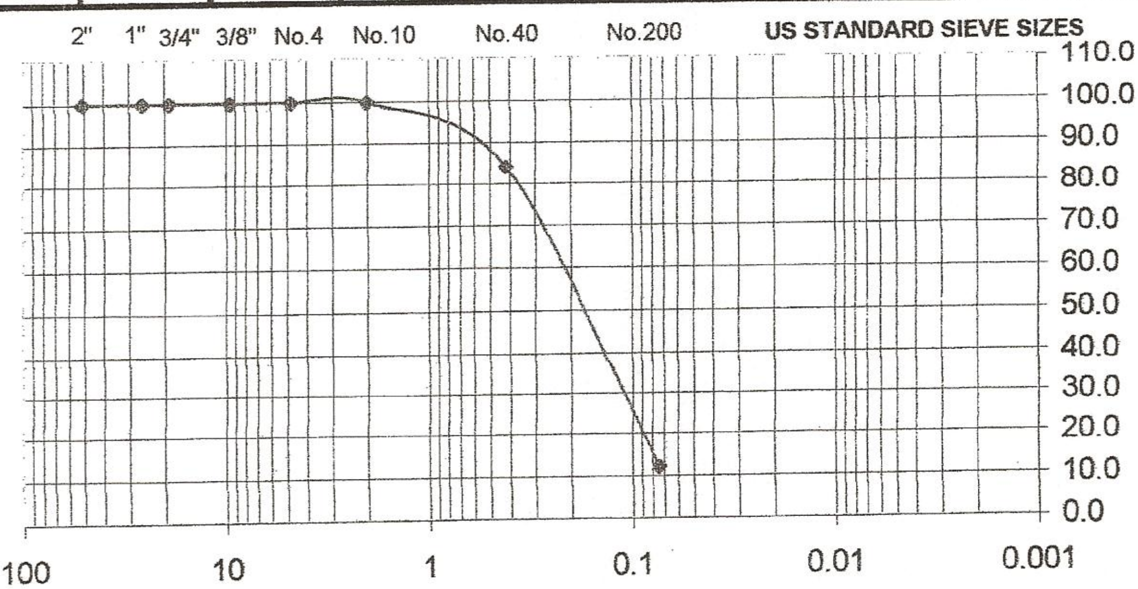
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-6
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	1017.6
Dry Wt. Soil + Tare (gm)	940.4
Weight of Tare (gm)	253.7
Weight of Water (gm)	77.2
Weight of Dry Soil (gm)	686.7
Moisture Content (%)	11.2

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	940.7
Weight of Tare (gm)	253.7
Weight of Sample (gm)	687.0

DESCRIPTION: TAN SAND WITH SILT

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	108.8	15.84	15.84	84.2
No. 200	0.074	495.8	72.17	88.01	12.0
Pan	-	81.2	11.82	99.83	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	10/6/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-6	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	TAN SAND WITH SILT	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP-SM

SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	10.7%
DRY WEIGHT (**pcf**):	88.1
SATURATION (%):	32.2%
VOID RATIO:	0.88

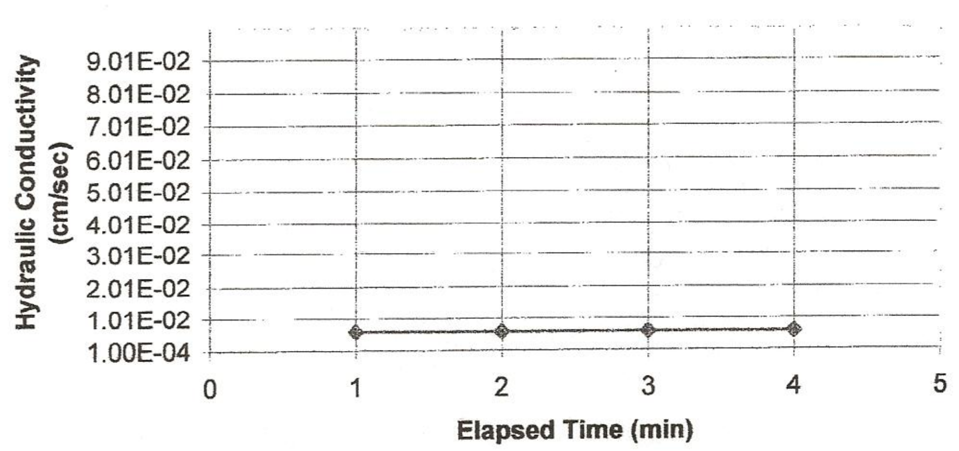
REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A

Material was lightly compacted in the permeameter.

PERMEANT DESCRIPTION: Tap Water

FINAL	
MOISTURE %:	33.2%
DRY WEIGHT (**pcf**):	88.1
SATURATION:	100.0%
VOID RATIO:	0.88
ROOM TEMP. (°C):	23.88

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.564
QUANTITY OF FLOW:	40.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	5.91E-03	5.91E-03	5.91E-03	5.91E-03

HYDRAULIC CONDUCTIVITY @ 20 oC 5.91E-03 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

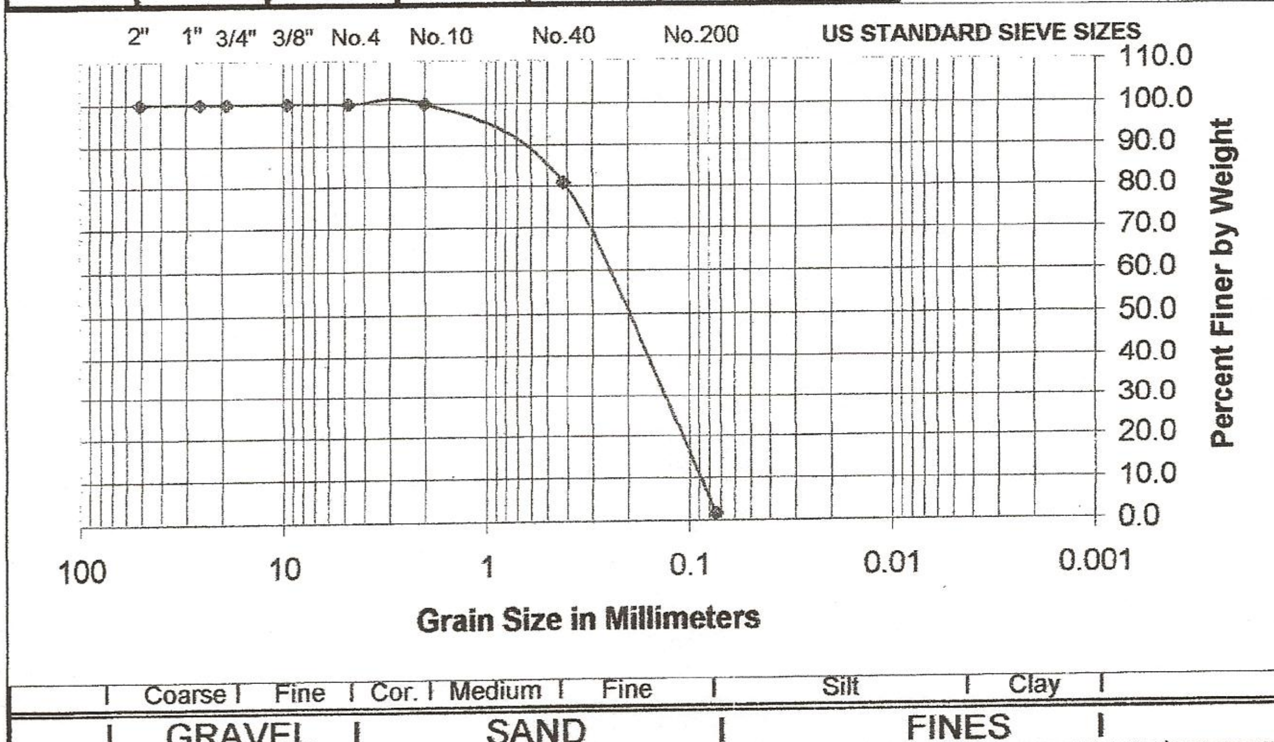
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-7
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	1028.5
Dry Wt. Soil + Tare (gm)	995.4
Weight of Tare (gm)	252.1
Weight of Water (gm)	33.1
Weight of Dry Soil (gm)	743.3
Moisture Content (%)	4.5

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	995.4
Weight of Tare (gm)	252.1
Weight of Sample (gm)	743.3

DESCRIPTION: **TAN SAND**

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	141.2	19.00	19.00	81.0
No. 200	0.074	590.3	79.42	98.41	1.6
Pan	-	11.5	1.55	99.96	-



DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	10/6/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-7	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	TAN SAND .	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

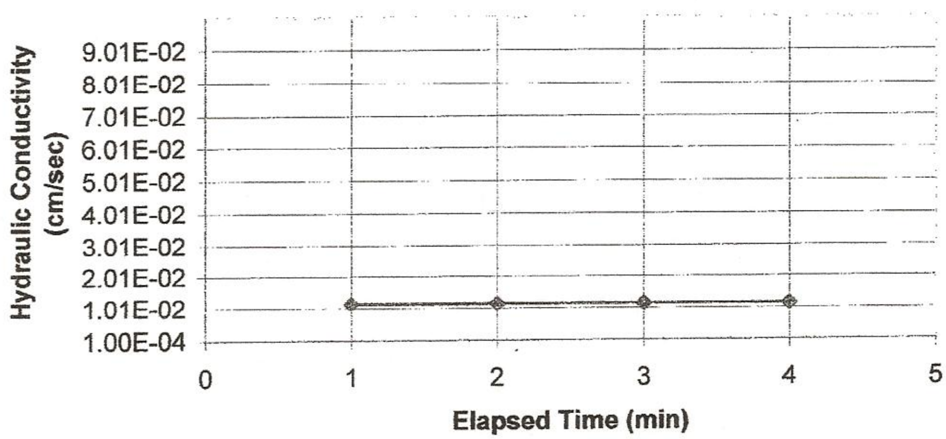
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	4.5%
DRY WEIGHT (**pcf**):	90.4
SATURATION (%):	14.3%
VOID RATIO:	0.84

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	31.4%
DRY WEIGHT (**pcf**):	90.4
SATURATION:	100.0%
VOID RATIO:	0.84
ROOM TEMP. (°C):	23.88

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.577
QUANTITY OF FLOW:	40.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	1.15E-02	1.15E-02	1.15E-02	1.15E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 1.15E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

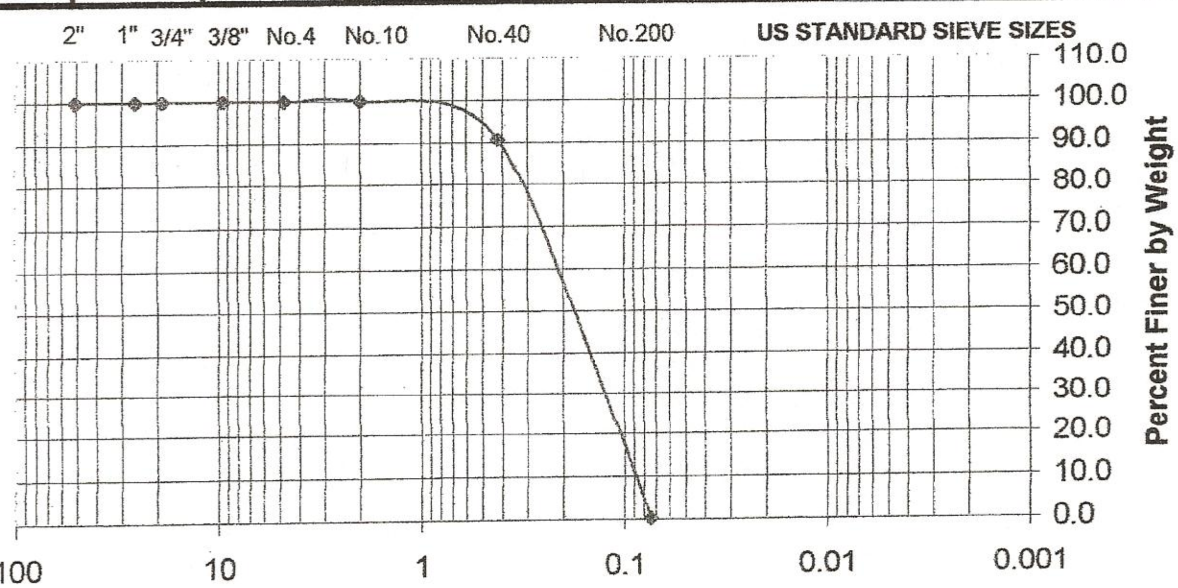
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-8
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	818.9
Dry Wt. Soil + Tare (gm)	790.6
Weight of Tare (gm)	182.0
Weight of Water (gm)	28.3
Weight of Dry Soil (gm)	608.6
Moisture Content (%)	4.7

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	790.6
Weight of Tare (gm)	182.0
Weight of Sample (gm)	608.6

DESCRIPTION: **GREY AND TAN SAND**

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	56.8	9.33	9.33	90.7
No. 200	0.074	549.7	90.32	99.65	0.3
Pan	-	3.9	0.64	100.30	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	10/6/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-8	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	GREY AND TAN SAND .	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	4.3%
DRY WEIGHT (pcf):	86.4
SATURATION (%):	12.4%
VOID RATIO:	0.92

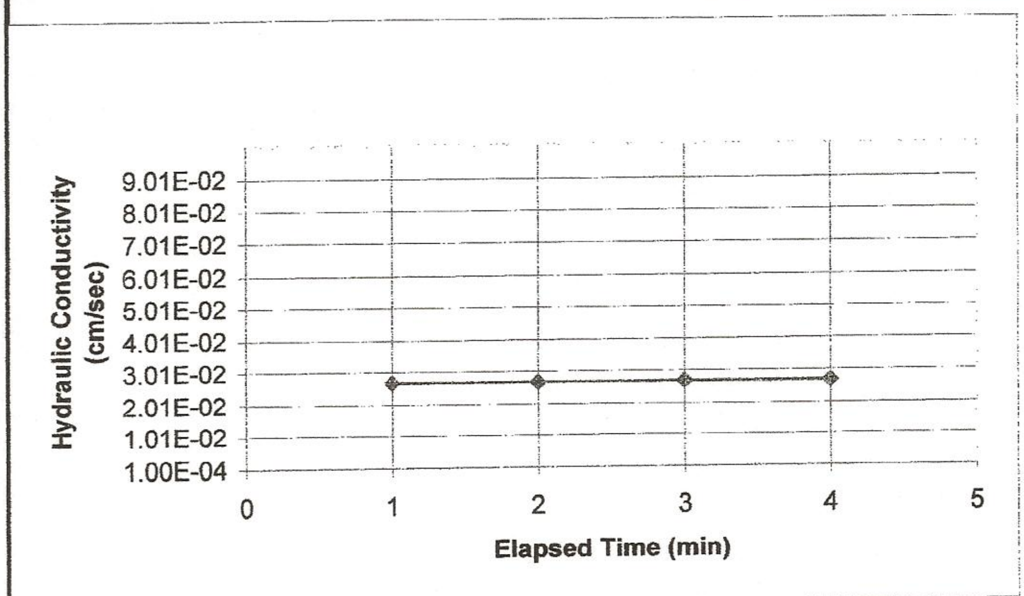
REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A

Material was lightly compacted in the permeameter.

PERMEANT DESCRIPTION: Tap Water

FINAL	
MOISTURE %:	34.6%
DRY WEIGHT (pcf):	86.4
SATURATION:	100.0%
VOID RATIO:	0.92
ROOM TEMP. (°C):	23.88

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.236
QUANTITY OF FLOW:	38.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	2.68E-02	2.68E-02	2.68E-02	2.68E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 2.68E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

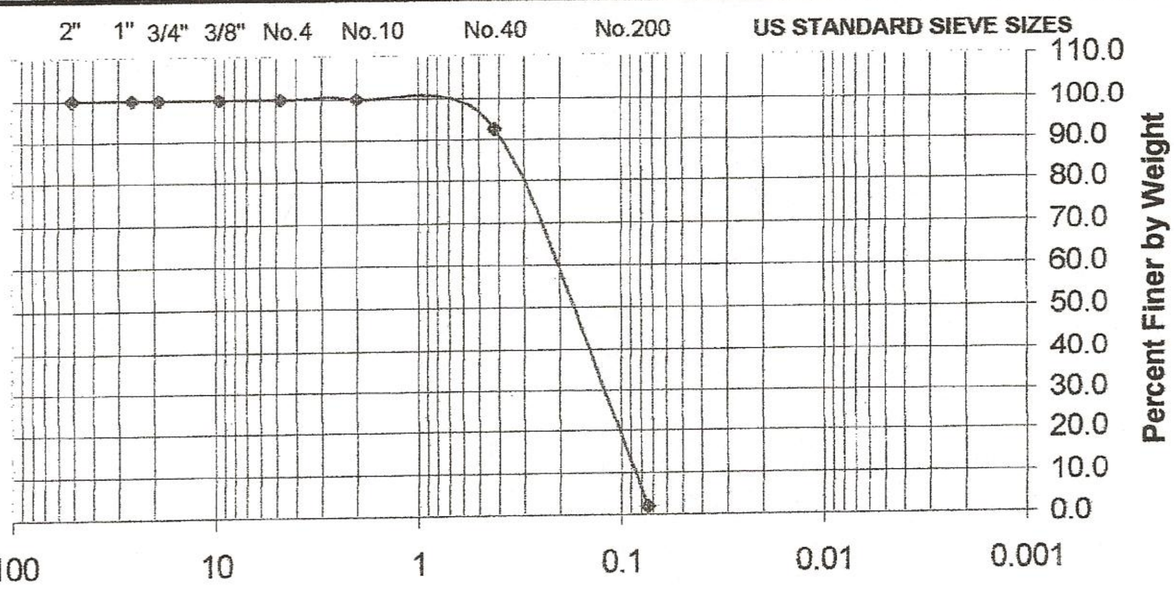
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-9
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	871.9
Dry Wt. Soil + Tare (gm)	840.1
Weight of Tare (gm)	181.4
Weight of Water (gm)	31.8
Weight of Dry Soil (gm)	658.7
Moisture Content (%)	4.8

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	840.1
Weight of Tare (gm)	181.4
Weight of Sample (gm)	658.7

DESCRIPTION: **ORANGE AND TAN SAND**

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	49.1	7.45	7.45	92.5
No. 200	0.074	596.3	90.53	97.98	2.0
Pan	-	11.3	1.72	99.70	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

Genesis Testing Services, Inc.

DATE: 10/25/12

REVIEW: AAG

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	10/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-9	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	ORANGE AND TAN SAND .	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	5.3%
DRY WEIGHT (pcf):	86.6
SATURATION (%):	15.4%
VOID RATIO:	0.92

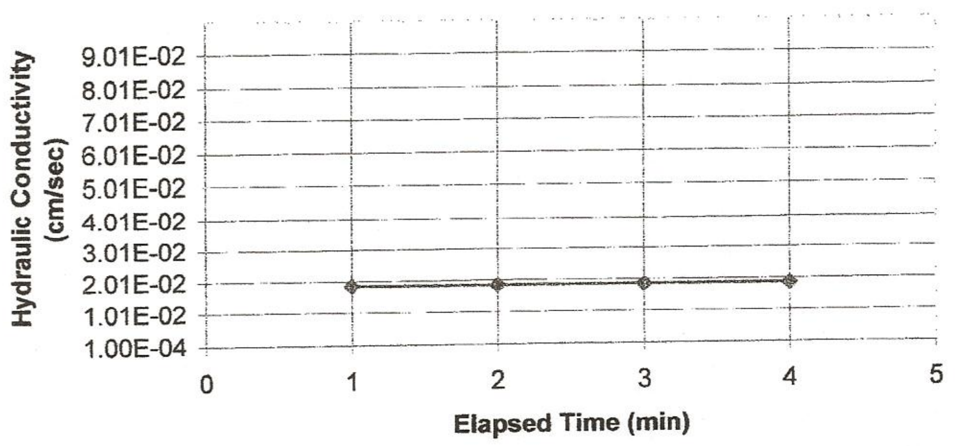
REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A

Material was lightly compacted in the permeameter.

PERMEANT DESCRIPTION: Tap Water

FINAL	
MOISTURE %:	34.5%
DRY WEIGHT (pcf):	86.6
SATURATION:	100.0%
VOID RATIO:	0.92
ROOM TEMP. (°C):	22.77

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.275
QUANTITY OF FLOW:	60.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	1.86E-02	1.86E-02	1.86E-02	1.86E-02

HYDRAULIC CONDUCTIVITY @ 20 oC 1.86E-02 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

PARTICLE SIZE ANALYSIS (ASTM D 422)

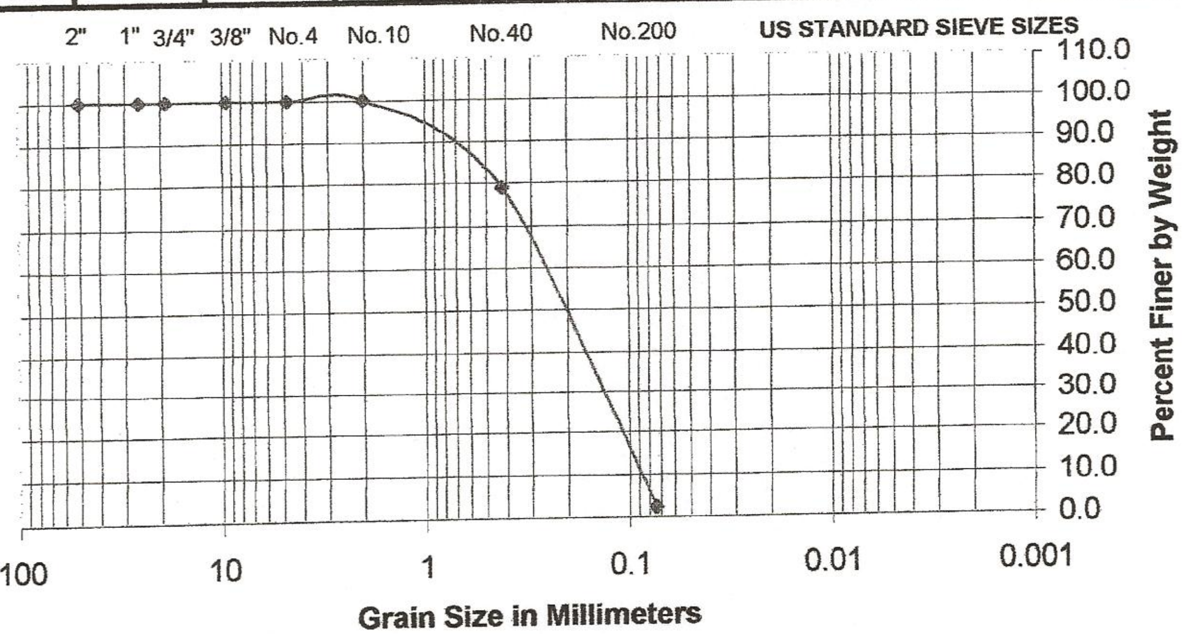
PROJECT TITLE: VISTA CLASS III LANDFILL - CELL 3	SAMPLE NUMBER: PC-10
PROJECT NUMBER: 2012-26	SAMPLE TYPE: Bag

IN-SITU MOISTURE	
Wet Wt. Soil + Tare(gm)	882.0
Dry Wt. Soil + Tare (gm)	843.1
Weight of Tare (gm)	182.2
Weight of Water (gm)	38.9
Weight of Dry Soil (gm)	660.9
Moisture Content (%)	5.9

TOTAL WEIGHT OF SAMPLE USED	
Weight of Sample + Tare gm)	843.1
Weight of Tare (gm)	182.2
Weight of Sample (gm)	660.9

DESCRIPTION: TAN SAND

Sieve Number	Grain Size (mm)	Mass of soil retained on sieve (g)	Percent of mass retained on each sieve	Cumulative percent retained	Percent Finer (%)
3-inch	76.1	0.0	0.00	0.00	100.0
2-inch	50.8	0.0	0.00	0.00	100.0
1-inch	25.7	0.0	0.00	0.00	100.0
3/4-inch	19.0	0.0	0.00	0.00	100.0
3/8-inch	9.51	0.0	0.00	0.00	100.0
No. 4	4.76	0.0	0.00	0.00	100.0
No. 10	2.00	0.0	0.00	0.00	100.0
No. 40	0.42	139.5	21.11	21.11	78.9
No. 200	0.074	505.9	76.55	97.65	2.3
Pan	-	14.8	2.24	99.89	-



Coarse	Fine	Cor.	Medium	Fine	Silt	Clay
GRAVEL		SAND			FINES	

DATE: 10/25/12

REVIEW: AAG

Genesis Testing Services, Inc.

RIGID WALL PERMEABILITY TEST REPORT (ASTM D 2434)

PROJECT TITLE:	VISTA LANDFILL - CELL 3	DATE:	10/22/2012
PROJECT NUMBER:	2012-26	SAMPLE TYPE:	BAG
SAMPLE NUMBER:	PC-10	DIAMETER, INCHES:	3.0
SOIL DESCRIPTION:	TAN SAND .	LENGTH, INCHES:	3.0
LIQUID LIMIT:	-	ESTIMATED S.G.:	2.66
PLASTICITY INDEX:	-	USCS:	SP

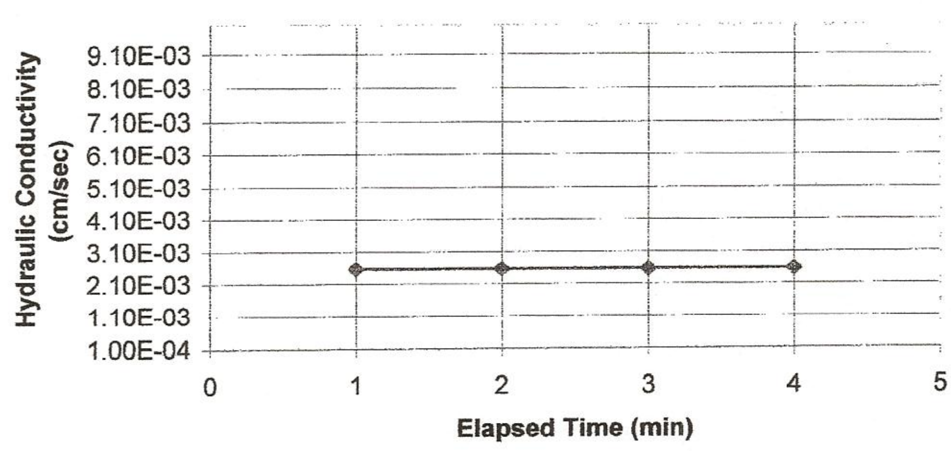
SPECIMEN PROPERTIES

INITIAL	
MOISTURE %:	5.8%
DRY WEIGHT (**pcf**):	90.3
SATURATION (%):	18.4%
VOID RATIO:	0.84

REMOLDED SOIL PROPERTIES	
MAXIMUM DRY DENSITY (pcf):	N/A
OPTIMUM MOISTURE CONTENT (%)	N/A
Material was lightly compacted in the permeameter.	
PERMEANT DESCRIPTION: Tap Water	

FINAL	
MOISTURE %:	31.5%
DRY WEIGHT (**pcf**):	90.3
SATURATION:	100.0%
VOID RATIO:	0.84
ROOM TEMP. (°C):	22.77

PERMEATION	
FINAL BACK PRESSURE:	-
EFFECTIVE CONSOLIDATION PRESSURE:	-
PORE PRESSURE DIFFERENCE:	-
HYDRAULIC GRADIENT:	0.931
QUANTITY OF FLOW:	28.0 cu.cm



ELAPSED TIME (MIN):	1	2	3	4
HYDRAULIC CONDUCTIVITY (CM/SEC):	2.57E-03	2.57E-03	2.57E-03	2.57E-03

HYDRAULIC CONDUCTIVITY @ 20 oC 2.57E-03 cm/sec

DATE: 10/25/12
REVIEWED BY: AAG

Genesis Testing Services, Inc.

CARBONATE CONTENT (Calcite Equivalent)
ASTM D 4373

PROJECT TITLE	GTS/WM-VISTA LF-CELL 3/FL
PROJECT NUMBER	123-90170
REMARKS	-

SAMPLE ID	PC-2	PC-3	PC-5
SPECIMEN NUMBER	Carbonate Content %	Carbonate Content %	Carbonate Content %
1	0.6	1.4	1.0
2	0.8	1.6	1.1
Average	0.7	1.5	1.1

SAMPLE ID	PC-8	PC-10	-
SPECIMEN NUMBER	Carbonate Content %	Carbonate Content %	Carbonate Content %
1	0.0	0.7	
2	0.0	0.8	
Average	0.0	0.8	

SAMPLE ID	-	-	-
SPECIMEN NUMBER	Carbonate Content %	Carbonate Content %	Carbonate Content %
1			
2			
Average			

SAMPLE ID	-	-	-
SPECIMEN NUMBER	Carbonate Content %	Carbonate Content %	Carbonate Content %
1			
2			
Average			

TECH	TJ
DATE	10/23/12
CHECK	[signature]
REVIEW	[signature]
APPROVE	

A.4 STONE AGGREGATE CONFORMANCE TESTS

VISTA CLASS III LANDFILL - CELL 3
SUMMARY OF SOIL DATA

					Atterberg Limits			Grain Size Distribution			Standard Proctor			Unit Weight			
Sample ID	Sample Type	Sample Depth	Soil Classification	In-Situ Moisture (%)	L.L.	P.L.	P.I.	% Finer No. 4 Sieve	% Finer No. 200 Sieve	% Finer .005 mm Sieve	Maximum Dry Density (lb/cu.ft)	Optimum Moisture Content (%)	Gs	Dry Density (lb/cu.ft)	Moisture Content (%)	Permeability (cm/sec)	Carbonate Content (%)
#4Stone	Bulk	-	GP	-	-	-	-	1.0	0.2	-	-	-	-	104.8	-	36.3	0.2
#57Stone	Bulk	-	GP	-	-	-	-	3.7	0.5	-	-	-	-	111.7	-	21.4	0.9
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ABBREVIATIONS:
LIQUID LIMIT (L.L.)
PLASTIC LIMIT (P.L.)
PLASTICITY INDEX (P.I.)
NON-PLASTIC (N/P)
SPECIFIC GRAVITY (Gs)
MOISTURE CONTENT (Mc)

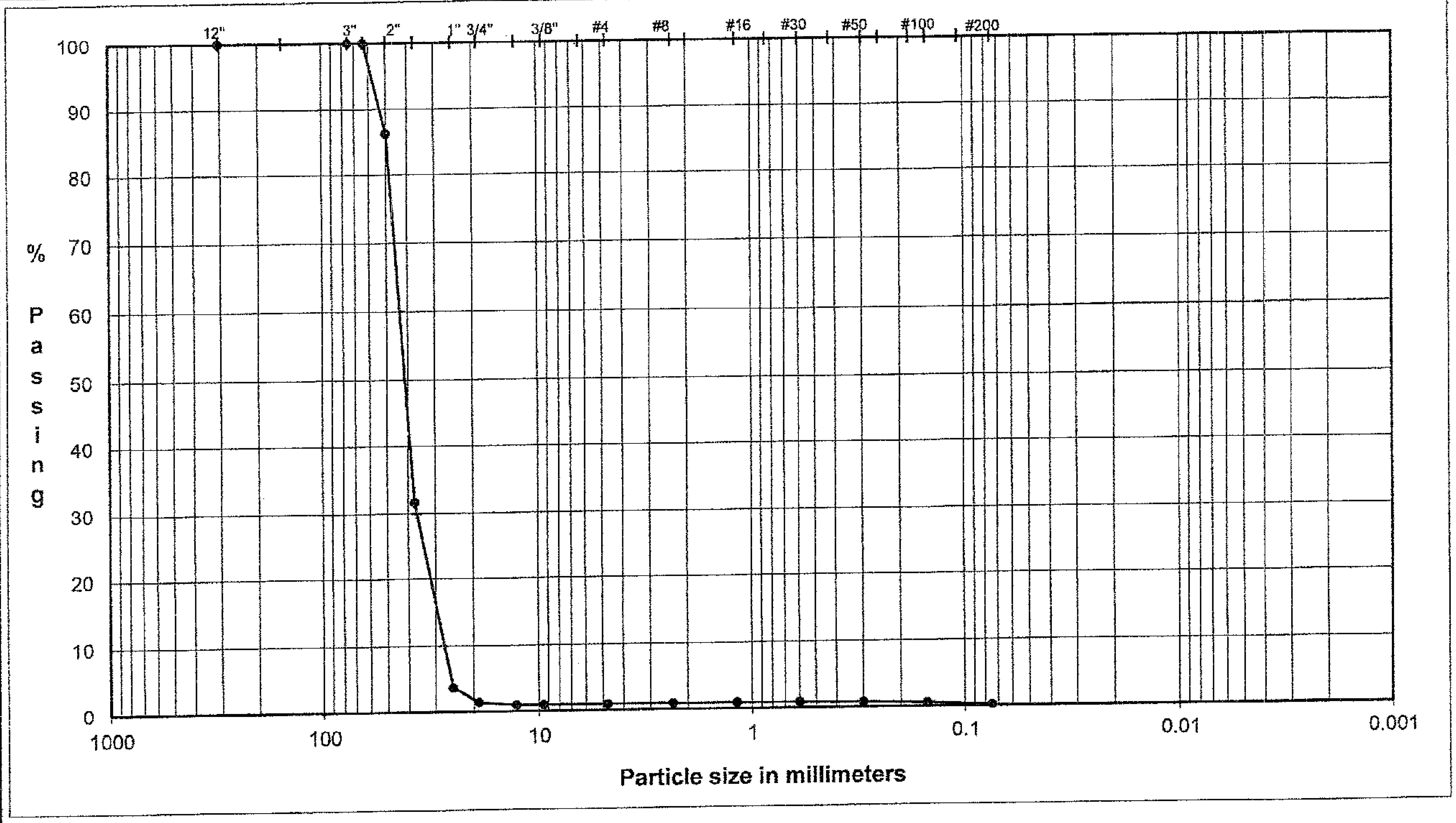
NOTES:
T = TRIAXIAL TEST
U = UNCONFINED COMPRESSION TEST
DS = DIRECT SHEAR TEST
O = ORGANIC CONTENT
P = pH
CC = CARBONATE CONTENT

OCTOBER 2012 123-90170

PARTICLE SIZE DISTRIBUTION

ASTM C117, C136

PROJECT NAME: **GTS/WM-VISTA LF - CELL 3/FL**
SAMPLE ID: **#4 STONE** - Depth: -
TYPE: **Bulk**



COBBLES	GRAVEL		SAND			FINES
	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay

U.S. Standard Sieves Sizes and Numbers

Sieve	Particle Size (mm)	% Passing	Particle Size Classification	Percentage
12.0"	304.8	**100.0**	Cobbles	**0.0**
3.0"	75	**100.0**		
2.5"	63.5	**100.0**	Coarse Gravel	**98.5**
2.0"	50	**86.2**		
1.5"	37.5	**31.6**		
1.0"	25	**3.7**		
0.75"	19	**1.5**		
0.50"	12.7	**1.0**	Fine Gravel	**0.5**
0.375"	9.5	**1.0**		
#4	4.75	**1.0**		
#8	2.36	**1.0**	Coarse Sand	**0.0**
#16	1.18	**1.0**	Medium Sand	**0.1**
#30	0.60	**0.9**		
#50	0.30	**0.8**	Fine Sand	**0.7**
#100	0.15	**0.6**		
#200	0.075	**0.2**		
			Fines	**0.2**

D_{60}= 43.6	D_{30}= 36.7	D_{10}= 27.4
Cu = D60/D10 =	1.6	< 4
Cc = D30^2/(D10*D60) =	1.1	> 1

DESCRIPTION: Gray, COARSE GRAVEL, trace medium to fine sand, trace fines.

USCS: GP

M_c 0.0%

TECH	AM
DATE	10/17/12
CHECK	
REVIEW	
APPROVE	

Golder Associates Inc.

CONSTANT HEAD PERMEABILITY TEST
ASTM D 2434 - MODIFIED

PROJECT TITLE	GTS/WM-VISTA LF - CELL 3/FL	SAMPLE ID	#4 STONE
PROJECT NUMBER	123-90170	SAMPLE TYPE	Bulk
REMARKS	-	SAMPLE DEPTH	-

		TIME IN SECONDS	VOLUME (ml)	TEMP. °C	Flow Rate (ml/sec)	
Gradient -1	1.	8.72	7570	23.0	868.12	*
	2.	9.00	7570	23.0	841.11	*
	3.	8.78	7570	23.0	862.19	*
Gradient -2	1.	7.72	7570	23.0	980.57	*
	2.	7.81	7570	23.0	969.27	*
	3.	7.57	7570	23.0	1000.00	*
Gradient -3	1.	6.82	7570	23.0	1109.97	*
	2.	6.81	7570	23.0	1111.60	*
	3.	6.74	7570	23.0	1123.15	*

INITIAL UNIT WEIGHT DETERMINATION

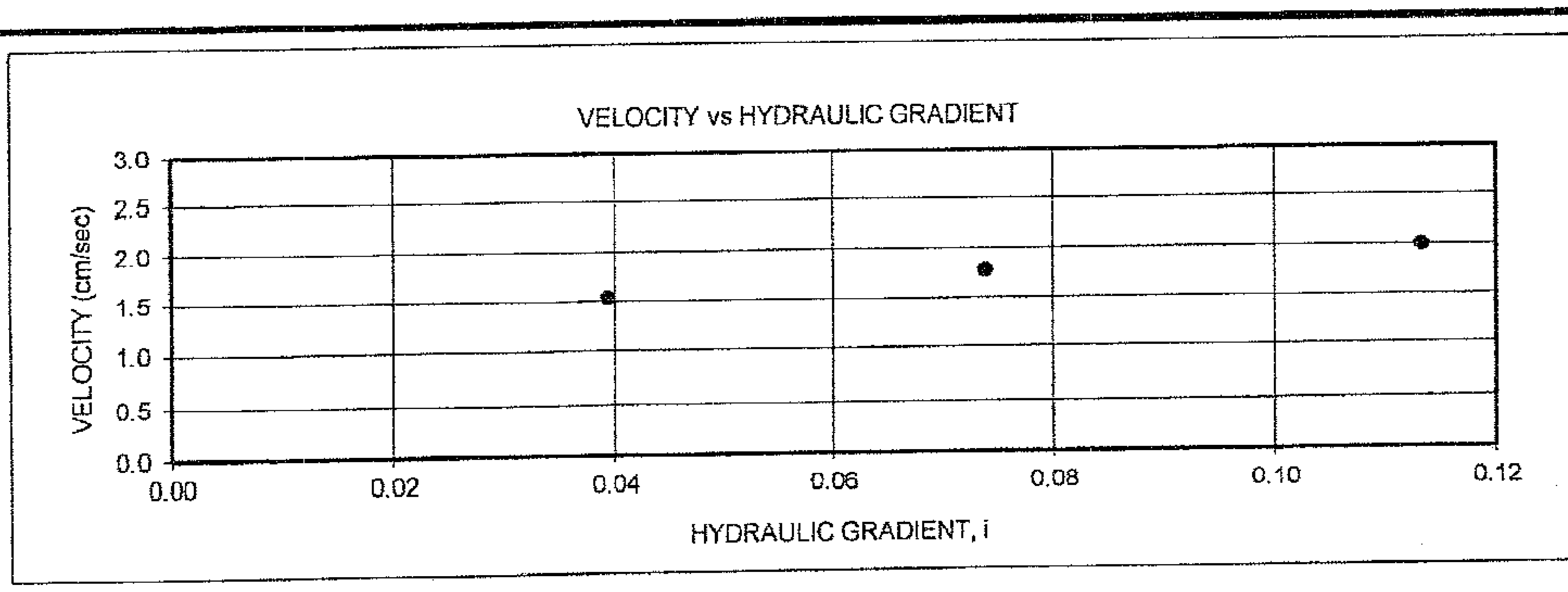
APPARATUS & WET SAMPLE (lbs):	42.0
APPARATUS & WET SAMPLE (g):	19050.9
APPARATUS WEIGHT (g):	1.8
WET SAMPLE WEIGHT (g):	19049.1

	INITIAL	FINAL
SAMPLE LENGTH (in):	8.0	8.0
SAMPLE DIAMETER (in):	10.5	10.5
SAMPLE AREA (in^2):	86.59	86.59
SAMPLE AREA (cm^2):	558.64	558.64
SAMPLE VOLUME (in^3):	692.72	692.72
SAMPLE VOLUME (ft^3):	0.401	0.401
WET DENSITY IN (pcf):	104.8	104.8
DRY DENSITY IN (pcf):	104.8	104.8

INITIAL MOISTURE CONTENT

WET SAMPLE & TARE (g):		
DRY SAMPLE & TARE (g):		
WEIGHT OF TARE (g):		
WEIGHT OF WATER (g):		
DRY SAMPLE WEIGHT (g):		
MOISTURE CONTENT (%):		

AVERAGE FLOW RATE (ml/sec):	857.14	983.28	1114.91
AVERAGE TEMP (°C):	23.0	23.0	23.0
TEMPERATURE CORRECTION:	0.931	0.931	0.931
HEAD OF WATER (mm):	8.0	15.0	23.0
HEAD OF WATER (in):	0.3	0.6	0.9
HYDRAULIC GRADIENT (i):	0.04	0.07	0.11
Velocity (cm/sec)	1.53	1.76	2.00
Permeability @ 20°C(cm/sec) =	36.3	22.2	16.4



TECH	TJ
DATE	10/18/12
CHECK	
REVIEW	
APPROVE	

Golder Associates Inc.

CARBONATE CONTENT
ASTM D 3042 - MODIFIED

PROJECT TITLE	GTS/WM-VISTA LF - CELL 3/FL
PROJECT NUMBER	123-90170
SAMPLE ID	#4 STONE

Residue +Tare weight (g)	594.97	594.31	598.02
Tare Weight (g)	83.22	82.94	84.54
Residue weight (g)	511.75	511.37	513.48

After Acid Application and Wash

Residue + Tare weight (g)	593.54	593.14	596.99
Residue weight (g)	510.32	510.20	512.45
Carbonate Content (%)	0.3	0.2	0.2

Average Carbonate Content (%) **0.2**

REMARKS

SAMPLE DESCRIPTION Gray, COARSE GRAVEL, trace medium to fine sand, trace fines.

USCS GP

MODIFIED: Only the Plus No.200 Size material used in the test.

TECH	TJ
DATE	101/19/12
CHECK	
REVIEW	
APPROVE	

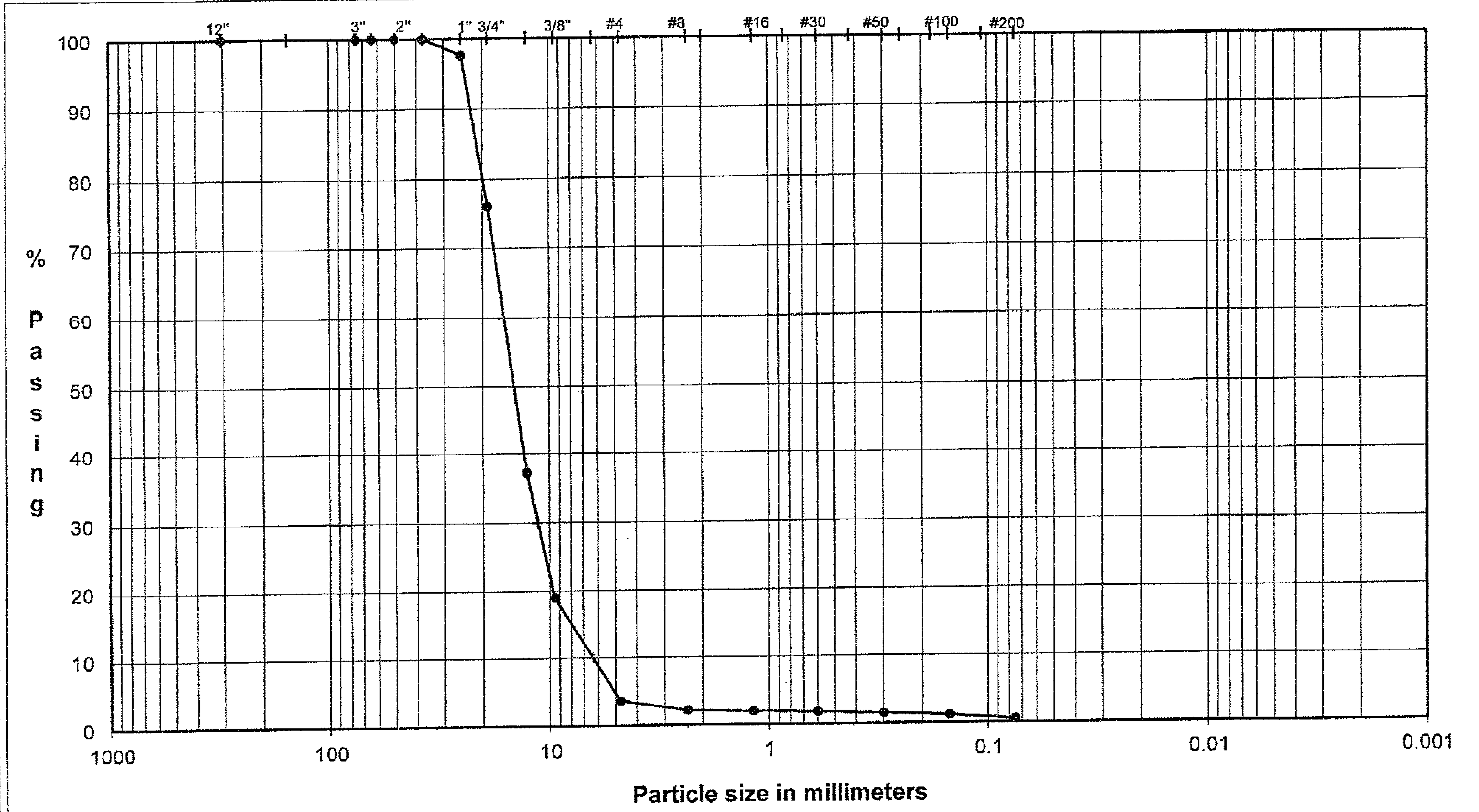
OCTOBER 2012

123-90170

PARTICLE SIZE DISTRIBUTION

ASTM C117, C136

PROJECT NAME: **GTS/WM-VISTA LF - CELL 3/FL**
SAMPLE ID: **#57 STONE** - Depth: -
TYPE: **Bulk**



	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
COBBLES	GRAVEL		SAND			FINES

U.S. Standard Sieves Sizes and Numbers

	Particle Size (mm)	% Passing	Particle Size Classification	Particle Size Percentage
12.0"	304.8	**100.0**		
3.0"	75	**100.0**	Cobbles	**0.0**
2.5"	63.5	**100.0**		
2.0"	50	**100.0**		
1.5"	37.5	**100.0**		
1.0"	25	**97.5**		
0.75"	19	**76.1**	Coarse Gravel	**23.9**
0.50"	12.7	**37.2**		
0.375"	9.5	**18.9**		
#4	4.75	**3.7**	Fine Gravel	**72.4**
#8	2.36	**2.2**	Coarse Sand	**1.5**
#16	1.18	**1.9**		
#30	0.60	**1.8**	Medium Sand	**0.5**
#50	0.30	**1.6**		
#100	0.15	**1.2**		
#200	0.075	**0.5**	Fine Sand	**1.2**
			Fines	**0.5**

D_{60}= 16.1	D_{30}= 11.3	D_{10}= 6.3
Cu = D60/D10 =	2.5	< 4
Cc = D30^2/(D10*D60) =	1.3	> 1

DESCRIPTION: Gray, COARSE GRAVEL, trace coarse to fine sand, trace fines.

USCS: GP

M_C 0.0%

TECH	AM
DATE	10/17/12
CHECK	[signature]
REVIEW	[signature]
APPROVE	

CONSTANT HEAD PERMEABILITY TEST
ASTM D 2434 - MODIFIED

PROJECT TITLE	GTS/WM-VISTA LF - CELL 3/FL	**SAMPLE ID**	#57 STONE
PROJECT NUMBER	123-90170	**SAMPLE TYPE**	Bulk
REMARKS	-	**SAMPLE DEPTH**	-

		TIME IN SECONDS	VOLUME (ml)	TEMP. °C	Flow Rate (ml/sec)	
Gradient -1	1.	7.59	7570	23.0	997.36	*
	2.	7.38	7570	23.0	1025.75	*
	3.	7.28	7570	23.0	1039.84	*
Gradient -2	1.	7.78	7570	23.0	973.01	*
	2.	7.88	7570	23.0	960.66	*
	3.	8.00	7570	23.0	946.25	*
Gradient -3	1.	9.50	7570	23.0	796.84	*
	2.	9.59	7570	23.0	789.36	*
	3.	9.44	7570	23.0	801.91	*

INITIAL UNIT WEIGHT DETERMINATION

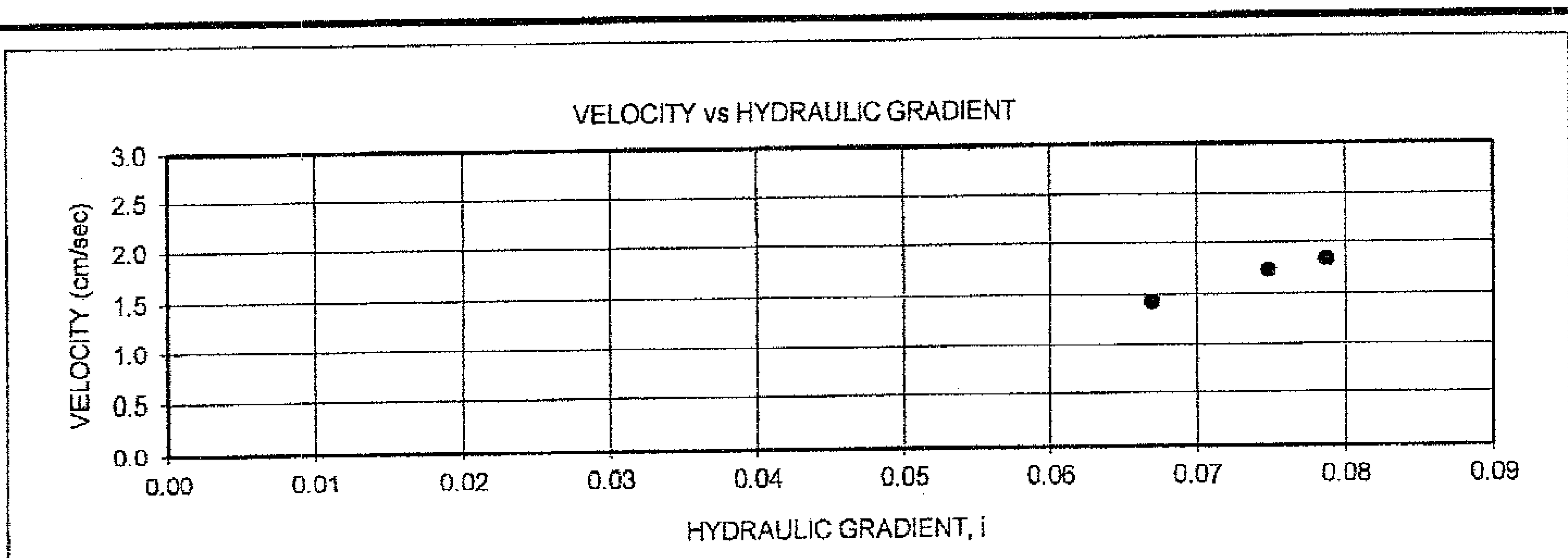
APPARATUS & WET SAMPLE (lbs):	56.0
APPARATUS & WET SAMPLE (g):	25401.2
APPARATUS WEIGHT (g):	1.8
WET SAMPLE WEIGHT (g):	25399.4

	INITIAL	FINAL
SAMPLE LENGTH (in):	10.0	10.0
SAMPLE DIAMETER (in):	10.5	10.5
SAMPLE AREA (in^2):	86.59	86.59
SAMPLE AREA (cm^2):	558.64	558.64
SAMPLE VOLUME (in^3):	865.90	865.90
SAMPLE VOLUME (ft^3):	0.501	0.501
WET DENSITY IN (pcf):	111.7	111.7
DRY DENSITY IN (pcf):	111.7	111.7

INITIAL MOISTURE CONTENT

WET SAMPLE & TARE (g):		
DRY SAMPLE & TARE (g):		
WEIGHT OF TARE (g):		
WEIGHT OF WATER (g):		
DRY SAMPLE WEIGHT (g):		
MOISTURE CONTENT (%):		

AVERAGE FLOW RATE (ml/sec):	1020.98	959.97	796.04
AVERAGE TEMP (°C):	23.0	23.0	23.0
TEMPERATURE CORRECTION:	0.931	0.931	0.931
HEAD OF WATER (mm):	20.0	19.0	17.0
HEAD OF WATER (in):	0.8	0.7	0.7
HYDRAULIC GRADIENT (i):	0.08	0.07	0.07
Velocity (cm/sec)	1.83	1.72	1.42
Permeability @ 20°C(cm/sec) =	21.6	21.4	19.8



TECH	TJ/PWM
DATE	10/18/12
CHECK	[signature]
REVIEW	[signature]
APPROVE	

CARBONATE CONTENT
ASTM D 3042 - MODIFIED

PROJECT TITLE	GTS/WM-VISTA LF - CELL 3/FL
PROJECT NUMBER	123-90170
SAMPLE ID	#57 STONE

Residue +Tare weight (g)	580.02	580.49	583.90
Tare Weight (g)	81.03	80.30	82.75
Residue weight (g)	498.99	500.19	501.15

After Acid Application and Wash

Residue + Tare weight (g)	576.42	577.17	577.24
Residue weight (g)	495.39	496.87	494.49
Carbonate Content (%)	0.7	0.7	1.3

Average Carbonate Content (%) **0.9**

REMARKS

SAMPLE DESCRIPTION Gray, COARSE GRAVEL, trace coarse to fine sand, trace fines.

USCS GP

MODIFIED: Only the Plus No.200 Size material used in the test.

TECH	TJ
DATE	10/19/12
CHECK	
REVIEW	
APPROVE	

Golder Associates Inc.

A.5 SUBGRADE ACCEPTANCE FORMS

CEC

Owner: Waste Management Inc

Project Name: Cell - 3

Site Name: Vista Landfill

Location: Apopka Fl

Date: 09/21/2012

Installer: E.S. I

I the Undersigned, a duly authorized representative of ESI do hereby accept the Soil Subgrade surface covered by geomembrane panel(s) P-1 through P-27 as an acceptable surface on which to install geomembrane.

E.S. I Souligha		Supt
Name	Signature	Title

9-21-12
Date

CEC's CQA certification acceptance by:

Tommy C Bradford		CQA Monitor
Name	Signature	Title

9/21/2012
Date

CEC

Owner: Waste Management Inc.

Project Name: Cell - 3

Site Name: Vista Landfill

Location: Apopka Fl

Date: 09/23/2012

Installer: E. S. I

I the Undersigned, a duly authorized representative of ESI do hereby accept the Soil Subgrade surface covered by geomembrane panel(s) P-28 through P-43 as an acceptable surface on which to install geomembrane.

SOULIGNA	[signature]	Supt
Name	Signature	Title

9/23/12
Date

CEC's CQA certification acceptance by:

Tommy C Bradford	[signature]	CQA Monitor
Name	Signature	Title

09/23/2012
Date

CEC

Owner: Waste Management Inc.

Project Name: Cell 3

Site Name: Vista Landfill

Location: Apopka Fl

Date: 09/24/2012

Installer: ESI

I the Undersigned, a duly authorized representative of ESI do hereby accept the Soil Subgrade surface covered by geomembrane panel(s) P-44 through P-61 as an acceptable surface on which to install geomembrane.

Saulisna

Name

Signature

Supt

Title

09/24/12

Date

CEC's CQA certification acceptance by:

Tommy C Bradford

Name

Signature

CQA Monitor

Title

09/24/2012

Date

CEC

Owner: Waste Management Inc.

Project Name: Cell-3

Site Name: Vista Landfill

Location: Apopka Fl

Date: 09/25/2012

Installer: E.S.I

I the Undersigned, a duly authorized representative of ESI do hereby accept the Soil Subgrade surface covered by geomembrane panel(s) P-62 through P-103 as an acceptable surface on which to install geomembrane.

Soulisgna	[signature]	Supt
Name	Signature	Title

9-25-12
Date

CEC's CQA certification acceptance by:

Tommy C Bradford	[signature]	CQA monitor
Name	Signature	Title

09/25/2012
Date

B.1 GEOMEMBRANE – TEXTURED

INVENTORY

CEC

Project Name: Vista Landfill Cell 3 Date: 09/17/2012

Client: WMI Material Type: 60 mil micro geomembrane

Project No.: 101.07.08 Manufacturer: AGRU

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		435343-12	23'x505'		
		435452-12	"		
		435563-12	"		
		435570-12	"		
		435571-12	"		
		435572-12	"		
		435573-12	"		
		435574-12	"		
		435676-12	"		
		435677-12	"		
		435678-12	"		

Totals: 11 Rolls 127,765 ft2

Notes: 16 Rolls of Welding Rod.

BL = 034634

CEC

Project Name Vista Landfill Cell 3 Date: 09/14/2012

Client: WMI Material Type: 60 mil Micro geomembrane

Project No.: 101.07.08 Manufacturer: AGRU

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		435453-12	23x505'		
		435454-12	"		
		435455-12	"		
		435459-12	"		
		435564-12	"		
		435565-12	"		
		435566-12	"		
		435567-12	"		
		435568-12	"		
		435569-12	"		
		435675-12	"		

Totals: 11 Rolls 127,765 ft2

Notes:

BOL = 034650

60 mil Liner

Geosynthetic Materials Inventory Checklist

CEC

Project Name: Vista Landfill Cell 3
Date: 09/17/2012
Client: WMI
Material Type: 60 mil micro geomembrane
Project No.: 191.07.08
Manufacturer: AGRU

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		435344-12	23' x 505'		
		435445-12	"		
		435446-12	"		
		435447-12	"		
		435449-12	"		
		435450-12	"		
		435451-12	"		
		435456-12	"		
		435460-12	"		
		435561-12	"		
		435562-12	"		

Totals: 11 Rolls 127,765 ft2

Notes:

BOC 034656

MANUFACTURER'S CERTIFICATIONS

agru america quality control dept

cust: Waste Management South
PO#: 1000024651 Vista LF LLC Cell 3
Dest: Apopka, FL

doc	19859

33 rolls 60 HD micro (505)

English Dimensions

roll #	wid	len	area	check weld rod qty (if ordered)				wgt		resin lot #
				100k/lot sm sqs + 2ft fric						
435343 .12	23	505	11,615.0	60HD	micro	33tot	1	3933	2ft fric + sqs	H7121073
435344 .12	23	505	11,615.0	60HD	micro	33tot	2	3830		H7121073
435445 .12	23	505	11,615.0	60HD	micro	33tot	3	3830		H7121073
435446 .12	23	505	11,615.0	60HD	micro	33tot	4	3710		H7121073
435447 .12	23	505	11,615.0	60HD	micro	33tot	5	3706		H7121073
435449 .12	23	505	11,615.0	60HD	micro	33tot	6	3711		H7121073
435450 .12	23	505	11,615.0	60HD	micro	33tot	7	3702		H7121073
435451 .12	23	505	11,615.0	60HD	micro	33tot	8	3710		H7121073
435452 .12	23	505	11,615.0	60HD	micro	33tot	9	3701	sqs	H7121073
435453 .12	23	505	11,615.0	60HD	micro	33tot	10	3707		H7121073
435454 .12	23	505	11,615.0	60HD	micro	33tot	11	3708		H7121073
435455 .12	23	505	11,615.0	60HD	micro	33tot	12	3707		H7121073
435456 .12	23	505	11,615.0	60HD	micro	33tot	13	3710		H7121073
435459 .12	23	505	11,615.0	60HD	micro	33tot	14	3918		H7121073
435460 .12	23	505	11,615.0	60HD	micro	33tot	15	3913		H7121073
435561 .12	23	505	11,615.0	60HD	micro	33tot	16	3923		H7121073
435562 .12	23	505	11,615.0	60HD	micro	33tot	17	3920		H7121073
435563 .12	23	505	11,615.0	60HD	micro	33tot	18	3900	sqs	H7121073
435564 .12	23	505	11,615.0	60HD	micro	33tot	19	3911		H7121073
435565 .12	23	505	11,615.0	60HD	micro	33tot	20	3914		H7121090
435566 .12	23	505	11,615.0	60HD	micro	33tot	21	3915		H7121090
435567 .12	23	505	11,615.0	60HD	micro	33tot	22	3915		H7121090
435568 .12	23	505	11,615.0	60HD	micro	33tot	23	3905		H7121090
435569 .12	23	505	11,615.0	60HD	micro	33tot	24	3908		H7121090
435570 .12	23	505	11,615.0	60HD	micro	33tot	25	3900		H7121090
435571 .12	23	505	11,615.0	60HD	micro	33tot	26	3918	sqs	H7121090
435572 .12	23	505	11,615.0	60HD	micro	33tot	27	3912		H7121090
435573 .12	23	505	11,615.0	60HD	micro	33tot	28	3907		H7121090
435574 .12	23	505	11,615.0	60HD	micro	33tot	29	3918		H7121090
435675 .12	23	505	11,615.0	60HD	micro	33tot	30	3921		H7121090
435676 .12	23	505	11,615.0	60HD	micro	33tot	31	3918		H7121090
435677 .12	23	505	11,615.0	60HD	micro	33tot	32	3920		H7121090
435678 .12	23	505	11,615.0	60HD	micro	33tot	33	3918		H7121090

agru america quality control dept.

quality certificate

ROLL # **435343-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.55**	mm	**61**	mil
	MAX:	**1.69**	mm	**67**	mil
Asperity ASTM D7466: **28/33** mil TOP / BOTTOM	AVE:	**1.61**	mm	**63**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Units		**TEST RESULTS**	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.47**	
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 (kN/m)	**156** ppi	**2,458**	psi
	Average Strength @ Break	**37** N/mm (kN/m)	**210** ppi	**3,317**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.08**	
	Average Elongation @ Break	%		**533.3**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.474**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........................ **8/29/2012**

Signature.........................

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435344-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH					
Measurement ASTM D5994 (Modified)	MIN:	**1.51**	mm	**59**	mil	Thickness.........	**1.5 mm**	**60 mil**	
	MAX:	**1.69**	mm	**67**	mil	Length..............	**153.926** m	**505.0** feet	
Asperity ASTM D7466: **28/35** mil TOP / BOTTOM	AVE:	**1.61**	mm	**63**	mil	Width...............	**7.01** m;	**23.0** feet	
						OIT(Standard) ASTM D3895 minutes	**168**		**TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.47**	
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 (kN/m)	**156** ppi	**2,458**	psi
	Average Strength @ Break	**37** N/mm (kN/m)	**210** ppi	**3,317**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		**16.08**	
Lo = 2.0" Break	Average Elongation @ Break	%		**533.3**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.474**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/29/2012**

Signature...

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # **435445-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH				
Measurement ASTM D5994 (Modified)	MIN:	**1.52**	mm	**60**	mil	Thickness.........	**1.5 mm**	**60 mil**
	MAX:	**1.69**	mm	**67**	mil	Length..............	**153.926** m	**505.0** feet
Asperity ASTM D7466: **26/31** mil TOP / BOTTOM	AVE:	**1.61**	mm	**63**	mil	Width...............	**7.01** m;	**23.0** feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.40**	
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 (kN/m)	**156** ppi	**2,458**	psi
	Average Strength @ Break	**37** N/mm (kN/m)	**210** ppi	**3,317**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.08**	
	Average Elongation @ Break	%		**533.3**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.474**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........................ **8/30/2012**

Signature........................

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435446-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.45**	mm	**57**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **29/32** mil TOP / BOTTOM	AVE:	**1.57**	mm	**62**	mil

Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.24**	
Carbon Black Content ASTM D4218	Range	%			**2.40**	
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 (kN/m)	**152** ppi	**2,458**	psi
	Average Strength @ Break	**36**	N/mm (kN/m)	**205** ppi	**3,317**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**16.08**	
	Average Elongation @ Break	%			**533.3**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2**	N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8**	N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1**	N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.474**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/30/2012**

Signature...

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435447-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH					
Measurement ASTM D5994 (Modified)	MIN:	**1.50**	mm	**59**	mil	Thickness.........	**1.5 mm**	**60 mil**	
	MAX:	**1.68**	mm	**66**	mil	Length..............	**153.926** m	**505.0** feet	
Asperity ASTM D7466: **29/33** mil TOP / BOTTOM	AVE:	**1.58**	mm	**62**	mil	Width...............	**7.01** m;	**23.0** feet	
						OIT(Standard) ASTM D3895 minutes	**168**		**TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.29**	
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 (kN/m)	**146** ppi	**2,347**	psi
	Average Strength @ Break	**32** N/mm (kN/m)	**185** ppi	**2,975**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		**14.66**	
Lo = 2.0" Break	Average Elongation @ Break	%		**528.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.178**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:... **8/30/2012**

Signature...

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435449-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.43**	mm	**56**	mil
	MAX:	**1.68**	mm	**66**	mil
Asperity ASTM D7466: **24/37** mil TOP / BOTTOM	AVE:	**1.58**	mm	**62**	mil

	Metric		English	
Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Property	Test	Units		TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.29**	
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 (kN/m)	**146** ppi	**2,347**	psi
	Average Strength @ Break	**32** N/mm (kN/m)	**185** ppi	**2,975**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**14.66**	
	Average Elongation @ Break	%		**528.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.178**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:......... **8/30/2012**

Signature.........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435450-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.52**	mm	**60**	mil
	MAX:	**1.67**	mm	**66**	mil
Asperity ASTM D7466: **29/34** mil TOP / BOTTOM	AVE:	**1.59**	mm	**63**	mil

	Metric		English	
Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

				TEST RESULTS	
OIT(Standard) ASTM D3895		minutes		**168**	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.29**	
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 (kN/m)	**147** ppi	**2,347**	psi
	Average Strength @ Break	**33** N/mm (kN/m)	**186** ppi	**2,975**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**14.66**	
	Average Elongation @ Break	%		**528.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.178**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:............ **8/30/2012**

Signature............ [signature]
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435451-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.48**	mm	**58**	mil
	MAX:	**1.61**	mm	**63**	mil
Asperity ASTM D7466: **29/34** mil TOP / BOTTOM	AVE:	**1.55**	mm	**61**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.29**	
Carbon Black Dispersion ASTM D5596	Category			**10 In Cat 1**	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	**25** N/mm (kN/m)	**143** ppi	**2,347**	psi
	Average Strength @ Break	**32** N/mm (kN/m)	**182** ppi	**2,975**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**14.66**	
	Average Elongation @ Break	%		**528.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**265.2** N		**59.622**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**467.8** N		**105.16**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**658.1** N		**147.95**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.178**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/30/2012**

Signature........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # **435452-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.49**	mm	**59**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **30/33** mil TOP / BOTTOM	AVE:	**1.56**	mm	**61**	mil

	Metric		English	
Thickness.........	**1.5**	mm	**60 mil**	
Length.............	**153.926**	m	**505.0**	feet
Width..............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.24**	
Carbon Black Content ASTM D4218	Range	%			**2.67**	
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 (kN/m)		**148** ppi	**2,403**	psi
	Average Strength @ Break	**35** N/mm (kN/m)		**202** ppi	**3,286**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			**16.03**	
Lo = 2.0" Break	Average Elongation @ Break	%			**537.0**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0**	N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9**	N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2**	N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.663**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/30/2012**

Signature.. [signature]

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435453-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.44**	mm	**57**	mil
	MAX:	**1.67**	mm	**66**	mil
Asperity ASTM D7466: **29/34** mil TOP / BOTTOM	AVE:	**1.53**	mm	**60**	mil

Thickness.........	**1.5 mm**	**60 mil**
Length..............	**153.926** m	**505.0** feet
Width...............	**7.01** m;	**23.0** feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.67**	
Carbon Black Dispersion ASTM D5596	Category			**10 In Cat 1**	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	**25** N/mm (kN/m)	**145** ppi	**2,403**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**198** ppi	**3,286**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.03**	
	Average Elongation @ Break	%		**537.0**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0** N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9** N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2** N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.663**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/30/2012**

Signature.........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept.

quality certificate

ROLL # **435454-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.48**	mm	**58**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **27/33** mil TOP / BOTTOM	AVE:	**1.55**	mm	**61**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.24**	
Carbon Black Content ASTM D4218	Range	%			**2.67**	
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 (kN/m)		**147** ppi	**2,403**	psi
	Average Strength @ Break	**35** N/mm (kN/m)		**201** ppi	**3,286**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**16.03**	
	Average Elongation @ Break	%			**537.0**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0**	N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9**	N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2**	N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.663**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:............ **8/30/2012**

Signature............

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435455-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.48**	mm	**58**	mil
	MAX:	**1.62**	mm	**64**	mil
Asperity ASTM D7466: **27/29** mil TOP / BOTTOM	AVE:	**1.57**	mm	**62**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.32**	
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 (kN/m)	**149** ppi	**2,403**	psi
	Average Strength @ Break	**36** N/mm (kN/m)	**203** ppi	**3,286**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.03**	
	Average Elongation @ Break	%		**537.0**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0** N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9** N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2** N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.663**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/30/2012**

Signature.........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435456-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.47**	mm	**58**	mil
	MAX:	**1.70**	mm	**67**	mil
Asperity ASTM D7466: **28/34** mil TOP / BOTTOM	AVE:	**1.55**	mm	**61**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.32**	
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 (kN/m)	**147** ppi	**2,403**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**201** ppi	**3,286**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		**16.03**	
Lo = 2.0" Break	Average Elongation @ Break	%		**537.0**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0** N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9** N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2** N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.663**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/30/2012**

Signature..

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept.

quality certificate

ROLL # **435459-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.53**	mm	**60**	mil
	MAX:	**1.72**	mm	**68**	mil
Asperity ASTM D7466: **28/35** mil TOP / BOTTOM	AVE:	**1.59**	mm	**63**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Units			**TEST RESULTS**	
Specific Gravity ASTM D792	Density	g/cc			**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /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 (kN/m)	**156** ppi	**2,497**	psi
	Average Strength @ Break	**34**	N/mm (kN/m)	**197** ppi	**3,146**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**15.10**	
	Average Elongation @ Break	%			**526.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0**	N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9**	N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2**	N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**51.126**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:...................... **8/30/2012**

Signature......................
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept

ROLL # **435460-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.51**	mm	**59**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **27/34** mil TOP / BOTTOM	AVE:	**1.59**	mm	**63**	mil

	Metric		English	
Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Metric	English	**TEST RESULTS**	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.11**	
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 (kN/m)	**156** ppi	**2,497**	psi
	Average Strength @ Break	**34** N/mm (kN/m)	**197** ppi	**3,146**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**15.10**	
	Average Elongation @ Break	%		**526.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0** N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9** N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2** N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.126**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/30/2012**

Signature........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435561-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	**1.54**	mm	**61**	mil	Thickness.........	**1.5 mm**	**60 mil**
	MAX:	**1.68**	mm	**66**	mil	Length..............	**153.926** m	**505.0** feet
Asperity ASTM D7466: **29/33** mil TOP / BOTTOM	AVE:	**1.61**	mm	**63**	mil	Width...............	**7.01** m;	**23.0** feet

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.11**	
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 (kN/m)	**158** ppi	**2,497**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**199** ppi	**3,146**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**15.10**	
	Average Elongation @ Break	%		**526.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**245.0** N		**55.076**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**396.9** N		**89.241**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**572.2** N		**128.63**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**51.126**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........ [signature]
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # **435562-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.52**	mm	**60**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **29/34** mil TOP / BOTTOM	AVE:	**1.60**	mm	**63**	mil

Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.24**	
Carbon Black Content ASTM D4218	Range	%			**2.42**	
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 (kN/m)	**167** ppi	**2,657**	psi
	Average Strength @ Break	**36**	N/mm (kN/m)	**203** ppi	**3,222**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**16.19**	
	Average Elongation @ Break	%			**523.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1**	N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5**	N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**55.972**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........ [signature]
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # **435563-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.51**	mm	**59**	mil
	MAX:	**1.69**	mm	**67**	mil
Asperity ASTM D7466: **27/32** mil TOP / BOTTOM	AVE:	**1.60**	mm	**63**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **168**

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min				**.24**	
Carbon Black Content ASTM D4218	Range	%				**2.42**	
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 (kN/m)	**167**	ppi	**2,657**	psi
	Average Strength @ Break	**36**	N/mm (kN/m)	**203**	ppi	**3,222**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%				**16.19**	
	Average Elongation @ Break	%				**523.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N			**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1**	N			**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5**	N			**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**					**55.972**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........ JH Holmes

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435564-12** Lot #: **H7121073** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH					
Measurement ASTM D5994 (Modified)	MIN:	**1.45**	mm	**57**	mil	Thickness.........	**1.5 mm**	**60 mil**	
	MAX:	**1.62**	mm	**64**	mil	Length..............	**153.926** m	**505.0** feet	
Asperity ASTM D7466: **26/34** mil TOP / BOTTOM	AVE:	**1.56**	mm	**61**	mil	Width...............	**7.01** m;	**23.0** feet	

OIT(Standard) ASTM D3895 minutes **168**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.943**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.24**	
Carbon Black Content ASTM D4218	Range	%		**2.42**	
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 (kN/m)	**163** ppi	**2,657**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**198** ppi	**3,222**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.19**	
	Average Elongation @ Break	%		**523.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.42**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1** N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5** N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**55.972**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept.

quality certificate

ROLL # **435565-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.46**	mm	**57**	mil
	MAX:	**1.69**	mm	**67**	mil
Asperity ASTM D7466: **26/34** mil TOP / BOTTOM	AVE:	**1.57**	mm	**62**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length.............	**153.926**	m	**505.0**	feet
Width..............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.25**	
Carbon Black Content ASTM D4218	Range	%		**2.42**	
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 (kN/m)	**164** ppi	**2,657**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**199** ppi	**3,222**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.19**	
	Average Elongation @ Break	%		**523.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1** N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5** N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**55.972**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature.........
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435566-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH				
Measurement ASTM D5994 (Modified)	MIN:	**1.51**	mm	**59**	mil	Thickness.........	**1.5 mm**	**60 mil**
	MAX:	**1.66**	mm	**65**	mil	Length..............	**153.926** m	**505.0** feet
						Width...............	**7.01** m;	**23.0** feet
Asperity ASTM D7466: **28/39** mil TOP / BOTTOM	AVE:	**1.58**	mm	**62**	mil	OIT(Standard) ASTM D3895 minutes	**183**	**TEST RESULTS**

Specific Gravity ASTM D792	Density	g/cc		**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.25**	
Carbon Black Content ASTM D4218	Range	%		**2.42**	
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 (kN/m)	**165** ppi	**2,657**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**200** ppi	**3,222**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**16.19**	
	Average Elongation @ Break	%		**523.4**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1** N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5** N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**55.972**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/31/2012**

Signature..

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept.

quality certificate

ROLL # **435567-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.49**	mm	**59**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **27/36** mil TOP / BOTTOM	AVE:	**1.59**	mm	**63**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.33**	
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 (kN/m)		**169** ppi	**2,708**	psi
	Average Strength @ Break	**37** N/mm (kN/m)		**212** ppi	**3,389**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**17.18**	
	Average Elongation @ Break	%			**529.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1**	N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5**	N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.335**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/31/2012**

Signature.......................................

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept.

quality certificate

ROLL #	435568-12	Lot #:	H7121090	Liner Type: Microspike™ HDPE

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.43	mm	56	mil
	MAX:	1.63	mm	64	mil
Asperity ASTM D7466: 27/37 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil

	Metric		English	
Thickness.........	1.5	mm	60	mil
Length..............	153.926	m	505.0	feet
Width...............	7.01	m;	23.0	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Unit			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.33**	
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 (kN/m)	**166** ppi	**2,708**	psi
	Average Strength @ Break	**36**	N/mm (kN/m)	**208** ppi	**3,389**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			**17.18**	
Lo = 2.0" Break	Average Elongation @ Break	%			**529.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1**	N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5**	N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.335**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **8/31/2012**

Signature..

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # **435569-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.47**	mm	**58**	mil
	MAX:	**1.69**	mm	**67**	mil
Asperity ASTM D7466: **27/35** mil TOP / BOTTOM	AVE:	**1.58**	mm	**62**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.33**	
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 (kN/m)	**168** ppi	**2,708**	psi
	Average Strength @ Break	**37**	N/mm (kN/m)	**211** ppi	**3,389**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**17.18**	
	Average Elongation @ Break	%			**529.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1**	N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5**	N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**57.335**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature.......

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435570-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.47**	mm	**58**	mil
	MAX:	**1.69**	mm	**67**	mil
Asperity ASTM D7466: **28/35** mil TOP / BOTTOM	AVE:	**1.56**	mm	**61**	mil

	Metric		English	
Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.25**	
Carbon Black Content ASTM D4218	Range	%		**2.24**	
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 (kN/m)	**166** ppi	**2,708**	psi
	Average Strength @ Break	**36** N/mm (kN/m)	**208** ppi	**3,389**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**17.18**	
	Average Elongation @ Break	%		**529.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1** N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5** N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.335**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.......................... **8/31/2012**

Signature..........................

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept

ROLL # **435571-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.50**	mm	**59**	mil
	MAX:	**1.63**	mm	**64**	mil
Asperity ASTM D7466: **29/33** mil TOP / BOTTOM	AVE:	**1.57**	mm	**62**	mil

	Metric		English	
Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.25**	
Carbon Black Content ASTM D4218	Range	%		**2.24**	
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 (kN/m)	**167** ppi	**2,708**	psi
	Average Strength @ Break	**37** N/mm (kN/m)	**209** ppi	**3,389**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%		**17.18**	
	Average Elongation @ Break	%		**529.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.286**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**474.1** N		**106.57**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**634.5** N		**142.64**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**57.335**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept. — quality certificate

ROLL # **435572-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.48**	mm	**58**	mil
	MAX:	**1.68**	mm	**66**	mil
Asperity ASTM D7466: **28/35** mil TOP / BOTTOM	AVE:	**1.59**	mm	**63**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Unit			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.26**	
Carbon Black Dispersion ASTM D5596	Category				**10 In Cat 1**	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	**28**	N/mm (kN/m)	**163** ppi	**2,598**	psi
	Average Strength @ Break	**34**	N/mm (kN/m)	**196** ppi	**3,134**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**15.71**	
	Average Elongation @ Break	%			**505.5**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9**	N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2**	N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**54.995**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature........ [signature]
Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept

ROLL # **435573-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH	
Measurement ASTM D5994 (Modified)	MIN:	**1.48**	mm	**58**	mil
	MAX:	**1.64**	mm	**65**	mil
Asperity ASTM D7466: **26/35** mil TOP / BOTTOM	AVE:	**1.58**	mm	**62**	mil

Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Units			TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.26**	
Carbon Black Dispersion ASTM D5596	Category				**10 In Cat 1**	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	**28** N/mm (kN/m)		**162** ppi	**2,598**	psi
	Average Strength @ Break	**34** N/mm (kN/m)		**195** ppi	**3,134**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			**15.71**	
Lo = 2.0" Break	Average Elongation @ Break	%			**505.5**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9**	N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2**	N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**54.995**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **8/31/2012**

Signature.........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435574-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.49**	mm	**59**	mil
	MAX:	**1.67**	mm	**66**	mil
Asperity ASTM D7466: **27/34** mil TOP / BOTTOM	AVE:	**1.62**	mm	**64**	mil

Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.26**	
Carbon Black Dispersion ASTM D5596	Category				**10 In Cat 1**	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	**29**	N/mm (kN/m)	**166** ppi	**2,598**	psi
	Average Strength @ Break	**35**	N/mm (kN/m)	**200** ppi	**3,134**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			**15.71**	
Lo = 2.0" Break	Average Elongation @ Break	%			**505.5**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9**	N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2**	N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**54.995**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:......... **8/31/2012**

Signature.........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

quality certificate

agru america quality control dept.

ROLL # 435675-12 | Lot #: **H7121090** | **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.49**	mm	**59**	mil
	MAX:	**1.68**	mm	**66**	mil
Asperity ASTM D7466: **27/34** mil TOP / BOTTOM	AVE:	**1.60**	mm	**63**	mil

	Metric		English	
Thickness.........	**1.5**	mm	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.42**	
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 (kN/m)		**164** ppi	**2,598**	psi
	Average Strength @ Break	**35** N/mm (kN/m)		**197** ppi	**3,134**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**15.71**	
	Average Elongation @ Break	%			**505.5**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9**	N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2**	N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**54.995**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:........ **9/1/2012**

Signature........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435676-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.55**	mm	**61**	mil
	MAX:	**1.67**	mm	**66**	mil
Asperity ASTM D7466: **27/35** mil TOP / BOTTOM	AVE:	**1.60**	mm	**63**	mil

	Metric		English	
Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

Test	Property	Unit			**TEST RESULTS**	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.42**	
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 (kN/m)	**164** ppi		**2,598**	psi
	Average Strength @ Break	**35** N/mm (kN/m)	**197** ppi		**3,134**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield Lo = 2.0" Break	Average Elongation @ Yield	%			**15.71**	
	Average Elongation @ Break	%			**505.5**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N			**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9** N			**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2** N			**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**54.995**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.......... **9/1/2012**

Signature..........

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435677-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

		METRIC		ENGLISH				
Measurement ASTM D5994 (Modified)	MIN:	**1.51**	mm	**59**	mil	Thickness.........	**1.5 mm**	**60 mil**
	MAX:	**1.66**	mm	**65**	mil	Length..............	**153.926** m	**505.0** feet
Asperity ASTM D7466: **26/34** mil TOP / BOTTOM	AVE:	**1.60**	mm	**63**	mil	Width...............	**7.01** m;	**23.0** feet

OIT(Standard) ASTM D3895 minutes **183**

				TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc		**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min		**.25**	
Carbon Black Content ASTM D4218	Range	%		**2.33**	
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 (kN/m)	**164** ppi	**2,600**	psi
	Average Strength @ Break	**37** N/mm (kN/m)	**212** ppi	**3,362**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		**13.63**	
Lo = 2.0" Break	Average Elongation @ Break	%		**535.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8** N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9** N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2** N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**			**55.034**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:............ **9/1/2012**

Signature............

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

agru america quality control dept

quality certificate

ROLL # **435678-12** Lot #: **H7121090** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	**1.50**	mm	**59**	mil
	MAX:	**1.65**	mm	**65**	mil
Asperity ASTM D7466: **26/35** mil TOP / BOTTOM	AVE:	**1.57**	mm	**62**	mil

	Metric		English	
Thickness.........	**1.5**	**mm**	**60 mil**	
Length..............	**153.926**	m	**505.0**	feet
Width...............	**7.01**	m;	**23.0**	feet

OIT(Standard) ASTM D3895 minutes **183**

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			**.946**	
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190ºC /2160 g	g/10 min			**.25**	
Carbon Black Content ASTM D4218	Range	%			**2.33**	
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 (kN/m)	**161** ppi	**2,600**	psi
	Average Strength @ Break	**36**	N/mm (kN/m)	**208** ppi	**3,362**	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			**13.63**	
Lo = 2.0" Break	Average Elongation @ Break	%			**535.7**	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			**-.67**	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	**254.8**	N		**57.279**	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	**442.9**	N		**99.575**	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	**610.2**	N		**137.18**	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs		**CERTIFIED**	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs		**ONGOING**	
Smooth Edge Testing ASTM D1004	**Average Tear Resistance**				**55.034**	lbs

Customer: **Waste Management South**
PO: **1000024651 Vista LF LLC Cell 3**
Destination **Apopka, FL**

Date:.. **9/1/2012**

Signature..

Quality Control Department

60HDmic.FRM
REV 03
12/23/05

CoA Date: 08/04/2012

CPChem

Certificate of Analysis

Shipped To: AGRU AMERICA INC 500 GARRISON RD GEORGETOWN SC 29440 USA	Delivery #: 88501114 PO #: 6780 Weight: 195500 LB Ship Date: 08/04/2012 Package: BULK Mode: Hopper Car Car #: CHVX896829 Seal No: 296903
Recipient: PALMER Fax:	

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: H7121073

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.24	g/10mi
HLMI Flow Rate	ASTM D1238	19	g/10mi
Density	D1505 or D4883	0.938	g/cm3
Pellet Count	P02.08.03	25	pel/g
Production Date		08/01/2012	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem). **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

Troy Griffin
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4806

CoA Date: 08/15/2012

Certificate of Analysis

Shipped To: AGRU AMERICA INC 500 GARRISON RD GEORGETOWN SC 29440 USA	Delivery #: 88506820 PO #: 006840 Weight: 197500 LB Ship Date: 08/15/2012 Package: BULK
Recipient: PALMER Fax:	Mode: Hopper Car Car #: CITX703193 Seal No: 296675

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: H7121090

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.25	g/10mi
HLMI Flow Rate	ASTM D1238	20	g/10mi
Density	D1505 or D4883	0.937	g/cm3
Pellet Count	P02.08.03	28	pel/g
Production Date		08/05/2012	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem). **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

Troy Griffin
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4806

Lili Cui, Ph.D., Geomembrane Technical Service & Applications Development
Room 154 PTC ■ Bartlesville, OK 74004■
918-661-1897 ■ cuil@cpchem.com ■ Fax: 918-662-2220 ■ www.cpchem.com

June 8, 2012

Grant Palmer
Agru America
500 Garrison Road
Georgetown, SC 29440

Dear Grant:

This letter is to report the final results of oven-aging and UV-aging tests (according to GRI-GM13 and GRI-GM17) on Agru America sheet samples that you provided to us in 2011. These tests were performed by CPChem's Materials Evaluation Laboratory in Bartlesville, OK. The tests were completed April 2012.

The GRI-GM13 (HDPE) and GRI-GM17 (LLDPE) durability tests were done according to the following procedures.

Test	Exposure	Method
HP-OIT	150 °C, 500 psi oxygen	D5885
Oven Aging	90 days, 85 °C	D5721
UV Aging	1600 UV hrs (Conditions were 20 hours UVA-340 at 75 °C followed by 4 hrs dark with condensation at 60 °C. Irradiance was 0.72 W/m^2 at 340 nm.)	D7238

Oven-Aging Results

Sample	Initial HP-OIT (min)	HP-OIT Value after Oven Aging (min)	% HP-OIT Retained	GRI-GM13 or GRI-GM17 % Retained Requirement
40 mil LLDPE Roll # 346550-11 from Marlex® 7104 Polyethylene Lot # CBC810430	659	572	**87**	60
60 mil HDPE Roll # 447108-11 from Marlex® K307 Polyethylene Lot # 71-1-1104	1136	994	**88**	80

UV-Aging Results

Sample	Initial HP-OIT (min)	HP-OIT Value after UV Aging (min)	% HP-OIT Retained	GRI-GM13 or GRI-GM17 % Retained Requirement
40 mil LLDPE Roll # 346550-11 from Marlex® 7104 Polyethylene Lot # CBC810430	659	449	**68**	35
60 mil HDPE Roll # 447108-11 from Marlex® K307 Polyethylene Lot # 71-1-1104	1136	924	**81**	50

According to these test results, the durability requirements are met.

If you have any questions, please call me at 918-661-1897.

Sincerely,

Lili Cui

Lili Cui, Ph.D.
Geomembrane Technical Service & Applications Development

CONFORMANCE TESTS

September 4, 2012

Mail To:

Sheree Grant
Waste Management, Inc.

email: sgrant@wm.com
ccemail: snunes@cecenv.com
ccemail: pwalls@cecenv.com

Bill To:

<= Same

Dear Sheree::

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**
TRI Job Reference Number:	E2372-07-08
Material(s) Tested:	1, Agru 60 mil Microspike HDPE Geomembrane
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 4218) 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

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

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

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 435343.12
TRI Log #: E2372-07-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Thickness (ASTM D 5994)													
Thickness (mils)	66	65	62	61	63	65	63	64	68	65	64	2	60 min
											61	<< min	54 low ind
Density (ASTM D 1505)													
Density (g/cm3)	0.944	0.944	0.944								0.944	0.000	0.94
Carbon Black Content (ASTM D 4218)													
% Carbon Black	2.28	2.33									2.31	0.04	2.0-3.0
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9/10 in Cat 1 or Cat 2
Rating - 2nd field view	1	1	1	1	1								All in Cat 1, 2 or 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	166	157	150	154	148						155	7	126 min
TD Yield Strength (ppi)	156	163	166	172	176						167	8	126 min
MD Break Strength (ppi)	233	208	225	230	181						215	22	90 min
TD Break Strength (ppi)	205	208	207	188	235						209	17	90 min
MD Yield Elongation (%)	32	29	28	26	28						29	2	12 min
TD Yield Elongation (%)	19	20	20	18	22						20	1	12 min
MD Break Elongation (%)	479	524	536	539	488						513	28	100 min
TD Break Elongation (%)	635	621	628	561	678						625	42	100 min

MD Machine Direction TD Transverse Direction

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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

September 6, 2012

Mail To:

Sheree Grant
Waste Management, Inc.

email: sgrant@wm.com
ccemail: snunes@cecenv.com
ccemail: pwalls@cecenv.com

Bill To:

<= Same

Dear Sheree::

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**
TRI Job Reference Number:	E2372-09-08
Material(s) Tested:	2, Agru 60 mil Microspike HDPE Geomembrane
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 4218) 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

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

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

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 435452.12
TRI Log #: E2372-09-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Thickness (ASTM D 5994)													
Thickness (mils)	60	59	62	61	61	66	66	66	71	63	**64**	4	60 min
											59	<< min	54 low ind
Density (ASTM D 1505)													
Density (g/cm3)	0.944	0.945	0.945								**0.945**	0.001	0.940 min
Carbon Black Content (ASTM D 4218)													
% Carbon Black	2.26	2.30									**2.28**	0.03	2.0-3.0%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9/10 in Cat 1 or Cat 2
Rating - 2nd field view	1	1	1	1	1								All in Cat 1, 2 or 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	154	157	158	166	156						**158**	5	126 min
TD Yield Strength (ppi)	176	163	173	160	170						**168**	7	126 min
MD Break Strength (ppi)	235	210	177	232	187						**208**	26	90 min
TD Break Strength (ppi)	172	198	215	156	201						**188**	24	90 min
MD Yield Elongation (%)	31	26	29	24	26						**27**	3	12 min
TD Yield Elongation (%)	24	24	23	21	23						**23**	1	12 min
MD Break Elongation (%)	508	508	476	483	483						**491**	15	100 min
TD Break Elongation (%)	504	580	646	463	603						**559**	75	100 min

MD Machine Direction   TD Transverse Direction

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 435563.12
TRI Log #: E2372-09-08

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Thickness (ASTM D 5994)													
Thickness (mils)	67	68	68	67	63	68	65	64	66	64	**66**	2	60 min
											63	<< min	54 low ind
Density (ASTM D 1505)													
Density (g/cm3)	0.945	0.945	0.945								**0.945**	0.000	0.940 min
Carbon Black Content (ASTM D 4218)													
% Carbon Black	2.22	2.24									**2.23**	0.01	2.0-3.0%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9/10 in Cat 1 or Cat 2
Rating - 2nd field view	1	1	1	1	1								All in Cat 1, 2 or 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	158	163	166	162	166						**163**	3	126 min
TD Yield Strength (ppi)	188	190	181	174	185						**184**	6	126 min
MD Break Strength (ppi)	231	234	229	232	189						**223**	19	90 min
TD Break Strength (ppi)	209	202	209	186	209						**203**	10	90 min
MD Yield Elongation (%)	27	31	31	22	32						**29**	4	12 min
TD Yield Elongation (%)	24	23	26	18	23						**23**	3	12 min
MD Break Elongation (%)	498	486	446	496	428						**471**	32	100 min
TD Break Elongation (%)	563	553	593	526	580						**563**	26	100 min

MD Machine Direction   TD Transverse Direction

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

September 7, 2012

Mail To:

Bill To:

Sheree Grant
Waste Management, Inc.

email: sgrant@wm.com
ccemail: snunes@cecenv.com
ccemail: pwalls@cecenv.com

<= Same

Dear Sheree::

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**
TRI Job Reference Number:	E2372-11-03
Material(s) Tested:	1, Agru 60 mil Microspike HDPE Geomembrane
Test(s) Requested:	Thickness (ASTM D 5994) Density (ASTM D 1505) Carbon Content (ASTM D 4218) 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

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

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

GEOMEMBRANE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Agru 60 mil Microspike HDPE Geomembrane
Sample Identification: 435571.12
TRI Log #: E2372-11-03

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Thickness (ASTM D 5994)													
Thickness (mils)	66	67	66	67	65	64	62	63	68	69	**66**	2	60 min
											62	<< min	54 low ind
Density (ASTM D 1505)													
Density (g/cm3)	0.946	0.946	0.946								**0.946**	0.000	0.940 min
Carbon Black Content (ASTM D 4218)													
% Carbon Black	2.37	2.37									**2.37**	0.00	2.0-3.0%
Carbon Black Dispersion (ASTM D 5596)													
Rating - 1st field view	1	1	1	1	1								9/10 in Cat 1 or Cat 2
Rating - 2nd field view	1	1	1	1	1								All in Cat 1, 2 or 3
Tensile Properties (ASTM D 638/GRI GM 13, 2 ipm strain rate, Type IV specimen - HDPE)													
MD Yield Strength (ppi)	164	166	157	152	164						**161**	6	126 min
TD Yield Strength (ppi)	175	173	182	166	165						**172**	7	126 min
MD Break Strength (ppi)	258	257	195	202	231						**229**	30	90 min
TD Break Strength (ppi)	208	214	212	200	193						**205**	9	90 min
MD Yield Elongation (%)	25	25	25	25	25						**25**	0	12 min
TD Yield Elongation (%)	19	20	18	18	20						**19**	1	12 min
MD Break Elongation (%)	558	523	510	486	490						**513**	29	100 min
TD Break Elongation (%)	613	639	609	606	580						**609**	21	100 min

MD Machine Direction   TD Transverse Direction

The testing is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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

B.2 GEOTEXTILE – 8 Ounce

INVENTORY

Geotextile

Geosynthetic Materials Inventory Checklist

CEC

Project Name	Vista Landfill Cell-3	Date:	09/28/2012
Client:	WMI	Material Type:	Geotextile 8 oz and 6 oz
Project No.:	101.07.08	Manufacturer:	SKAPS

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
	W315-18-300	330068416	300 X 15	Woven geotextile	
	"	330068417	"	for Road	
	"	330068418	"	"	
	"	330068392	"	"	
	"	330068394	"	"	
	"	330068393	"	"	
	GE180-180-690	27297.01	15 X 690	NONWOVEN geotextile	
		27297.02	"	for leachate	
		27297.03	"	system.	

Totals: 6 Rolls woven
3 Rolls Nonwoven → Woven fabric = 27,000 ft²
Nonwoven fabric = 31,050 ft²

Notes:

MANUFACTURER'S CERTIFICATIONS

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

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

October 1, 2012
Waste Management

PO : 1000024653
BOL : 32691

Dear Sir/Madam:

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

PROPERTY	TEST METHOD	UNITS	M.A.R.V. Minimum Average Roll Value
Weight	ASTM D 5261	oz/sy (g/m^2)	8.00 (271)
Thickness*	ASTM D 5199	mils (mm)	100 (2.54)
Grab Tensile	ASTM D 4632	lbs (kN)	225 (1.00)
Grab Elongation	ASTM D 4632	%	50
Trapezoidal Tear	ASTM D 4533	lbs (kN)	90 (0.40)
Puncture Resistance	ASTM D 4833	lbs (kN)	130 (0.58)
Mullen Burst Strength	ASTM D 3786	psi (kPa)	425 (2930)
Permittivity*	ASTM D 4491	sec^{-1}	1.26
Permeability*	ASTM D 4491	cm/sec	0.30
Water Flow*	ASTM D 4491	gpm/ft^2(l/min/m^2)	100 (4074)
AOS*	ASTM D 4751	US Sieve (mm)	80 (0.18)
UV Resistance	ASTM D 4355	%/hrs	70/500

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

PALAK PATEL
QUALITY CONTROL MANAGER

Product : GE180-180

ROLL #	WEIGHT	THICKNESS	MD TENSILE	MD ELONG	XMD TENSILE	XMD ELONG	MD TRAP	XMD TRAP	PUNCTURE	MULLEN	AOS	WATER FLOW	PERMEABILITY	PERMITTIVITY
ASTM METHOD	D5261	D5199	D4632	D4632	D4632	D4632	D4533	D4533	D4833	D3786	D4751	D4491	D4491	D4491
UNITS	oz/sq yd	(mils)	lbs.	%	lbs	%	lbs.	lbs	lbs.	psi	US Sieve	gpm/ft^2	cm/sec	sec^{-1}
TARGET	8.00	100	225	50	225	50	90	90	130	425	80	100	0.30	1.26
27297.01	8.53	124	233	72	244	82	104	119	137	434	80	102	0.43	1.36
27297.02	8.53	124	233	72	244	82	104	119	137	434	80	102	0.43	1.36
27297.03	8.53	124	233	72	244	82	104	119	137	434	80	102	0.43	1.36

*All Values are MARV.

CONFORMANCE TESTS

September 28, 2012

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

email: sgrant@wm.com
cc email: snunes@cecenv.com
cc email: pwalls@cecenv.com

Dear Sheree:

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 3**
TRI Job Reference Number:	E2372-28-05
Material(s) Tested:	1, Skaps GE180 Nonwoven Geotextile
Test(s) Requested:	Mass/Unit Area (ASTM D 5261) Grab Tensile (ASTM D 4632) Puncture Resistance (ASTM D 4833) CBR Puncture Strength (ASTM D 6241) Trapezoidal Tear (ASTM D 4533) Apparent Opening Size (ASTM D 4751) Permittivity (ASTM D 4491)

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

Sincerely,

MPatel

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

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

GEOTEXTILE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Skaps GE180 Nonwoven Geotextile
Sample Identification: 27297.01
TRI Log #: E2372-28-05

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)	4.03	3.76	3.94	3.76	3.68	3.66	4.18	3.84	3.72	4.26	**3.88**	0.21	
Mass/Unit Area (oz/sq.yd)	9.37	8.75	9.16	8.75	8.56	8.51	9.72	8.93	8.65	9.91	**9.03**	0.49	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	244	236	240	227	255	263	250	238	245	236	**243**	11	200 min
TD - Tensile Strength (lbs)	251	306	296	299	273	294	330	247	285	323	**290**	27	200 min
MD - Elong. @ Max. Load (%)	73	72	69	69	81	83	77	67	79	79	**75**	6	
TD - Elong. @ Max. Load (%)	97	95	114	103	87	96	97	108	108	93	**100**	8	
Puncture Resistance (ASTM D 4833)													
Puncture Strength (lbs)	160	141	156	143	130	129	138	136	143	131	**145**	14	90 min
	145	176	158	156	133								
CBR Puncture Strength (ASTM D 6241)													
Puncture Resistance (lbs)	825	689	743	757	788	726	693	798	745	716	**748**	45	500 min
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	125	96	118	86	87	91	91	115	92	120	**102**	15	75 min
TD - Tear Strength (lbs)	111	127	144	127	131	139	124	127	125	123	**128**	9	75 min
Apparent Opening Size (ASTM D 4751)													
Opening Size Diameter (mm)	0.107	0.131	0.129	0.136	0.145						**0.129**	0.014	0.21 max
Sieve No.	120	100	100	100	100						**100**		

Falling Head Permittivity (ASTM D 4491, 9-in Upper Standpipe; 2 in opening)

Water Temp. (C):	19.5
Correction Factor:	1.02

Test Speciemn No. >:	1					2				
Thickness (mils)	98.7	98.7	98.7	98.7	98.7	98.9	98.9	98.9	98.9	98.9
Time (s)	19.5	19.5	19.0	19.0	19.5	21.6	21.6	21.6	21.6	21.6
Specimen Permittivity (s-1)	1.46	1.46	1.49	1.49	1.46	1.31	1.31	1.31	1.31	1.31
Specimen Permittivity @20°C (sec-1)	1.48	1.48	1.52	1.52	1.48	1.33	1.33	1.33	1.33	1.33
Specimen Flow rate (GPM/ft2)	110	110	113	113	110	99.7	99.7	99.7	99.7	99.7
Specimen Permeability (cm/s)	0.37	0.37	0.38	0.38	0.37	0.33	0.33	0.33	0.33	0.33

Test Speciemn No. >:	3					4				
Thickness (mils)	102	102	102	102	102	101	101	101	101	101
Time (s)	23.2	22.7	23.2	22.7	23.3	20.6	20.6	20.5	20.6	20.6
Permittivity (s-1)	1.22	1.25	1.22	1.25	1.22	1.38	1.38	1.38	1.38	1.38
Specimen Permittivity @20°C (sec-1)	1.24	1.27	1.24	1.27	1.24	1.40	1.40	1.40	1.40	1.40
Specimen Flow rate (GPM/ft2)	92.9	94.9	92.9	94.9	92.5	105	105	105	105	105
Specimen Permeability (cm/s)	0.32	0.33	0.32	0.33	0.32	0.36	0.36	0.36	0.36	0.36

TEMPERATURE CORRECTED VALUES		MEAN	PROJ. SPEC.
	Permittivity (s-1)	**1.37**	0.5 min
	Flow rate (GPM/ft2)	**102**	
	Permeability (cm/s)	**0.35**	

MD Machine Direction TD Transverse Direction

B.3 GEOTEXTILE – 6 Ounce

INVENTORY

Geotextile

Geosynthetic Materials Inventory Checklist

CEC

Project Name: Vista Landfill Cell 3

Date: 09/28/2012

Client: WMI

Material Type: Geotextile 8 oz and 6 oz

Project No.: 101.07.08

Manufacturer: SKAPS

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
	W315-18-300	330068416	300 X 15	Woven geotextile	
	"	330068417	"	for Road	
	"	330068418	"	"	
	"	330068392	"	"	
	"	330068394	"	"	
	"	330068393	"	"	
	GE180-180-690	27297.01	15 X 690	NonWoven geotextile	
		27297.02	"	for leachate	
		27297.03	"	system.	

Totals: 6 Rolls woven
3 Rolls NonWoven → Woven fabric = 27,000 ft²
NonWoven fabric = 31,050 ft²

Notes:

MANUFACTURER’S CERTIFICATIONS

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

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

October 1, 2012
Waste Management

PO : 1000024653
BOL : 32691

Dear Sir/Madam:

This is to certify that SKAPS W315 woven geotextile fabrics are woven polypropylene materials offering optimum performance . Produced from first quality raw materials, they provide the perfect balance of strength and separation in styles capable of functioning exceptionally well in a wide range of performance requirements. All properties meet following requirements:

PROPERTY	TEST METHOD	UNITS	M.A.R.V. Minimum Average Roll Value
Weight	ASTM D 5261	oz/sy (g/sm)	6.30 (214)
Grab Tensile	ASTM D 4632	lbs (kN)	315 (1.40)
Grab Elongation	ASTM D 4632	%	50
Trapezoid Tear Strength	ASTM D 4533	lbs (kN)	120 (0.53)
CBR Puncture	ASTM D 6241	lbs (kN)	1000 (4.44)
Mullen Burst Strength	ASTM D 3786	psi (kPa)	600 (4134)
Permittivity*	ASTM D 4491	l/sec	0.050
Water Flow*	ASTM D 4491	gpm/sf(l/min/sm)	4 (163)
AOS*	ASTM D 4751	US Sieve (mm)	40 (0.42)
UV Resistance	ASTM D 4355	%/hrs	70/500

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

PALAK PATEL
QUALITY CONTROL MANAGER

Product : W315-180

ROLL # ASTM METHOD UNITS TARGET	WEIGHT* D5261 oz/sq yd 6.30	MD TENSILE D4632 lbs. 315	MD ELONG D4632 % <50	XMD TENSILE D4632 lbs 315	XMD ELONG D4632 % <50	MD TRAP D4533 lbs. 120	XMD TRAP D4533 lbs 120	CBR PUNCTURE D6241 lbs. 1000	MULLEN D3786 psi 600	AOS D4751 US Sieve 40	WATER FLOW D4491 gpm/ft^2 4	PERMITTIVITY D4491 sec^{-1} 0.050
330068392	6.33	324	22	318	15	134	137	1166	649	40	6	0.078
330068393	6.33	324	22	318	15	134	137	1166	649	40	6	0.078
330068394	6.33	324	22	318	15	134	137	1166	649	40	6	0.078
330068416	6.25	317	17	315	19	126	130	1033	621	40	5	0.067
330068417	6.25	317	17	315	19	126	130	1033	621	40	5	0.067
330068418	6.25	317	17	315	19	126	130	1033	621	40	5	0.067

* Weight is typical. All other values are MARV.

CONFORMANCE TESTS

October 10, 2012

Mail To:

Sheree Grant
Waste Management, Inc.

Bill To:

<= Same

email: sgrant@wm.com
cc email: snunes@cecenv.com
cc email: pwalls@cecenv.com

Dear Sheree:

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**
TRI Job Reference Number:	E2372-46-03
Material(s) Tested:	1, Skaps W-315 Woven Geotextile
Test(s) Requested:	Mass/Unit Area (ASTM D 5261) Grab Tensile (ASTM D 4632) Puncture Resistance (ASTM D 4833) CBR Puncture Strength (ASTM D 6241) Trapezoidal Tear (ASTM D 4533)

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

Sincerely,

MPatel

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

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

TRI / Environmental, Inc.
A Texas Research International Company

GEOTEXTILE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Skaps W-315 Woven Geotextile
Sample Identification: 330068416
TRI Log #: E2372-46-03

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Mass/Unit Area (ASTM D 5261)												
5" diameter circle (grams)	2.65	2.66	2.69	2.67	2.65	2.67	2.66	2.66	2.68	2.63	**2.66**	0.02
Mass/Unit Area (oz/sq.yd)	6.16	6.19	6.26	6.21	6.16	6.21	6.19	6.19	6.23	6.12	**6.19**	0.04
Grab Tensile Properties (ASTM D 4632)												
MD - Tensile Strength (lbs)	376	297	383	359	413	361	375	397	358	362	**368**	31
TD - Tensile Strength (lbs)	336	336	349	358	348	337	324	334	343	333	**340**	10
MD - Elong. @ Max. Load (%)	34	30	32	31	34	31	32	33	31	31	**32**	1
TD - Elong. @ Max. Load (%)	25	29	28	28	29	27	25	26	27	25	**27**	2
Puncture Resistance (ASTM D 4833)												
Puncture Strength (lbs)	180	162	154	132	153	163	156	156	160	145	**154**	11
	142	158	145	158	153							
CBR Puncture Strength (ASTM D 6241)												
Puncture Resistance (lbs)	1263	1241	1235	1264	1325	1304	1306	1236	1225	1300	**1270**	36
Trapezoidal Tear (ASTM D 4533)												
MD - Tear Strength (lbs)	148	144	155	166	149	161	144	139	148	125	**148**	12
TD - Tear Strength (lbs)	119	112	112	123	124	114	122	128	116	115	**118**	5

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.

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

B.4 GEOSYNTHETIC CLAY LINER

INVENTORY

GCL

Geosynthetic Materials Inventory Checklist

CEC

Project Name: Vista Landfill Cell 3 Date: 08/24/2012

Client: WMF Material Type: GCL Bentomat

Project No.: 101.07.28 Manufacturer: CETCO

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
	201234CV	6197	15x150		
	"	6198	"		
	"	6199	"		
	"	6200	"		
	"	6201	"		
	"	6204	"		

Totals: 6 Roll @ 2250 13,500 ft²

Notes:

Note! 2 Additional Rolls were on Packing Slip but not shipped 6202 and 6203

MANUFACTURER'S CERTIFICATIONS

Date: 8/16/2012
Purchase Order: 1000024652
ORDER NUMBER: 000286293

Waste Managment

Apopka, FL 32703

To Whom it May Concern:

Please find enclosed the MQA/MQC test data package for Geosynthetic Clay Liner shipments to Waste Managment.

The enclosed data package includes results of all the MQC tests required by ASTM D5889, with the exception of index flux/hydraulic conductivity. This test, which is run according to ASTM D5887, is normally performed once per production lot (once per week), unless a higher frequency is required by the project specifications. Because of the GCL's low permeability, this test can take several weeks to complete. The index flux/hydraulic conductivity results associated with this lot of material will be provided under separate cover as soon as they are available.

Although the index flux/hydraulic conductivity test results are not yet available, CETCO accepts responsibility for our GCL should the index flux/hydraulic conductivity tests produce unacceptable results. If, upon delivery and prior to installation, individual rolls of GCL are found to be nonconforming to accepted project specifications, CETCO will replace the nonconforming material at no charge.

Questions regarding this information should be directed to Chris Athanassopoulos, Technical Support Engineer, at (847) 851-1831.

Sincerely,

Maria Martinez
Quality Assurance
CETCO Cartersville Plant

GEOSYNTHETIC CLAY LINER
MANUFACTURING QUALITY ASSURANCE DATA PACKAGE

PROJECT NAME: WM-Vista LF
CUSTOMER P.O.: 1000024652
ORDER NUMBER: 000286293
PREPARED FOR: Waste Managment

CONTENTS:

- Product Certifications
- GCL Order packing list and MQA tracking form
- GCL manufacturing quality control test data
- Bentonite clay certification
- Raw material test results

PREPARED BY: Maria Martinez
Quality Assurance
CETCO
218 Industrial Park

Cartersville, GA 30121
Telephone: (770) 387-7700
E-Mail: as maria.covarrubias@cetco.com

PRODUCT CERTIFICATIONS

PROJECT NAME: WM-Vista LF
CUSTOMER P.O.: 1000024652
ORDER NUMBERS: 000286293
PREPARED FOR: Waste Managment

The GCL manufactured for the above-referenced order number(s) is certified to meet the values 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 Min
ASTM D 5890	Bentonite Swell Index	1 per 50 Tons	24 ml/2g Min
ASTM D 6768	GCL Grab Strength	200,000 sq ft (20,000 sq m)	30 lbs/in MARV
ASTM D 6243	GCL Hydrated Internal Shear Strength	Periodic	500 psf typ @ 200 psf normal load
ASTM D 5887	GCL Hydraulic Conductivity	Weekly	5.0E-9 cm/s Max
ASTM D 5887	GCL Index Flux	Weekly	1.0E-8 m3/m2/s Max
ASTM D 6496	GCL Peel Strength	40,000 sq ft (4000 sq m)	3.5 lbs/in Min

SPECIALLY REQUESTED CERTIFIED PROPERTIES FOR THIS ORDER OF BENTOMAT ST

Test Method	Test Method Property	Requested Frequency	Requested Value	Requested Conditions
ASTM D 5887	GCL Hydraulic Conductivity	100,000 ft	Standard	Standard
ASTM D4632*	Grab Strength*modified with 4-inch grips	Standard	Standard	Standard
ASTM D 4643	GCL Moisture	Standard	25-30%	Standard

Bentonite property tests are performed at a bentonite processing facility before shipment to CETCO's production facility.
All tensile testing is in the machine direction using ASTM D 6768. All peel strength testing is performed using
ASTM D 6496. Upon request tensile and peel results can be reported per modified ASTM D 4632 using 4 inch grips.

NEEDLE DETECTION AND REMOVAL 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.

Maria Martinez
Quality Assurance

CETCO

GCL PACKING LIST AND MQA TRACKING FORM

Listing of finished and raw materials used to produce certification package number 000286293

GCL								Geotextiles				Clay
CV-BENTOMAT ST								N/W-WHITE			WOVEN	CV-CG 50
Order	**GCL Lot #**	**GCL Roll #**	**Length**	**Width**	**weight**	**sq ft**	**Roll # Tested**	**Cap Lot #**	**Cap Roll #**	**Roll # Tested**	**Base Roll #**	**Clay Lot #**
000286293	201234CV	6197	150	15	2650	2250	6197	201234CV	00002462	00002460	MDWE022966-1	1085408B
000286293	201234CV	6198	150	15	2636	2250	6197	201234CV	00002462	00002460	MDWE022966-1	1085408B
000286293	201234CV	6199	150	15	2636	2250	6197	201234CV	00002462	00002460	MDWE022966-1	1085408B
000286293	201234CV	6200	150	15	2636	2250	6197	201234CV	00002462	00002460	MDWE022966-1	1085408B
000286293	201234CV	6201	150	15	2636	2250	6197	201234CV	00002464	00002460	MDWE022966-1	1085408B
000286293	201234CV	6202	150	15	2636	2250	6197	201234CV	00002464	00002460	MDWE022966-1	1085408B
000286293	201234CV	6203	150	15	2636	2250	6197	201234CV	00002464	00002460	MDWE022966-1	1085408B
000286293	201234CV	6204	150	15	2636	2250	6197	201234CV	00002464	00002460	MDWE022966-1	1085408B
Total sq ft:						**18000**	Total Number of Rolls Certified: **8**					

CETCO

GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 000286293 have been tested in our production facility lab.

Product	Lot # Tested	Roll # Tested	Mass Area	Grab Strength	Peel Strength 6496	Grab 4632 Modified	Moisture
		ASTM Test Method:	D 5993	D 6768	D 6496	D4632*	D 4643
		Required Value:	0.75 lb /sq ft Min	30 lbs/in MARV	3.5 lbs/in Min	Standard	25-30%
CV-BENTOMAT ST	201234CV	6197	0.84	39.0	6.9	156.1	29.3

modified ASTM D 4632 using 4 inch grips.

BENTONITE CLAY CERTIFICATION

The Bentonite Clay used to produce package 000286293

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

Clay Lot #	Moist	Swell	Fluid Loss
ASTM Test Method:	D 2216	D 5890	D 5891
Required Value:	12% Max	24 ml/2g Min	18 ml Max
1085408B	9.10	30.00	17.60

CETCO

GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 000286293 was manufactured with geotextiles which were tested with the following results.

BASE GEOTEXTILE				COVER GEOTEXTILE			
Material	**Roll Number**	**Mass Area oz/yd2**	**Grab Strength lbs**	**Material**	**Roll Number**	**Mass Area oz/yd2**	**Grab Strength lbs**
Mattex	mdwe022966-1	3.5	189.1	CV-NON-WOVEN	00002460	6.4	34.4

Certifications from our suppliers are on file at our production facility.

An '*' or 'PT' indicates supplier certifications were unavailable prior to shipping so testing was performed at a CETCO lab.

CONFORMANCE TESTS

TRI / Environmental, Inc.
A Texas Research International Company

August 28, 2012

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

email: sgrant@wm.com
cc email: snunes@cecenv.com
cc email: pwalls@cecenv.com

Dear Ms. Grant:

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**
TRI Job Reference Number:	E2365-77-09
Material(s) Tested:	1, Bentomat ST GCL
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, P.E.
Division Director
Geosynthetic Services Division
www.GeosyntheticTesting.com

GCL TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista

Material: Bentomat ST GCL
Sample Identification: 6197 **Lot: 201234CV**
TRI Log #: E2365-77-09

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	6	7	8	9	10	MEAN	STD. DEV.	PROJ. SPEC.
Index Flux (ASTM D 5887)													
Index Flux ($m^3/m^2/sec$)	2.5E-09										$\boxed{2.5E-09}$		
Hydraulic Conductivity (cm/sec)	1.9E-09										$\boxed{1.9E-09}$		5.0E-09

MD Machine Direction TD Transverse Direction NA Not Available

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

B.5 GEOCOMPOSITE – TN300

INVENTORY

Geocomposite

Geosynthetic Materials Inventory Checklist

CEC

Project Name: Vista Landfill Cell 3
Client: WMI
Project No.: 101.07.08
Date: 09/18/2012
Material Type: Geocomposite
Manufacturer: SKaps

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		502810100001	14x180		
		502810100002	"		
		502810100003	"		
		502810100004	"		
		502810100005	"		
		502810100006	"		
		502810100007	"		
		502810100008	"		
		502810100009	"		
		502810100010	"		
		502810100011	"		
		502810100012	"		
		502810100013	"		
		502810100014	"		
		502810100015	"		
		502810100016	"		
		502810100017	"		
		502810100018	"		
		502810100019	"		
		502810100020	"		
		502810100021	"		
		502810100022	"		
		502810100023	"		
		502810100024	"		
		502810100025	14x175		
		502810100026	14x180		
		502810100027	"		

Totals: 27 Rolls 67,970 ft²

Notes: + 2 bags of ties.

Doc. 1807

Geosynthetic Materials Inventory Checklist

CEC

Project Name: Vista Landfill Cell 3
Date: 09/19/2012
Client: WMI
Material Type: Geocomposite
Project No.: 101.07.08
Manufacturer: SKAPS

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		502810100028	14x180		
		502810100029	14x160		
		502810100030	14x180		
		502810100031	"		
		502810100032	"		
		502810100033	"		
		502810100034	"		
		502810100035	"		
		502810100036	"		
		502810100037	"		
		502810100038	"		
		502810100039	"		
		502810100040	"		
		502810100041	"		
		502810100042	"		
		502810100043	"		
		502810100044	"		
		502810100045	14 X 150		
		502810100046	14 X 180		
		502810100047	"		
		502810100048	"		
		502810100049	"		
		502810100050	"		
		502810100051	"		
		502810100052	"		
		502810100053	"		
		502810100054	14 X 195		

Totals: 27 Rolls 67,550

Notes: + 2 bags ties

BOL - 1834

Geosynthetic Materials Inventory Checklist

CEC

Project Name Vista Landfill Cell 3	Date: 08/21/2012
Client: WMI	Material Type: Geocomposite
Project No.: 101.07.08	Manufacturer: SKAPS

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		502810100082	14x180		
		502810100083	"		
		502810100084	"		
		502810100085	"		
		502810100086	"		
		502810100087	"		
		502810100088	"		
		502810100089	"		
		502810100090	"		
		502810100091	"		
		502810100092	"		
		502810100093	"		
		502810100094	"		
		502810100095	"		
		502810100096	"		
		502810100097	"		
		502910100098	"		
		502910100099	"		
		502810100100	"		
		502810100101	"		
		502810100102	"		
		502810100103	"		
		502810100104	"		
		502810100105	"		
		502810100106	"		
		502810100107	"		
		502810100108	"		

Totals: 27 Rolls 68,040 ft

Notes: T 2 bags ties

Geosynthetic Materials Inventory Checklist

CEC

Project Name Vista landfill Cell 3

Date: 09/21/2012

Client: WMI

Material Type: Geocomposite

Project No.: 101.07.08

Manufacturer:

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		5028101 0109	14x150		
		5028101 0110	14x180		
		5028101 0111	"		
		5028101 0112	"		
		5028101 0113	"		
		5028101 0114	14 x100		
		5028101 0115	14x180		
		5028101 0116	14 x 160		
		5028101 0117	14x180		
		5028101 0118	"		
		5028101 0119	"		
		5028101 0120	"		
		5028101 0121	"		
		5028101 0122	"		
		5028101 0123	"		
		5028101 0124	"		
		5028101 0125	"		
		5028101 0126	"		
		5028101 0127	"		
		5028101 0128	"		
		5028101 0129	"		
		5028101 0130	"		
		5028101 0131	"		
		5028101 0132	"		
		5028101 0133	"		
		5028101 0134	"		
		5028101 0135	"		

Totals: 27 Rolls 65,940 ft2

Notes:

Geosynthetic Materials Inventory Checklist

CEC

Project Name Vista Landfill Cell 3	Date: 09/21/2012
Client: WMI	Material Type: Geocomposite
Project No.: 101.07.08	Manufacturer: Skaps

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		502810100055	14 X 180		
		502810100056	14X175		
		502810100057.1	14X120		
		502801010058	14X170		
		502801010059	14X180		
		502810100060	"		
		502810100061	"		
		502810100062	"		
		502810100063	"		
		502810100064	"		
		502810100065	"		
		502810100066	"		
		502810100067	"		
		502810100068	"		
		502810100069	14X195		
		502810100070	14 X 160		
		502810100071	14X180		
		502810100072	"		
		502810100073	14X190		
		502810100074	14X180		
		502810100075	"		
		502810100076	"		
		502810100077	"		
		502810100078	"		
		502810100079	"		
		502810100080	"		
		502810100081	"		

Totals: 27 Rolls 67,010 ft2

Notes: + 2 bags of ties

CEC

Project Name: Vista Landfill Cell 3
Date: 09/28/2012
Client: WMI
Material Type: Geocomposite
Project No.: 101.07.08
Manufacturer: SKAPS

CEC ID #	Lot Number	Roll Number	Dimensions	Comments	Conformance Sample #
		5028/010136	14X180		
		5028/010137	"		
		5028/010138	"		
		5028/010139	"		
		5028/010140	"		
		5028/010141	"		
		5028/010142	"		
		5028/010143	"		
		5028/010144	"		
		5028/010145	"		
		5028/010146	"		
		5028/010147	"		
		5028/010148	"		
		5028/010149	14X140		
		5028/010150	14X180		
		5028/010151	"		
		5028/010152	"		
		5028/010153	14X190		

Totals: 18 Rolls 43,650 ft

Notes: + 3 bags of ties

MANUFACTURER’S CERTIFICATIONS

September 11, 2012
Waste Management

Ref. : WM Vista Landfill Cell 3, FL
Customer P.O. # 1000024653
Product : TN 300-2-8

We certify that the TN 300-2-8 drainage geocomposite, 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	0.162	Minimum
Thickness	ASTM D 5199	mil	200	Minimum
Carbon Black	ASTM D 4218	%	2.0 - 3.0	Range
Tensile Strength	ASTM D 5035	lbs/in	45	Minimum
Melt Flow	ASTM D 1238[3]	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm^3	0.93	Minimum
Composite				
Ply Adhesion	ASTM D 7005	lb/in	1.0	MARV[6]
Transmissivity[1] (MD)	ASTM D 4716	m^2/sec	9.0×10^{-4}	MARV
Transmissivity[2] (MD)	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
Grab Elongation	ASTM D 4632	%	50	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}	0.50	MARV
AOS	ASTM D 4751	US Sieve	70	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.02 and a confining pressure of 500 psf between soil and 60 mil textured HDPE geomembrane after 24 hours.

2 Transmissivity measured using water at 21 $\pm$ 2 °C (70 $\pm$ 4 °F) with a gradient of 0.02 and a confining pressure of 12,000 psf between soil and 60 mil textured HDPE geomembrane 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

APPROVED 5 QA

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
1	50281010001	50281010001 - N	5028.009	5028.045	1.42	3.16	
2	50281010002	50281010002 - N	5028.009	5028.045			
3	50281010003	50281010003 - N	5028.009	5028.045			
4	50281010004	50281010004 - N	5028.009	5028.045			
5	50281010005	50281010005 - N	5028.009	5028.045			
6	50281010006	50281010006 - N	5028.009	5028.045			
7	50281010007	50281010007 - N	5028.001	5028.015			
8	50281010008	50281010008 - N	5028.001	5028.015			
9	50281010009	50281010009 - N	5028.001	5028.015			
10	50281010010	50281010010 - N	5028.001	5028.015			
11	50281010011	50281010011 - N	5028.001	5028.015			
12	50281010012	50281010012 - N	5028.001	5028.015			
13	50281010013	50281010013 - N	5028.014	5028.030			
14	50281010014	50281010014 - N	5028.014	5028.030			
15	50281010015	50281010015 - N	5028.014	5028.030	1.57	3.09	
16	50281010016	50281010016 - N	5028.014	5028.030			
17	50281010017	50281010017 - N	5028.014	5028.030			
18	50281010018	50281010018 - N	5028.014	5028.030			
19	50281010019	50281010019 - N	5028.016	5028.046			
20	50281010020	50281010020 - N	5028.016	5028.046			
21	50281010021	50281010021 - N	5028.016	5028.046			
22	50281010022	50281010022 - N	5028.016	5028.046			
23	50281010023	50281010023 - N	5028.016	5028.046			
24	50281010024	50281010024 - N	5028.016	5028.046			
25	50281010025	50281010025 - N	5028.039	5028.034			
26	50281010026	50281010026 - N	5028.039	5028.034			
27	50281010027	50281010027 - N	5028.039	5028.034			

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010001 - N	NCIX 1151	0.9553	0.348	316	2.39	109	
50281010002 - N	NCIX 1151	0.9553					
50281010003 - N	NCIX 1151	0.9553					
50281010004 - N	NCIX 1151	0.9553					
50281010005 - N	NCIX 1151	0.9553					
50281010006 - N	NCIX 1151	0.9553					
50281010007 - N	NCIX 1151	0.9553					
50281010008 - N	NCIX 1151	0.9553					
50281010009 - N	NCIX 1151	0.9553					
50281010010 - N	NCIX 1151	0.9553					
50281010011 - N	NCIX 1151	0.9553					
50281010012 - N	NCIX 1151	0.9553					
50281010013 - N	NCIX 1151	0.9553					
50281010014 - N	NCIX 1151	0.9553					
50281010015 - N	NCIX 1151	0.9560	0.354	311	2.37	111	
50281010016 - N	NCIX 1151	0.9560					
50281010017 - N	NCIX 1151	0.9560					
50281010018 - N	NCIX 1151	0.9560					
50281010019 - N	NCIX 1151	0.9560					
50281010020 - N	NCIX 1151	0.9560					
50281010021 - N	NCIX 1151	0.9560					
50281010022 - N	NCIX 1151	0.9560					
50281010023 - N	NCIX 1151	0.9560					
50281010024 - N	NCIX 1151	0.9560					
50281010025 - N	NCIX 1151	0.9560					
50281010026 - N	NCIX 1151	0.9560					
50281010027 - N	NCIX 1151	0.9560					

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
28	50281010028	50281010028 - N	5028.039	5028.034			
29	50281010029	50281010029 - N	5028.039	5028.034			
30	50281010030	50281010030 - N	5028.039	5028.034	1.60	2.77	
31	50281010031	50281010031 - N	5028.049	5028.023			
32	50281010032	50281010032 - N	5028.049	5028.023			
33	50281010033	50281010033 - N	5028.049	5028.023			
34	50281010034	50281010034 - N	5028.049	5028.023			
35	50281010035	50281010035 - N	5028.049	5028.023			
36	50281010036	50281010036 - N	5028.049	5028.023			
37	50281010037	50281010037 - N	5028.002	5028.051			
38	50281010038	50281010038 - N	5028.002	5028.051			
39	50281010039	50281010039 - N	5028.002	5028.051			
40	50281010040	50281010040 - N	5028.002	5028.051			
41	50281010041	50281010041 - N	5028.002	5028.051			
42	50281010042	50281010042 - N	5028.002	5028.051			
43	50281010043	50281010043 - N	5028.007	5028.036			
44	50281010044	50281010044 - N	5028.007	5028.036			
45	50281010045	50281010045 - N	5028.007	5028.036	1.51	2.52	
46	50281010046	50281010046 - N	5028.007	5028.036			
47	50281010047	50281010047 - N	5028.007	5028.036			
48	50281010048	50281010048 - N	5028.007	5028.036			
49	50281010049	50281010049 - N	5028.037	5028.040			
50	50281010050	50281010050 - N	5028.037	5028.040			
51	50281010051	50281010051 - N	5028.037	5028.040			
52	50281010052	50281010052 - N	5028.037	5028.040			
53	50281010053	50281010053 - N	5028.037	5028.040			
54	50281010054	50281010054 - N	5028.037	5028.040			

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010028 - N	NCIX 1151	0.9560					
50281010029 - N	NCIX 1151	0.9560					
50281010030 - N	NCIX 1151	0.9554	0.343	312	2.54	107	
50281010031 - N	NCIX 1151	0.9554					
50281010032 - N	NCIX 1151	0.9554					
50281010033 - N	NCIX 1151	0.9554					
50281010034 - N	NCIX 1151	0.9554					
50281010035 - N	NCIX 1151	0.9554					
50281010036 - N	NCIX 1151	0.9554					
50281010037 - N	NCIX 1151	0.9554					
50281010038 - N	NCIX 1151	0.9554					
50281010039 - N	NCIX 1151	0.9554					
50281010040 - N	NCIX 1151	0.9554					
50281010041 - N	NCIX 1151	0.9554					
50281010042 - N	NCIX 1151	0.9554					
50281010043 - N	NCIX 1151	0.9554					
50281010044 - N	NCIX 1151	0.9554					
50281010045 - N	NCIX 1151	0.9548	0.355	317	2.26	104	
50281010046 - N	NCIX 1151	0.9548					
50281010047 - N	NCIX 1151	0.9548					
50281010048 - N	NCIX 1151	0.9548					
50281010049 - N	NCIX 1151	0.9548					
50281010050 - N	NCIX 1151	0.9548					
50281010051 - N	NCIX 1151	0.9548					
50281010052 - N	NCIX 1151	0.9548					
50281010053 - N	NCIX 1151	0.9548					
50281010054 - N	NCIX 1151	0.9548					

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

Product : TN 300-2-8
Project : WM Vista Landfill Cell 3, FL

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
55	50281010055	50281010055 - N	5028.028	5028.041			
56	50281010056	50281010056 - N	5028.028	5028.041			
57	50281010057	50281010057 - N	5028.028	5028.041			
58	50281010058	50281010058 - N	5028.028	5028.041			
59	50281010059	50281010059 - N	5028.028	5028.041			
60	50281010060	50281010060 - N	5028.028	5028.041	1.41	2.65	
61	50281010061	50281010061 - N	5028.020	5028.013			
62	50281010062	50281010062 - N	5028.020	5028.013			
63	50281010063	50281010063 - N	5028.020	5028.013			
64	50281010064	50281010064 - N	5028.020	5028.013			
65	50281010065	50281010065 - N	5028.020	5028.013			
66	50281010066	50281010066 - N	5028.020	5028.013			
67	50281010067	50281010067 - N	5028.008	5028.018			
68	50281010068	50281010068 - N	5028.008	5028.018			
69	50281010069	50281010069 - N	5028.008	5028.018			
70	50281010070	50281010070 - N	5028.008	5028.018			
71	50281010071	50281010071 - N	5028.008	5028.018			
72	50281010072	50281010072 - N	5028.008	5028.018			
73	50281010073	50281010073 - N	5028.003	5028.048			
74	50281010074	50281010074 - N	5028.003	5028.048			
75	50281010075	50281010075 - N	5028.003	5028.048	1.47	1.94	
76	50281010076	50281010076 - N	5028.003	5028.048			
77	50281010077	50281010077 - N	5028.003	5028.048			
78	50281010078	50281010078 - N	5028.003	5028.048			
79	50281010079	50281010079 - N	5028.033	5028.044			
80	50281010080	50281010080 - N	5028.033	5028.044			
81	50281010081	50281010081 - N	5028.033	5028.044			

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010055 - N	NCIX 1151	0.9548					
50281010056 - N	NCIX 1151	0.9548					
50281010057 - N	NCIX 1151	0.9548					
50281010058 - N	NCIX 1151	0.9548					
50281010059 - N	NCIX 1151	0.9548					
50281010060 - N	NCIX 1151	0.9555	0.342	315	2.67	108	
50281010061 - N	NCIX 1151	0.9555					
50281010062 - N	NCIX 1151	0.9555					
50281010063 - N	NCIX 1151	0.9555					
50281010064 - N	NCIX 1151	0.9555					
50281010065 - N	NCIX 1151	0.9555					
50281010066 - N	NCIX 1151	0.9555					
50281010067 - N	NCIX 1151	0.9555					
50281010068 - N	NCIX 1151	0.9555					
50281010069 - N	NCIX 1151	0.9555					
50281010070 - N	NCIX 1151	0.9555					
50281010071 - N	NCIX 1151	0.9555					
50281010072 - N	NCIX 1151	0.9555					
50281010073 - N	NCIX 1151	0.9555					
50281010074 - N	NCIX 1151	0.9555					
50281010075 - N	NCIX 1151	0.9556	0.351	314	2.65	110	
50281010076 - N	NCIX 1151	0.9556					
50281010077 - N	NCIX 1151	0.9556					
50281010078 - N	NCIX 1151	0.9556					
50281010079 - N	NCIX 1151	0.9556					
50281010080 - N	NCIX 1151	0.9556					
50281010081 - N	NCIX 1151	0.9556					

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
82	50281010082	50281010082 - N	5028.033	5028.044			
83	50281010083	50281010083 - N	5028.033	5028.044			
84	50281010084	50281010084 - N	5028.033	5028.044			
85	50281010085	50281010085 - N	5028.043	5028.031			
86	50281010086	50281010086 - N	5028.043	5028.031			
87	50281010087	50281010087 - N	5028.043	5028.031			
88	50281010088	50281010088 - N	5028.043	5028.031			
89	50281010089	50281010089 - N	5028.043	5028.031			
90	50281010090	50281010090 - N	5028.043	5028.031	1.46	2.28	
91	50281010091	50281010091 - N	5028.050	5028.024			
92	50281010092	50281010092 - N	5028.050	5028.024			
93	50281010093	50281010093 - N	5028.050	5028.024			
94	50281010094	50281010094 - N	5028.050	5028.024			
95	50281010095	50281010095 - N	5028.050	5028.024			
96	50281010096	50281010096 - N	5028.050	5028.024			
97	50281010097	50281010097 - N	5028.038	5028.026			
98	50281010098	50281010098 - N	5028.038	5028.026			
99	50281010099	50281010099 - N	5028.038	5028.026			
100	50281010100	50281010100 - N	5028.038	5028.026			
101	50281010101	50281010101 - N	5028.038	5028.026			
102	50281010102	50281010102 - N	5028.038	5028.026			
103	50281010103	50281010103 - N	5028.042	5028.012			
104	50281010104	50281010104 - N	5028.042	5028.012			
105	50281010105	50281010105 - N	5028.042	5028.012	1.48	2.09	
106	50281010106	50281010106 - N	5028.042	5028.012			
107	50281010107	50281010107 - N	5028.042	5028.012			
108	50281010108	50281010108 - N	5028.042	5028.012			

Product : **TN 300-2-8**

Project : **WM Vista Landfill Cell 3, FL**

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

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010082 - N	NCIX 1151	0.9556					
50281010083 - N	NCIX 1151	0.9556					
50281010084 - N	NCIX 1151	0.9556					
50281010085 - N	NCIX 1151	0.9556					
50281010086 - N	NCIX 1151	0.9556					
50281010087 - N	NCIX 1151	0.9556					
50281010088 - N	NCIX 1151	0.9556					
50281010089 - N	NCIX 1151	0.9556					
50281010090 - N	NCIX 1151	0.9559	0.346	322	2.41	106	
50281010091 - N	NCIX 1151	0.9559					
50281010092 - N	NCIX 1151	0.9559					
50281010093 - N	NCIX 1151	0.9559					
50281010094 - N	NCIX 1151	0.9559					
50281010095 - N	NCIX 1151	0.9559					
50281010096 - N	NCIX 1151	0.9559					
50281010097 - N	NCIX 1151	0.9559					
50281010098 - N	NCIX 1151	0.9559					
50281010099 - N	NCIX 1151	0.9559					
50281010100 - N	NCIX 1151	0.9559					
50281010101 - N	NCIX 1151	0.9559					
50281010102 - N	NCIX 1151	0.9559					
50281010103 - N	NCIX 1151	0.9559					
50281010104 - N	NCIX 1151	0.9559					
50281010105 - N	NCIX 1151	0.9550	0.347	320	2.52	105	
50281010106 - N	NCIX 1151	0.9550					
50281010107 - N	NCIX 1151	0.9550					
50281010108 - N	NCIX 1151	0.9550					

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
109	50281010109	50281010109 - N	5028.047	5028.054			
110	50281010110	50281010110 - N	5028.047	5028.054			
111	50281010111	50281010111 - N	5028.047	5028.054			
112	50281010112	50281010112 - N	5028.047	5028.054			
113	50281010113	50281010113 - N	5028.047	5028.054			
114	50281010114	50281010114 - N	5028.047	5028.054			
115	50281010115	50281010115 - N	5028.022	5028.035			
116	50281010116	50281010116 - N	5028.022	5028.035			
117	50281010117	50281010117 - N	5028.022	5028.035			
118	50281010118	50281010118 - N	5028.022	5028.035			
119	50281010119	50281010119 - N	5028.022	5028.035			
120	50281010120	50281010120 - N	5028.022	5028.035	1.43	2.48	
121	50281010121	50281010121 - N	5028.021	5028.005			
122	50281010122	50281010122 - N	5028.021	5028.005			
123	50281010123	50281010123 - N	5028.021	5028.005			
124	50281010124	50281010124 - N	5028.021	5028.005			
125	50281010125	50281010125 - N	5028.021	5028.005			
126	50281010126	50281010126 - N	5028.021	5028.005			
127	50281010127	50281010127 - N	5028.053	5028.017			
128	50281010128	50281010128 - N	5028.053	5028.017			
129	50281010129	50281010129 - N	5028.053	5028.017			
130	50281010130	50281010130 - N	5028.053	5028.017			
131	50281010131	50281010131 - N	5028.053	5028.017			
132	50281010132	50281010132 - N	5028.053	5028.017			
133	50281010133	50281010133 - N	5028.010	5028.006			
134	50281010134	50281010134 - N	5028.010	5028.006			
135	50281010135	50281010135 - N	5028.010	5028.006	1.30	2.29	

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010109 - N	NCIX 1151	0.9550					
50281010110 - N	NCIX 1151	0.9550					
50281010111 - N	NCIX 1151	0.9550					
50281010112 - N	NCIX 1151	0.9550					
50281010113 - N	NCIX 1151	0.9550					
50281010114 - N	NCIX 1151	0.9550					
50281010115 - N	NCIX 1151	0.9550					
50281010116 - N	NCIX 1151	0.9550					
50281010117 - N	NCIX 1151	0.9550					
50281010118 - N	NCIX 1151	0.9550					
50281010119 - N	NCIX 1151	0.9550					
50281010120 - N	NCIX 1151	0.9551	0.357	321	2.66	112	
50281010121 - N	NCIX 1151	0.9551					
50281010122 - N	NCIX 1151	0.9551					
50281010123 - N	NCIX 1151	0.9551					
50281010124 - N	NCIX 1151	0.9551					
50281010125 - N	NCIX 1151	0.9551					
50281010126 - N	NCIX 1151	0.9551					
50281010127 - N	NCIX 1151	0.9551					
50281010128 - N	NCIX 1151	0.9551					
50281010129 - N	NCIX 1151	0.9551					
50281010130 - N	NCIX 1151	0.9551					
50281010131 - N	NCIX 1151	0.9551					
50281010132 - N	NCIX 1151	0.9551					
50281010133 - N	NCIX 1151	0.9551					
50281010134 - N	NCIX 1151	0.9551					
50281010135 - N	NCIX 1151	0.9558	0.353	313	2.74	106	

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

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

Roll	Geocomposite Roll Number	Geonet Roll Number	Geotextile Roll Number		Ply Adhesion (lb/in)		Geocomposite Transmissivity (m^2/sec)
			Side A	Side B	Minimum	Average	
136	50281010136	50281010136 - N	5028.010	5028.006			
137	50281010137	50281010137 - N	5028.010	5028.006			
138	50281010138	50281010138 - N	5028.010	5028.006			
139	50281010139	50281010139 - N	5028.004	5028.052			
140	50281010140	50281010140 - N	5028.004	5028.052			
141	50281010141	50281010141 - N	5028.004	5028.052			
142	50281010142	50281010142 - N	5028.004	5028.052			
143	50281010143	50281010143 - N	5028.004	5028.052			
144	50281010144	50281010144 - N	5028.004	5028.052			
145	50281010145	50281010145 - N	5028.032	5028.027			
146	50281010146	50281010146 - N	5028.032	5028.027			
147	50281010147	50281010147 - N	5028.032	5028.027			
148	50281010148	50281010148 - N	5028.032	5028.027			
149	50281010149	50281010149 - N	5028.032	5028.027			
150	50281010150	50281010150 - N	5028.032	5028.027	1.38	2.26	
151	50281010151	50281010151 - N	5028.029	5028.011			
152	50281010152	50281010152 - N	5028.029	5028.011			
153	50281010153	50281010153 - N	5028.029	5028.011			
154	50281010154	50281010154 - N	5028.029	5028.011			
155	50281010155	50281010155 - N	5028.029	5028.011			
156	50281010156	50281010156 - N	5028.029	5028.011			
157	50281010157	50281010157 - N	5028.019	5028.025			
158	50281010158	50281010158 - N	5028.019	5028.025			
159	50281010159	50281010159 - N	5028.019	5028.025			
160	50281010160	50281010160 - N	5028.019	5028.025			
161	50281010161	50281010161 - N	5028.019	5028.025			
162	50281010162	50281010162 - N	5028.019	5028.025			

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

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, FL**

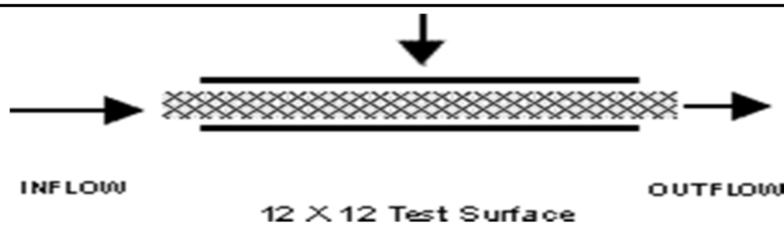
We, the Geonet Manufacturer, hereby certify the following for the material sent to the above referenced project :

Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
50281010136 - N	NCIX 1151	0.9558					
50281010137 - N	NCIX 1151	0.9558					
50281010138 - N	NCIX 1151	0.9558					
50281010139 - N	NCIX 1151	0.9558					
50281010140 - N	NCIX 1151	0.9558					
50281010141 - N	NCIX 1151	0.9558					
50281010142 - N	NCIX 1151	0.9558					
50281010143 - N	NCIX 1151	0.9558					
50281010144 - N	NCIX 1151	0.9558					
50281010145 - N	NCIX 1151	0.9558					
50281010146 - N	NCIX 1151	0.9558					
50281010147 - N	NCIX 1151	0.9558					
50281010148 - N	NCIX 1151	0.9558					
50281010149 - N	NCIX 1151	0.9558					
50281010150 - N	NCIX 1151	0.9557	0.352	318	2.68	109	
50281010151 - N	NCIX 1151	0.9557					
50281010152 - N	NCIX 1151	0.9557					
50281010153 - N	NCIX 1151	0.9557					
50281010154 - N	NCIX 1151	0.9557					
50281010155 - N	NCIX 1151	0.9557					
50281010156 - N	NCIX 1151	0.9557					
50281010157 - N	NCIX 1151	0.9557					
50281010158 - N	NCIX 1151	0.9557					
50281010159 - N	NCIX 1151	0.9557					
50281010160 - N	NCIX 1151	0.9557					
50281010161 - N	NCIX 1151	0.9557					
50281010162 - N	NCIX 1151	0.9557					

ASTM D 4716

Client:	Waste Management	**Job #**	5028
Project:	WM Vista Landfill Cell 3, FL		
Product:	TN 300-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Soil Geocomposite 60 mil Textured HDPE Geomembrane	**Normal Load:** **Gradient:** **Seating Time:** **Flow Direction:**	500 0.02 24 hours MD

Test Results:

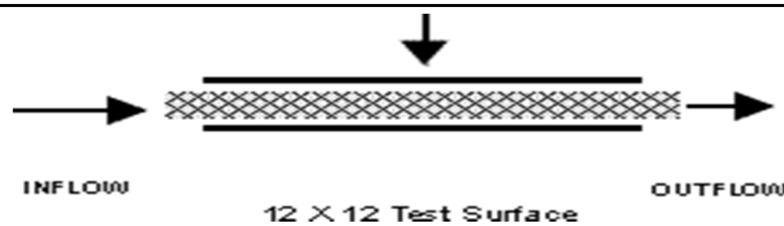
Roll No.	Pressure, psf	Gradient	Transmissivity, m^2/sec
			24 hours
50281010001	500	0.02	1.69×10^{-3}
50281010035			1.79×10^{-3}
50281010070			1.46×10^{-3}
50281010105			1.78×10^{-3}
50281010140			1.43×10^{-3}

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

ASTM D 4716

Client:	Waste Management	**Job #**	5028
Project:	WM Vista Landfill Cell 3, FL		
Product:	TN 300-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Soil Geocomposite 60 mil Textured HDPE Geomembrane	**Normal Load:**	12000
		Gradient:	0.02
		Seating Time:	100 hours
		Flow Direction:	MD

Test Results:

Roll No.	Pressure, psf	Gradient	Transmissivity, m^2/sec 100 hours
50281010001	12000	0.02	9.55×10^{-4}
50281010035			9.76×10^{-4}
50281010070			9.9×10^{-4}
50281010105			9.61×10^{-4}
50281010140			9.78×10^{-4}

POLYETHYLENE RESIN CERTIFICATION

Customer Name : Waste Management
Project Name : WM Vista Landfill Cell 3, FL
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN 300-2-8

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*
Matrix Polymers	Chevron, TX	HDPE	NCIX 1151	Density	ASTM D1505	gm / cc	0.9497	0.950
				Melt flow Index	ASTM D1238[(a)]	gm / 10 min	0.35	0.32

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

SKAPS

Product : **TN 300-2-8**
Project : **WM Vista Landfill Cell 3, 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.	MD ELONG %	XMD TENSILE lbs.	XMD ELONG %	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	CBR PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
50281010001	5028.009	8.14	226	72	244	85	100	117	134	684	80	1.39
	5028.045	8.29	230	69	242	81	98	114	131	650	80	1.39
50281010035	5028.049	8.29	230	69	242	81	98	114	131	650	80	1.39
	5028.023	8.20	225	71	241	82	105	110	132	690	80	1.39
50281010070	5028.008	8.14	226	72	244	85	100	117	134	684	80	1.39
	5028.018	8.58	233	67	238	77	96	108	130	673	80	1.39
50281010105	5028.042	8.21	235	65	243	76	98	114	131	650	80	1.39
	5028.012	8.37	229	74	234	78	96	108	130	673	80	1.39
50281010140	5028.004	8.60	231	66	236	80	100	117	134	684	80	1.39
	5028.052	8.23	234	70	240	79	104	120	138	670	80	1.36

CONFORMANCE TESTS

September 4, 2012

Mail To: **Bill To:**

Sheree Grant **<= Same**
Waste Management, Inc.

email: sgrant@wm.com
cc email: snunes@cecenv.com
cc email: pwalls@cecenv.com

Dear Sheree:

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**
TRI Job Reference Number:	E2368-77-07
Material(s) Tested:	2, Skaps TN300-2-8 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

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

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

GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010003
TRI Log #: E2368-77-07

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			

Hydraulic Transmissivity (ASTM D 4716)

Direction Tested: Machine Direction

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

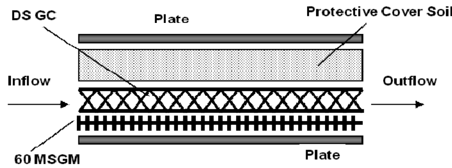


Plate / Protective Cover Soil / Sample / 60 mil. MSHDGM / Plate

Seat Time (hours)		Specimen		1		MEAN	STD. DEV.	PROJ. SPEC.
	Volume (cc)		605	609	606			
	Time (s)		60.36	60.42	60.35			
100	Flow Rate (GPM/ft width)		0.16	0.16	0.16	**0.16**	0.00	
	Transmissivity (m^2/s)		1.57E-03	1.58E-03	1.57E-03	**1.57E-03**	4.49E-06	7.9E-4 min
	Test Temp (C)			22.0				
	Temp. Corr. Factor			0.953				

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 / Protective Cover Soil / Sample / 60 mil. MSHDGM / Plate

Seat Time (hours)		Specimen		1		MEAN	STD. DEV.	PROJ. SPEC.
	Volume (cc)		551	565	567			
	Time (s)		19.27	19.83	19.92			
24	Flow Rate (GPM/ft width)		0.45	0.45	0.45	**0.45**	0.00	
	Transmissivity (m^2/s)		4.58E-03	4.56E-03	4.56E-03	**4.57E-03**	1.09E-05	9.0E-4 min
	Test Temp (C)			21.0				
	Temp. Corr. Factor			0.976				

Peel Strength (ASTM D 7005)

PARAMETER	1	2	3	4	5	MEAN	STD. DEV.	PROJ. SPEC.
A - MD Average Peel Strength (ppi)	7.0	4.8	6.2	8.1	6.2	**6.5**	1.2	1.0 min
A - MD Average Peel Strength (g/in)	3178	2179	2815	3677	2815	**2933**	550	
B - MD Average Peel Strength (ppi)	3.9	4.6	2.6	9.2	6.9	**5.4**	2.6	1.0 min
B - MD Average Peel Strength (g/in)	1771	2088	1180	4177	3133	**2470**	1188	

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

MD Machine Direction

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

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010003
TRI Log #: E2368-77-07

GEOTEXTILE COMPONENT - A

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)	3.88	3.76	3.47	4.02	3.39	3.57	3.77	3.62	3.44	3.93	**3.69**	0.22	
Mass/Unit Area (oz/sq.yd)	9.02	8.75	8.07	9.35	7.89	8.30	8.77	8.42	8.00	9.14	**8.57**	0.51	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	225	291	238	253	254	219	254	281	297	257	**257**	26	200 min
TD - Tensile Strength (lbs)	285	320	209	288	306	278	262	282	301	254	**278**	31	200 min
MD - Elong. @ Max. Load (%)	65	73	72	71	71	69	67	61	83	71	**70**	6	
TD - Elong. @ Max. Load (%)	97	101	111	106	101	102	95	116	106	93	**103**	7	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	90	109	114	100	106	81	100	84	98	102	**98**	11	75 min
TD - Tear Strength (lbs)	108	116	101	125	117	109	106	98	123	127	**113**	10	75 min
Apparent Opening Size (ASTM D 4751)													
Opening Size Diameter (mm)	0.140	0.140	0.146	0.139	0.144						**0.142**	0.003	0.21 max
Sieve No.	100	100	100	100	100						**100**		

Falling Head Permittivity (ASTM D 4491, 9-in Upper Standpipe; 2 in opening)

Water Temp. (C): 21
Correction Factor: 0.98

Test Speciemn No. >:			1					2		
Thickness (mils)	96.4	96.4	96.4	96.4	96.4	112	112	112	112	112
Time (s)	15.4	15.3	15.4	15.4	15.4	16.4	16.4	16.4	16.5	16.4
Specimen Permittivity (s-1)	1.84	1.85	1.84	1.84	1.84	1.73	1.73	1.73	1.72	1.73
Specimen Permittivity @20°C (sec-1)	1.81	1.82	1.81	1.81	1.81	1.70	1.70	1.70	1.69	1.70
Specimen Flow rate (GPM/ft2)	135	136	135	135	135	127	127	127	126	127
Specimen Permeability (cm/s)	0.44	0.45	0.44	0.44	0.44	0.48	0.48	0.48	0.48	0.48

Test Speciemn No. >:			3					4		
Thickness (mils)	108	108	108	108	108	115	115	115	115	115
Time (s)	16.9	16.9	16.9	16.9	16.9	17.5	17.5	17.5	17.4	17.5
Permittivity (s-1)	1.68	1.68	1.68	1.68	1.68	1.62	1.62	1.62	1.63	1.62
Specimen Permittivity @20°C (sec-1)	1.65	1.65	1.65	1.65	1.65	1.59	1.59	1.59	1.60	1.59
Specimen Flow rate (GPM/ft2)	123	123	123	123	123	119	119	119	120	119
Specimen Permeability (cm/s)	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.46

TEMPERATURE CORRECTED VALUES		MEAN	PROJ. SPEC.
	Permittivity (s-1)	**1.69**	0.5 min
	Flow rate (GPM/ft2)	**126**	
	Permeability (cm/s)	**0.46**	

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.

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

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010003
TRI Log #: E2368-77-07

GEOTEXTILE COMPONENT - B

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)	4.07	3.75	3.38	3.50	3.97	3.80	3.70	3.60	3.20	3.89	**3.69**	0.27	
Mass/Unit Area (oz/sq.yd)	9.47	8.72	7.86	8.14	9.23	8.84	8.61	8.37	7.44	9.05	**8.57**	0.63	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	230	265	231	209	247	267	220	316	239	257	**248**	30	200 min
TD - Tensile Strength (lbs)	257	266	233	278	307	271	369	223	288	255	**275**	41	200 min
MD - Elong. @ Max. Load (%)	65	73	63	64	68	69	68	68	70	75	**68**	4	
TD - Elong. @ Max. Load (%)	100	94	121	99	103	100	97	117	105	87	**102**	10	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	72	108	107	112	114	86	92	96	96	106	**99**	13	75 min
TD - Tear Strength (lbs)	119	100	89	115	108	87	104	82	192	122	**112**	31	75 min
Apparent Opening Size (ASTM D 4751)													
Opening Size Diameter (mm)	0.145	0.137	0.145	0.144	0.137						**0.142**	0.004	0.21 max
Sieve No.	100	100	100	100	100						**100**		

Falling Head Permittivity (ASTM D 4491, 9-in Upper Standpipe; 2 in opening)

Water Temp. (C):	21.3
Correction Factor:	0.97

Test Speciemn No. >:	1					2				
Thickness (mils)	126	126	126	126	126	115	115	115	115	115
Time (s)	20.1	19.5	19.6	20.1	20.1	18.5	18.5	18.5	18.5	18.4
Specimen Permittivity (s-1)	1.41	1.46	1.45	1.41	1.41	1.53	1.53	1.53	1.53	1.54
Specimen Permittivity @20°C (sec-1)	1.38	1.42	1.41	1.38	1.38	1.49	1.49	1.49	1.49	1.50
Specimen Flow rate (GPM/ft2)	103	106	105	103	103	112	112	112	112	112
Specimen Permeability (cm/s)	0.44	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44

Test Speciemn No. >:	3					4				
Thickness (mils)	99.2	99.2	99.2	99.2	99.2	94.3	94.3	94.3	94.3	94.3
Time (s)	14.8	14.8	14.8	14.8	14.8	13.7	14.3	13.7	14.2	14.2
Permittivity (s-1)	1.92	1.92	1.92	1.92	1.92	2.07	1.98	2.07	2.00	2.00
Specimen Permittivity @20°C (sec-1)	1.87	1.87	1.87	1.87	1.87	2.02	1.93	2.02	1.95	1.95
Specimen Flow rate (GPM/ft2)	140	140	140	140	140	151	145	151	146	146
Specimen Permeability (cm/s)	0.47	0.47	0.47	0.47	0.47	0.48	0.46	0.48	0.47	0.47

TEMPERATURE CORRECTED VALUES		MEAN	PROJ. SPEC.
	Permittivity (s-1)	**1.68**	0.5 min
	Flow rate (GPM/ft2)	**126**	
	Permeability (cm/s)	**0.46**	

MD Machine Direction TD Transverse Direction

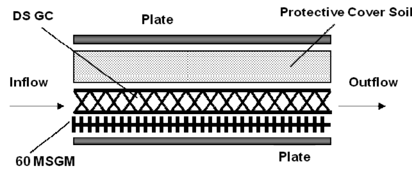
GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010088
TRI Log #: E2368-77-07

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			

Hydraulic Transmissivity (ASTM D 4716)



Direction Tested: Machine Direction

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

Plate / Protective Cover Soil / Sample / 60 mil. MSHDGM / Plate

Seat Time (hours)		Specimen 1			MEAN	STD. DEV.	PROJ. SPEC.
	Volume (cc)	814	818	815			
	Time (s)	60.27	60.38	60.30			
100	Flow Rate (GPM/ft width)	0.21	0.21	0.21	0.21	0.00	
	Transmissivity (m^2/s)	2.11E-03	2.12E-03	2.11E-03	2.11E-03	3.40E-06	7.9E-4 min
	Test Temp (C)		22.0				
	Temp. Corr. Factor		0.953				

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 / Protective Cover Soil / Sample / 60 mil. MSHDGM / Plate

Seat Time (hours)		Specimen 1			MEAN	STD. DEV.	PROJ. SPEC.
	Volume (cc)	567	572	573			
	Time (s)	29.63	29.67	29.78			
24	Flow Rate (GPM/ft width)	0.30	0.31	0.31	0.30	0.00	
	Transmissivity (m^2/s)	3.06E-03	3.09E-03	3.08E-03	3.08E-03	1.18E-05	9.0E-4 min
	Test Temp (C)		21.0				
	Temp. Corr. Factor		0.976				

Peel Strength (ASTM D 7005)

PARAMETER	1	2	3	4	5	MEAN	STD. DEV.	PROJ. SPEC.
A - MD Average Peel Strength (ppi)	4.4	2.9	6.9	4.4	15.6	6.8	5.1	1.0 min
A - MD Average Peel Strength (g/in)	1998	1317	3133	1998	7082	3105	2317	
B - MD Average Peel Strength (ppi)	7.7	3.1	7.9	3.4	13.4	7.1	4.2	1.0 min
B - MD Average Peel Strength (g/in)	3496	1407	3587	1544	6084	3223	1904	

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

MD Machine Direction

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

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010088
TRI Log #: E2368-77-07

GEOTEXTILE COMPONENT - A

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)	3.99	4.48	3.56	4.34	3.50	3.05	4.03	3.50	4.22	3.76	**3.84**	0.45	
Mass/Unit Area (oz/sq.yd)	9.28	10.42	8.28	10.09	8.14	7.09	9.37	8.14	9.82	8.75	**8.94**	1.04	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	229	259	270	287	239	196	305	242	254	276	**256**	31	200 min
TD - Tensile Strength (lbs)	308	317	247	259	288	266	312	215	438	293	**294**	60	200 min
MD - Elong. @ Max. Load (%)	65	71	64	73	67	57	75	70	71	79	**69**	6	
TD - Elong. @ Max. Load (%)	106	103	118	108	98	95	102	116	109	101	**106**	7	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	91	101	114	99	92	90	113	95	129	79	**100**	15	75 min
TD - Tear Strength (lbs)	121	114	95	134	114	111	127	91	143	120	**117**	16	75 min

MD Machine Direction TD Transverse Direction

GEOCOMPOSITE TEST RESULTS

TRI Client: Waste Management, Inc.
Project: Vista Landfill

Material: Skaps TN300-2-8 Double Sided Geocomposite
Sample Identification: 0050281010088
TRI Log #: E2368-77-07

GEOTEXTILE COMPONENT - B

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)													
5" diameter circle (grams)	3.87	3.79	4.18	4.16	3.75	3.67	3.87	3.28	4.26	3.53	**3.84**	0.31	
Mass/Unit Area (oz/sq.yd)	9.00	8.82	9.72	9.68	8.72	8.54	9.00	7.63	9.91	8.21	**8.92**	0.71	8 min
Grab Tensile Properties (ASTM D 4632)													
MD - Tensile Strength (lbs)	241	247	244	303	245	283	230	255	254	273	**257**	22	200 min
TD - Tensile Strength (lbs)	262	312	234	331	309	279	297	279	317	324	**294**	31	200 min
MD - Elong. @ Max. Load (%)	65	67	65	74	76	85	65	69	67	74	**71**	6	
TD - Elong. @ Max. Load (%)	106	107	111	103	101	101	91	126	103	102	**105**	9	
Trapezoidal Tear (ASTM D 4533)													
MD - Tear Strength (lbs)	87	109	92	146	93	102	115	99	114	100	**106**	17	75 min
TD - Tear Strength (lbs)	118	91	116	103	152	99	141	105	116	102	**114**	19	75 min

MD Machine Direction   TD Transverse Direction

B.6 INTERFACE FRICTION TESTING

TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

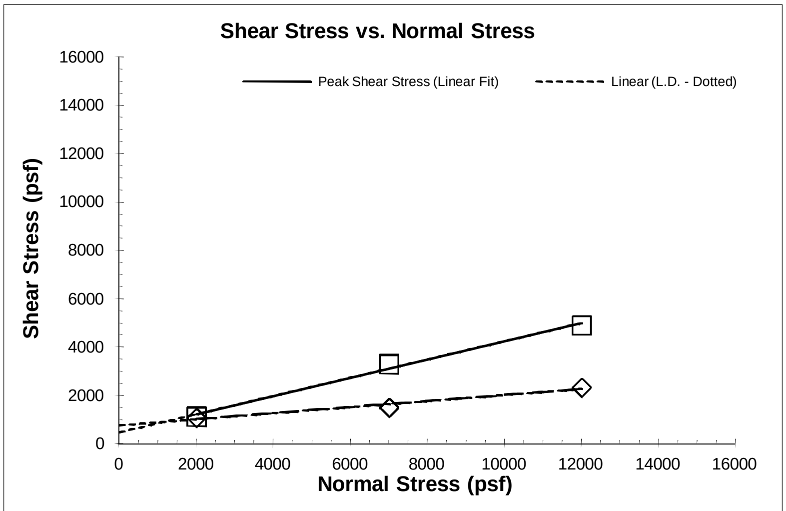
Interface Friction Test Report

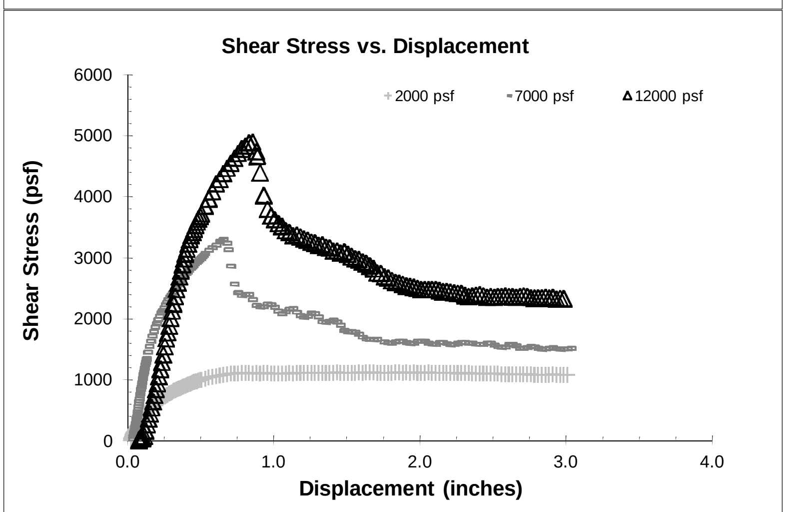
Client: **Waste Management**
Project: **Vista Landfill, Cell 3**
Test Date: 09/07/12-09/10/12

TRI Log#: E2365-14-01
Test Method: ASTM D 5321

John M. Allen, P.E., 09/10/2012
Quality Review/Date

Tested Interface: Liner Protective Layer (PC-1) vs. Skaps TN300-2-8 Double-sided Geocomposite (50281010050) vs. Agru 60 mil HDPE Microspike Geomembrane (435343.12) vs. Compacted Subbase (SF-1)





Test Results

	Peak	Large Displacement (@ 3.0 in.)
Friction Angle (degrees):	**20.6**	**7.1**
Y-intercept or Adhesion (psf):	**477**	**772**

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

Test Conditions

Upper Box &	Liner Protective Layer tamped in place
Floating	Skaps TN300-2-8 double-sided geocomposite
Floating	Agru 60 mil HDPE Microspike geomembrane (shingy side down)
Lower Box	Compacted Subbase (SF-1) remolded to 95% of maximum dry density at optimum or 102.4 pcf at 12.1%

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)	1134	3305	4901
Corrected Large Displacement Shear Stress (psf)	1088	1511	2335
Peak Secant Angle (degrees)	29.6	25.3	22.2
Large Displacement Secant Angle (degrees)	28.5	12.2	11.0
Asperity (mils), dull side	25.4	27.4	26.2

9063 Bee Caves Road □ Austin, TX 78733-6201 □ (512) 263-2101 □ (512) 263-2558 □ 1-800-880-TEST

TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

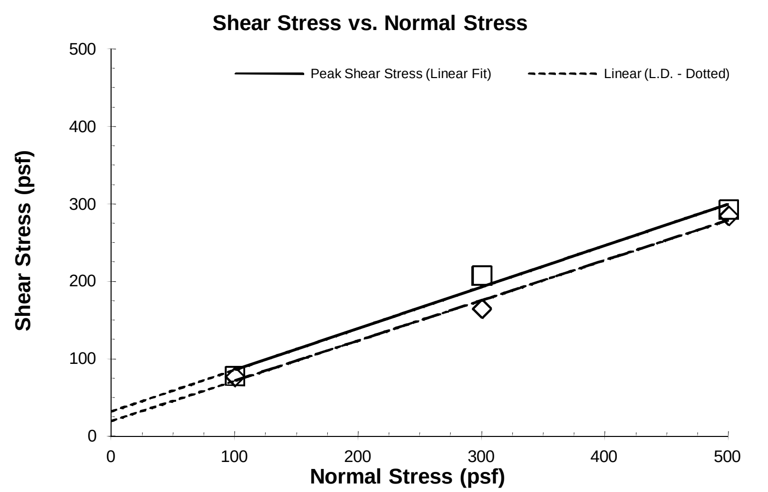
Interface Friction Test Report

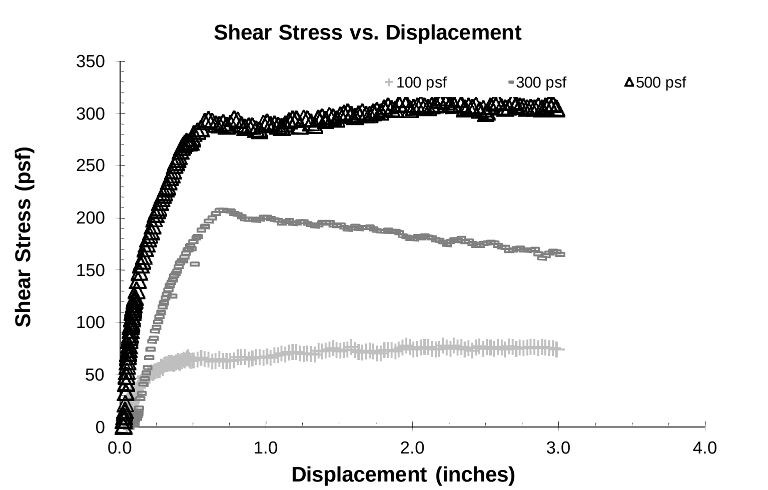
Client: **Waste Management**
Project: **Vista Landfill, Cell 3**
Test Date: 09/11/12-09/13/12

TRI Log#: E2365-14-01
Test Method: ASTM D 5321

John M. Allen, P.E., 09/14/2012
Quality Review/Date

Tested Interface: Liner Protective Layer (PC-1) vs. Skaps TN300-2-8 Double-sided Geocomposite (50281010050) vs. Agru 60 mil HDPE Microspike Geomembrane (435343.12) vs. Compacted Subbase (SF-1)





Test Results

	Peak	Large Displacement (@ 3.0 in.)
Friction Angle (degrees):	28.2	27.5
Y-intercept or Adhesion (psf):	32	20

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

Test Conditions

Upper Box &	Liner Protective Layer tamped in place
Floating	Skaps TN300-2-8 double-sided geocomposite
Floating	Agru 60 mil HDPE Microspike geomembrane (shingy side down)
Lower Box	Compacted Subbase (SF-1) remolded to 95% of maximum dry density at optimum or 102.4 pcf at 12.1%

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)	78	208	293
Corrected Large Displacement Shear Stress (psf)	77	165	285
Peak Secant Angle (degrees)	38.1	34.7	30.4
Large Displacement Secant Angle (degrees)	37.6	28.8	29.7
Asperity (mils), dull side	35.6	36.8	35.0

9063 Bee Caves Road □ Austin, TX 78733-6201 □ (512) 263-2101 □ (512) 263-2558 □ 1-800-880-TEST

C.1 TENSIOMETER CALIBRATION

Demtech Services, Inc.

Placerville, California, USA

CALIBRATION CERTIFICATE

Customer Name: **Environmental Specialties International, Inc.**

Tensiometer Model: Pro-Tester T-0100

Device Calibrated: S-Type load cell
Range: 0 - 750 lbs. Tension
Model No: M2405-750#
Serial No: **205327**

Calibration Apparatus:

Reference load cell (S/N 204781)

A/D Module Model No: T-029
A/D Module Serial No: **1205205327**
Channel No: N/A

Dead Weight:		Reference Cell:	
W1	2	R1	2
W2	152	R2	152
W3	302	R3	302

Indicator reading with no load: 0

Offset: **1.329345** Scale: **4.998566**

Applied Force lbs.	Cell Response:	Deviation Error:
2	2	0.00
52	52	0.00
102	102	0.00
152	152	0.00
202	202	0.00
252	252	0.00
302	302	0.00

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F
Exitation Voltage: 5 V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Calibration Technician: MWH

Matt Harrison

Date: 08/06/12

C.2 TRIAL WELD

CEC

Trial Weld Information

Page 1 of 2

Client: Vista Landfill
Project: Gll 3
Project No.: 101.07.08

Date: 09/21/2012
Daily Report No.: 33

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds: Barrel Temp	Extrusion Welds: Preheat Temp	Fusion Welds: Wedge Temp	Fusion Welds: Wedge Speed	Peel PPI			Shear PPI	Observer	P/F	Comments
13:28	90	#1	MS	1998	—	—	860	5.00	98/98	97/112	\	121/123	TLB	P	S/S
13:39	90	#2	PV	1483	—	—	860	5.00	116/110	104/118	\	124/134	TLB	P	S/S
13:43	90	#3	FO	1999	—	—	860	5.00	133/101	112/132	\	127/126	TLB	P	S/S
13:15	90	#4	NC	E5382	550	500	860	5.00	123	124	\	135/131	TLB	P	Extrusion
15:33	90	#5	PV	1483	~~860~~	~~400~~	860	400	125/118	124/118	\	121/124	TLB	P	T/T
17:30	90	#6	MS	1998	—	—	860	500	176/121	151/148	\	164/152	TLB	P	T/S

MIN REG. VALUES:
Material
Peel Extrusion
Peel Fusion
Shear

Rev. 02/00

CF207/CPS

CEC

Trial Weld Information

Date: 09/23/2014
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds		Fusion Welds		Peel		PPI	Shear PPI	Observer	P/F	Comments
					Barrel Temp	Preheat Temp	Wedge Temp	Wedge Speed							
07:38	76°	7	PV	1483	—	—	860	5.00	126 117	125 127	—	165/129	TCB	P	
07:33	76°	8	MS	1998	—	—	860	5.00	129 124	123 120	—	152/154	TCB	P	
07:40	76°	9	FO	1999	—	—	860	5.00	128 108	114 120	—	154/153	TCB	P	
07:47	78°	10	NC	EX-5382	550	500	—	—	115	124	—	149/145	TCB	P	Extrusion
13:02	88°	11	PV	1483	—	—	860	500	112 110	112 119	—	128/127	TCB	P	
13:07	88°	12	FO	1999	—	—	860	5.00	122 127	123 114	—	127/125	TCB	P	
13:09	88°	13	MS	1998	—	—	860	5.00	Peel	—	—	—	TCB	F	20% Peel ; Bond
13:08	88	14	NC	EX-5382	500	550	—	—	131	129	—	137/137	TCB	P	Extrusion
13:29	88°	15	MS	1998	—	—	860	5.00	122 113	119 128	—	132/129	TCB	P	Retest Pass

MIN REG. VALUES:
Material
Peel Extrusion
Peel Fusion
Shear

CEC

Trial Weld Information

Date: 08/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds: Barrel Temp	Extrusion Welds: Preheat Temp	Fusion Welds: Wedge Temp	Fusion Welds: Wedge Speed	Peel PPI			Shear PPI	Observer	P/F	Comments
07:50	73	16	NC	EXT 5382	500	550	—	—	143	142	—	156/166	TCB	P	Extrusion
08:00	73°	17	FO	1999	—	—	860	5.00	126 130	131 139	—	149/153	TCB	P	T/T
08:10	73	18	FO	1999	—	—	860	5.00	132 129	139 143	—	172/144	TCB	P	S/S
08:25	73	19	IS	EXT 503	550	550	—	—	144	126	—	152/137	TCB	P	T/T extrusion old/New
09:18	77	20	MS	1998	—	—	860	5.00	125 132	114 95	—	180/143	TCB	P	SS
13:00	89°	21	IS	EXT 503	550	550	—	—	125	130	—	131/131	TCB	P	T/T Extrusion old New
13:30	89	22	NC	5382	500	550	—	—	125	128	—	131/134	TCB	P	TT extrusion
13:40	89	23	FO	1999	—	—	860	5.00	128 111	113 127	—	135/137	TCB	P	S/S
13:43	89	24	MS	1998	—	—	860	5.0	115 108	113 112	—	123/127	TCB	P	S/S
13:52	90	25	MS	1998	—	—	860	4.0	119 111	136 133	—	134/140	TCB	P	T/T

MIN REG. VALUES:
Material ______
Peel Extrusion ______
Peel Fusion ______
Shear ______

CFC

Trial Weld Information

Page 4 of 6

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds: Barrel Temp	Extrusion Welds: Preheat Temp	Fusion Welds: Wedge Temp	Fusion Welds: Wedge Speed	Peel		PPI	Shear PPI	Observer	P/F	Comments
08:25	77	26	FO	1999	—	—	860	5.00	116 138	125 124	—	155/163	TCB	P	S/T
08:36	77	27	MS	1998	—	—	860	4.30	134 137	132 136	—	147/143	TCB	P	T/T
08:23	77	28	MS	1998	—	—	860	4.30	117 124	119 120	—	154/153	TCB	P	S/T
08:50	77	29	NC	EX 5382	550	500	—	—	108	90	—	171/173	TCB	P	T/T old/New
08:54	77	30	IS	EX 503	550	500	—	—	96	109	—	167/172	TCB	P	T/T old/New
08:55	77	31	IS	EX 503	550	550	—	—	78	108	—	155/158	TCB	P	T/T
13:05	90	32	MS	1998	—	—	860	4.30	125 124	131 112	—	135/130	TCB	P	T/S
13:20	90	33	NC	EX 5382	550	500	—	—	128	129	—	131/133	TCB	P	T/T old/New
13:25	90	34	NC	EX 5382	550	500	—	—	123	118	—	133/128	TCB	P	T/T
13:35	90	35	IS	EX 503	550	500	—	—	127	123	—	120/120	TCB	P	T/T old/New
13:38	90	36	IS	EX 503	550	5,00	—	—	128	123	—	133/125	TCB	P	F/T
14:08	91	37	MS	1998	—	—	860	4.3	127 121	129 117	—	128/121	TCB	P	B/T
14:00	91	38	MS	1998	—	—	860	4.3	126 122	116 118	—	132/136	TCB	P	SS
14:10	91	39	FO	1999	—	—	860	5.0	117 123	127 120	/	127/130	TCB	P	SS

MIN REG. VALUES:
Material ______
Peel Extrusion ______
Peel Fusion ______
Shear ______

Rev. 02/00

CF207/CPS

CEC

Trial Weld Information

Page 5 of 6

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds		Fusion Welds		Peel PPI			Shear PPI	Observer	P/F	Comments
					Barrel Temp	Preheat Temp	Wedge Temp	Wedge Speed							
14:13	91	40	FO	1999	860	5.0	860	5.00	121 125	115 123	–	124/125	TCB	P	T/T
14:13	91	41	NC	Ex 5382	550	500	—	—	134	131	—	137/135	TCB	P	T4

MIN REG. VALUES:
Material ________
Peel Extrusion ________
Peel Fusion ________
Shear ________

CFC

Trial Weld Information

Page 6 of 6

Date: 07/26/2012
Daily Report No.: 38

Client: Vista Landfill
Project: Cell-3
Project No.: 10607-08

Time	AMB Temp	Sample ID	Seamer ID	Machine ID	Extrusion Welds		Fusion Welds		Peel PPI			Shear PPI	Observer	P/F	Comments
					Barrel Temp	Preheat Temp	Wedge Temp	Wedge Speed							
08:44	77°	42	NC	5382	500	550	—	—	137	135		143/143	TCB	P	5/5
14:00	90	43	NC	5382	500	550	—	—	111	110		120/121	TCB	P	5/5

MIN REG. VALUES:
Material ____
Peel Extrusion ____
Peel Fusion ____
Shear ____

C.3 PANEL PLACEMENT LOGS

CEC

Panel Placement Information

Page 1 of 9

Date: 09/21/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-1	P	N. Berm	13:12	0+00	1+06	106	435452-12	TCB	
P-2	P	N. Berm	13:29	0+00	1+04	104	〃	TCB	
P-3	P	N. Berm	13:32	0+00	1+03	103	〃	TCB	
P-4	P	N. Berm	13:36	0+00	1+03	103	〃	TCB	
P-5	P	N. Berm	13:40	0+00	0+78	78	〃	TCB	
P-6	P	N. Berm	13:44	0+00	1+05	105	435698-12	TCB	
P-7	P	N. Berm	14:10	0+00	1+02	102	〃	TCB	
P-8	P	N. Berm	14:20	0+00	1+07	107	〃	TCB	
P-9	P	N. Berm	14:33	0+00	1+07	107	〃	TCB	
P-10	P	N. Berm	14:50	0+00	1+07	107	435456-12	TCB	
P-11	P	N. Berm	15:00	0+00	1+07	107	〃	TCB	
P-12	P	N. Berm	15:06	0+00	1+08	108	〃	TCB	
P-13	P	N. Berm	15:09	0+00	1+08	108	〃	TCB	
P-14	P	Floor	15:10	0+77	1+05	28	〃	TCB	
P-15	P	N. Berm	15:15	0+00	1+04	104	435573-12	TCB	
					Total Length	1477	x 23 = 33,971 ft²		

Rev. 08/00

l:/work/solid/fieldforms/panelplacement

CEC

Panel Placement Information

Page 2 of 9

Date: 09/21/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-16	P	N. Berm	15:25	0+00	1+05	105	435573-12	TCB	
P-17	P	N. Berm	15:30	0+00	1+05	105	"	TCB	
P-18	P	N. Berm	15:35	0+00	1+04	104	"	TCB	
P-19	P	N. Berm	15:40	0+00	0+75	75	"	TCB	
P-20	P	N. Berm	15:50	0+00	0+51	51	435678-12	TCB	
P-21	P	N. Berm	15:55	0+00	0+32	32	435456-12	TCB	
P-22	P	E Berm	16:00	0+26	0+58	32	435678-12	TCB	
P-23	P	N. Berm	16:10	0+00	0+54	54	435676-12	TCB	
P-24	P	E Berm	16:15	0+00	0+26	26	"	TCB	
P-25	P	E Berm	16:20	0+00	0+85	85	"	TCB	
P-26	P	E Berm	16:30	0+00	1+08	108	"	TCB	
P-27	P	E Berm, Floor	17:10	0+00	4+70	470	435570-12	TCB	
					Total Length	1247	x23 = 28,681 ft2		

CEC

Panel Placement Information

Page 3 of 9

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-28	P	E Berm Floor	07:30	0+00	4+64	464	435564-12	TCB	
P-29	P	E. Berm Floor	07:55	0+00	4+65	465	435675-12	TCB	
P-30	P	E. Berm Floor	08:05	0+00	4+65	465	435565-12	TCB	
P-31	P	E Berm Floor	08:10	0+00	4+63	463	435569-12	TCB	
P-32	P	E Berm Floor	09:00	0+00	4+64	464	435568-12	TCB	
P-33	P	E. Berm Floor	09:25	0+00	4+64	464	435566-12	TCB	
P-34	P	E Berm Floor	10:00	0+00	4+64	464	435455-12	TCB	
P-35	P	E Berm Floor	10:15	0+00	4+64	464	435459-12	TCB	
P-36	P	E Berm Floor	11:05	0+00	4+63	463	435561-12	TCB	
P-37	P	E Berm Floor	12:50	0+00	4+66	466	435563-12	TCB	
P-38	P	E Berm Floor	13:15	0+00	4+66	466	435677-12	TCB	
P-39	P	E Berm Floor	14:15	0+00	4+63	463	435450-12	TCB	
P-40	P	E Berm Floor	15:20	0+00	4+63	463	435454-12	TCB	
P-41	P	E Berm Floor	15:30	0+00	4+63	463	435451-12	TCB	
P-42	P	E Berm Floor	16:15	0+00	4+63	463	435344-12	TCB	
					Total Length	6960	x 23 = 160,080 ft²		

Rev. 08/00

l:/work/solid/fieldforms/panelplacement

CEC

Panel Placement Information

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-43	P	E. Berm Floor	16:40	0+00	4+63	463	435453-12	TCB	
					Total Length	463	x23 = 10,649		

CEC

Panel Placement Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-44	P	E-Berm Floor	07:15	0+00	2+23	223	435676-12	TCB	
P-45	P	Floor	07:20	2+23	2+61	38	435453-12	TCB	
P-46	P	Floor	07:25	2+61	2+95	34	435563-12	TCB	
P-47	P	Floor	07:33	2+95	3+22	27	435569-12	TCB	
P-48	P	Floor	07:35	3+22	3+56	34	435344-12	TCB	
P-49	P	Floor	07:40	3+56	3+87	31	435451-12	TCB	
P-50	P	Floor	07:45	3+87	4+22	35	435454-12	TCB	
P-51	P	Floor	07:50	4+22	4+56	34	435450-12	TCB	
P-52	P	Floor	07:55	4+56	4+77	21	435677-12	TCB	
P-53	P	Floor	08:00	4+51	4+68	17	435561-12	TCB	
P-54	P	Floor	08:05	4+22	4+51	29	435459-12	TCB	
P-55	P	Floor	08:10	3+86	4+22	36	435455-12	TCB	
P-56	P	E Berm Floor	09:00	0+00	3+86	386	435562-12	TCB	
P-57	P	Floor	09:30	3+36	4+56	120	435562-12	TCB	
P-58	P	E-Berm Floor	13:15	0+00	3+36	336	435449-12	TCB	
					Total Length	1401	x23 = 32,223		

CEC

Panel Placement Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-59	P	E Berm Floor	13:30	0100	1464	164	435449-12	TCB	
P-60	P	Floor		1464	~~4154~~	290	435567-12	TCB	
P-61	P	Floor		2504	4454	250	435447-12	TCB	
~~P-62~~	~~P~~	~~E Berm Floor~~		~~0100~~	~~2154~~	~~204~~	~~435567-12~~	~~TCB~~	~~90~~ Removed

Total Length	908	20,884

Rev. 08/00

l:/work/solid/fieldforms/panelplacement

CEC

Panel Placement Information

Page 7 of 9

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-62	P	S.W. Corner	08:45	0+00	2+04	204	435447-12	TCB	
P-63	P	S.W. Corner	08:48	0+00	0+30	30	435447-12	TCB	
P-64	P	SW Corner	08:50	0+00	0+29	29	"	TCB	
P-65	P	SW Corner	08:53	0+00	0+28	28	"	TCB	
P-66	P	SW Corner	08:57	0+00	0+25	25'	"	TCB	
P-67	P	S. Berm West	09:05	0+00	0+58	58'	"	TCB	
P-68	P	S. Berm West	09:10	0+00	0+58	58'	435571-12	TCB	
P-69	P	S. Berm West	09:20	0+00	0+57	57'	"	TCB	
P-70	P	S Berm West	09:25	0+00	0+55	55'	"	TCB	
P-71	P	S Berm West	09:35	0+00	0+54	54'	"	TCB	
P-72	P	S Berm West	09:40	0+00	0+52	52'	"	TCB	
P-73	P	S Berm W Corner	09:42	0+00	0+50	50'	"	TCB	
P-74	P	S Berm W Corner	09:46	0+32	0+57	25	"	TCB	
P-75	P	S Berm W. Corner	09:49	0+00	0+85	85	435460-12	TCB	
P-76	P	S Berm	09:55	0+00	0+98	98	435571-12	TCB	
					Total Length	908	x 23 = 20,884 ft²		

Rev. 08/00

l:/work/solid/fieldforms/panelplacement

CEC

Panel Placement Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-77	P	S. Berm	10:00	0+00	0+98	98	435571-12	TCB	
P-78	P	S. Berm	10:05	0+00	0+98	98	435460-12	TCB	
P-79	P	S. Berm	10:10	0+00	0+98	98	435460-12	TCB	
P-80	P	S. Berm	10:15	0+00	0+98	98	435460-12	TCB	
P-81	P	SE Corner	10:20	0+00	0+27	27	435460-12	TCB	÷ 2
P-82	P	Floor	10:25	3+15	4+53	138	435460-12	TCB	
P-83	P	S. Berm	10:30	0+00	0+98	98	435445-12	TCB	
P-84	P	S. Berm	10:45	0+00	0+98	98'	435445-12	TCB	
P-85	P	Floor	10:55	2+97	3+15	18		TCB	
P-86	P	E Berm Floor	15:00	0+00	2+43	243	435445-12	TCB	
P-87	P	S Berm Sump	16:10	0+00	1+19	119	435446-12	TCB	
P-88	P	S. Berm	16:17	0+00	1+19	119	435446-12	TCB	
P-89	P	S. Berm	16:20	0+00	1+19	119	435446-12	TCB	
P-90	P	S. Berm	16:30	0+00	0+96	96	435446-12	TCB	
P-91	P	S. Berm	16:35	0+00	0+95	95	435572-12	TCB	
					Total Length	1443			

33,189

CEC

Panel Placement Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Panel Number	Layer	Location	Time	Station Beg.	Station End	Deployed Panel Length	Batch/Roll Number	Observer	Comments/Damage
P-92	P	S. Berm	16:45	0+00	0+92	92	435572-12	TCB	
P-93	P	S. Berm	16:50	0+00	0+94	94	435572-12	TCB	
P-94	P	S. Berm	17:00	0+00	0+94	94	435572-12	TCB	
P-95	P	S Berm	17:15	0+00	0+94	94	435572-12	TCB	
P-96	P	S. Berm	17:55	0+00	0+69	69	435343-12	TCB	
P-97	P	SE. Corner	18:00	0+00	0+44	44	435343-12	TCB	
P-98	P	SE Corner	18:05	0+00	0+25	25'	435343-12	TCB	÷2
P-99	P	SE Corner	18:10	0+12	0+46	34	435354-12	TCB	
P-100	P	SE Corner	18:20	0+00	0+70	70	435343-12	TCB	
P-101	P	SE Corner	18:25	0+00	0+92	92	435343-12	TCB	
P-102	P	SE Corner	18:30	0+00	1+15	115	435343-12	TCB	
P-103	P	SE Corner	18:35	0+00	0+22	22	435343-12	TCB	
					Total Length	845	x23.0 = 19,435 ft2		

Rev. 08/00

l:/work/solid/fieldforms/panelplacement

C.4 PANEL SEAMING INFORMATION

CEC

Panel Seaming Information

Page 1 of 23

Date: 09/21/2008
Daily Report No.: 33

Client: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Machine ID: 1483
Seamer ID: PV

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P1/P2	N. B	13:53	0+00	1+04	104	TCB	
P6/P-7	N Ber	14:31	0+00	1+02	102	TCB	
P-8/P-9	N. Ber	14:52	0+00	1+07	107	TCB	DS-1
P-11/P-12	N. Bem	15:14	0+00	1+06	106	TCB	
P-5/P-14	Floor	15:41	0+00	0+23	23	TCB	
P-4/P-14	Floor	15:48	0+77	1+01	24	TCB	
P-6/P-14	Floor	15:53	0+78	1+05	27	TCB	
P-18/P-19	Floor	16:19	0+00	0+75	75	TCB	
P-22/P-24	E Berm	16:53	0+00	0+23	23	TCB	
P-21/P-24	E Bern	17:10	0+00	0+17	17	TCB	
P-21/P-22	E Bern	17:15	0+17	0+23	6	TCB	
P-23/P-24	E. Berm Corner	17:22	0+31	0+55	24	TCB	
P-20/P-22	E Berm Corner	17:41	0+23	0+53	20	TCB	
P-19/P-22	E. Ben Corner	17:47	0+53	0+57	4	TCB	662

CEC

Panel Seaming Information

Client: Vista Landfill
Project: Cell-3
Project No.: 10107.08

Date: 08/21/2012
Daily Report No.: 33

Machine ID: 1483
Seamer ID: PV

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-19/P-25	N.E. Corner	17:48	0+57	0+86	19	TCB	
P-18/P-25	NE Corner	17:52	0+86	0+89	3	TCB	
P-18/P-26	NE Corn	17:53	0+89	1+22	33	TCB	55'

CEC

Panel Seaming Information

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Page 3 of 23

Date: 09/21/2012
Daily Report No.: 33

Machine ID: 1999
Seamer ID: FO

Seam ID	Seam Location	Start Time	Station		Seam Length	Observer	Comments
			Beg.	End			
P-3/P-4	N. Berm	13:55	0+00	1+03	103	TCB	
P-5/P-6	N. Berm	14:25	0+00	0+78	78	TCB	—
P9/P-10	N Berm	15:00	0+00	1+07	107	TCB	
P12/P-13	N. Berm	15:25	0+00	1+08	108	TCB	
P-15/P-16	N. Berm	15:55	0+00	1+03	103	TCB	
P-21/P-23	N. Berm	16:57	0+00	0+31	31	TCB	
P-24/P-25	E Berm	17:15	0+00	0+26	24	TCB	
P-22/P-25	E Berm	17:20	0+26	0+58	32	TCB	
P-26/P-27	E Berm	17:30	0+00	1+08	108	TCB	
P-6/P-27	Tie in	17:33	3+36	3+59	23	TCB	
P-14/P-27	Tie in	17:36	3+59	3+81	22	TCB	
P-4/P-27	Tie in	17:40	3+81	4+04	23	TCB	
P-3/P-27	Tie in	17:45	4+04	4+26	22	TCB	
P-2/P-27	Tie in	17:50	4+26	4+32	6	TCB	790

CEC

Panel Seaming Information

Date: 04/21/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: EX 5383
Seamer ID: NC

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
Existing/P-1	West Tie in	14:00	1406	0400	106	TCB	106

CEC

Panel Seaming Information

Date: 08/21/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P2 / P-3	N. Berm	13:57	0+00	1+03	103	TCB	
P-4 / P5	N. Berm	14:16	0+00	0+77	77	TCB	
P-7 / P8	N. Berm	14:37	0+00	1+02	102	TCB	
P10 / P-11	N. Berm	15:04	0+00	1+07	107	TCB	
P-13 / P-15	N. Berm	15:34	0+00	1+04	104	TCB	
P-16 / P-17	N. Berm	15:50	0+00	1+05	105	TCB	
P-17 / P-18	N. Berm	16:20	0+00	1+04	104	TCB	
P-19 / P-20	N. Berm	16:18	0+00	0+51	51	TCB	
P-20 / P-21	N. Berm	16:28	0+00	0+32	32	TCB	
P-25 / P-26	E Berm	16:55	0+00	0+85	85	TCB	
P-17 / P-27	Tie in N.	17:40	1+08	1+31	23	TCB	
P-16 / P-27	Tie in N.	17:43	1+31	1+54	23	TCB	
P-15 / P-27	Tie in N.	17:46	1+54	1+77	23	TCB	
P-13 / P-27	Tie in N.	17:49	1+77	2+00	23	TCB	962

CEC

Panel Seaming Information

Date: 09/21/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-12 / P-27	Tie-in	17:52	2+00	2+22	22	TCB	
P-11 / P-27	Tie in	17:55	2+22	2+45	23	TCB	
P-10 / P-27	Tie-in	17:58	2+45	2+68	23	TCB	
P-9 / P-27	Tie-in	18:01	2+68	2+91	23	TCB	
P-8 / P-27	Tie-in	18:04	2+91	3+14	23	TCB	
P-7 / P-27	Tie-in	18:07	3+14	3+36	22	TCB	137

CEC

Panel Seaming Information

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-28/P-29	E. Berm Floor	08:07	0+00	4+64	464	TCB	
P-31/P-32	E. Berm Floor	09:09	0+00	4+63	463	TCB	
P-34/P-35	E Berm Floor	10:26	0+00	4+64	464	TCB	
P-37/P-38	E Berm Floor	13:38	0+00	4+66	466	TCB	
P-35/P-36	Floor	11:12	2+98	4+63	165	TCB	
P-38/P-39	E Berm Floor	14:35	0+00	4+63	463	TCB	
P-40/P-41	E Berm Floor	15:47	0+00	4+63	463	TCB	
P-42/P-43	E Berm Floor	16:50	0+00	4+63	463	TCB	3411

CEC

Panel Seaming Information

Page 8 of 23

Date: 09/23/2012

Daily Report No.: 35

Client: Vista Landfill

Project: Cell 3

Project No.: 101.07.08

Machine ID: 1483

Seamer ID: PV

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-29/P-30	E Berm Floor	08:34	0+00	4+65	465	TLB	
P-32/P-33	E Berm Floor	10:00	0+00	4+64	464	TLB	
P-27/P-28	E Berm Floor	13:29	0+00	0+92	92	TLB	1021

CEC

Panel Seaming Information

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 1999
Seamer ID: FD

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-30/P-31	E Berm - Floor	08:45	0+00	4+63	463	TCB	
P-33/P-34	E. Berm Floor	10:40	0+00	4+64	464	TCB	
P-35/P-36	E. Berm Floor	11:25	0+00	2+98	298	TCB	
P-36/P-37	E. Berm Floor	13:15	0+00	4+63	463	TCB	
P-27/P-28	E. Berm Floor	14:39	0+92	4+64	372	TCB	
P-39/P-40	E Berm Floor	15:30	0+00	4+63	463	TCB	
P-41/P-42	E Berm Floor	16:50	0+00	4+63	463	TCB	2986

CEC

Panel Seaming Information

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: EX-5382
Seamer ID: NC

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-2/P-27	Tie in	08:33	4+32	4+49	17	TCB	
P-1/P-27	Tie in	08:38	4+49	4+70	21	TCB	38

CEC

Panel Seaming Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-43/P-44	E Berm Floor	09:46	0+00	2+23	223	TCB	
P-43/P-45	Floor	10:20	2+23	2+61	38	TCB	
P-43/P-46	Floor	10:38	2+61	2+95	11	TCB	
P-43/P-47	Floor	10:46	2+95	3+22	27	TCB	
P-43/P-48	Floor	11:00	3+22	3+56	34	TCB	
P-43/P-49	Floor	11:09	3+56	3+87	31	TCB	
P-43/P-50	Floor	11:18	3+87	4+22	35	TCB	
P-43/P-51	Floor	11:25	4+22	4+56	34	TCB	
P-43/P-52	Floor	11:29	4+56	4+77	21	TCB	
P-59/P-60	Floor	14:42	0+00	0+23	23	TCB	
P-59/P-62	E Berm Floor	15:21	0+00	1+64	164	TCB	
P-62/P-60	Floor	15:40	1+64	2+04	40	TCB	
P-62/P-61	Floor	15:12	0+00	0+23	23	TCB	
P-61/P-60	Floor	15:50	2+04	4+54	250	TCB	954

CEC

Panel Seaming Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: 1999
Seamer ID: FO

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-44/P-45	Floor	08:25	0+00	0+23	23	TCB	
P-45/P-46	Floor	08:30	0+00	0+23	23	TCB	
P-46/P-47	Floor	08:40	0+00	0+23	23	TCB	
P-47/P-48	Floor	08:50	0+00	0+23	23	TCB	
P-48/P-49	Floor	09:00	0+00	0+23	23	TCB	
P-49/P-50	Floor	09:15	0+00	0+23	23	TCB	
P-50/P-51	Floor	10:30	0+00	0+23	23	TCB	
P-51/P-52	Floor	10:40	0+00	0+23	23	TCB	
P-55/P-56	Floor	11:00	0+00	0+23	23	TCB	
P-56/P-44	E Berm Floor	11:20	0+00	2+23	223	TCB	
P-56/P-45	Floor	11:27	2+23	2+61	38	TCB	
P-56/P-46	Floor	11:31	2+61	2+95	34	TCB	
P-56/P-47	Floor	11:35	2+95	3+22	27	TCB	
P-56/P-48	Floor	11:38	3+22	3+56	34	TCB	
P-56/P-49	Floor	11:43	3+56	3+86	30	TCB	593

CEC

Panel Seaming Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: 1999
Seamer ID: FO

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-55/P-49	Floor	11:46	3+86	3+87	1	TCB	
P-55/P-50	Floor	11:47	3+87	4+22	35	TCB	
P-54/P-51	Floor	11:52	4+22	4+51	29	TCB	
P-53/P-51	Floor	11:55	4+51	4+56	5	TCB	
P-53/P-52	Floor	12:00	4+56	4+68	12	TCB	
P-56/P-58	E Berm Floor	13:50	0+00	3+36	336	TCB	
P-57/P-58	Floor	14:30	0+00	0+23	23	TCB	
P-56/P-57	Floor	14:32	3+36	3+76	30	TCB	
P-55/P-57	Floor	14:37	3+76	4+11	35	TCB	
P-54/P-57	Floor	14:42	4+11	4+40	29	TCB	
P-53/P-57	Floor	14:46	4+40	4+56	16	TCB	
P-58/P-59	E Berm Floor	15:02	0+00	1+64	164	TCB	
P-58/P-60	Floor	15:37	1+64	3+34	170	TCB	
P-57/P-60	Floor	16:00	3+34	4+54	120	TCB	
P-54/P-55	Floor	16:25	0+00	0+23	23	TCB	1028

CEC

Panel Seaming Information

Date: 04/24/ 2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-53/P-54	Floor	16:30	0+00	0+23	23	TCB	03

CEC

Panel Seaming Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: Ex. 503
Seamer ID: IS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
Exist/P-41	Tie-in	08:50	4+31	4+20	11	TCB	
Exist/P-40	Tie-in	08:56	4+20	3+97	23	TCB	
Exist/P-39	Tie-in	09:07	3+97	3+74	23	TCB	
Exist/P-38	Tie-in	09:11	3+74	3+52	22	TCB	
Exist/P-37	Tie-in	09:38	3+52	3+29	23	TCB	
Exist/P-36	Tie in	09:50	3+29	3+07	22	TCB	
Exist/P-35	Tie-in	10:10	3+07	2+84	23	TCB	
Exist/P-34	Tie-in	10:16	2+84	2+61	23	TCB	
Exist/P-33	Tie-in	10:25	2+61	2+39	22	TCB	
Exist/P-32	Tie-in	10:45	2+39	2+16	23	TCB	
Exist/P-31	Tie-in	10:50	2+16	1+93	23	TCB	
Exist/P-30	Tie-in	11:05	1+93	1+71	22	TCB	
Exist/P-29	Tie-in	11:15	1+71	1+48	23	TCB	
Exist/P-28	Tie-in	11:30	1+48	1+25	23	TCB	
Exist/P-27	Tie in	11:50	1+25	1+03	22	TCB	328

Panel Seaming Information

Page 16 of 23

Date: 09/25/2012

Daily Report No.: 37

Client: Vista Landfill

Project: Cell 6

Project No.: 101.07.08

Machine ID: 1999

Seamer ID: FO

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-64/P-65	S.W. Corner	08:50	0+00	0+28	28	TCB	
P-65/P-66	S.W. Corner	8:55	0+00	0+24	24	TCB	
P-64/P-67	S.W. Corner	08:58	0+24	0+58	34	TCB	
P-66/P-67	S.W. Corner	09:05	0+00	0+25	25	TCB	
P-72/P-73	W side Storm	11:00	0+00	0+50	50	TCB	
P-73/P-76	W. Corner S. Berm	11:10	0+00	0+06	6	TCB	
P-73/P-75	W. Corner S. Berm	11:11	0+06	0+32	26	TCB	
P-75/P-76	W. Corner S. B	11:20	0+00	0+85	85	TCB	
P-78/P-79	S. Berm	11:00	0+00	0+98	98	TCB	
P-80/P-83	S. Berm	14:45	0+00	0+98	98	TCB	
P-61/P-82	Floor	11:50	3+45	4+53	108	TCB	
P-87/P-88	S. Berm Sump	16:30	0+00	1+19	119	TCB	
P-88/P-89	S. Berm	16:55	0+00	1+19	119	TCB	
P-90/P-91	S. Berm	17:10	0+00	0+95	95	TCB	
P-92/P-93	S. Berm	17:30	0+00	0+94	94	TCB	1009

CEC

Panel Seaming Information

Date: 9/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 1999
Seamer ID: F-O

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-94/P-95	S. Berm	17:55	0+00	0+94	94	TCB	
P-95/P-96	S.E. Corner	18:20	0+00	0+69	69	TCB	
P-96/P-97	SE Corner	18:40	0+00	0+44	44	TCB	
P97/P98	SE Corner	18:42	0+00	0+16	16	TCB	
P-62/P86	E Berm Floor	15:30	0+00	2+04	204	TCB	
P62/P-61	Floor	15:50	0+00	0+23	23	TCB	
P-89/P61	Floor	16:06	2+43	2+51	8	TCB	
P-88/P61	Floor	16:08	2+51	2+74	23	TCB	
P-87/P61	Floor	16:20	2+74	2+97	23	TCB	
P-85/P-61	Floor	16:29	2+97	3+45	48	TCB	
P-86/P-61	Floor	16:44	2+04	2+43	39	TCB	591

CEC

Panel Seaming Information

Page 18 of 23

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-67/P-68	W. Side, S. Bern	08:55	0+00	0+58	58	TCB	
P-68/P-69	W. Side S. Bern	09:09	0+00	0+57	57	TCB	
P-69/P-70	W. Side S. Bern	09:25	0+00	0+55	55	TCB	
P-70/P-71	W. Side S. Bern	09:25	0+00	0+54	54	TCB	
P-71/P-72	W. Side S. Bern	09:33	0+00	0+52	52	TCB	
P-74/P-75	W. Corner S. Bern	11:00	0+32	0+43	11	TCB	
P-73/P-74	W. Corner S. Bern	11:15	0+00	0+22	22	TCB	
P-74/P-81	W. Corner S. Bern	11:20	0+43	0+57	14	TCB	
P-76/P-77	S. Bern	10:40	0+00	0+85	98	TCB	
P-77/P-78	S. Bern	10:56	0+00	0+98	98	TCB	
P-79/P-80	S. Bern	11:17	0+00	0+98	98	TCB	
P-83/P-84	S. Berm	14:44	0+00	0+88	88	TCB	
P-82/P-76	Floor	13:20	0+00	0+23	23	TCB	
P-82/P-77	Floor	13:24	0+23	0+46	23	TCB	
P-82/P-78	Floor	13:28	0+46	0+69	23	TCB	784

Panel Seaming Information

Page 19 of 23

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station		Seam Length	Observer	Comments
			Beg.	End			
P-82/P-79	Floor	13:32	0+69	0+92	23	TCB	
P-82/P-80	Floor	13:36	0+92	1+11	19	TCB	
P-85/P-80	Floor	15:35	1+11	1+15	4	TCB	
P-85/P-83	Floor	16:30	1+15	1+38	23	TCB	
85/84	Floor	16:34	1+38	1+60	22	TCB	
P-82/P85	Floor	15:35	0+00	0+23	23	TCB	
P-85/P87	Floor	16:46	0+00	0+23	23	TCB	
P-84/P-87	S. Berm Sump	13:30	0+00	0+96	96	TCB	
P-89/P-90	S. Berm	18:25	0+00	0+96	96	TCB	
P-91/P92	S. Berm	17:12	0+00	0+95	95	TCB	
P-93/P-94	S. Berm	17:44	0+00	0+94	94	TCB	
P-86/P-89	Floor	17:30	0+00	0+26	26	TCB	
P-86/P-90	Floor	18:02	2+29	2+07	22	TCB	
P-86/P-91	Floor	18:05	2+07	1+84	23	TCB	
P-86/P92	Floor	18:09	1+84	1+61	23	TCB	589

CEC

Panel Seaming Information

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Date: 09/25/2012
Daily Report No.: 37

Machine ID: 1998
Seamer ID: MS

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
P-86/P93	Floor	18:13	1+61	1+38	23	TCB	
P-86/P94	Floor	18:18	1+38	1+15	23	TCB	
P-86/P-102	E berm Floor	18:35	0+00	1+15	115	TCB	
P-75/P-81	S.W. Corner	16:00	0+00	0+27	27	TCB	
P101/P-102	SE Corner	16:20	0+00	0+92	92	TCB	280
P-97/P-100	SE Corner	18:25	0+25	0+57	32	TCB	
P-96/P101	SE Corner	18:29	0+57	0+89	22	TCB	
P-95/P-102	SE Corn	18:35	0+89	1+21	32	TCB	

CEC

Panel Seaming Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 6
Project No.: 101.07.08

Machine ID: Ex 5382
Seamer ID: NC

Seam ID	Seam Location	Start Time	Station		Seam Length	Observer	Comments
			Beg.	End			
P-63/P-64	S.W. Corner	08:37	0+00	0+29	29	TCB	

CEC

Panel Seaming Information

Date: 09/26/2012
Daily Report No.: 38

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 5382
Seamer ID: NC

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
Exist/P-41	W. Tie in	08:53	4+31	4+44	13	TCB	
Exist/P-42	W. Tie in	08:57	4+44	4+66	22	TCB	
Exist/P-43	W. Tie in	09:06	4+66	4+88	22	TCB	
Exist/P-52	W. Tie in	09:13	4+88	5+10	22	TCB	
Exist/P-53	W. Tie in	09:21	5+10	5+33	23	TCB	
Exist/P-57	W. Tie in	09:28	5+33	5+56	23	TCB	
Exist/P-60	W. Tie in	09:36	5+56	5+79	23	TCB	
Exist/P-61	W. Tie in	09:44	5+79	6+02	23	TCB	
Exist/P-82	W. Tie in	09:56	6+02	6+25	23	TCB	
Exist/P-75	W. Tie in	10:18	6+25	6+52	27	TCB	
Exist/P-81	W. Tie in	10:29	6+52	6+75	23	TCB	
Exist/P-74	W. Tie in	10:49	6+75	6+98	23	TCB	
Exist/P-73	W. Tie in	11:01	6+98	7+21	23	TCB	
Exist/P-72	W. Tie in	11:17	7+21	7+44	23	TCB	
Exist/P-71	W. Tie in	11:26	7+44	7+67	23	TCB	

CEC

Panel Seaming Information

Date: 9/26/2012
Daily Report No.: 38

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Machine ID: 5382
Seamer ID: NC

Seam ID	Seam Location	Start Time	Station Beg.	Station End	Seam Length	Observer	Comments
Exist/P-70	W. Tie-in	11:33	7+67	7+90	23	TCB	
Exist/P-69	W Tie in	11:41	7+90	8+13	23	TCB	
Exist/P-68	W. Tie in	11:46	8+13	8+36	23	TCB	
Exist/P-67	W-Tie in	11:58	8+36	8+39	3	TCB	
Exist/P-64	W Tie in	15:04	8+39	8+44	5	TCB	
Exist/P-63	W. Tie in	15:16	8+44	8+74	30	TCB	
P-100/P-101	West Corner	15:36	0+00	0+70	70	TCB	
P-99/P-103	West Corner	16:04	0+00	0+22	22	TCB	
P-103/P-100	West Corner	16:18	0+00	0+12	12	TCB	
P-99/P-100	West Corner	16:22	0+12	0+46	34	TCB	
P-98/P-99	West Corner	16:47	0+00	0+25	25	TCB	

C.5 NONDESTRUCTIVE TEST LOGS

CEC

Nondestructive Seam Testing Information

Page 1 of 19

Date: 09/21/2016
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P1/P2	N. Berm	BOS	0+58	VP	14:15	14:20	30	30	P	–	TCB	
P1/P2	N. Berm	0+58	EOS	VP	14:15	14:20	30	30	P	–	TCB	
P2/P3	N. Berm	EOS	BOS	VP	14:17	14:22	30	30	P	–	TCB	
P3/P4	N. Berm	EOS	BOS	VP	14:27	14:32	30	30	P	–	TCB	
P4/P5	N. Berm	EOS	BOS	VP	14:42	14:47	30	29	P	–	TCB	
P5/P14	Floor	BOS	EOS	VP	15:55	16:00	30	29	P	–	TCB	
P4/P14	Floor	BOS	EOS	VP	16:01	16:06	30	28	P	–	TCB	
P5/P6	N. Berm	EOS	0+60	VP	14:45	14:49	30	30	P	–	TCB	
P5/P6	N. Berm	0+60	BOS	VP	14:45	14:49	30	30	P	–	TCB	
P6/P7	N. Berm	EOS	BOS	VP	15:00	15:05	30	30	P	–	TCB	
P7/P8	N. Berm	EOS	BOS	VP	15:12	15:17	30	30	P	–	TCB	
P8/P9	N. Berm	EOS	0+70	VP	15:00	15:05	30	28	P	–	TCB	
P8/P9	N. Berm	0+70	BOS	VP	15:13	15:18	30	30	P	–	TCB	
P9/P10	N. Berm	EOS	BOS	VP	15:25	15:30	30	28	P	–	TCB	
P10/P11	N. Berm	EOS	BOS	VP	15:28	15:32	30	29	P	–	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/21/2012

Daily Report No.: 33

Client: Vista Landfill

Project: Cell 3

Project No.: 601-07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P-11/P-12	N. Berm	EOS	BOS	VP	15:40	15:45	30	28	P	—	TCB	
P-12/P-13	N. Berm	EOS	BOS	VP	16:15	16:20	30	28	P	—	TCB	
P-13/P-15	N. Berm	EOS	BOS	VP	16:16	16:21	30	29	P	—	TCB	
P-15/P-16	N. Berm	EOS	BOS	VP	16:17	16:22	30	28	P	—	TCB	
P-16/P-17	N. Berm	EOS	BOS	VP	16:18	16:23	30	28	P	—	TCB	
P-17/P-18	N. Berm	EOS	BOS	VP	16:33	16:38	30	28	P	—	TCB	
P-18/P-19	N. Berm	BOS	EOS	VP	16:40	16:45	30	28	P	—	TCB	
P-19/P-20	N. Berm	BOS	EOS	VP	16:45	16:46	30	28	P	—	TCB	
P-20/P-21	N. Berm	BOS	EOS	VP	16:50	16:55	30	28	P	—	TCB	
P-21/P-23	N. Berm	EOS	BOS	VP	17:07	17:12	30	28	P	—	TCB	
P-23/P-24	E Berm	BOS	EOS	VP	17:23	17:28	30	28	P	—	TCB	
P-21/P-24	N. E Corner	BOS	EOS	VP	17:15	17:20	30	28	P	—	TCB	
P-21/P-22	N.E. Corner	BOS	EOS	VP	17:15	17:20	30	28	P	—	TCB	
P-22/P-24	E Berm	BOS	EOS	VP	16:55	17:00	30	28	P	—	TCB	
P-24/P-25	E. Berm	BOS	0+20	VP	17:30	17:35	30	28	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/29/2012
Daily Report No.: 33

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P24/P25	E Berm	0720	EOS	VP	17:30	17:35	30	28	P	—	TLB	
P22/P25	E Berm	BOS	EOS	VP	17:30	17:35	30	28	P	—	TLB	
P7/P27	Floor	BOS	EOS	MS	—	—	—	—	—	P	TLB	- Repair R-24
P6/P14	N-Berm	BOS	EOS	VP	16:07	16:12	30	29	P	—	TLB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/22/2012 Client: Vista Landfill Page 4 of 19

Daily Report No.: 34 Project: Cell 3

Project No.: 101.07.08

Seam ID	Seam Location	Location Station Beg.	Location Station End	Test Crew	Air Testing Time Beg.	Air Testing Time End	Air Testing Pressure Beg.	Air Testing Pressure End	Air Testing P/F	Vacuum Test P/F	Observer	Comments
P-6/P-27	Tie-in	BOS	EOS	VP	07:33	07:38	30	29	P	—	TCB	
P-14/P-27	Tie in	BOS	EOS	VP	07:31	07:36	30	30	P	—	TCB	
P-4/P-27	Tie in	BOS	EOS	VP	07:30	07:35	30	29	P	—	TCB	
P-3/P-27	Tie in	BOS	EOS	VP	07:29	07:34	30	30	P	—	TCB	
P-2/P-27	Tie-in	BOS	4432	MS	—	—	—	—	—	P	TCB	Repair R-33
P-2/P-27	Tie-in	4432	EOS	MS	—	—	—	—	—	P	TCB	Extruded seam
P1/P-27	Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	Extruded Seam

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/23/2012

Daily Report No.: 35

Client: Vista Landfill

Project: Cell-3

Project No.: 10,107,08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P-11/P-27	Tie in	BOS	EOS	VP	08:00	08:05	30	28	P	—	TCB	
P-13/P-27	Tie in	BOS	EOS	VP	08:00	08:05	30	29	P	—	TCB	
P-9/P-27	Tie in	BOS	EOS	VP	07:50	07:55	30	28	P	—	TCB	
P-8/P-27	Tie in	BOS	EOS	VP	07:50	07:55	30	28	P	—	TCB	
P-7/P-27	Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-24
P-27/P-28	E Berm	BOS	0+92	VP	15:46	15:51	30	28	P	—	TCB	
P-27/P-28	Floor	0+92	EOS	VP	15:46	15:51	30	28	P	—	TCB	
P-28/P-29	Floor E Berm	EOS	BOS	VP	09:15	09:20	30	28	P	—	TCB	
P-29/P-30	Floor E. Berm	EOS	BOS	VP	09:35	09:40	30	28	P	—	TCB	
P-30/P-31	Floor E. Berm	EOS	BOS	VP	11:10	11:15	30	29	P	—	TCB	
P-31/P-32	Floor E. Berm	EOS	BOS	VP	11:12	11:17	30	28	P	—	TCB	
P-32/P-33	Floor	EOS	4+15	VP	11:25	11:30	30	28	P	—	TCB	1 test
P-32/P-33	Floor	4+15	3+38	VP	11:25	11:30	30	28	P	—	TCB	"
P-32/P-33	Floor	3+38	BOS	VP	11:25	11:30	30	28	P	—	TCB	"
P-33/P-34	Floor E. Berm	EOS	BOS	VP	11:37	11:42	30	28	P		TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 9/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell - 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station Beg.	Location Station End	Test Crew	Air Testing Time Beg.	Air Testing Time End	Air Testing Pressure Beg.	Air Testing Pressure End	Air Testing P/F	Vacuum Test P/F	Observer	Comments
P-25/P-26	E Berm	BOS	EOS	VP	08:43	08:48	30	28	P	—	TCB	
P-26/P-27	E Berm	BOS	0+22	VP	08:44	08:49	30	28	P	—	TCB	
P-26/P-27	E Berm	0+22	0+60	VP	08:45	08:50	30	28	P	—	TCB	
P-20/P-22	NE Corner	BOS 0+23	0+28	MS	—	—	—	—	—	P	TCB	Repair R-121
P-20/P-22	NE Corner	0+28	EOS	VP	08:37	08:42	30	28	P	—	TCB	
P-19/P-22	NE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-122
P-19/P-25	NE Corner	BOS	EOS	VP	08:37	08:42	30	28	P	—	TCB	
P-18/P-25	NE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-126
P-18/P-26	NE Corner	BOS	EOS	VP	08:35	08:40	30	28	P	—	TCB	
P-26/P-27	E Berm	0+60	EOS	VP	08:50	08:55	30	29	P	—	TCB	
P-17/P-27	Tie-in	BOS	EOS	VP	08:25	08:30	30	28	P	—	TCB	
P-16/P-27	Tie in	BOS	EOS	VP	08:30	08:35	30	28	P	—	TCB	
P-15/P-27	Tie in	BOS	EOS	VP	08:15	08:20	30	28	P	—	TCB	
P-13/P-27	Tie-in	BOS	EOS	VP	08:10	08:15	30	29	P	—	TCB	
P-12/P-27	Tie-in	BOS	EOS	VP	08:10	08:15	30	28	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/23/2012
Daily Report No.: 35

Client: Vista Landfill
Project: Cell 3
Project No.: 131.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P-34/P-35	Floor E. Bem	EOS	BOS	VP	11:38	11:43	30	28	P	–	TCB	
P-35/P-36	Floor	EOS	2+98	VP	12:56	13:01	30	28	P	–	TCB	
P-35/P-36	Floor E. Bem	2+98	BOS	VP	12:56	13:01	30	28	P	–	TCB	
P-36/P-37	Floor E. Bem	EOS	BOS	VP	14:25	14:30	30	28	P	–	TCB	
P-37/P-38	Floor E Bem	EOS	BOS	VP	15:26	15:37	30	28	P	–	TCB	
P-38/P-39	Floor E Bem	EOS	BOS	VP	16:30	16:35	30	29	P	–	TCB	
P-39/P-40	Floor E Bem	EOS	BOS	VP	16:45	16:50	30	29	P	–	TCB	
P-40/P-41	Floor E Bem	EOS	BOS	VP	16:47	16:52	30	28	P	–	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 9/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P41/P42	Floor	EOS	BOS	VP	07:30	07:33	30	28	P	—	TCB	
P42/P43	Floor	EOS	BOS	VP	07:32	07:37	30	29	P	—	TCB	
P60/P61	Floor	EOS	BOS	VP	16:18	16:23	30	29	P	—	TCB	
P61/P62	Floor	BOS	EOS	VP	15:33	15:38	30	29	P	—	TCB	
P-60/P62	Floor	EOS	BOS	VP	16:18	16:23	30	29	P	—	TCB	
P-59/P62	Floor	EOS	BOS	VP	16:18	16:23	30	29	P	—	TCB	
P62/P86	E Ber Floor	EOS	BOS	VP	16:10	16:15	30	29	P	—	TCB	
P-61/P86	Floor	BOS	EOS	VP	16:08	16:13	30	30	P	—	TCB	
P61/P89	Floor	BOS	EOS	VP	17:38	17:43	30	29	P	—	TCB	
P-61/P88	Floor	BOS	EOS	VP	17:40	17:45	30	30	P	—	TCB	
P-61/P87	Floor	BOS	EOS	VP	17:43	17:47	30	28	P	—	TCB	
P-85/P87	Floor	BOS	EOS	VP	16:50	16:55	30	29	P	—	TCB	
P-61/P85	Floor	BOS	3+00	VP	15:28	15:33	30	30	P	—	TCB	
P-61/P85	Floor	3+00	EOS	VP	15:28	15:33	30	28	P	—	TCB	
P-82/P85	Floor	BOS	EOS	VP	15:38	15:43	30	28	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P-44/P-45	Floor	BOS	EOS	VP	08:20	08:25	30	28	P	—	TCB	
P-45/P-46	Floor	BOS	EOS	VP	09:00	09:05	30	28	P	—	TCB	
P-46/P-47	Floor	BOS	EOS	VP	09:03	09:08	30	28	P	—	TCB	
P-47/P-48	Floor	BOS	EOS	VP	09:07	09:12	30	29	P	—	TCB	
P-48/P-49	Floor	BOS	EOS	VP	09:10	09:15	30	28	P	—	TCB	
P-43/P-44	Floor	BOS	EOS	VP	14:23	14:28	30	29	P	—	TCB	
P-43/P-45	Floor	BOS	EOS	VP	14:23	14:28	30	29	P	—	TCB	
P-43/P-46	Floor	BOS	EOS	VP	14:23	14:28	30	29	P	—	TCB	
P-43/P-47	Floor	BOS	EOS	VP	14:20	14:25	30	29	P	—	TCB	
P-43/P-48	Floor	BOS	EOS	VP	14:13	14:18	30	30	P	—	TCB	
P-43/P-49	Floor	BOS	EOS	VP	13:58	14:03	30	28	P	—	TCB	
P-43/P-50	Floor	BOS	EOS	VP	11:48	11:53	30	30	P	—	TCB	
P-43/P-51	Floor	BOS	EOS	VP	11:37	11:42	30	29	P	—	TCB	
P-43/P-52	Floor	BOS	EOS	VP	11:06	11:11	30	29	P	—	TCB	
P-52/P-53	Floor	BOS	EOS	VP	13:34	13:39	30	29	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/24/2012
Daily Report No.: 36

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P53/P54	Floor	BOS	EOS	VP	13:35	13:40	30	30	P	—	TCB	
P-51/P54	Floor	BOS	EOS	VP	13:35	13:40	30	28	P	—	TCB	
P-51/P-53	Floor	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-81
P-54/P-55	Floor	BOS	EOS	VP	13:45	13:50	30	30	P	—	TCB	
P-51/P55	Floor	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-82
P-50/P-55	Floor	BOS	EOS	VP	13:46	13:51	30	30	P	—	TCB	
P-49/P55	Floor	BOS	EOS	MS	—	—	—	—	—	P	TCB	Repair R-83
P55/P-56	Floor	BOS	EOS	VP	13:44	13:49	30	29	P	-	TCB	
P-49/P56	Floor	BOS	EOS	VP	13:54	13:59	30	28	P	—	TCB	
P-48/P56	Floor	BOS	EOS	VP	14:25	14:30	30	29	P	—	TCB	
P-47/P56	Floor	BOS	EOS	VP	14:35	14:40	30	29	P	—	TCB	
P-46/P-56	Floor	BOS	EOS	VP	14:35	14:40	30	30	P	—	TCB	
P-45/P-56	Floor	BOS	EOS	VP	14:36	14:41	30	29	P	—	TCB	
P-44/P-56	Floor	BOS	EOS	VP	14:45	14:50	30	30	P	—	TCB	
P-56/P-57	Floor	BOS	EOS	VP	14:55	15:00	30	30	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/24/2012

Daily Report No.: 36

Client: Vista Landfill

Project: Cell 3

Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P-57/P-58	Floor	BOS	EOS	VP	15:03	15:08	30	29	P	—	TCB	
P-56/P-57	Floor	BOS	EOS	VP	15:00	15:05	30	30	P	—	TCB	
P-55/P-57	Floor	BOS	EOS	VP	15:01	15:06	30	30	P	—	TCB	
P-54/P-57	Floor	BOS	EOS	VP	15:01	15:06	30	30	P	—	TCB	
P-53/P-57	Floor	BOS	EOS	VP	15:01	15:06	30	30	P	—	TCB	
P-57/P-60	Floor	BOS	EOS	VP	16:16	16:21	30	30	P	—	TCB	
P-58/P-60	Floor	BOS	EOS	VP	16:25	16:30	30	29	P	—	TCB	
P-58/P-59	Floor	BOS	EOS	VP	16:25	16:30	30	29	P	—	TCB	
P-59/P-60	Floor	BOS	EOS	VP	15:40	15:45	30	28	P	—	TCB	
P-49/P-50	Floor	BOS	EOS	VP	11:10	11:15	30	29	P	—	TCB	
P-50/P-51	Floor	BOS	EOS	VP	11:12	11:17	30	29	P	—	TCB	
P-51/P-52	Floor	BOS	EOS	VP	11:16	11:21	30	30	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101. 07. 08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P-64/P65	SW. Corner	BOS	EOS	VP	08:53	08:58	30	29	P	—	TLB	
P65/P66	SW. Corner	BOS	EOS	VP	09:25	09:30	30	29	P	—	TLB	
P66/P67	SW. Corner	BOS	EOS	VP	09:20	09:25	30	28	P	—	TLB	
P14/P67	SW. Corner	BOS	EOS	VP	09:30	09:35	30	28	P	—	TLB	
P67/P68	SW side	BOS	EOS	VP	09:35	09:40	30	30	P	—	TLB	
P68/P69	SW. Side	BOS	EOS	VP	09:36	09:41	30	28	P	—	TLB	
P-69/P-70	SW side	BOS	EOS	VP	09:55	10:00	30	29	P	—	TLB	
P-70/P-71	SW. Side	BOS	EOS	VP	09:58	10:03	30	30	P	—	TLB	
P-71/P-72	SW Side	BOS	EOS	VP	10:00	10:05	30	28	P	—	TLB	
P-72/P-73	SW Side	BOS	EOS	VP	10:10	10:15	30	29	P	—	TLB	
P-73/P-75	SW Side	BOS	EOS	VP	13:03	13:08	30	30	P	—	TLB	
P-73/P-74	SW. Side	BOS	EOS	VP	10:11	10:16	30	30	P	—	TLB	
P-74/P-75	SW. Side	BOS	EOS	VP	13:03	13:08	30	28	P	—	TLB	
P-74/P-81	SW Side	BOS	EOS	VP	13:00	13:05	30	29	P	—	TLB	
P-75/P-81	SW. Side	BOS	EOS	VP	11:42	11:47	30	30	P	—	TLB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Page 13 of 19

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P75/P76	S Berm	BOS	EOS	VP	11:35	11:40	30	29	P	—	TCB	
P-76/P77	S Berm	BOS	EOS	VP	10:55	11:00	30	29	P	—	TCB	
P-77/P78	S Berm	BOS	EOS	VP	11:12	11:17	30	28	P	—	TCB	
P-78/P-79	S Berm	BOS	EOS	VP	11:15	11:20	30	29	P	—	TCB	
P-79/P80	S Berm	BOS	EOS	VP	11:30	11:35	30	29	P	—	TCB	
P80/P83	S. Berm	BOS	EOS	V. P	15:12	15:18	30	30	P	—	TCB	
P-83/P84	S Berm	BOS	0+82	VP	15:25	15:30	30	29	P	—	TCB	
P-83/P84	S Berm	0+82	0+92	VP	15:15	15:20	30	28	P	—	TCB	
P83/P-84	S. Berm	0+92	EOS	VP	15:17	15:22	30	30	P	—	TCB	
P-84/P87	S Berm sump	BOS	0+82	VP	16:30	16:35	30	29	P	—	TCB	
P-84/P87	S Berm Sump	0+82	EOS	VP	16:33	16:38	30	28	P	—	TCB	
P-86/P-89	Floor	BOS	EOS	VP	18:13	18:18	30	29	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P81/P82	Floor	EOS	BOS	VP	13:15	13:20	30	29	P	–	TCB	
P87/P88	S. Bem	EOS	BOS	VP	16:55	17:00	30	29	P	–	TCB	
P88/P89	S Bem	EOS	BOS	VP	17:00	17:15	30	29	P	–	TCB	
P89/P90	S. Bem	EOS	BOS	VP	17:11	17:16	30	29	P	–	TCB	
P86/P90	Floor	BOS	EOS	VP	18:12	18:17	30	28	P	–	TCB	
P90/P91	S Bem	BOS	EOS	VP	17:46	17:51	30	29	P	–	TCB	
P86/P91	Floor	BOS	EOS	VP	18:12	18:17	30	30	P	–	TCB	
P91/P92	S Bem	BOS	EOS	VP	17:50	17:55	30	29	P	–	TCB	
P86/P92	Floor	BOS	EOS	VP	18:15	18:20	30	29	P	–	TCB	
P92/P93	S Bem	BOS	EOS	VP	17:55	18:00	30	30	P	–	TCB	
P86/P93	Floor	BOS	EOS	VP	18:20	18:25	30	28	P	–	TCB	
P93/P94	S. Bem	BOS	EOS	VP	17:59	18:06	30	29	P	–	TCB	
P86/P94	Floor	BOS	EOS	VP	18:25	18:30	30	28	P	–	TCB	
P86/P102	E Bem	BOS	EOS	VP	~~18~~:58	19:004	30	29	P	–	TCB	
P95/P102	SE Corner	BOS	EOS	VP	19:00	19:05	30	29	P	–	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Page 15 of 19

Date: 09/25/2012
Daily Report No.: 37

Client: Vista Landfill
Project: Cell 3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
		Beg.	End		Time Beg.	Time End	Pressure Beg.	Pressure End	P/F			
P94/P95	S Berm	BOS	EOS	VP	18:03	18:08	30	28	P	–	TCB	
P95/P96	SE Corner	BOS	EOS	VP	18:35	18:40	30	29	P	–	TCB	
P96/P105	SE Corner	BOS	EOS	VP	19:50	19:55	30	29	P	–	TCB	
P96/P97	SE Corner	BOS	EOS	VP	18:55	19:00	30	28	P	–	TCB	
P97/P100	SE Corner	BOS	EOS	VP	19:55	20:00	30	28	P	–	TCB	
P100/P101	SE Corner	0+33	EOS	VP	20:00	20:05	30	28	P	–	TCB	
P97/P98	SE Corner	BOS	EOS	VP	19:57	20:02	30	29	P	–	TCB	
P76/P82	Floor	BOS	EOS	VP	17:15	17:20	30	28	P	–	TCB	
P77/P82	Floor	BOS	EOS	VP	17:16	17:21	30	29	P	–	TCB	
P78/P82	Floor	BOS	EOS	VP	17:20	17:25	30	28	P	–	TCB	
P79/P82	Floor	BOS	EOS	VP	17:22	17:27	30	28	P	–	TCB	
P80/P82	Floor	BOS	EOS	VP	17:29	17:34	30	28	P	–	TCB	
P80/P85	Floor	BOS	EOS	MS	–	–	–	–	–	P	TCB	Repair R-112
P83/P85	Floor	BOS	EOS	VP	17:36	17:41	30	28	P	–	TCB	
P84/P85	Floor	BOS	EOS	VP	17:38	17:43	30	29	P		TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 09/26/2012 Client: Vista Landfill Page 16 of 19

Daily Report No.: 38 Project: Cell 3

Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
P98/P99	SE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	Extruded Seam
P99/P103	SE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	" "
P-100/P103	SE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	" "
P99/P100	SE Corner	BOS	EOS	MS	—	—	—	—	—	P	TCB	" "
2 P-100/P101	SE Corner	BOS	0+33	MS	—	—	—	—	—	P	TCB	" "
P101/P102	SE Corner	BOS	EOS	VP	0808	0813	30	30	P	—	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 9/27/2012

Daily Report No.: ________

Client: Vista Landfill

Project: Cell-3

Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
Exist/P38	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P39	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P40	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P41	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P42	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-43	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P52	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P53	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P57	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P60	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P61	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P82	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P75	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P81	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P74	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 9/26/2012
Daily Report No.:

Client: Vista Landfill
Project: Cell-3
Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
Exist/P-1	W-Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P27	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-28	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P29	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P30	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-31	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-32	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-33	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P34	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P35	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P-36	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	
Exist/P37	W. Tie in	BOS	EOS	MS	—	—	—	—	—	P	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

CEC

Nondestructive Seam Testing Information

Date: 9/21/2011 Client: Vista Landfill

Daily Report No.: Project: Cell-3

Project No.: 101.07.08

Seam ID	Seam Location	Location Station		Test Crew	Air Testing					Vacuum Test P/F	Observer	Comments
					Time		Pressure					
		Beg.	End		Beg.	End	Beg.	End	P/F			
Exist/P-73	W. Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P-72	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P-71	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P70	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P69	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P68	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P-67	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P-64	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
Exist/P-63	W- Tie in	BOS	EOS	MS	–	–	–	–	–	P	TCB	
P-63/P64	West corner	BOS	EOS	MS	–	–	–	–	–	P	TCB	

KEY: B.O.S. = Beginning of Seam E.O.S. = End of Seam

C.6 DESTRUCTIVE TEST DATA

Destructive Seam Sample Log

Client: Vista Landfill   Project: Coll-3   Page ____ of ____   Project No.: 101.07.08

Sample Number	Date Sampled	Seam ID	Location	Seamer ID	Machine ID	Field Test Peel (PPI)			Shear (PPI)	Lab Test P/F	Sample Reason/Comments
DS-1	09/21	P8/P-9	0+25	PV	1483	119/116	133/115 100/97	120/123 111/107	143, 151, 137 146, 154	P	
DS-2	09/21	P-4/P-5	0+50	MC	1998	121/127 98/102	116/96 121/106	114/98	154/137/141 132, 145	P	Tie-in ST
DS-3	09/21	P-16/P17	0+45	MC	1998	126/125 110/113	124/133 120/119	96/108	137, 148, 141 136, 132	P	
DS-4	09/21	P-12/P-13	0+70	FO	1999	109/115 109/107	113/125 103/111	113/115	154, 156, 144 151, 146	P	
DS-5	09/21	P-18/P-21	0+93	PV	1483	129, 127 107, 124	125, 112 118, 121	117/111	151, 156, 147 139, 140	P	
DS-6	09/21	P-26/P-27	0+19	FO	1999	144, 114 113, 119	125 118	118/127	151, 156, 147 139, 140	P	
DS-7	09/21	P-12/P-27	215'	MC	1998	132/112 130/116	131/126 107/104	116/114	145, 148, 137 142, 156	P	
DS-8	09/21	Existing/P-1	0+55	NC	EX 5382	134 106	113 118	124	127, 131, 142 129, 135	P	Extrusion

Destructive Seam Sample Log

Client: Vista Landfill Project: Cell-3 Page ____ of ____ Project No.: 101.07.08

Sample Number	Date Sampled	Seam ID	Location	Seamer ID	Machine ID	Field Test Peel (PPI)			Shear (PPI)	Lab Test P/F	Sample Reason/Comments
DS-9	9/23	P-28/P-29	3+45	MS	1998	146/129 101/111	122/118 109/117	100/105	146, 139, 152 147, 136	P	
DS-10	9/23	P-29/P-30	4+25	PV	1483	109/122 114/106	132/115 109/105	97/113	139, 141, 144 137, 151	P	
DS-11	9/23	P-30/P-31	0+60	FO	1999	130/109 96/131	128/126 102/120	115/126	154, 138, 142 127, 131	P	
DS-12	9/23	P-31/P-32	3+20	MS	1998	136/120 120/106	118/124 119/107	131/126	140, 125, 141 133, 139	P	
DS-13	9/23	P-32/P-33	2+40	PV	1483	128/111 126/109	121/113 112/107	109/112	146, 139, 131 136, 142	P	
DS-14	9/23	P-33/P-34	4+35	FO	1999	129/114 121/109	118/105 106/100	105/114	131, 137, 125 136, 133	P	
DS-15	9/23	P-34/P-35	1+05	MS	1998	114/121 117/107	106/118 121/126	114/111	136, 142, 148 139, 128	P	
DS-16	9/23	P-35/P-36	2+80	FO	1999	118/119 124/120	116/124 112/116	117/108	141, 147, 134 136, 140	P	
DS-17	9/23	P-35/P-36	4+50	MS	1998	114/107 115/117	112/119 121/107	100/112	137, 134, 141 139, 145	P	
DS-18	9/23	P-36/P-37	3+90	FO	1999	120/137 121/125	116/112 114/117	127/120	147, 142, 131 124, 135	P	
DS-19	9/23	P-37/P-38	3+30	MS	1998	124/110 132/109	113/118 121/104	116/129	137, 148, 136 143, 140	P	
DS-20	9/23	P-27/P-28	3+50	FO	1999	121/113 105/115	118/121 124/114	112/107	146, 151, 137 146, 141	P	
DS-21	9/23	P-38/P-39	205	MS	1998	117/111 119/119	104/112 106/117	118/121	146, 157, 138 143, 146	P	
DS-22	9/23	P-39/P-40	1+10	FO	1999	116/121 112/107	101/110 112/119	123/116	131, 136, 142 137, 143	P	
DS-23	9/23	P-40/P-41	0+45	MS	1998	96/103 118/116	119/124 110/112	111/107	143, 146, 131 137, 144	P	

CEC

Destructive Seam Sample Log

Client: Vista Landfill Project: Cell 3 Page ____ of ____
Project No.: 101.07.08

Sample Number	Date Sampled	Seam ID	Location	Seamer ID	Machine ID	Field Test Peel (PPI)			Shear (PPI)	Lab Test P/F	Sample Reason/Comments
DS-24	9/23	P-41/P-42	1+95'	FO	1999	101/122 106/105	115/103 118/121	116/112	136, 133, 127 129/134	P	
DS-25	9/23	P-42/P-43	2+95	MS	1998	101/115 116/109	121/108 102/113	111/124	142, 138, 132 144, 146	P	

CEC

Destructive Seam Sample Log

Client: Vista Landfill Project: Cell 3 Page ____ of ____ Project No.: 101.07.08

Sample Number	Date Sampled	Seam ID	Location	Seamer ID	Machine ID	Field Test Peel (PPI)			Shear (PPI)	Lab Test P/F	Sample Reason/Comments
DS-26	9/24	P-31/R-61	2+10'	JS	EX 503	126 102	111 121	131	132, 126, 137 137, 128	P	
DS-27	9/24	P-43/P-44	0+80	MS	1998	128/133 126/131	118/121 126/119	113/132	145, 138, 129 133, 141	P	
DS-28	9/24	P-45/P-56	3+75	FO	1999	126/123 118/135	113/116 127/119	121/129	137, 131, 142 144, 135	P	
DS-29	9/24	P-54/P-37	4+15	FO	1999	135/128 118/122	112/126 111/117	127/121	154, 148, 141 146, 152	P	
DS-30	9/24	P-58/P-59	1+55	FO	1999	130/118 122/127	114/107 128/114	121/113	148, 141, 134 139, 145	P	
DS-31	9/24	P-61/P-62	0+10	MS	1998	146/126 130/120	118/127 126/134	116/121	134, 143, 136 145, 136	P	
DS-32	9/24	P-60/P-61	4+40	MS	1998	138/142 133/119	117/123 131/136	115/127	156, 149, 146 137, 143	P	

Destructive Seam Sample Log

Client: Vista Landfill Project: Cell-3 Page ____ of ____

Project No.: 10.07.08

Sample Number	Date Sampled	Seam ID	Location	Seamer ID	Machine ID	Field Test Peel (PPI)			Shear (PPI)	Lab Test P/F	Sample Reason/Comments
DS-33	09/25	P-75/P-76	0+30	FO	1999	112/127 136/119	127 110	109/106 113/127	151, 146 141 156, 143	P	
DS-34	9/25	P-79/P-80	0+70	MS	1998	113/121 128/119	112/125	121/118	142, 139, 146 151, 138	P	
DS-35	9/25	P-62/P-86	1+40'	FO	1999	130/124 116/126	114/121	126/123 112/114	152, 154, 146 141, 143	P	
DS-36	9/25	P-93/P-94	0+50	MS	1998	119/116 107/118	117/115	121/112 124/112	150, 154, 145 138, 142	P	
DS-37	9/25	Exist/P-82	6+17	NC	5382	100 118	119	132 133	132, 127, 129 133 124	P	
DS-38	9/26	P-99/P-100	0+39	NC	5382	113 107	107	121 128	133, 126	P	

TRI/Environmental, Inc.
A Texas Research International Company

Date: 2012-09-25

Mail To:
Sheree Grant
Waste Management Inc

, ,

Bill To:

Waste Management Inc
101.07.08

e-mail:
sgrant@wm.com snunes@cecinv.com pwalls@cecinv.com tommybradford@bellsouth.net

Dear Ms. Grant,

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

Project:	**Vista Landfill**
TRI Job Reference Number:	**9534**
Material(s) Tested:	(24) Heat Fusion Weld Seam(s) (2) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

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
http://www.geosyntheticstestinc.com

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management Inc

Project: Vista Landfill

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-1 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	145	117	113	124	122	**124**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	122	120	114	112	129	**119**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	171	171	171	177	171	**172**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-2 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	114	123	116	113	116	**116**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	110	119	117	117	114	**115**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	163	163	164	164	170	**165**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN
Sample ID: DS-3 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	131	139	119	138	132	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	129	114	133	117	139	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	173	174	174	175	182	176
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-4 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	127	125	111	115	126	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	116	117	115	116	119	117
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	159	161	163	165	167	163
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-5 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	115	132	104	148	114	**123**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	152	155	135	153	146	**148**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	167	164	173	167	168	**168**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-6 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	118	119	116	124	124	**120**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	148	114	147	115	149	**135**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	178	171	173	177	175	**175**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Waste Management Inc
Project: Vista Landfill

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN
Sample ID: DS-7 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	141	143	134	147	143	**142**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	132	130	135	139	139	**135**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	145	146	151	152	147	**148**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-9 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	120	132	126	125	134	**127**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	115	116	128	107	123	**118**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	166	165	173	172	171	**169**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Waste Management Inc
Project: Vista Landfill

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN
Sample ID: DS-10 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	119	122	118	116	143	**124**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	138	122	119	121	**127**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	176	170	168	176	167	**171**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-11 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	122	137	119	132	117	**125**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	135	140	116	143	116	**130**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	172	169	172	171	177	**172**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

PARAMETER	TEST REPLICATE NUMBER 1	2	3	4	5	MEAN
Sample ID: DS-12 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	128	121	114	120	123	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	138	146	138	140	145	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	174	177	172	172	181	175
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-13 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	124	132	131	135	144	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	124	115	128	132	129	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	169	167	168	176	176	171
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management Inc

Project: Vista Landfill

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-14 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	125	121	129	124	125	**125**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	147	129	130	131	140	**135**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	167	165	172	164	166	**167**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-15 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	136	119	133	116	131	**127**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	146	140	138	133	139	**139**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	159	166	164	161	160	**162**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Waste Management Inc

Project: Vista Landfill

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-16 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	126	129	121	126	130	**126**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	136	131	129	143	142	**136**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	178	166	176	170	170	**172**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-17 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	124	117	125	120	127	**123**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	148	145	143	146	140	**144**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	171	172	177	170	167	**171**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-18 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	131	133	126	127	131	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	142	155	152	146	143	148
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	167	166	168	168	168	167
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-19 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	124	125	118	117	125	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	123	140	114	143	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	166	167	166	172	164	167
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-20 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	133	123	134	129	127	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	124	123	131	118	130	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	168	174	168	170	174	171
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-21 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	124	115	127	118	133	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	134	131	139	135	112	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	166	166	163	163	165	165
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-22 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	112	128	118	121	119	**120**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	144	134	138	137	**137**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	163	159	163	162	161	**162**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-23 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	125	130	118	121	136	**126**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	136	147	138	134	145	**140**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	162	165	163	163	159	**162**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-24 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	135	126	126	120	120	**125**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	145	104	138	132	109	**126**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	165	164	163	164	161	**163**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-25 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	134	125	117	117	129	**124**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	128	137	137	137	131	**134**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	163	163	162	168	158	**163**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: Waste Management Inc
Project: Vista Landfill

Material: 60 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9534

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-8 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	152	152	129	152	139	**145**
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	166	168	166	168	173	**168**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-26 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	166	144	149	151	154	**153**
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	151	157	154	153	147	**152**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

Date: 2012-09-27

Mail To:
Sheree Grant
Waste Management Inc

, ,

Bill To:

Waste Management Inc
101.07.08

e-mail:
sgrant@wm.com snunes@cecinv.com pwalls@cecinv.com tommybradford@bellsouth.net

Dear Ms. Grant,

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

Project:	**Vista Landfill Cell 3**
TRI Job Reference Number:	**9554**
Material(s) Tested:	(10) Heat Fusion Weld Seam(s) (2) Single Extrusion Weld Seam(s)
Test(s) Requested:	SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

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,

Melissa Hunter

Melissa Hunter
Project Manager
Geosynthetic Services Division
http://www.geosyntheticstestinc.com

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Waste Management Inc
Project: Vista Landfill Cell 3

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-27 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	140	130	129	139	124	**132**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	137	130	123	141	124	**131**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	154	161	157	160	159	**158**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-28 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	132	133	137	137	148	**137**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	153	150	152	159	157	**154**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	175	175	177	177	176	**176**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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 3

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-29 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	129	121	136	127	127	**128**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	143	149	139	130	**139**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	171	175	173	172	173	**173**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-30 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	126	122	123	119	124	**123**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	106	137	140	140	144	**133**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	160	157	155	157	158	**157**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Waste Management Inc
Project: Vista Landfill Cell 3

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-31 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	148	151	148	148	142	**147**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	128	128	137	130	138	**132**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	163	161	153	157	155	**158**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-32 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	116	120	129	118	120	**121**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	148	148	139	128	**139**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	174	167	166	168	176	**170**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.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 3

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

PARAMETER	1	2	3	4	5	MEAN
	TEST REPLICATE NUMBER					
Sample ID: DS-33 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	121	122	127	132	122	**125**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	116	145	136	138	146	**136**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	174	185	173	177	181	**178**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-34 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	146	118	142	137	120	**133**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	126	114	126	122	125	**123**
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	177	181	183	177	181	**180**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS
TRI Client: Waste Management Inc
Project: Vista Landfill Cell 3

Material: 60mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-35 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	121	119	122	122	125	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	118	144	116	118	140	127
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	156	160	160	159	161	159
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-36 | Weld: Heat Fusion						
Side: A						**Peel A**
Peel Strength (ppi)	146	128	142	136	145	139
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						**Peel B**
Peel Strength (ppi)	133	138	138	143	137	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	173	176	180	175	173	175
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

TRI/Environmental, Inc.
A Texas Research International Company

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS - SINGLE TRACK
TRI Client: Waste Management Inc
Project: Vista Landfill Cell 3

Material: 60 mil. HDPE
SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)
TRI Log#: 9554

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-37 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	148	141	150	159	155	**151**
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	160	162	155	174	167	**164**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-38 | Weld: Single Extrusion						
Side: Peel						**Peel**
Peel Strength (ppi)	114	148	128	133	132	**131**
Peel Incursion (%)	<5%	<5%	<5%	<5%	<5%	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						**Shear**
Shear Strength (ppi)	167	177	163	172	171	**170**
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

http://www.geosyntheticstesting.com
9063 Bee Caves Road / Austin, Tx. 78733 / 512.263.2101 / fax: 512.263.2558

C.7 REPAIR LOGS

GFC

Geomembrane Repair Log

Client: Vista Landfill   Project: CN-3   Page 1 of 17   Project No.: 101.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-1	09/21	P-3/P-4	3 / 4	0+05	Bad Seam edge	1.0X1.5 Patch	NC/5382 17:05	9/26	MS	P/TCB	Capped by R-39
R-2	09/21	Existing P-1	Exist P-1	0+00 to 0+08	Hole	Patch 2X4	NC/5382 16:35	9/26	MS	P/TCB	
R-3	9/24	Existing P-1	Existing P-1	0+55	DS-8	P-2X6	JS/503 13:15	9/26	MS	P/TCB	
R-4	09/21	Existing P-1	Existing P-1	0+69	Hole	Patch 7'X8'	NC/5382 14:27	9/26	MS	P/TCB	
R-5	09/21	Existing P-1	Existing P-1	0+79	'T'	Patch 1.5X1.5	NC/5382 14:15	9/26	MS	P/TCB	
R 6	09/21	Existing P-1	Existing P-1	1+05	T	Patch 2X2	NC/5382 14:00	9/26	MS	P/TCB	
R-7	09/21	P-4 P5	4 / 5	0+06	No Edge	B-1'	NC/5382 17:10	9/26	MS	P/TCB	
R-8	09/21	P-5 P-6	5 / 6	0+60	Hole	Patch 1.5X6'	NC/5382 17:30	9/26	MS	P/TCB	
R-9	09/21	P-5 P-6 P-14	5 / 6 / 14	0+78	T	Patch 1.5X4	NC/5382 17:25	9/21	MS	P/TCB	
R-10	09/21	P-4 P-5 P-14	4 / 5 / 14	0+77	T	Patch 1.5X4	NC/5382 17:15	9/21	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00   l:/work/solid/fieldforms/geomembrane

GEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell-3 Page 2 of 17

Project No.: 101.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-11	09/23	P-4 P-5	4 5	0+50	DS-2	P-2x5	NC/5382 10:25	9/26	MS	P/TCB	
R-12	9/23	P-26 P-21		0+19	DS-6	P-2X8	NC/5382 16:12	9/26	MS	P/TCB	
R-13	9/23	P-24 P-25	25 24	0+20'	Hole	P-1.5X1.5	NC/5382 15:45	9/26	MS	P/TCB	
R-14	9/23	P-22 P-24 P-25	25 22 24	0+26	T	P-1.5X1.5	NC/5382 15:40	9/26	MS	P/TCB	
R-15	9/23	P-21 P-22 P-24	22 21 24	0+17	T	P-2X2	NC/5382 15:34	9/26	MS	P/TCB	
R-16	9/23	P-20 P-21 P-22	20 22 21	0+23	T	P-4X5	NC/5382 15:30	9/26	MS	P/TCB	
R-17	9/23	P-21 P-23 P-24	21 23 24	0+31	T	P-3.5X6	NC/5382 15:42	9/26	MS	P/TCB	
R-18	9/23	P-20 P-22	20 22	0+28'	Hole	P-1X2	NC/5382	9/26	MS	P/TCB	
R-19	9/23	P-18 P-26	18 26	0+93	DS-5	P-2X6	NC/5382 14:05	9/26	MS	P/TCB	
R-20	09/23	P-3 P-4 P-27	3 4 27	4+04	T	P-1.5X2.5	NC/5382 08:40	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00 I:/work/solid/fieldforms/geomembrane

CEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell-3

Project No.: 101072.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-21	9/23	P-2 P-3 P-27	2 13 27	4+26	T	P-2X2	NC/5382 08:33	9/26	MS	P/TCB	
R-22	9/23	P-4 P-14 P-27	4 14 27	3+81	T	P-2X5	NC/5382 09:00	9/26	MS	P/TCB	
R-23	9/23	P-6 P-14 P-27	14 6 27	3+59	T	P-2X5	NC/5382 09:25	9/26	MS	P/TCB	
R-24	9/23	P-6 P-7 P-8 P-27	6 7 8 27	3+13 to 3+37	T's & Recon seam	Patch/cap 2.5X24'	NC/5382 09:45	9/26	MS	P/TCB	
R-25	9/23	P-8 P-9 P-27	8 9 27	2+91	T	P-1.5X2.5	NC/5382 10:30	9/26	MS	P/TCB	
R-26	9/23	P-9 P-10 P-27	9 10 27	2+68	T	P-2X3	NC/5382 10:34	9/26	MS	P/TCB	
R-27	9/23	P-10 P-11 P-27	10 11 27	2+45	T	P-2X3	NC/5382 10:44	9/26	MS	P/TCB	
R-28	9/23	P-11 P-12 P-27	11 12 27	2+22	T	P-1.5X2.5	NC/5382 10:50	9/26	MS	P/TCB	
R-29	9/23	P-12 P-13 P-27	12 13 27	2+00	T	P-1.5X2.5	NC/5382 10:57	9/26	MS	P/TCB	
R-30	9/23	P-13 P-15 P-27	13 15 27	1+77	T	P-2X2.5	NC/5382 11:10	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

GEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell-3 Page 4 of 17

Project No.: 101107108

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-31	9/23	P-12 P-13	12 13	0+09	Seam edge	P-1.5x2	NC/5382 09:15	9/26	MS	P/TCB	
R-32	9/24	P-30 P-31	30 31	0+60	DS-11	P 2x5	NC/5382 08:07	9/26	MS	P/TCB	
R-33	9/23	P-2 P-27	2 3 27	Covers start of seam 4+32	Hole	P-2x4	NC/5382 08:30	9/26	MS	P/TCB	
R-34	9/23	P-8 P-9	8 9	0+70	Hole	P-2x3	NC/5382 10:40	9/26	MS	P/TCB	
R-35	9/23	P-8 P-9	8 9	0+25	DS-1	P-2x5	NC/5382 10:45	9/26	MS	P/TCB	
R-36	9/24	P-31 P-32	31 32	3+20	DS-12	P 2x6	NC/5382 09:20	9/26	MS	P/TCB	
R-37	9/23	P-2 P-27	2 27	2+15	DS-7	P 2x5	NC/5382 09:23	9/26	MS	P/TCB	
R-38	9/23	P-12 P-13	12 13	0+70	DS-4	P-2x6	NC/5382 11:05	9/26	MS	P/TCB	
R-39	9/23	P3 P4	3 4	0+09	On edge of seam Hole	P-1.5x2	NC/5382 09:24	9/26	MS	P/TCB	
R40	9/24	P-32 P-33	32 33	2+40	DS-13	P-2x6	NC/5382 09:15	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00

CEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 5 of 19 Project No.: 101.0728

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-41	9/24	P-33 P-34	33 34	4+35	DS-14	P 2x5	IS/503 10:45	9/26	MS	P/TCB	
R-42	9/24	P-34 P-35	34 35	1+05	DS-15	P-2x5	NC/5382 08:55	9/26	MS	P/TCB	
R-43	9/24	P-35 P-36	35 36	2+80	DS-16	P-2x5	NC/5382 10:15	9/26	MS	P/TCB	
R-44	09/24	P-35 P-36	35 36	4+50	DS-17	P-2x6	IS/503 10:05	9/26	MS	P/TCB	
R-45	9/24	P-36 P-37	36 37	3+90	DS-18	P-2x5	NC/5382 10:00	9/26	MS	P/TCB	
R-46	9/24	P-37 P-38	37 38	3+30	DS-19	P-2x6	NC/5382 10:05	9/26	MS	P/TCB	
R-47	9/24	P-27 P-28	27 28	3+50	DS-20	P-2x5	NC/5382 09:50	9/26	MS	P/TCB	
R-48	9/24	P-38 P-39	38 39	2+05	DS-21	P-2x6	NC/5382 10:25	9/26	MS	P/TCB	
R-49	9/24	P-39 P-40	39 40	1+10	DS-22	P-2x5	NC/5382 0955	9/26	MS	P/TCB	
R-50	9/24	P-40 P-41	40 41	0+45	DS-23	P 2x5	NC/5382 10:35	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00 I:/work/solid/fieldforms/geomembrane

CEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 6 of 17 Project No.: 101,07,08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-51	9/24	P-41 P-42	41 / 42	1+95	DS-24	P-2X5	NC/5382 10:53	9/26	MS	P/TCB	
R52	9/24	P-42 P-43	42 / 43	2+95	DS-25	P-2x5	NC/5382 11:05	9/26	MS	P/TCB	
R-53	9/21	P-1 P-2	1 / 2	0+58	Hole	P-2x2.5	NC/5382 17:00	9/26	MS	P/TCB	
R-54	9/24	P-32 P-33	32 / 33	4+15	Hole	P-2X3	NC/5382 10:10	9/26	MS	P/TCB	
R-55	9/24	P-32 P-33	32 / 33	3+38	Hole	P-2x2.5	NC/5382 09:15	9/27	MS	P/TCB	
R-56	9/24	Exist P-37 P-38	Exist 38 / 37	3+52	Hole	P-3x3.5	IS/503 09:38	9/27	MS	P/TCB	
R-57	9/24	P-28 P-29	28 / 29	3+45	DS-9	P-2X5	NC/5382 09:45	9/26	MS	P/TCB	
R-58	9/24	P-29 P-30	29 / 30	4+25	DS-10	P-2X6	NC/5382 09:50	9/26	MS	TCB/P	
R-59	9/24	P-35 P-36	35 / 36	2+98	Hole	P-2X2.5	NC/5382 08:55	9/26	MS	P/TCB	
R-60	9/24	Exist P-34 P-35	Exist 35 / 34	2+84	Hole	P-1X3	IS/503 10:15	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00 l:/work/solid/fieldforms/geomembrane

CFC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 7 of 17

Project No.: 10127.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-61	9/24	Exist P-31	Exist 31	on tie in 1+93 to 2+16	Recon Seam	P-2X23	IS/503 11:10	9/26	MS	P/TCB	
R-62	9/24	R-61 P-31	R-61 P-31	2+10'	DS-26	P-2x5	IS/503	9/26	MS	P/TCB	
* R-63	9/23	P-16 P-17	16 17	0+45	DS-3	P-2x5	NC/5382 14:15	9/26	MS	P/TCB	
R-64	9/24	P-31 P-32	31 32	0+30	Bad Seam	P 2x7	NC/5382 08:15	9/26	MS	P/TCB	
R-65	9/24	P-36 P-37	36 37	0+28	Hole	P 2x2.5	NC 5382 08:35	9/26	MS	P/TCB	
R-66	9/25	P-43 P-44	43 44	0+80	DS-27	P-2x5	IS/503 15:40	9/26	MS	P/TCB	
R-67	9/25	P-49 P-56	49 56	3+75	DS-28	P 2x5	IS/503 12:10	9/26	MS	P/TCB	
R-68	9/25	P-54 P-57	54 57	4+15	DS-29	P-2x6	IS/503 09:50	9/26	MS	P/TCB	
R-69	9/25	P-58 P-59	58 59	1+55	DS-30	P 2x5	NC/5382	9/26	MS	P/TCB	
R-70	9/25	P-61 P-62	61 62	0+10	DS-31	P-2x22	NC/5382	9/26	MS	P/TCB	cap station from 0+00 - 0+22'

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00

I:/work/solid/fieldforms/geomembrane

GEC

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell 3   Page 8 of 17   Project No.: 1010208

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-71	9/25	P-60 P-61	60 61	2+40	DS-32	P-2x6	IS/503 09:45	9/26	MS	P/TCB	
R-72	9/23	P-27 P-28	27 28	0+92	Hole	P-2x4	NC/5382 17:05	9/26	MS	P/TCB	
R-73	9/24	P-43 P-44 P-45	45 43 44	2+23	T	P-1.5x2	NC/5382 15:35	9/26	MS	P/TCB	
R-74	9/24	P-43 P-45 P-46	46 43 45	2+61	T	P-1.5x1.5	NC/5382 15:32	9/26	MS	P/TCB	
R-75	9/24	P-43 P-46 P-47	47 43 46	2+95	T	P-1.5x1.5	NC/5382 15:12	9/26	MS	P/TCB	
R-76	9/24	P-43 P-47 P-48	48 43 47	3+22	T	P-1.5x2	NC/5382 14:49	9/26	MS	P/TCB	
R-77	9/24	P-43 P-48 P-49	49 43 48	3+56	T	P-1.5x2	NC/5382 14:40	9/26	MS	P/TCB	
R-78	9/24	P-43 P-49 P-50	50 43 49	3+87	T	P-2x6.5	NC/5382 14:35	9/26	MS	P/TCB	
R-79	9/24	P-43 P-50 P-51	51 43 50	4+22	T	P-1.5x1.5	NC/5382 13:47	9/26	MS	P/TCB	
R-80	9/24	P-43 P-51 P-52	52 43 51	4+56	T	P-1.5x2.5	NC/5382 13:55	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00

l:/work/solid/fieldforms/geomembrane

CFG

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell-3   Page 9 of 17   Project No.: 01.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-81	9/24	P-51 P52 P54 P53	51 54 52 53	4+50 to 4+61	Recon Seam and T's	P-2X11	NC/5382 14:15	9/26	MS	P/TCB	
R-82	9/24	P-50 P-51 P-54 P-55	50 55 51 54	4+22	T	P 2X3	NC/5382 14:20	9/26	MS	P/TCB	
R-83	9/24	P49 P50 P55 P-56	49 56 50 55	3+85 to 3+89	Recon Seam and T'	P-2X4	NC/5382 14:30	9/26	MS	P/TCB	
R-84	9/24	P-48 P-49 P 56	48 56 49	3+56	T	P-2X2	NC/5382 14:45	9/26	MS	P/TCB	
R-85	9/24	P47 P-48 P-56	47 56 48	3+22	T	P-1.5X1.5	NC/5382 14:57	9/26	MS	P/TCB	
R-86	9/24	P-46 P-47 P-56	46 56 47	2+95	T	P 2X4	NC/5382 15:05	9/26	MS	P/TCB	
R-87	9/24	P-45 P-46 P-56	45 56 46	2+61	T	P-2X2.5	NC/5382 15:20	9/26	MS	P/TCB	
R-88	9/24	P44 P45 P-56	44 56 45	2+23	T	P-2X2	NC/5382 14:12	9/26	MS	P/TCB	
R-89	9/24	P56 P57 P58	57 56 58	3+36	T	P 1.5X3	NC/5382	9/26	MS	P/TCB	
R-90	9/24	P55 P56 P57	56 57 55	3+76	T	P 1.5X9	NC/5382	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

CEC

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell 3   Page 10 of 17
Project No.: 101.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-91	09/24	P54 P55 P57	57 54 55	4+11	T	P-2x2	IS/503	9/26	MS	P/TCB	
R-92	9/24	P-53 P54 P57	57 53 54	4+40	T	P 2x2	IS/503	9/26	MS	P/TCB	
R-93	9/24	Exist P53 P57	Exist 57 53	5+63	Hole at T	P-1.5x1.5	IS/503	9/26	MS	P/TCB	
R-94	9/24	Exist P-57 P60	Exist 60 57	5+59	Hole at T	P-3x6	IS/503 09:35	9/26	MS	P/TCB	
R-95	9/25	P-60		4+49 9' from P57/P-60	Hole	P-1.5x3.5	IS/503 09:40	9/26	MS	P/TCB	
R-96	9/25	P57 P-58 P-60	60 57 58	3+33 to 3+46	T @ Recon Seam	P-2x13	IS/503 10:25	9/26	MS	P/TCB	
R-97	9/24	P58 P59 P-60	58 59 60	1+64	T	P-1.5x1.5	NC/5382 16:05	9/26	MS	P/TCB	
R-98	9/24	P59 P-60 P62	59 62 60	1+64	T	P 1.5x1.5	NC/5382 16:10	9/26	MS	P/TCB	
R-99	9/26	P75 P76	75 76	0+30	DS-33	P-2x5	NC/5382 09:41	9/26	MS	P/TCB	
R-100	9/26	P-79 P80	80 79	0+70	DS 34	P-2x6	NC/5382 09:25	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell-3   Page 11 of 17
Project No.: 10607-08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-101	9/26	P-62 P-86	62 86	1+40	DS-35	P-2x6	NC/5382 09:02	9/26	MS	P/TCB	
R-102	9/26	P-93 P-94	94 93	0+50	DS-36	P-2x5	NC/5382 09:07	9/26	MS	P/TCB	
R-103	09/26	Exist P-82	Exist P82	0+17	DS-37	P-2x6	NC/5382 09:37	9/26	MS	P/TCB	
R-104	9/25	Existing P-75 P-76	75 Exist 76	6+43	Hole	P-1.5x1	NC/5382 13:47	9/27	MS	P/TCB	
R-105	9/25	Existing P-73 P-74	74 73 Exist	7+11	Hole	P-1x2	NC/5382	9/27	MS	P/TCB	
R-106	9/25	Exist P-69 P-71	71 69 Exist	8+03	Hole	P-1x13	NC/5382 10:13	9/27	MS	P/TCB	
R-107	9/25	Exist P-82 P-61	Exist 82 61	6+05	T	P-1x2	IS/503 13:50	9/27	MS	P/TCB	
R-108	9/25	P-82 P-76 P-77	77 76 82	0+23	T	P-1.5x2.5	IS/503 14:05	9/27	MS	P/TCB	
R-109	9/25	P-82 P-77 P-78	78 77 82	0+46	T	P-1.5x2.5	IS/503 14:10	9/27	MS	P/TCB	
R-110	9/25	P-82 P-78 P-79	79 78 82	0+69	T	P-2x3	IS/503 14:15	9/27	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00
l:/work/solid/fieldforms/geomembrane

CEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 12 of 17
Project No.: 10607-08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-111	09/25	P-82 P-79 P-80	80 79 82	0+92	T	P-2x3	IS/503 14:20	9/26	MS	P/TCB	
R-112	9/25	P-80 P-82 P-83 P-85	83 80 85 82	1+28 to 1+16	T & Recon Seam	P-2x8	NC/5382 17:05	9/26	MS	P/TCB	
R-113	9/25	P-61 P-82 P-85	85 82 61	3+15	T	P-2.5x3	NC/5382 16:20	9/27	MS	P/TCB	
R-114	9/25	P-61 P-85	85 61	3+00	Hole	P-1.5x2.5	NC/5382 16:35	9/27	MS	P/TCB	
R-115	9/25	P-61 P-85 P-87	87 85 61	2+97	T	P-3x4	NC/5382 18:05	9/27	MS	P/TCB	
R-116	9/25	P-84 P-85 P-87	84 87 85	0+96	T	P-4x6	NC/5382 17:25	9/27	MS	P/TCB	
R-117	9/25	P-87 P-84	50 87 84	0+82	Cut	P-3x8	NC/5382 17:35	9/27	MS	P/TCB	
R-118	9/25	P-61 P-87 P-88	88 87 61	2+74	T	P-2x3	NC/5382 18:00	9/27	MS	P/TCB	
R-119	9/25	P-61 P-88 P-89	89 88 61	2+51	T	P-2x2	NC/5382 18:15	9/27	MS	P/TCB	
R-120	9/25	P-61 P-86 P-89	86 89 61	2+43	T	P-4x6	NC/5382 18:25	9/27	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

CFC

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell-3   Page 13 of 16   Project No.: 606-27-08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-121	09/23	P-20 P22	P-34	0+23 to 0+28	Recon Seam	Bead 5'	NC/5382	9/26	MS	P/TLB	
R122	9/23	P-19 P-20 P-22 P-25	19 20 22 25	0+52 to 0+58	Recon Seam	P-2X5	NC/5382 15:00	9/26	MS	P/TLB	
R-123	9/24	P-28	P-28 P-29	6' From P-28/P-29 4+25	Hole	P-1X1	IS/5383 13:10	9/26	MS	P/TLB	
R-124	9/26	P-12 P-13	12 13 R-31	0+00 to 0+05	Recon Seam	P-1.5X5	NC/5382 11:10	9/26	MS	P/TLB	
R125	9/23	P-18 P-25 P-26	18 25 26	0+89	T	P-2X2	NC/5382 11:15	9/26	MS	P/TLB	
R-126	9/27	P-18 P-19 P-25 P-26	18 19 25 26	0+85 to 0+89	Recon Seam	P-2X4	NC/5382 11:14	9/26	MS	P/TLB	
R-127	9/23	P-26 P-27	26 27	0+72	Hole	P-2X6	NC/5382 17:45	9/26	MS	P/TLB	
R-128	9/23	P-17 P-18 P-26 P-27	17 18 26 27	1+08	T	P-5X6	NC/5382 13:45	9/26	MS	P/TLB	
R-129	9/23	P-16 P-17 P-27	16 17 27	1+31	T	P-2X3	NC/5382 13:40	9/26	MS	P/TLB	
R-130	9/23	P-15 P-16 P-27	15 16 27	1+54	T	P-2X3	NC/5382 13:35	9/26	MS	P/TLB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

CEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 14 of 16 Project No.: 10102 98

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-131	9/25	Exist P-63	NT P63 Exist	0+00 to 16	Hole	P 5x16	NC/5382 09:09	9/27	MS	P/TCB	
R-132	9/25	P-63	P-63	Across top of panel 0+00 to 0+08	Holes	P-8x8	NC/5382 ~~18~~:35	9/27	MS	P/TCB	
R-133	9/25	Existing P-63 P-64	Exist 63 64	8+83	T	P 1.5x2	NC/5382 09:05	9/27	MS	P/TCB	
R-134	9/25	P-64 P-65 P-66 P-67	66 65 67 64	0+28	T	P-4x7	NC/5382 09:35	9/27	MS	P/TCB	
R-135	9/25	P-65 P-66	66 65	0+00 to 0+05	Recon Seam	P-2x5	NC/5382 09:40	9/27	MS	P/TCB	
R-136	9/25	P-67 P-68	67 68	0+00 to 0+05	Recon Seam	P-2x5	NC/5382 09:25	9/27	MS	P/TCB	
R-137	9/25	P-73 P-75 P-76	76 75 73	0+00 to 0+06	Recon Seam	P-2x4 B-2'	NC/5382 14:17	9/27	MS	P/TCB	
R-138	9/25	P-73 P-74 P-75	75 73 74	0+32	T	P 1.5x2	NC/5382 14:05	9/27	MS	P/TCB	
R-139	9/25	P-74 P-75 P-81	75 74 81	0+44	T	P 2x2.5	NC/5382 14:00	9/27	MS	P/TCB	
R-140	9/26	Exist.	Exist P68	2' from tie-in Along tie, in 8+44	Hole from Backhoe	P-3x3	NC/5382 16:07	9/27	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

GEC

Geomembrane Repair Log

Client: Vista Landfill Project: Cell 3 Page 15 of 17 Project No.: 1010708

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-141	09/26	Existing	Exist P-64	3' f P-63 8+80	Damage from Excavator	P 3x3	NC/5382 09:12	9/27	ms	P/TCB	
R-142	9/25	P83	87	3' fm 87/88 0+20	Hole	P-1.5x1.5	NC/5382 16:12	9/26	ms	P/TCB	
R-143	9/25	P-83	83	8' fm 83/84 0+95	Hole	P-1.5x1.5	NC/5382 16:20	09/26	ms	P/TCB	
R-144	9/25	P83 P84	84 83	0+92	Hole	P 1.5x2	NC/5382 16:30	9/26	ms	P/TCB	
R-145	9/25	P83 P84 P85	84 83 85	1+38	T	P-1.5x2	NC/5382 17:10	9/26	ms	P/TCB	
R-146	9/25	P86 P89 P90	90 89 86	2+29	T	P 3.5x4	NC/3282 18:37	9/26	ms	P/TCB	
R-147	9/25	P86 P90 P91	91 90 86	2+07	T	P 2x2	NC/5382 18:43	9/26	ms	P/TCB	
R-148	9/25	P91 P92 P86	92 91 86	1+84	T	P 2x4	NC/5382 18:50	9/26	ms	P/TCB	
R-149	9/25	P92 P93 P86	93 92 86	1+61	T	P-1.5x2	NC/5382 19:00	9/26	ms	P/TCB	
R-150	9/25	P93 P94 P-86	94 93 86	1+38	T	P 2x2	NC/5382 19:05	9/26	ms	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00 I:/work/solid/fieldforms/geomembrane

CEC

Geomembrane Repair Log

Client: Vista Landfill   Project: Cell-3   Page 16 of 17
Project No.: 101.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew / Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-151	9/26	P-87	88 / 87	3' from 87/88 0+18	Hole	P 1x1	NC/5382 09:18	9/26	MS	P/TCB	
R-152	9/26	P-94 P-95 P-102 P-86	86 102 95 94	1+15	T	P 3x6	NC/5382 09:10	9/26	MS	P/TCB	
R-153	9/26	P95 P96 P-101 P102	101 96 102 95	0+89	T	P 3.5x6	NC/5382 09:25	9/26	MS	P/TCB	
R-154	9/26	P96 P97 P100 P101	100 97 101 96	0+57	T	P 3x5	NC/5382 14:15	9/26	MS	P/TCB	
R-155	9/26	P97 P98 P99 P100	99 98 100 97	0+25	T	P 2x2	NC/5382 15:35	9/26	MS	P/TCB	
R156	9/26	P-99 P-100	100 99	0+39	DS-38	P 2x5	NC/5382 15:00	9/26	MS	P/TCB	
R-157	9/26	P-100 P-101	100 101	0+33	Recon Seam	P 2x13	NC/5382	9/26	MS	P/TCB	
R-158	9/26	P-21 P-23	21 23	0+00 to 0+05	Recon Seam	P-2x5	NC/5382 11:37	9/26	MS	P/TCB	
R-159	9/26	P-34	33 34	10' from 33/34 0+10	Hole	P 1x2	NC/5382 11:40	9/26	MS	P/TCB	
R-160	9/26	P-34	33 34	10' from 33/34 0+13	Hole	P 1x2	NC/5382 11:44	9/26	MS	P/TCB	

KEY: P=Patch B=Bead C=Cap DS= Destructive Sample O=Other and describe in Comments

Rev.8/00   l:/work/solid/fieldforms/geomembrane

GEC

Geomembrane Repair Log

Client: Vista Landfill　　Project: Cell - 3　　Page 17 of 17　　Project No.: 101.07.08

Repair Number	Date Repaired	Seam ID	Panel(s)	Location	Description of Damage	Type / Size of Repair	Repair Crew Machine ID	Date Tested	Tested By	P/F & Initials	Comments
R-161	09/26	P-34	33 / 34	10' From 33/34 0+20'	Hole	P-1x2	NC/5382 12:00	09/26	MS	P/TCB	
R-162	09/26	P-35	34 / 35	10' From 34/35 0+10'	Hole	1.5x2	NC/5382 14:05	9/26	MS	P/TCB	
R-163	9/26	P-35	35 / 36	6' From 35/36 0+10'	Hole	1.5x1.5	NC/1583	9/26	MS	P/TCB	
R-164	9/26	P-42	41 / 42	9' From 41/42 0+08	Hole	P-1x1.5	NC/1583	9/26	MS	P/TCB	

KEY: P=Patch　B=Bead　C=Cap　DS= Destructive Sample　O=Other and describe in Comments

Rev.8/00

l:/work/solid/fieldforms/geomembrane

D.1 CERTIFICATE OF COMPLETION

Certificate of Acceptance

CEC

Type: Partial________ Substantial________ Final ✓

Project Name: Cell-3

Site Name: Vista Class III Landfill

Date: 09/26/2012

Description of Work Certified: Completed sub grade and sub base soil for Cell-3 Construction for placement of geomembrane Liner. All soils tested and certification survey is complete.

I hereby certify that the above identified work has been inspected and that it has been properly installed. I further certify that all required testing has been completed and the results have been deemed acceptable by the CQA Engineer. The work is suitable for its intended use.

CQA ENGINEER

Signature: [signature] Date: 9/26/12

Name (print): SETH A. NUNES

Title: CERTIFYING ENGINEER

Representing: CARLSON ENVIRONMENTAL CONSULTING, PC

CONTRACTOR'S REPRESENTATIVE

Signature: [signature] Date: 9-26-12

Name (print): Jack R. Wiggins

Title: Supt. CRC Gen. Cont.

Representing: CRC Gen. Cont

OWNER'S REPRESENTATIVE

Signature: [signature] Date: 09/26/2012

Name (print): Tommy C Bradford

Title: Construction Quality Assurance Monitor CEC

Representing:

Certificate of Acceptance

CEC

Type: Partial ______ Substantial ______ Final ✓

Project Name: Cell - 3

Site Name: Vista Class III Landfill

Date: 09/26/2012

Description of Work Certified: ESI completed All 60 mil geomembrane Liner installation for Cell-3. All destructive seam testing passed laboratory testing. All nondestructive testing was performed and passed. CEC and ESI walked all Liner installed in Cell-3 ongoing prior to covering any liner.

I hereby certify that the above identified work has been inspected and that it has been properly installed. I further certify that all required testing has been completed and the results have been deemed acceptable by the CQA Engineer. The work is suitable for its intended use.

CQA ENGINEER

Signature: [signature] Date: 9/26/2012

Name (print): SETH A. NUNES

Title: CERTIFYING ENGINEER

Representing: CARLSON ENVIRONMENTAL CONSULTANTS, PC

CONTRACTOR'S REPRESENTATIVE

Signature: [signature] Date: 9/26/2012

Name (print): SOULIGNA PHINTHISENE

Title: SUPT

Representing: E.S.I

OWNER'S REPRESENTATIVE

Signature: Tommy C Bradford Date: 09/26/2012

Name (print): Tommy C Bradford

Title: Construction Quality Assurance Monitor CEC

Representing:

Certificate of Acceptance

CEC

Type: Partial______ Substantial______ Final ✓

Project Name: Cell - 3

Site Name: Vista Class III Landfill

Date: 09/29/2012

Description of Work Certified: ESI completed geocomposite over 60 mil Liner covering Cell-3. All geocomposite was checked during installation, tying, and sewing. All geocomposite for Cell-3 is complete

I hereby certify that the above identified work has been inspected and that it has been properly installed. I further certify that all required testing has been completed and the results have been deemed acceptable by the CQA Engineer. The work is suitable for

CQA ENGINEER

Signature: ______ Date: 9/29/12

Name (print): SETH A. NUNES

Title: CERTIFYING ENGINEER

Representing: CARLSON ENVIRONMENTAL CONSULTANTS, PC

CONTRACTOR'S REPRESENTATIVE

Signature: ______ Date: 9/29/2012

Name (print): SOULIGNA DHINTHISENE

Title: SUPT

Representing: E.S.I

OWNER'S REPRESENTATIVE

Signature: ______ Date: 09/29/2012

Name (print): Tommy C Bradford

Title: Construction Quality Assurance Monitor CEC

Representing:

Certificate of Acceptance

CEC

Type: Partial_____ Substantial_____ Final ✓

Project Name: Cell 3

Site Name: Vista Class III Landfill

Date:

Description of Work Certified: Completed the leachate collection pipe and drainage stone system including sump riser pipe. Completed the 2 foot layer of protective cover sand in Cell-3.

I hereby certify that the above identified work has been inspected and that it has been properly installed. I further certify that all required testing has been completed and the results have been deemed acceptable by the CQA Engineer. The work is suitable for its intended use.

CQA ENGINEER

Signature: [signature] Date: 11/09/12

Name (print): SETH A. NUNES

Title: CERTIFYING ENGINEER

Representing: CARLSON ENVIRONMENTAL CONSULTANTS, PC

CONTRACTOR'S REPRESENTATIVE

Signature: [signature] Date: 11/09/12

Name (print): JACK R. WIGGINS

Title: Supt.

Representing: ERC Gen. Cont.

OWNER'S REPRESENTATIVE

Signature: [signature] Date: 11/09/12

Name (print): Tommy C Bradford

Title: Construction Quality Assurance Monitor CEC

Representing:

CEC

Type: Partial______ Substantial______ Final ✓

Project Name: Cell - 3

Site Name: Vista Class III Landfill

Date:

Description of Work Certified: Completed All force main pipe, 3" SDR-11 AND 6" SDR-11, AND " carrier pipe for the 3" force main AND 10" carrier pipe for the 6" force main, All Force main pipe for cell - 3 is complete And pressure tested.

I hereby certify that the above identified work has been inspected and that it has been properly installed. I further certify that all required testing has been completed and the results have been deemed acceptable by the CQA Engineer. The work is suitable for its intended use.

CQA ENGINEER

Signature: [signature] Date: 11/09/12

Name (print): SETH A. NUNES

Title: CERTIFYING ENGINEER

Representing: CARLSON ENVIRONMENTAL CONSULTANTS, PC

CONTRACTOR'S REPRESENTATIVE

Signature: [signature] Date: 11/09/12

Name (print): JACK R. Wiggins

Title: Supt.

Representing: ERC Gen. Contracting

OWNER'S REPRESENTATIVE

Signature: [signature] Date: 11/09/12

Name (print): Tommy C Bradford

Title: Construction Quality Assurance Monitor.

Representing:

D.2 LEACHATE FORCEMAIN TESTING

CEC

CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS, AIR PERMITTING, AND REGULATORY COMPLIANCE SERVICES

BELOW GROUND HDPE PIPE PRESSURE TEST REPORT

Site: Vista Class III Landfill, Cell-3

Contractor: ERC

Test Performed By: Jack Wiggins

Date: 11/05/2012

Time: 17:30

Description & Location of Test Segment: Force Main 3" from N.E. Corner to SE Corner and 6" Force Main from SE Corner to the sump.

Diameter & SDR of Test Segment: 3" is SDR-11 and 6" is SDR-11

Length: 3" SDR-11 is 560' and 6" SDR-11 is 260'.

Start Time: 16:30 **End Time:** 17:30

Start Temperature: 90° °F **End Temperature:** 89 °F

Start Pressure: 130 psi **End Pressure:** 129 psi

Pass/Fail: Pass **Retest (yes/no):** NO

Comments:

Test was Hydrostatic, Checked the pipe for leaks, The pipe was left overnight with any pressure loss.

Record Prepared By: [signature] **Date:** 11/05/2012

CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS, AIR PERMITTING, AND REGULATORY COMPLIANCE SERVICES

BELOW GROUND HDPE PIPE PRESSURE TEST REPORT

Site: Vista Class III Landfill. Cell-3

Contractor: ERC

Test Performed By: Jack Wiggins

Date: 11/06/2012

Time: 11:15

Description & Location of Test Segment: Containment pipe, 6" from N.E. Corner to S.E. Corner and 10" from SE Corner to sump.

Diameter & SDR of Test Segment: 6" SDR-17 and 10" SDR-17

Length: 6" SDR-17 is 560' and the 10" SDR-17 is 260 feet.

Start Time: 10:15 **End Time:** 11:15

Start Temperature: 85 °F **End Temperature:** 85 °F

Start Pressure: 10 psi **End Pressure:** 10 psi

Pass/Fail: PASS **Retest (yes/no):** NO

Comments:

Containment Pipes tested with Air only.

Record Prepared By: [signature] **Date:** 11/06/2012

CEC

CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS, AIR PERMITTING, AND REGULATORY COMPLIANCE SERVICES

BELOW GROUND HDPE PIPE PRESSURE TEST REPORT

Site: Vista Class III Landfill Cell 3

Contractor: ERC

Test Performed By: Jack Wiggins

Date: 11/06/2011

Time: 14:45

Description & Location of Test Segment: Force main pipe, 6" from the N.E. Corner to tie in At Cell 2.

Diameter & SDR of Test Segment: 6" SDR-11

Length: 6" SDR-11, 590'

Start Time: 13:45 **End Time:** 14:45

Start Temperature: 92° °F **End Temperature:** 92° °F

Start Pressure: 130 psi **End Pressure:** 126 psi

Pass/Fail: PASS **Retest (yes/no):** NO

Comments:

Test was Hydrostatic, Checked along pipe for any leaks.

Record Prepared By: [signature] **Date:** 11/06/2011

CARLSON ENVIRONMENTAL CONSULTANTS, PC

LANDFILL GAS, AIR PERMITTING, AND REGULATORY COMPLIANCE SERVICES

BELOW GROUND HDPE PIPE PRESSURE TEST REPORT

Site: Vista Class III Landfill Cell - 3

Contractor: ERC

Test Performed By: Jack Wiggins

Date: 11/06/2012

Time: 17:30

Description & Location of Test Segment: Containment pipe 10" from the N.E. Corner to tie-in at Cell-2.

Diameter & SDR of Test Segment: 10" SDR-17

Length: 10" SDR-17 590'

Start Time: 16:30 **End Time:** 17:30

Start Temperature: 82 °F **End Temperature:** 82 °F

Start Pressure: 10 psi **End Pressure:** 10 psi

Pass/Fail: Pass **Retest (yes/no):** No

Comments:

Containment pipe was air tested.

Record Prepared By: [signature] **Date:** 11/06/2012

D.3 DAILY FIELD LOGS

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 1 Mon

Page 1 of 2

Project: Cell 3 Cell 3

Date: 08/13/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M.

Temp.(EF): High Low 74 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1

Visitors	Representing

Daily Notations:

05:00 Depart Palm City Fl for Vista Landfill. Mobilized to site.

08:00 On site. Met with Sherce, Checked equipment shipped to the landfill for CEC.

10:30 Attended the pre-construction meeting for Cell 3 Construction. Please see minutes of meetings.

12:30 ERC personnel are grubbing the cell 3 surface with a D6 Dozer. The surveyor is on site and set bench marks for ERC.

14:30 I picked equipment needed for soil testing on site. I am checking a storage area.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 107.07.08 Report No.: 1 MON

Date: 08/ 13/ 2012 Page: 2 of 2

11:00 ERC will not start work until tomorrow morning. Thier superintendent is not on site yet. I departed the site to locate a hotel.

Signature [illegible]

9

CEC

Daily Field Report

Owner: Vista Class III Landfill

Report No.: 2 Tues

Page 1 of 2

Project: Vista Landfill Cell 3

Date: 08/14/2012

Project: No.:

Weather: A.M. PC P.M. PC

Temp.(EF): High 94° Low 75° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Trucks Volvo	25 ton	2	2
Roller Ingersoll Rand	SD100	1	1
Roller CAT	563	1	0
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:30 I Arrived on site at Vista landfill. ERC not on site yet.

07:00 ERC personnel are on site. They signed the sign in sheet. They continued clearing and grubbing the surface of cell-3.

09:00 ERC checked sand thickness at the tie-in to cell-2. Thickness was checked 2 feet from the post markers at the liner runout. Sand thickness from North to south at post, 23", 16", 13", 21" and 37". Top of berm markers at each end were not checked.

12:00 ERC used thier hand rover GPS to stake the east berm location.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.:

Report No.: 2 Tue

Date: 08/14/2012

Page: 2 of 2

13:30 ERC used a loaded Volvo end dump to proof roll the east berm area. I monitored the proofrolling. They started cut and fill to level the berm area.

15:30 ERC personnel are hauling fill from the old road access area at the North end of cell 3 to the east berm area. They are compacting with the SD100 roller. They are having problems with the GPS on the D6 dozer.

17:30 ERC stopped work. They are working on their equipment.

17:50 I departed the site.

Fill Hauled & Placed today by ERC: Average 18 CYs load

121 loads

2,178 Cubic Yards

Signature

11.5

CEC

Owner: Vista Class III Landfill

Report No.: 3 Wed

Page 1 of 2

Project: Vista Landfill Cell-3

Date: 08/15/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92° Low 75° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Volvo	25 ton	2	2
Roller Ingersoll Rand	SD100	1	1
Roller CAT	563	1	0
Water Tanker 5000 gal	5000 gal	1	1

Visitors

Representing

Daily Notations:

07:00 Arrived on site. ERC on site.

07:30 Completed sign in sheet. ERC started hauling fill from the old access road, north side to the east berm area.

10:00 ERC personnel are placing and grading fill on the east side of Cell-3. Fill is from the old access road at the north end. They are having problems with the GPS on the D6 dozer. They are working on it.

13:00 ERC continues to place fill from the old access road at the east side where the berm is located. They are compacting fill to make the berm level.

14:30 We checked the liner along the Cell-2 tie in where

Signature: Jerry C Bruff

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 3 Wed

Date: 08/15/2012 Page: 2 of 2

holes were excavated at Liner run out. Most area's was cut .6 to .8 except the south corner was fill 5.8. This was in the berm area

17:00 I received the Pod on site. ERC continues to place and compact fill at the east side of of cell-3, They are operating the water tanker.

18:20 ERC personnel stopped work. They are performing service on thier equipment. The D6 dozer continues to grade in cell-3.

19:20 ERC stopped with the dozer I departed the s.i.

ERC placed 123 loads today x 18 cys = 2214

Signature

(12)

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 4 Thurs

Page 1 of 2

Project: Cell 3

Date: 08/16/2012

Project No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 94 Low 76 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Volvo	25 Ton	2	2
Roller Ingersoll Rand	SD100	1	1
Roller CAT	563	1	0
Water Tanker CAT	5000 gal	1	1

Visitors	Representing
Edwin Suddreth	CEC

Daily Notations:

06:30 I picked up items for testing soil and arrived on site. ERC personnel are on site. ERC personnel on site. I set up the soils lab at the Pod.

07:15 ERC personnel are placing and compacting fill on the east berm area.

09:00 I am performing moisture density test on compacted sections of the east berm. ERC has 2 trucks moving fill to the berm. The south end of the east berm was dry. ERC will get the water tanker operating.

11:30 ERC personnel are placing fill, adding moisture and compacting on the south east floor and east berm.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Report No.: 4 Thurs

Date: 08/16/2012 Page: 2 of 2

I retested the failed section of east berm and it passed.

14:00 ERC continues placing, grading and compacting fill on the east berm and floor. They are using the GPS Dozer to control lift thickness.

16:30 Edwin Suddreth with CEC is on site for the afternoon. I continue to perform moisture density test on the east berm and south east floor.

18:30 ERC continues placing fill on the floor of Cell-3. They will work until 19.00 today.

19:00 The crew stopped work except for the dozer grading. I am completing the testing of Drive cylinders.

19:30 ERC stopped work for the day. I departed the site.

ERC hauled 250 loads x 18 CY = 4500 CYs.

Signature

11

Daily Field Report

CFC

Owner: Vista Class III Landfill

Report No.: 5 FRI

Page 1 of 2

Project: Cell-3

Date: 08/17/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92 Low 77 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End dump Volvo	25 ton	2	2
Compactor Ingersoll Rand	SD105	1	1
Compactor CAT	543	1	0
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista landfill. ERC personnel are on site.

07:15 ERC personnel are placing and compacting fill at the east berm area. Fill is from the old road ~~area at~~ the North road area.

09:00 I am performing moisture density test on compacted sections of the berm. They are using the water tanker to wet the soil prior to compacting. The soil is mostly sand.

11:30 ERC continues placing, grading and compacting fill at the east berm and south east berm area. I

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 5 FRI

Date: 08/17/2012 Page: 2 of 2

Am observing the placement and grading, compacting and I am performing moisture density test.

1400 There are thunder storms around the area but none here yet. ERC continues to place, grade, wet and compact structural fill at the east berm and south berm of Cell-3. I am performing moisture density test.

1615 ERC stopped placing fill at the berms. They are stockpiling fill at the south west side of Cell-3. They stopped grading or compacting at this time.

1700 ERC stopped work for the day. They will not work until Monday.

1705 I departed the site.

Note! ERC hauled 168 loads today = @18 $\frac{cy}{load}$ = 3024 cy

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 6 MON

Page 1 of 2

Project: Cell - 3

Date: 08/20/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. MC

Temp.(EF): High 94° Low 77° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo	330	1	1
Excavator Linkbelt	330	1	1
End dump Volvo	25 tons	2	2
Compactor Ingersoll Rand	SD100	1	1
Compactor CAT	563 ~~5000 gal~~	1	0
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

Daily Notations:

07:10 I arrived on site at Vista Landfill. ERC personnel are on site working on thier equipment. They are making repairs to thier dozer. They do not have the excavator on site yet.

09:00 I picked up propane for the stove to dry soil samples. The excavator is on site. ERC has not started work yet.

10:00 ERC personnel are placing, grading, adding moisture and compacting fill on the east berm. I am performing moisture density test on compacted sections of lifts.

13:00 The dozer knocked out the pipe near the north toe of slope. The GPS located the pipe. They will relocate the

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 6 Mon

Date: 08/20/2012 Page: 2 of 2

pipe after they excavate the area. I continue to perform moisture density test on compacted sections of the east slope.

16:00 ERC has another excavator on site. They are using both excavators at this time. They removed the cat compactor from the site.

17:25 ERC stopped hauling fill. They are servicing thier equipment.

17:45 I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 7 Tues

Page 1 of 2

Project: Cell - 3

Date: 08/21/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. MC/Rain

Temp.(EF): High 89° Low 74 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins.

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	4

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo	330	1	1
End Dump Volvo	25 Ton	2	2
Compactor Ingersoll Rand	SD/00	1	1
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

Daily Notations:

06:55 I arrived on site at Vista landfill. ERC personnel are on site.

07:15 ERC started placing fill on the west floor of cell-3. They are adding moisture and compacting the east berm area.

08:00 I am performing moisture density test on compacted sections of the east berm. They trucks are placing fill at the west floor with continued proof rolling.

11:00 ERC personnel are placing fill on the west floor area. They are proof rolling the floor as the haul the fill. ERC continues to add moisture, grade and compact fill on the east berm. I am performing moisture density

Signature: Jonny C Bradford

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 7 Tue

Date: 08/21/2012 Page: 2 of 2

test on compacted lift sections.

14:00 I am performing moisture density test with drive cylinders on compacted sections of lifts at the east berm. ERC continues placing, adding moisture, grading and compacting fill on the east berm. I shipped sample SF-3 at Fedex.

15:15 Thunder storms are moving through the area. There is rain. ERC continues to load trucks. They are placing fill on the east slope.

16:45 ERC personnel stopped work and are fueling their equipment. Rain continues.

17:00 ERC has stopped work except for the GPS dozer grading the North slope and inside slope of the east berm.

19:00 ERC stopped work for the day. I departed the site

Signature [signature]

Daily Field Report

CFC

Owner: Vista Class III Landfill

Report No.: 8 Wed

Page 1 of 2

Project: Cell- 3

Date: 08/22/2012

Project: No.: 101.07.08

Weather: A.M. mc P.M. Rain

Temp.(EF): High 89 Low 73° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	5

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Excavator Volvo	330	1	1
End dump Volvo	25 TON	2	2
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:55 I Arrived on site, ERC personnel are on site. There was some rain last night but water has been pumped off the floor of Cell 3.

07:15 ERC personnel are compacting fill on the east berm. They are grading the inside slope of the east berm. Excess soil is pushed to the floor. They started excavating the 6" pipe At the south toe of slope and they are grading high points in the floor.

08:30 I discussed the As-built survey with Sheree. The top of subbase and top of protective cover will be As-built. I informed Peter Walls. ERC personnel are using both excavations.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 8 Wed

Date: 08/22/2012 Page: 2 of 2

11:00 ERC continues to grade the inside slope of the east berm where, it was overbuilt for compaction, They continue to excavate the 4" drain pipe along the south toe of slope.

13:00 ERC personnel are placing fill from the borrow area across from the site office. They are placing fill on the east berm.

13:40 Rain started. ERC continues grading the east berm to get water to drain. They continue to excavate the 6" pipe at the toe of the south slope.

15:00 ERC stopped work except for excavating the the 6" pipe at the south slope.

16:30 ERC stopped work because of the rain. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 9 Thurs

Page 1 of 2

Project: Cell 3

Date: 08/23/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. PC

Temp.(EF): High 88° Low 75° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	5

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt Excavator Volvo	330 330	1 1	1 1
End dump Volvo	25 TON	3	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:45 I arrived on site. ERC personnel are on site. It is overcast this morning but no rain.

07:30 ERC personnel are hauling fill from the West borrow area to the floor of Cell-3. They are proof rolling as each truck crosses the cell.

09:30 ERC started filling the hole at the toe of the south slope where the 6" pipe was removed. They are also placing fill inside Cell-3, west side. Fill is from the west borrow area.

12:00 ERC personnel continues placing, grading and compacting fill at the west side of the south toe of slope. This is the area where the 6" pipe was removed. They continue to place fill on

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Thurs

Report No.: 9 Thurs

Date: 08/23/2012

Page: 2 of 2

West floor of Cell-3

15:00 ERC personnel are compacting 12" lifts at the trench cut at toe of south slope where the 6" pipe was removed. They continue to place fill on the west floor.

18:00 ERC continues to place fill on the west floor area of cell-3. They are grading fill along the toe of south slope, west side.

19:15 ERC stopped work for the day. They are servicing their equipment. Jack Wiggins said that they will work this Saturday because of the projected rain next week. I departed the site

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 10 FRI

Page 1 of 2

Project: Cell - 3

Date: 08/24/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. PC

Temp.(EF): High 91 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	2
End dump Volvo	25 Ton	3	2
Compactor Ingersoll Rand	SD 100	1	1
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista landfill. ERC personnel are on site.

07:15 ERC personnel started placing fill on the east berm and they are compacting fill at the south toe of slope, west side. I am performing moisture density test.

09:30 6 Rolls of GCL arrived on site. The packing slip has 8 rolls, I informed Sheree. ERC placed the 6 rolls of GCL on a pad to keep it above ground. Jack said that he will get a tarp for the GCL. I continue to perform moisture density test.

12:00 ERC stopped work for lunch except for the trackhoe working

Signature: Tony L Bradford

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101. 07. 08 Report No.: 10 FRI

Date: 08/24/2012 Page: 2 of 2

At the south toe of slope. They are also working on the D6 dozer.

13:15 ERC personnel are placing fill on the east berm and at the south toe of slope. I am performing moisture density test.

16:00 ERC personnel are placing, grading and compacting fill on the east berm and south berm area.

19:00 ERC personnel stopped working in Cell 3. They used a Tarp to cover the GCL Rolls.

19:15 I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 11 SAT

Page 1 of 2

Project: Cell-3

Date: 08/25/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. MC

Temp.(EF): High 89 Low 74° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	4

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	1
End dump Volvo	25 ton	3	0
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are on site.

07:15 ERC personnel are compacting fill on the east berm and cleaning up the cell. ERC will not place any fill today.

09:00 ERC personnel are grading the floor of Cell-3 and compacting. They are preparing the surface for rain.

11:30 ERC personnel are compacting and smooth drum rolling the floor of Cell-3. They are moving excess soil at the south floor. ERC started grading the south road area to drain rain water toward

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 11 SAT

Date: 08/25/2012

the cells to keep rain water on site.
12:40 ERC stopped work for the day. They will be on site Monday even with rain. I departed the site.

Signature

CEC

Owner: Vista Class III Landfill

Report No.: 12 MON

Page 1 of 1

Project: Cell - 3

Date: 8/27/2012

Project: No.: 101.07.08

Weather: A.M. Rain P.M. Rain o/c

Temp.(EF): High 74 Low 87 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	2

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	0
End Dump Volvo	25 ton	3	0
Compactor Ingersoll Rand	SD700	1	0
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Hills landfill. There is a steady moderate rain this morning. Jack with ERC is on site.

08:00 ERC will pump water and they will grade the West borrow area. I will check with ERC later. Rain continues

10:00 I am checking moisture density test results with the drawing. Rain continues

15:00 The rain has stopped. The cell 3 area is wet. It is too wet to perform any work in cell-3. I only worked 4.0 hours today.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

(4)

CEC

Owner: Vista Class III Landfill

Report No.: 13 Tue

Page 1 of 2

Project: Cell 3

Date: 08/28/2012

Project: No.: 101.07.08

Weather: A.M. OC P.M. Rain

Temp.(EF): High 90 Low 79 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	1
End Dump Volvo	25 ton	4	2
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	0
Mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site. The weather is partly cloudy but no rain.

07:15 ERC personnel are working on their Dozer. They are compacting the east berm. The cell floor is wet.

08:30 I am performing moisture density test. Soil on the berm is not wet. Moisture density test are passing.

09:00 ERC has a mini excavator on site and started exposing the tie in liner at the west edge of Cell 3.

10:00 ERC started hauling fill from the west borrow area to the east berm. They have 2 trucks hauling. I am performing moisture density test.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

12

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 13 Tue

Date: 08/28/2012 Page: 2 of 2

13:00 Rain started. ERC personnel started grading the top of the east berm. They stopped hauling fill.

14:00 Rain has stopped. ERC personnel are using the mini excavator to clean the edge of liner at the west tie-in, north side. ERC completed the 6" pipe removal at the south end.

15:30 They are building a larger ramp into the south end of the cell. ERC will replace the pump that they are having problems with.

16:00 Rain started again. ERC continues to haul fill to the ramp at the south end of cell 3.

18:00 ERC personnel are having problems with the pump at the sump area. They will have the sump replaced. There is rain off and on.

19:00 ERC replaced the pump but it has no automatic start. They will repair the pump tomorrow. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Project: Cell 3

Project: No.: 101. 07. 08

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Report No.: 14 Wed

Page 1 of 2

Date: 08/29/2012

Weather: A.M. PC P.M. PC Rain

Temp.(EF): High 91 Low 75 Rain

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	13

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	2
End dump Volvo	25 ton	4	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 ~~gal~~	1	0
mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:45 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:10 ERC started excavating Liner, Along the west tie-in Area for Cell 3. They are excavating using the mini excavator and by hand.

08:00 ERC personnel are placing fill on the south berm. They are pumping water from the cell floor at the sump.

10:00 I am performing moisture density test on the south berm as ERC personnel compact lifts. Fill is from the west borrow area.

11:00 ERC continues placing, grading and compacting fill on

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

1/15

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 14 Wed

Date: 08/29/2012 Page: 2 of 2

the south berm. They are replacing the pump at the sump again. ERC continues to clean soil off the tie in liner.

14:00 ERC personnel are placing and compacting fill at the south berm area. I am performing moisture density test. Fill is from the west borrow area. ERC continues to excavate soil from the tie in at cell-3 west edge.

16:00 ERC continues placing soil on the south berm. I am observing and performing moisture density test on compacted lift sections.

18:30 ERC has stopped work in cell-3. They are fueling their equipment. I departed the site.

There was rain lak!

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 15 Thurs

Page 1 of 2

Project: Cell-3

Date: 08/30/2012

Project: No.: 151.07.08

Weather: A.M. PC P.M.

Temp.(EF): High 91 Low 76 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	9

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	2
End dump Volvo	25 ton	3	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	1
Mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site. There was rain overnight. The sump area of Cell-3 has standing water. The automatic pump did not work. ERC turned the pump on.

07:30 ERC graded the haul road and started hauling fill from the west borrow area to Cell-3. I am observing and performing moisture density test.

10:00 I continue to perform moisture density test on compacted lifts on the south berm. ERC personnel are locating liner at the south west corner of Cell-3 to tie-in.

13:00 ERC personnel are placing fill on the east berm. They

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Report No.: 15 Thurs

Date: 08/30/2012 Page: 2 of 2

continue to excavate at the Liner tie-in, south west side of Cell-3. I am performing moisture density test on compacted lift sections. I shipped S.F-4 for Laboratory testing, The soil changed.

15:30 ERC personnel continues placing, grading and compacting fill on the east berm. I am observing and performing moisture density test on compacted Lift sections

16:55 ERC stopped hauling to the east berm. They are hauling to the slope of the Active Cell, North side to construct A berm to stop rain water from getting into cell-3. They are preparing the berm to set A pump.

19:00 ERC completed the berm across the ditch, North side of the Active cell and set A 6" pump. They stopped work for the day. I departed the site.

Signature [signature]

12.0

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 16 FRI

Page 1 of 2

Project: Cell 3

Date: 08/31/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 90 Low 74 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	2
End dump Volvo	25 Ton	3	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 GAL	1	1
Mini Excavator Komatsu	88	1	0

Visitors | Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill, ERC personnel are on site.

07:20 ERC started hauling fill from the west borrow area to the east berm, I am performing moisture density test,

10:30 ERC personnel are placing grading and compacting fill on the east berm, I am observing the placement, grading, adding moisture and compacting. I am also performing moisture density test on compacted Lift sections,

13:00 ERC personnel continues to place fill on the east berm.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 16 FRI

Date: 08/31/2012 Page: 2 of 2

Fill is from the west borrow area. There are [illegible] plastic.
ERC personnel are pulling the plastic out of the fill. I am
performing moisture density test on the east berm.
16:00 I continue to perform moisture density test on compacted
Sections of east berm. ERC personnel stopped hauling
fill. They are grading the berms at the road area, south
side to drain water if there is rain.
17:00 ERC has the D6 dozer grading fill at the south
road, south berm and east berm to divert rain water
if there is rain. The remaining personnel has departed the
site until Tuesday morning.
18:00 I departed the site.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 17 Tue

Page 1 of 2

Project: Cell - 3

Date: 09/04/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. PC

Temp.(EF): High 93 Low 72 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	DC	1	1
Excavator Link Belt Volvo	300	2	2
End dump volvo	25 ton	3	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	1
Mini Excavator Komatsu	88	1	1

Visitors: Seth Nunes

Representing: CEC

Daily Notations:

06:45 I arrived on site at Vista Landfill, ERC personnel are on site.

07:15 ERC personnel are grading the haul roads for trucks to haul from the west borrow area.

07:45 ERC started placing fill on the east berm from the west borrow area. There are pices of plastic in the fill. ERC will remove the plastic.

09:00 ERC personnel are placing fill on the east berm. They are removing pices of plastic from the fill. I am performing moisture density test.

11:00 I attended the preconstruction meeting for cell 3-soils

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 17 Tues

Date: 09/04/2012 Page: 2 of 2

with WMI, ERC, CEC and the city of Apopka. Please see minutes of meetings.

13:00 ERC personnel are placing fill on the south berm and they are cleaning the south west tie-in area for the Liner. They are using the mini excavator. I am observing and performing moisture density test.

16:00 I continue to perform moisture density test on compacted lift sections on the south berm. ERC started cutting the north slope of the south berm. They are also cleaning Liner at Cell 2 where Cell 3 will tie-in at the south edge.

18:00 ERC personnel has stopped work for the day. I departed the site.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 18 Wed

Page 1 of 2

Project: Cell - 3

Date: 09/05/2012

Project: No.: 10.1.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92 Low 73° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Volvo Link Belt	330	2	2
End Dump Volvo	25 ton	3	3
Compactor Ingersoll Rand	SD 100	1	1
Water Tanker CAT	5000 gal	1	1
Mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:55 I arrived on site, ERC personnel are on site preparing to haul fill.

07:30 ERC personnel are hauling fill to the south berm, They are grading with the GPS dozer, adding moisture and compacting.

08:00 ERC started excavating soil off the Liner at the south west corner of cell-3, I am observing and performing moisture density test on compacted Lift sections.

11:00 ERC personnel are placing, grading, adding moisture and compacting fill on the south berm, I am observing and performing moisture density test, ERC shipped

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Report No.: 18 Wed

Date: 09/05/2012 Page: 2 of 2

the Volvo excavator off site.

14:00 I continue to perform moisture density test on compacted sections of lifts on the south berm. ERC continues placing fill from the west borrow area at cell 5. They are using the mini excavator to excavate soil off liner in cell-2 at the south west corner of cell-3.

17:00 ERC stopped hauling fill. They are using the Linkbelt excavator to move soil at the west side of the south berm.

19:00 ERC stopped work for the day. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 19 Thurs

Page 1 of 2

Project: Cell 3

Date: 09/06/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC/Rain

Temp.(EF): High 93 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	
Excavator LinkBelt	330	1	
End dump Volvo	25 Ton	3	
Compactor Ingersoll Rand	SD100	1	
Water Tanker CAT	5000 gal	1	
Mini Excavator Komatsu	58	1	

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:20 ERC personnel are placing fill on the south berm. I am observing the lift thickness and compacting. ERC has 2 personnel removing pices of plastic from the fill.

10:00 ERC personnel continues to place, grade and compact fill on the south berm. Fill is from the west borrow area at cell-5. They are using some fill excavated from the tie-in area, south side between cells 2 and 3. They have personnel removing pices of plastic from the fill. I am observing

Signature: Tony C Bray

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 10/1 07.08 | Report No.: 19 Thus

Date: 09/06/2012 | Page: 2 of 2

the grading, adding moisture and compacting. I am also performing moisture density test.

13:00 ERC continues placing, grading and compacting fill on the south berm. I am performing moisture density test.

15:05 Rain started. ERC personnel continues to place fill on the south berm.

16:00 The rain has stopped. ERC personnel are cutting up trees at the north end of the cell. They will not haul any fill to keep the roads from turning to mud.

17:30 ERC stopped work for the day. I departed the site.

Signature

White Copy - Library File   Yellow Copy - Owner   Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 20 FRI

Page 1 of 2

Project: Cell - 3

Date: 09/07/2012

Project: No.: 101-07-08

Weather: A.M. PC P.M. PC / Trace

Temp.(EF): High 91 Low 73 Rain Trace

Contractor(s) ERC

Contractor Super(s)

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End dump Volvo	25 Ton	3+1	4
Compactor Ingersoll Rand	SD 100	1	1
Water Tanker CAT	5000 GAL	1	1
Mini Excavator Komatsu	88	1	0

Visitors

Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:20 ERC personnel are hauling fill from the west borrow pit to cell-3, south berm. They are grading and compacting lifts on the south berm.

08:30 ERC moved the area they are loading from. This soil has a yellow tent. I am performing moisture density test.

11:00 ERC continues to place, grade, add moisture and compact fill on the south berm. I am observing and performing moisture density test.

Signature: Tony C Braff

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101,07.08 Report No.: 20 FRI

Date: 09/07/2012 Page: 2 of 2

13:00 ERC personnel are placing, grading and compacting fill on the south berm. I am observing and performing moisture density test. ERC brought in a loader and another truck to haul off trees pilled up at the north end of G11-3.

16:00 There is a sprinkle of rain off and on. ERC continues placing, grading, adding moisture and compacting fill on the south berm. I am observing and performing moisture density test. ERC continues to remove trees from the north side of G11-3.

17:30 ERC stopped placing fill. I am completing moisture density test.

18:00 I departed the site for the day.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Owner: Vista Class III Landfill

Report No.: 21 SAT

Page 1 of 2

Project: Cell 3

Date: 09/08/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End dump volvo	25 Ton	4	1
Compactor Ingersoll Rand	SD100	1	1
Water Truck CAT	5,000 gal	1	0

Visitors

Representing

Daily Notations:

06:40 I arrived on site at vista landfill. ERC personnel are on site.

07:00 ERC has a flat on one of the trucks. The dozer has a hose leaking. ERC will cut excess Liner at cell 2 tie-in at the south side to grade a slope toward the sump.

07:30 ERC are using the excavator to remove soil from the Liner at the south west side of Cell-3.

08:00 ERC personnel are cutting sections of Liner at the south west corner of Cell-3. They are preparing the tie in area for Cell-2 and Cell-3 at the south west corner. They are not hauling any fill.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101. 07. 08 Report No.: 21 SAT

Date: 09/08/2012 Page: 2 of 2

11:00 ERC continues to remove geocomposite and liner at the south west tie-in area of Cell 3. Shane Cover was on site and observed the south west corner work.

13:30 ERC personnel removed liner and geocomposite, 10' lower than the tie-in shown on the drawings. They pulled excess liner up the slope. Scrap liner and geocomposite was hauled to the active landfill.

14:30 ERC personnel are placing and compacting fill in the south west corner of Cell 3 to drain rain water out of the corner.

16:30 ERC personnel stopped work for the day. The dozer will grade the road and around the berms to drain water if there is rain. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 22 MON

Page 1 of 2

Project: Cell-3

Date: 09/10/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 89 Low 77° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator LinkBelt	330	1	1
End dump Volvo	25 ton	4	4
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 GAL	1	1

Visitors

Representing

Daily Notations:

06:35 I arrived on site at Vista Landfill, ERC personnel are on site.

07:20 ERC personnel started placing fill on the south berm and at the area where the liner was removed. They have 4 trucks.

09:00 ERC personnel are placing, grading, adding moisture and compacting fill on the south berm, I am observing and performing moisture density test.

11:00 ERC continues to place grade and compact fill at the south berm and the area where liner was removed, south west corner.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.0

CEC

Project No.: 101.07.08 Report No.: 22 MON

Date: 09/10/2012 Page: 2 of 2

13:30 ERC personnel continues to place fill on the south berm. I am observing the placement, grading, adding moisture and compacting. I am performing moisture density test on compacted lift sections.

16:00 ERC personnel continues placing grading and compacting fill on the south berm. I am observing and performing moisture density test.

17:00 ERC started placing the 6" subbase on the south berm of on-3. I am observing the soil placement.

18:00 ERC has stopped work for the day. I departed the site.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 23 Tue

Page 1 of 2

Project: Cell-3

Date: 09/11/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 88 Low 75 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator LinkBelt	330	1	1
End Dump Volvo	25 TON	4	4
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

Daily Notations:

06:45 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:15 ERC personnel are placing fill on the south berm. I am observing and performing moisture density test on compacted sections of lifts. Fill is from the road area at Cell-5.

10:00 I am performing moisture density test on compacted lift sections at the south berm area. ERC personnel are placing, grading, adding moisture and compacting fill on the south berm.

13:00 ERC ran out of fill at the road area. They are in

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.0

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 23 Tue

Date: 09/11/2012

Page: 2 of 2

white sand. They will move thier location to get fill.

15:00 The D6 dozer is down. They are working on it. ERC continues to move sand at the borrow area with the excavator. They have stopped hauling fill. They are working on a road at the borrow area.

17:00 ERC stopped work for the day. They moved sand off orange soil at the borrow area and completed a road. I departed the site.

Signature [signature]

CEC

Owner: Vista Class III Landfill

Project: Q11-3

Project: No.: 101.07.08

Report No.: 24 Wed

Page 1 of 2

Date: 09/12/2012

Weather: A.M. PC P.M. PC

Temp.(EF): High 86 Low 71 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator LinkBelt	330	1	1
End dump Volvo	25 Ton	3	3
Compactor Ingersoll Rand	SD100	1	1
Water Tanker CAT	25 Ton	1	1

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are on site. They do not have a dozer on site yet.

07:20 ERC started placing fill in stockpiles. They still do not have a dozer yet.

08:45 ERC has thier dozer on site. They started grading the borrow area. They continue to stockpile fill at the south berm area.

11:00 ERC personnel are placing, grading, adding moisture and compacting fill at the south and west side of the south berm. I am observing the trucks loaded as they drive across the berms. There is no soft spots. I am performing

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

12

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 24 Wed

Date: 09/12/2012 Page: 2 of 2

moisture density test on compacted lift sections.

14:00 ERC continues placing grading and adding moisture to fill at the south slope. I am observing and performing moisture density test.

17:00 ERC personnel are placing fill on the south berm. They placed fill in the storage area, North of Cell-3. This fill will be used for storing Liner and geocomposite. I continue to perform moisture density test on compacted sections of the south berm. Steve Grant was on site and observed work in progress.

18:25 ERC stopped placing fill. They continue to grade fill on the south berm, I am testing samples.

19:00 ERC has stopped work. They are fueling their equipment. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 25 Thurs

Page 1 of 2

Project: Cell - 3

Date: 09/13/2012

Project: No.: 106 C7. 08

Weather: A.M. PC P.M. PC

Temp.(EF): High 86 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Volvo	25 Ton	3	3
Compactor Ingersoll Rand	SD 100	1	1
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

/

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:30 ERC personnel started placing fill on the south berm and at the run out in the south east corner.

09:00 I am performing moisture density test on the south berm as ERC personnel compacts lifts.

11:00 ERC personnel continues to place, grade, add moisture and compact fill on the south berm. I am observing and performing moisture density test.

13:00 ERC continues placing, grading and compacting fill on the south berm. They are working in the area where

Signature: Tony C Buff

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.5

Daily Field Report

CEC

Project No.: 121-07-08 Report No.: 25 Thurs

Date: 09/13/2012 Page: 2 of 2

Liner was removed at the south west corner of cell 3.
I am observing the trucks operating on compacted fill and
performing moisture density test.
16:00 ERC continues to place and compact fill at the south
berm. They are operating the water tanker at each lift.
I am observing and performing moisture density test.
18:00 ERC stopped hauling fill. They continue to grade
with the D6-dozer.
18:30 ERC personnel are servicing thier equipment. I departed
the site.

Note! ERC will over fill the south west berm area
and excavate the tie-in area to insure good
compaction in this area.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 26 FRI

Page 1 of 2

Project: Cell - 3

Date: 09/14/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 88 Low 74 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End dump Volvo	25 Ton	3	3
Compactor CAT / Ingersoll Rand	563 / SD100	1 / 1	0 / 1
Water Tanker CAT	5000 gal	1	1
Mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill, ERC personnel are on site.

07:20 ERC started placing, grading, adding moisture and compacting fill on the south berm. They are working on the tie-in area at the south west corner of cell-3.

09:00 I am performing moisture density test on compacted section of lifts at the south berm. ERC personnel are placing and compacting fill.

12:00 I shipped the following samples at Fedex. SF-5, SF 6, for Atterbergs only, PC-1, 2, 3, 4, & 5.

15:00 ERC personnel graded the sides of the south berm

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.0

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 26 FRJ

Date: 09/14/2012

Page: 2 of 2

and moved to the north berm. They are grading top of slope at the north berm.

17:00 ERC personnel stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 27 SAT

Page 1 of 2

Project: Cell - 3

Date: 09/15/2012

Project: No.: 101.07.08

Weather: A.M. PC/RAIN P.M.

Temp.(EF): High 85 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) JACK Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	5

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai Dozer CAT	760-7A D6	1 1	1 1
Excavator LinkBelt	330	1	1
End dump Volvo	25 ton	3	1
CAT Compactor Ingersoll Rand	563 SD100	1 1	1
Water Tanker CAT	5000 gal	1	0
Mini Excavator Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:15 ERC personnel are moving excess soil from the south berm to the north berm.

08:00 ERC personnel are grading the north slope subbase with the GPS dozer. They are grading the top of berm at the west side with the mini excavator and hand rover.

10:30 ERC personnel are grading the inside slope of the east berm with the GPS dozer. They are grading top of the North berm with the hand rover and mini excavator. They also installed a silt fence around the drainage

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.5

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 27 SAT

Date: 09/15/2012

structure at the ditch next to the North berm.

11:20 Rain started. ERC personnel continues grading the inside slope of the east berm.

13:30 ERC personnel continues to grade the sides of the east berm and the top of the North berm. They are moving excess soil to the south east corner to construct a ramp to get in and out of the cell. Rain has stopped.

16:00 ERC personnel are removing excess fill from the floor of cell-3. They are grading the North berm with the GPS dozer.

18:30 ERC stopped work for the day. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Project: Cell - 3

Project: No.: 101. 07. 08

Report No.: 28 SUN

Page 1 of 2

Date: 09/16/2012

Weather: A.M. PC P.M. PC

Temp.(EF): High 88 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	5

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	0
Mini Excavator Komatsu	88	1	0
Compactor Ingersoll Rand	SD/00	1	1
Compactor CAT	563	1	1
End Dump Volvo	25 Ton	3	3
Water Tanker CAT	5000 gal	1	1

Visitors | Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel Are on site.

07:15 ERC personnel Are fine grading AND removing excess fill from Cell-3 floor AND south berm.

10:30 ERC personnel Are using the GPS dozer to fine grade the surface of Cell-3, They Are using the loader AND trucks to remove excess fill, It Appears that About 0.1 cut is being made on the surface.

11:30 ERC Are pulling A piece of fence with the ATV to smooth the surface of the floor, They continue to fine grade AND remove excess soil,

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Report No.: 28 SUN

Date: 09/16/2012 Page: 2 of 2

14:00 ERC personnel are fine grading the east floor of cell-3. They started static rolling the west floor. They are walking the floor area checking for any stones or hard dirt clods.

16:00 ERC personnel are smoothing the floor of cell-3 with a pice of chain link fence pulled by the ATV and smooth drum rolling. They are also grading the south berm with the GPS dozer.

16:55 ERC stopped work for the day. I departed the site. ERC did not complete the subgrade for survey. They have more work tomorrow morning.

Signature

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 29 MON

Page 1 of 2

Project: Cell-3

Date: 09/17/2012

Project: No.: 10.07.08

Weather: A.M. PC P.M.

Temp.(EF): High Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Mini Excavator Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	1
Compactor CAT	563	1	1
End Dump Volvo	25 Ton	3	1
Water Tanker CAT	5000 gal	1	1

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista landfill. ERC personnel are on site.

07:00 ERC stared grading the storage area for Liner, Material should start arriving today.

07:30 ERC started placing fill at the east run out and, east side of the east berm. They are using 1 truck.

09:30 1 load of 60 micro spike Liner arrived on site and was unloaded by ERC personnel. I took inventory.

11:30 Universal Engineering was on site for 1 hour today. They performed 4 density test, Two test on the north berm failed and will be retested, ERC unloaded the 2nd load of Liner today. They

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101-07-08 Report No.: 29 MON

Date: 09/17/2012 Page: 2 of 2

Are smooth drum rolling the floor of Cell-3.

13:30 The survey crew is on site to As-built the inside section of Cell-3. The east liner run out area is incomplete. ERC continues to haul fill to the run out area of the east berm.

14:10 ERC stopped hauling fill. They are working on thier D6 dozer and they do not have the water tanker on site. They are using the mini excavator to shape the south west tie in area.

16:00 ERC stopped work for the day. They do not have the water tanker on site. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 30 Tue

Page 1 of 2

Project: Cell - 3

Date: 09/18/2012

Project: No.: 101.07.08

Weather: A.M. MC / Rain P.M. Rain

Temp.(EF): High 88 Low 77° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	10
ESI	13

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Mini Excavator Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	1
Compactor CAT	563	1	0
ERC Dump Volvo	25 Ton	3	2
Water Tanker CAT	5000 gal	1	1
Skid Steer			

Visitors | Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:00. ERC has the water tanker back on site but the removed the CAT 563 compactor from the site. ERC has extra personnel on site today.

07:30 ERC started cleaning the Liner tie-in by hand at the South west corner.

09:00 One load of liner arrived on site and was unloaded by ERC personnel, I took inventory. They are adding moisture and compacting the east berm. ESI arrived on site.

10:30 I am performing moisture density test on the east berm

Signature:

White Copy - Library File   Yellow Copy - Owner   Pink Copy - Employee's Field File

11.0

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 30 Tue

Date: 09/18/2012 Page: 2 of 2

And on the run out.

11:30 A thunder storm moved through the area. There is light rain. ERC continue to haul fill to the run out area at the east berm.

13:00 A load of geocomposite arrived. I took inventory as ERC unloaded the truck. ERC personnel are cleaning the tie-in liner along the west tie-in of cell 3.

14:00 Rain continues. ERC continues to haul fill to the run out area of east berm. They are cleaning the liner at cell-2 for tie in.

17:00 ERC built a soil berm at the road area, north of the north berm to divert water if there is hard rain. They are placing fill on the run out at the east berm. Light rain continues.

18:00 ERC stopped work for the day. ESI was on site and started filling sand bags but departed the site when rain started.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 31 Wed

Page 1 of 3

Project: Cell-3

Date: 09/19/2012

Project: No.: 101.07.08

Weather: A.M. [illegible] P.M. Rain

Temp.(EF): High 88 Low 75 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-9A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Mini Exca Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	1
End Dump Volvo	25 Ton	3	2
Water Tanker CAT	5000 GAL	1	1
Skid Steer Roller	Roller	1	1

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill. ERC personnel are on site.

07:00 ESI personnel arrived on site. They started filling sand bags.

07:20 ERC personnel are hand raking the north slope. They started hauling fill to the run out area of the east berm.

08:30 Seth Nunes is on site. He walked the Cell 3 work area. ERC continues placing fill at the east run out area.

09:30 I attended the Preconstruction meeting for Liner. Please see minutes of meetings.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

(11.0)

CEC

Project No.: 101.07.08 Report No.: 31 Wed

Date: 09/19/2012 Page: 2 of 3

10:30 There is a wet spot at the toe of east berm about 75' from the North east corner. We uncovered the 6" subbase to check and it was dry under the subbase. The area will be left open to see if any more water appears. A load of geocomposite arrived and was unloaded by ERC personnel.

12:30 I shipped soil samples at Fedex. ERC personnel are placing, grading and compacting fill on the east run out area. There are thunder storms moving through the area.

14:00 Rain started. ERC personnel are standing by. Rain is heavy at times.

15:30 Rain has stopped. ERC personnel are hand raking the north slope.

16:30 I spoke to Seth Nunes. The control points are not at 50' intervals. Some are 52, 53 ecta. Seth will let me know about the survey. ERC started excavating the North anchor trench, 2' from the crest at the North west corner. They are grading the east side of the east berm with the CPS dozer.

17:30 ERC only excavated about 40' of anchor trench. They uncovered the tie-in liner in the anchor trench at the North west corner. They will not uncover

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.27.08

Report No.: 31 Wed

Date: 09/19/2012

Page: 3 of 3

any more anchor trench until tomorrow because of the weather. They continue to grade the east side of the east berm.

18:00 ERC stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File   Yellow Copy - Owner   Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 32 Thur

Page 1 of 2

Project: Cell 3

Date: 09/20/2012

Project No.: 101-07-08

Weather: A.M. OC P.M. MC

Temp.(EF): High 88 Low 76 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760 7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Mini Excavator Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	0
Enc dump Volvo	25 Ton	2	2
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:45 I Arrived on site at Vista Landfill. ERC personnel Are on site.

07:00 ERC held thier morning safety meeting. ESI personnel Arrived on site and held thier safety meeting. The Area is too wet to deploy liner from rain yesterday And last night. ESI will depart the site and return At noon to check conditions.

07:30 Seth Nunes called. The certification shots for Cell 3 will be reshot. ERC personnel Are making repairs to subgrade And subbase from eroded ruts.

09:00 The concrete manholes Arrived on site. They were unloaded

Signature: [signature]

10.0

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 32 Thurs

Date: 09/20/2012 Page: 2 of 2

south of the south road. ERC personnel are removing trash liner from the south side of Cell-3.

10:30 ERC has thier GPS checking grades inside Cell-3. They are cleaning the tie-in liner along the west side of Cell-3.

11:00 ERC started building a diversion berm accross the active landfill to divert rain water to the ditch at the North side of the active landfill. They are using 2 trucks and the D6 dozer.

13:00 ERC personnel continues work on the diversion berm at the active landfill. They are also cleaning the liner tie-in along the west edge of Cell-3. They are also checking grades with the GPS rover inside Cell-3,

15:00 ERC personnel are raking and checking the slope for rocks. They are pumping water from the sump area of Cell-3. They have 1 truck hauling fill to the diversion berm.

16:00 ERC completed the diversion berm. They are setting up the 6" pump at the south berm and sump location.

17:00 ERC has stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Class III Landfill

Report No.: 33 FRI

Page 1 of 2

Project: Cell-3

Date: 09/21/2012

Project: No.: 101.07.08

Weather: A.M. OC P.M.

Temp.(EF): High 89 Low 73 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Mini Excavator Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	1
End Dump Volvo	25 Ton	2	1
Water Tanker CAT	5000 GAL	1	0

Visitors | Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:00 ESI is on site. Myself, Arizona, Jack and Sheree walked the north slope. ERC will excavate the anchor trench and ESI will install panels on the north slope and out 70' from the toe. I called Yves and informed her.

08:00 ERC personnel are excavating the north anchor trench and hand raking the north slope. A load of geocomposite arrived and Jack told them that he will unload them at 09:00.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 33 FRI

Date: 09/21/2012

Page: 2 of 2

09:30 ERC personnel are unloading geocomposite. A 2nd load of geocomposite arrived on site.

10:45 ERC unloaded the 2 loads of geocomposite. A load of Drainage pipe 30" arrived on site.

13:00 ESI personnel are on site preparing tier equipment for placing panels.

13:15 ESI started panel placement on the north berm, starting at the west end. ERC personnel are excavating the anchor trench. I walked the subbase on the north slope and floor out 50'. ESI signed a Certificate of Acceptance.

16:00 ESI continues placing and seaming panels on the north berm of Cell-3. They are air testing seams as they complete seams.

18:00 Light rain started. ESI personnel are heat sealing patches over holes in the liner. They have completed welding.

18:50 ESI and ERC has stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill Cell 3

Report No.: 34 SAT

Page 1 of 2

Project: Cell 3

Date: 09/22/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. MC

Temp.(EF): High 90 Low 74 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	
ESI	1

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	0
Excavator Mini Komatsu	88	1	1
Compactor - Ingersoll Rand	SD100	1	1
End dump Volvo	25 Ton	2	0
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. Jack Wiggins and Arizona are on site. We walked the Floor area. There is a damp spot at the leachate trench area, but not a large area. ERC will back blade the area and allow it to dry. They will also excavate the seep area at the east berm toe and recompact soil in this area.

09:00 ERC personnel are grading the floor. They are excavating the wet spot at the toe of east berm, about 100' from the north east corner.

11:00 ERC Completed the repair at the wet spot. They excavated

Signature: Tony C Bradford

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

7.5

Daily Field Report

CEC

Project No.: 101, 07, 08 Report No.: 34 SAT

Date: 9/22/12 Page: 2 of 2

AN AreA 80' long AND 15' wide, All the Area excavated was dry after excavation, Red silty soil was compacted in Lifts over the repair Area, ESI personnel has not Arrived on site yet,

13:00 ERC personnel are checking grades with the GPS rover and GPS dozer,

14:00 ERC has rolled and checked the floor and berm About 200' south from the North berm. ESI will not start panel placement until tomorrow morning, They will not deploy tomorrow if there is rain tonight.

14:30 I departed the site,

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Owner: Vista Landfill Cell 3

Report No.: 35 SUN

Page 1 of 2

Project: Cell 3

Date: 09/23/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 90 Low 75 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator LinkBelt	330	1	0
Excavator Mini Komatsu	88	1	0
Compactor Ingersoll Rand	SD100		1
End Dump Volvo	25 ton	2	0
Water Tanker CAT	5000 gal	1	0

Visitors | Representing

Daily Notations:

06:50 I arrived on site, ESI and ERC personnel are on site. There was no rain yesterday and the area was dry. ERC personnel are rolling the berm slopes and floor.

07:30 ESI started placing panels in Cell 3. They are placing panels over the east berm and floor. I am walking the subbase in front of panel placement. ESI and myself signed a subgrade acceptance form. ESI personnel are also air testing seams

09:30 ESI continues to place and seam panels on the east berm and floor. They are making repairs to the

Signature: [signature]

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 35 SUN

Date: 09/23/2012 Page: 2 of 2

Liner. I am observing, recording and marking destructive samples on completed seams.

11:00 ESI personnel are placing GCL in the center of cell-6 and placing panel accross the cell. I am observing, recording and marking destructive seam samples. ERC personnel are smooth drum rolling in front of ESI placing panels.

14:00 I continue to observe, and record ESI placing and seaming panels in cell-3. I am marking destructive seam samples.

17:00 ESI stopped work for the day. They have not tested any destructive samples yet.

Signature ______________________

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Owner: Vista Landfill Cell-3 | Report No.: 36 MON

Page 1 of 2

Project: Cell-3 | Date: 09/24/2012

Project: No.: 101.07.08 | Weather: A.M. PC P.M. PC

Temp.(EF): High 96 Low 72° Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai Dozer CAT	760-7A D6	1 1	1 1
Excavator Link Belt Excavator Mini Kubota	330 88	1 1	0 1
Compactor Ingersoll Rand End Dump Volvo	SD100 25 ton	1 2	1 0
Water Tanker CAT	5000 gal	1	0

Visitors | Representing

Daily Notations:

06:50 I Arrived on site At Vista Landfill, ERC And ESI personnel arriving on site.

07:30 ESI personnel are installing panels on the south end of Cell-3, ERC personnel are fine grading the south slope at the tie-in Area.

10:00 I am observing and recording ESI personnel installing panels, seaming panels and making repairs to the liner. They are cutting and testing destructive seam samples. They are air testing seams as they complete seaming. ERC personnel are fine grading the south berm and the west tie in Area. The

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 36 mon

Date: 09/24/2012 Page: 2 of 2

330 excavator is down.

13:00 ESI personnel are field testing destructive seam samples, installing panels, seaming, making repairs to the liner and air testing seams. ERC continues fine grading the south berm.

16:00 ESI continues seaming making repairs to the liner and air testing seams. ESI personnel have deployed liner as far as they can go until the sump is excavated. ERC continues to fine grade.

17:30 ESI and ERC has stopped work for the day. I took 26 destructive seam samples to fedex for shipment to TRI for laboratory testing. I stopped work for the day.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Landfill

Project: Cell 3

Project: No.: 101208

Report No.: 37 Tue

Page 1 of 2

Date: 9/25/2012

Weather: A.M. MC P.M. PC

Temp.(EF): High 88 Low 67 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai Dozer CAT	760-7A D6	1 1	0 1
Excavator LinkBelt Excavator mini Komatsu	330 88	1 1	1 1
Compactor Ingersoll Rand End dump Volvo	SD100 25 ton	1 2	1 1
Water Tanker CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill. ERC personnel are on site unloading a load of pipe.

07:30 ESI personnel are placing panels at the south west corner. They are working north and will deploy across the south slope. ERC personnel are excavating the anchor trenche.

10:00 ESI personnel are placing and seaming panels on the south berm and south floor. ERC personnel are excavating the sump area and the ditch up the south berm at the sump. They are also removing the ramp at the south east corner.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 161.07.08

Report No.: 37 Tue

Date: 09/25/2012

Page: 2 of 2

13:00 ESI personnel continues to place panels, seam panels, make repairs and they are air testing seams. ERC personnel are excavating the sump. The survey crew is on site.

16:00 ESI has covered the sump area. They installed the GCL and bentonite. They continue to place and seam panels. ERC personnel are working on the anchor trench at the south berm

18:00 ERC personnel has stopped work for the day. ESI continues to place and seam panels.

19:45 ESI stopped work for the day. They completed placing panels for Cell-3. We checked the sump area and floor to insure all holes are patched to protect the sump if there is rain.

20:00 I printed out destructive test results and stopped work for the day.

Signature

13

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Daily Field Report

Owner: Vista Landfill

Project: Cell-3

Project: No.: 101.07.08

Report No.: 38 Wed

Page 1 of 2

Date: 09/26/2012

Weather: A.M. MC Fx P.M.

Temp.(EF): High 92 Low 70 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai Dozer CAT	760-7A D6	1 1	0 1
Excavator Link Belt Excavator mini Komatsu	330 88	1 1	1 0
Compactor Ingersoll Rand End dump Volvo	SD100 25 ton	1 2	0 0
Water Tank CAT	5000 gal	1	0

Visitors

Representing

Daily Notations:

06:30 I Arrived on site at Vista Landfill, ERC personnel are on site. I checked the 26 destructive samples set to the laboratory. All passed.

07:30 ESI personnel are performing detail work on Liner at the south side. ERC personnel are working on the overflow at the south east corner. ESI pulled the Liner back to allow them to grade the corner.

10:00 ESI personnel started geocomposite. They will do the tie-in at Panel 1 and then move to the east berm, work around the north berm to the west tie-in. I am walking the Liner in front of geocomposite placement.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.5

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 38 Wed

Date: 09/26/2012 Page: 2 of 2

13:00 ESI personnel are vacuum testing repairs in front of geocomposite placement. They are working on panels in the south west corner where the backhoe hit the liner while cleaning the sand. They are working on liner at the south east overflow.

16:30 I shipped destructive samples at Fedex. ESI also continues to place geocomposite on the east slope of cell 3.

17:15 I attended a meeting about the schedule, ERC will start sand tomorrow, ESI will complete the geocomposite on Friday.

18:15 I departed the site.

Signature

N.S

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 39 Thurs

Page 1 of 2

Project: Cell 3

Date: 09/27/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92 Low 72 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7
ESI	14

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai Dozer CAT	760-7A D6	1 1	1 1
excavator LinkBelt Excavator Mini Komatsu	330 88	1 1	1 0
Compactor [illegible] End dump Volvo	SD130 25 TON	1 2	0 2

Visitors Representing

Daily Notations:

06:40 I Arrived on site at Vista Landfill. ERC personnel Are on site.

07:00 ESI personnel Are on site. ERC personnel Are grading the borrow Area to get protective Cover. They Are moving fill At cell 4.

07:30 ESI started placing geocomposite At the south west side of cell 3. I Am observing the placement, plastic ties And sewing. I Am walking the liner in front of geocomposite placement to insure the Area is clean And no damage.

10:00 ESI continues placing geocomposite At the south

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.5

Daily Field Report

CFC

Project No.: 101.07.08 Report No.: 39 Thurs

Date: 09/27/2012 Page: 2 of 2

side of Cell-3. I continue to walk the liner in front of geocomposite

13:00 ESI personnel are placing, tying and sewing geocomposite in Cell-3. They are using a blower to clean liner in front of the placement. ERC personnel are preparing to build a ramp into Cell-3 at the south west corner

15:00 ERC dumped a load of protective cover with stones. They are removing the load. ESI continues to place geocomposite. I am walking the liner in front of the geocomposite being placed.

18:00 ERC personnel has stopped work for the day. ESI personnel are placing sand bags around the edge of geocomposite.

18:15 I departed the site for the day.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 40 FRI

Page 1 of 2

Project: Cell 3

Date: 09/28/2012

Project No.: 101.07.08

Weather: A.M. PC P.M.

Temp.(EF): High 90 Low 74 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins ARIZONA

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6
ESI	13

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Excavator mini Komatsu	38	1	0
Compactor Ingersoll Rand	SD100	1	0
End dump Volvo	25 ton	2	2

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are on site.

07:00 ESI personnel are on site. ERC personnel started hauling protective cover to the south west corner. They will build a ramp into cell 3. Soil is unloaded at Cell-2 tie-in and graded into cell-3.

10:30 A load of geocomposite and geotextile arrived on site and was unloaded by ERC. I took inventory of materials as it was unloaded. ESI continues to place geocomposite in Cell-3.

13:00 ESI continues installation of geocomposite at the center

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 40 FRI

Date: 09/28/2012 Page: 2 of 2

.section of cell-3. The Electrical crew was on site and ran conduit accross the top of the east berm from North to South. I shipped a sample of #4 stone for laboratory testing. ERC personnel are placing protective cover at the south west corner.

15:30 ERC personnel stopped work for the day. ESI personnel continues to install geocomposite on the floor of cell-3.

17:30 ESI completed most of the geocomposite in cell 3. They have a few repairs to make to the geocomposite, They stopped work for the day. I departed the site.

Signature

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 41 SAT

Page 1 of 2

Project: Cell - 3

Date: 09/29/2012

Project: No.: 191.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 92 Low 73 Rain

Contractor(s) ERC ESI

Contractor Super(s) Jack Wiggins Arizona

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ESI	13
ERC	0

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	0
Excavator Link Belt	330	1	0
Excavator mini Komatsu	58	1	0
Compactor Ingersoll Rand	SD100	1	1
End Dump Volvo	25 ton	1	2

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are not working today.

07:00 ESI personnel are on site. They are making repairs to geocomposite and cleaning the cell-3 work area.

09:30 I am walking the geocomposite to insure all repairs to geotextile are complete. ESI personnel are cleaning the work area and moving leftover materials to the storage area.

12:00 ESI moved all remaining materials to the storage area. I took inventory of materials stored. ESI personnel are cleaning up the work area. They are hauling trash to

Signature: Tony C Bragg

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

75

Daily Field Report

CEC

Project No.: 101-0708

Report No.: 41 Sat

Date: 09/29/2012

Page: 2 of 2

the Active Landfill.

14:00 We walked the cell 3 work Area to insure All repairs are complete and the area is clean.

14:30 ESI personnel removed their equipment trailer from the site. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 42 Mon

Page 1 of 2

Project: Cell-3

Date: 10/01/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. MC

Temp.(EF): High 91 Low 75° Rain Trace

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator, Link Belt	330	1	1
Excavator mini, Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	1
End Dump Volvo	25 ton	2	2

Visitors

Representing

Daily Notations:

06:45 I Arrived on site at Vista Landfill, ERC personnel are arriving on site.

07:15 ERC personnel started compacting the anchor trench at the south west side, I am observing and performing moisture density test.

08:00 ERC started placing protective cover sand. They are building a ramp up the south slope.

11:00 ERC continues to place and grade protective cover sand in Cell-3, They constructed a ramp in on the south slope, The trucks exit the south west corner, They are keeping trucks on 3.5 feet of sand, I continue

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.0

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 42 MON

Date: 10/01/2012 Page: 2 of 2

to perform moisture density test on sections of the anchor trench as they compact the trench.

14:00 ERC continues to compact fill in the anchor trench at the north side. They continue to place protective cover soil on the west floor of cell-3.

15:20 A rain shower moved through the area. ERC continues placing protective cover sand.

17:00 ERC continues to place protective cover soil at the west floor of cell-3. They are keeping trucks on 3.5 feet of soil. ERC has 2 trucks hauling protective cover soil.

18:00 ERC stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Owner: Vista Landfill

Report No.: 43 Tue

Page 1 of 2

Project: Cell-3

Date: 10/02/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. MC

Temp.(EF): High 88 Low 72° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
Excavator mini Komatsu	88	1	1
Compactor Ingersoll Rand	SD100	1	0
End Dump Volvo	25 ton	2	2

Visitors

Representing

Daily Notations:

06:40 I Arrived on site at Vista Landfill. ERC personnel are Arriving on site.

07:00 ERC personnel started hauling protective cover sand to cell-3. They are keeping trucks on 3.5 feet of sand.

10:00 ERC continues to place protective cover sand in cell 3. They are building a road toward the North berm at the west side. ERC personnel are moving to different locations in the borrow area to stay in the sand.

13:00 ERC started using the mini to throw sand down the east berm to get sand on the east berm. They continue to place protective cover sand on the floor of Cell 3 at

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.0

CEC

Project No.: 101107.01

Report No.: 43 Tue

Date: 10/02/2012

Page: 2 of 2

the west floor area. ERC moved the plywood along the west edge to the slope area of Cell-2.

16:00 ERC personnel are placing sand on the floor of Cell-3. They are building a road west to east across the North end of Cell-3.

17:15 Rain started. ERC continues placing and grading protective cover sand in Cell-3 at the North side.

18:00 ERC personnel stopped work for the day. I departed the site.

Signature

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 44 Wed

Page 1 of 2

Project: Cell - 3

Date: 10/03/2012

Project: No.: 101.07.08

Weather: A.M. MC P.M. MC

Temp.(EF): High 86° Low 75° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	2	2
Excavator Link Belt	330	1	1
Excavator mini Komatsu	88	1	0
Compactor Ingersoll Rand	SP100	1	0
End Dump Volvo	25 TON	4	4

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:15 The electrician is on site to complete the trench for the conduit. ERC started hauling protective cover sand to Cell-3.

07:30 ERC has a flat tire on one of the End Dumps. They have 1 truck hauling sand at this time.

08:30 ERC had a 2nd flat tire on the other truck. They still have 1 truck hauling protective cover sand. They will get 2 more truck today.

11:30 ERC has 4 trucks on site to haul protective cover

Signature: Tony C Braff

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

120

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 44 Wed

Date: 10/03/2012 Page: 2 of 2

sand. They are placing protective cover sand in cell-3 at the west side and north toe of slope.

14:00 ERC continues to place protective cover sand in cell-3. They have 4 truck hauling sand. They continue to place sand at the west side.

16:00 ERC has the 2nd D6 dozer on site. They continue placing protective cover sand. They moved the location in the borrow area.

19:15 ERC stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 45 Thur

Page 1 of 2

Project: Cell-3

Date: 10/04/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC/RAIN

Temp.(EF): High 90 Low 74 Rain

Contractor(s) ERC

Contractor Super(s) JACK Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader HYUNDAI Dozer CAT	760-7A D6	1 2	0 2
EXCAVATOR LINK Belt	330	1	1
END DUMP VOLVO	25 TON	4	4
Compactor INGERSOLL RAND	SD100	1	0

Visitors Representing

Daily Notations:

06:55 I Arrived ON site At Vista LANDfill, ERC personnel Are ON site.

07:15 ERC personnel started hauling protective cover SAND to Cell-3, They have 4 trucks At this time, SAND is placed At the North east side of Cell-3,

10:00 I Attended the progress meeting for Cell-3 Construction. Please see minutes of meetings. ERC personnel moved to Another location in the borrow Area, They continue to place protective cover soil At the North east Side of Cell-3, They continue to use 4 trucks.

13:00 ERC personnel Are excavating Protective/Cover SAND from

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

Daily Field Report

CEC

Project No.: 101-07-08 | Report No.: 45 Thurs

Date: 10/04/2012 | Page: 2 of 2

the south side of the borrow area. They have 4 trucks hauling protective cover sand.

15:00 ERC has 2 trucks hauling cover material for WMI and 2 trucks hauling protective cover sand to cell-3. They continue to place sand at the east side of cell-3.

17:00 Rain started. ERC continues to place protective cover sand in cell-3.

17:30 ERC stopped hauling sand. They are pumping water from cell-3. Hard rain continues. I departed the site.

Signature

White Copy - Library File   Yellow Copy - Owner   Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 46 FRT

Page 1 of 2

Project: Cell-3

Date: 10/05/2012

Project: No.: 101.07.08

Weather: A.M. PC/Fogg P.M. PC

Temp.(EF): High 88 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jade Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	9

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	2	2
Excavator Link Belt	330	1	1
End dump Volvo	25 ton	2	2
Compactor Ingersoll Rand	SD100	1	0

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. There was rain last night. They are pumping water from the sump in cell-3. There are some eroded area's at the south road. Cell-3 has no eroded area's.

07:30 ERC personnel are grading access roads at the south side to get sand trucks into Cell-3.

08:00 ERC started placing protective cover sand in Cell-3. They have 2 trucks hauling protective cover sand.

09:00 ERC stopped hauling protective cover sand. They are working on thier excavator, ERC continues to grade roads and they are pumping water from Cell-3.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 46 ERI

Date: 10/05/2012 Page: 2 of 2

11:00 ERC continues to haul protective cover soil to cell-3. They are keeping trucks on a minimum of 3 feet of sand. They have 2 trucks hauling protective cover sand.

14:00 ERC personnel continues placing protective cover sand in cell-3. I shipped protective cover sand samples No. 6, 7 and 8 for laboratory testing.

15:15 ERC stopped work for the day. They will not work this weekend. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 47 Mon

Page 1 of 2

Project: Cell-3

Date: 10/08/2012

Project: No.: 101-07-08

Weather: A.M. PC P.M. MC

Temp.(EF): High 86 Low 74° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Volvo	25 Ton	2	2
Compactor Ingersoll Rand	SD100	1	0

Visitors	Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:15 ERC personnel started hauling protective cover sand to the east side of Cell-3. They have 2 trucks hauling sand today. ERC personnel are pumping rain water from Cell 3.

10:00 ERC personnel continues to place protective cover sand at the east side of Cell-3. They are building roads and fingers in Cell-3. They are keeping trucks on a minimum of 3 feet of sand.

13:00 ERC personnel started drilling holes in the sump riser

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 47 Mon

Date: 10/08/2012 Page: 2 of 2

pipe. Holes are 5/8", 6" apart, 4 rows at 90°.
ERC continues to haul and place protective cover sand in cell-3. They have only 1 truck hauling at this time, one truck has a bad tire.

15:30 ERC has the 2nd truck operating again. They continue to place and grade protective cover sand in cell-3. They are keeping trucks on a minimum of 3 feet of sand.

15:45 Rain started. ERC continues hauling protective cover sand to cell-3, rain is light.

16:00 ERC has the 3rd truck on site. Rain continues and they continue to place and grade protective cover sand in cell-3.

17:15 ERC stopped work and are fueling thier equipment. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 48 Tue

Page 1 of 2

Project: Cell-3

Date: 10/09/2012

Project: No.: 101.07.08c

Weather: A.M. PC/Foggy P.M. PC

Temp.(EF): High 86° Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator Link Belt	330	1	1
End Dump Volvo	25 ton	3	3
Compactor Ingersoll Rand	SD150	1	0

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill. ERC personnel are arriving on site.

07:15 ERC personnel started hauling and placing protective cover sand in Cell 3. They have 3 trucks hauling and are building roads toward the south east side.

10:30 ERC personnel are placing protective cover sand at the south east side of Cell-3. They have 3 trucks hauling sand and are keeping trucks ~~a~~ minimum of 3 feet above the liner.

13:00 ERC personnel has 3 trucks hauling protective cover

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 48 Tue

Date: 10/09/2012 Page: 2 of 2

sand to cell 3. They started pushing up the south slope and the have 1 truck hauling to the run out area of the east berm.

16:00 ERC personnel continues to place protective cover sand in Cell 3. They have 1 truck hauling sand to the east run out area and 2 trucks hauling to the south slope.

17:35 ERC stopped hauling sand. They are fueling thier equipment. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 49 Wed

Page 1 of 2

Project: Cell-3

Date: 10/10/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 86 Low 69 Rain

Contractor(s) ERC

Contractor Super(s) JACK WIGGINS

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	2	2
Excavator Link Belt	330	1	1
End Dump Volvo	25 ton	3	3
Compactor Ingersoll Rand	SD100	1	0

Visitors Representing

Daily Notations:

06:55 I arrived on site at Vista Landfill. ERC personnel are arriving on site.

07:15 ERC personnel are hauling and placing protective cover sand to Cell-3. They have 2 trucks hauling inside the cell and 1 truck to the run out area.

09:00 ERC has a second D6 dozer on site. They are grading the borrow area. They continue ~~to~~ to place protective cover sand in Cell-3. They are grading sand up the west berm.

10:30 ERC personnel have 3 trucks hauling protective cover sand to the east berm of Cell-3. They are pushing

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.0

CEC

Project No.: 101.07.08 Report No.: 49 Wed

Date: 10/10/2012 Page: 2 of 2

sand up the east berm from the toe of slope. They installed a rub sheet across the leachate trench about 100' North of the sump to build a shorter road to the east side of cell-3.

13:00 ERC personnel continues placing protective cover sand in cell-3. They started pushing sand up the North east slope. They are using the 2nd dozer to grade the borrow area.

16:00 ERC continues placing sand in cell-3. They are pushing sand up the North east slope. I discussed protective cover sand over liner with Jack Wiggins. It must be 1×10^{-4} or greater. I informed him the 1×10^{-5} was for cover for final cap.

18:10 ERC personnel stopped placing sand for the day. They continue to grade the borrow area. I departed the site.

Note! I took 1 hour off todays time for picking up a replacement site vechicle.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CFC

Owner: Vista Landfill

Report No.: 50 Thurs

Page 1 of 2

Project: Cell 3

Date: 10/11/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. PC

Temp.(EF): High 84 Low 65° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	2	2
Excavator LinkBelt	330	1	1
End Dump Volvo	25 ton	3	3
Compactor IngersollRand	SD100	1	0

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista landfill. ERC personnel are arriving on site.

07:15 ERC personnel started placing and grading protective cover sand in Cell-3.

08:00 I informed Sheree that the conduit on the east berm pulled apart. She will call the electrician.

10:30 ERC continues placing protective cover sand in Cell-3. They have 3 trucks and 2 dozers work inside the cell. They are grading sand up the east and north slopes.

13:00 ERC personnel are placing protective cover sand on

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.0

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 50 Thur

Date: 10/11/2012 Page: 2 of 2

the north slope and the floor of cell-3. They are moving around in the borrow area to stay in good sand.

15:30 ERC personnel are using 3 trucks to haul protective cover sand to cell-3. They have 2 dozers with GPS grading the sand. The section of conduit was repaired by adding a 1 foot section.

18:30 ERC personnel are fueling thier equipment. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 51 FRI

Page 1 of 2

Project: Cell-3

Date: 10/12/2012

Project: No.: 101.07.08

Weather: A.M. C P.M.

Temp.(EF): High 87 Low 67 Rain

Contractor(s) ERC

Contractor Super(s) JACK Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer ~~C~~ CAT	D6	2	2
Excavator Link Belt	330	1	1
Trucks Volvo	25 ton	3	3
Compactor Ingersoll Rand	SD100	1	0

Visitors

Representing

Daily Notations:

06:55 I arrived on site at Vista landfill. ERC personnel are on site.

07:15 ERC personnel started hauling protective cover sand to Cell-3. They have 1 truck hauling to the run out area and 2 trucks hauling to the inside east slope.

09:30 The excavator loading trucks at the borrow area blew a hydraulic hose. They stopped hauling sand. ERC continues to grade sand in Cell-3. ERC started fusing the riser pipe perforated section.

11:30 ERC personnel continues fusing the sump riser pipe. They are grading sand inside Cell-3. The excavator

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

5.5

Daily Field Report

CFC

Project No.: 101.07.98

Report No.: 51 FRI

Date: 10/12/2012

Page: 2 of 2

is still down.

12:00 ERC sent all their personnel home except for the 2 dozer operators.

12:30 ERC has stopped all work except for fueling thier equipment. They will not work this weekend. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 52 MON

Page 1 of 2

Project: Cell-3

Date: 10/15/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. Rain PC

Temp.(EF): High 84 Low 71 Rain Trace

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	0
Dozer CAT	D6	1	1
Excavator LinkBelt	330	1	1
Trucks Volvo	25 TON	3	3
Compactor Ingersoll Rand	SD100	0	0

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are arriving on site. One of the D6 dozers is down. They will move it off site today.

07:20 ERC started grading protective cover sand in cell-3. They are hauling protective cover sand to the run out area of cell-3.

09:30 ERC had problems with one of thier haul trucks. They have 2 trucks hauling at this time. They are grading sand inside of cell-3.

11:30 ERC continues placing protective cover sand in cell-3. They are using 2 trucks.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 52 Mon

Date: 10/15/2012 Page: 2 of 2

13:00 One load of #57 Stone Arrived on site. I took a sample for Laboratory testing. ERC continues to place and grade protective cover soil in cell-3.

13:45 Rain started. ERC continues placing and grading sand in cell-3. ERC has a 2nd D6 dozer on site.

14:15 The rain has stopped. ERC continues placing protective cover sand in cell-3. They have 2 dozers with GPS, grading sand at the east floor.

16:30 ERC personnel continues placing and grading protective cover sand in cell-3. They have 3 trucks hauling sand and 2 dozers grading sand.

17:40 ERC has stopped work for the day. They are fueling thier equipment. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 53 Tue

Page 1 of 2

Project: Cell-3

Date: 10/16/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. PC

Temp.(EF): High 84 Low 70 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760 7A	1	1
Dozer CAT	D6	2	2
Excavator Link Belt	330	1	1
Trucks Volvo	25 Ton	3	1
Compactor Ingersoll Rand	SD 100	1	0

Visitors

Representing

Daily Notations:

06:55 I arrived on site at Vista Landfill, ERC personnel are on site.

07:15 ERC will not haul sand this morning. They will grade sand in Cell-3 to see how much more sand they need. They will start fusing pipe sections.

07:45 ERC personnel are using 2 D6 dozers and the excavator to move and grade sand in Cell-3.

08:30 ERC started pumping water from Cell-3 sump. They are preparing to fuse pipe.

09:30 ERC personnel are fusion sections of the 18" riser pipe. They continue to grade sand inside of Cell-3 and

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

CEC

Project No.: 101.97.98

Report No.: 53 Tre

Date: 10/16/2012

Page: 2 of 2

At the east run out area.

11:30 ERC personnel continues fusing the sump riser pipe and grading protective cover sand in Cell-3.

13:30 ERC personnel are grading protective cover sand in Cell-3. They are using the excavator and 1 truck to move excess sand from the east side of Cell-3 to the west side.

16:00 ERC fused the 18" Riser pipe for the sump. They said that they need an additional 5 feet of 18" SDR 11 Pipe. Sheree Orded the pipe and it will be here tomorrow. ERC graded the east floor of Cell-3 to close to final grade. They moved excess sand to the west side of Cell-3.

17:30 ERC stopped work for the day. I departed the site.

Note: ERC said today that they will work only 40 hours per week until Cell-3 is completed. Jack said he should complete the sand and force main by Next week.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 54 Wed

Page 1 of 2

Project: Cell-3

Date: 10/17/2012

Project: No.: 101.07.07

Weather: A.M. PC P.M. MC

Temp.(EF): High 81 Low 68 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer Cat	D6	2	1
Excavator Link Belt	330	1	1
Trucks Volvo	25 Ton	2	2
Compactor Ingersoll Rand	SD/100	1	0

Visitors Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are arriving on site.

07:30 ERC personnel are grading sand on the west floor of Cell-3. They are pushing piles up and moving piles with the 330 excavator. They are also working on thier welding equipment.

09:30 ERC personnel continues pushing excess sand into piles. The excavator is loading

10:00 I discussed pipe testing with Seth Nunes. The force main will be Hydrostatic Tested at 130 PSI for 1 hour and the outside pipe pressure tested at 10 PSI.

11:00 A 5 foot section of 18" SDR11 pipe was delivered on site.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

Daily Field Report

CEC

Project No.: 106.07.08 Report No.: 54 Wed

Date: 10/17/2012 Page: 2 of 2

ERC continues moving excess sand from the west side of Cell-3.

13:00 ERC personnel are removing excess protective cover sand from Cell-3. They are placing sand on the south top of berm. They are also fusing the 5' section on the 18" riser pipe.

15:30 ERC personnel are grading protective cover sand in Cell-3. They are fusion blind flanges on solid 6" pipe for the North and south clean out.

17:30 ERC personnel stopped work for the day. They have another excavator that will be on site tomorrow.

Signature [signature]

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 55 Thurs

Project: Cell-3

Date: 10/18/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 87 Low 70° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	2	1
Excavator Link Belt	330	1	1
Excavator Kobelco	235	1	1
Trucks Volvo	25 ton	2	1
Compactor Ingersoll Rand	SD100	1	0

Visitors Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill. ERC personnel are arriving on site.

07:30 ERC personnel are grading protective cover sand on the south slope to get the slope ready to install the sump riser pipe. They are cleaning the sump.

09:30 ERC cleaned the sump and trench up the south slope. They graded sand to within 6 feet of the sump and trench. ERC sewed geotextile for the sump and trench up the south berm.

11:30 ERC installed the sump geotextile, 1" thick HDPE plate and the 18" sump riser pipe. The pipe was held

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

CEC

Project No.: 101.07.08 Report No.: 55 Thurs

Date: 10/18/2012 Page: 2 of 2

in place with the excavator until the sump was filled with #4 stone. ERC personnel are removing the ramp accross the leachate trench area that was constructed about 100' North of the sump.

13:30 ERC personnel are installing geotextile for the leachate collection system. They are preparing to fuse a few sections of leachate collection pipe.

15:00 ERC started fusing the 6" leachate collection pipe. They only fused 3 sections.

15:45 ERC has stopped work for the day. They will not work tomorrow. They will return to work on Monday. I departed the site.

Signature

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 56 FRI

Page 1 of 1

Project: Cell-3

Date: 10/19/2012

Project: No.: 101.07.08

Weather: A.M. — P.M. —

Temp.(EF): High — Low — Rain —

Contractor(s) N/A

Contractor Super(s) N/A

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	0

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
N/A			

Visitors	Representing

Daily Notations:

09:00 I picked up drawing at Fedex for Vista Landfill, I worked on the Photo log. Had pictures made, made out the log.

13:30 I stopped work for the day.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

4 hrs

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 57 MON

Page 1 of 2

Project: Cell - 3

Date: 10/22/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. PC

Temp.(EF): High 82 Low 64° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
loader Hyundai	760-7A	1	1
Dozer CAT	D6	2	1
Excavator Link Belt	330	1	1
Excavator Kobelco	235	1	1
Trucks Volvo	25 ton	2	0
Compactor Ingersoll Rand	SD100	1	0

Visitors

Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel are on site.

07:20 ERC started grading sand (final) at the east side of Cell-3. They also started fusing 6" perforated leachate collection pipe. They are using high pressure air to clean the pipe.

10:30 ERC personnel are drilling holes in 6" pipe for perforations. They were short 2 sections of perforated pipe. ERC shipped one of thier trucks off site. They now have 1 truck left.

13:00 ERC personnel are fusing leachate collection pipe and grading protective cover sand at the east side of cell-3.

Signature: [signature]

White Copy - Library File   Yellow Copy - Owner   Pink Copy - Employee's Field File

CEC

Project No.: 101-07-08

Report No.: 57 Mon

Date: 10/22/2012

15:00 ERC personnel excavated sand up the north slope for the North clean out pipe. They continue to fuse pipe. They continue to grade sand at the east side of cell-3. I discussed the cell-3 sump stone and geotextile with Sheree Grant and Seth Nunes. The drawing has geotextile covering the stone in the sump with no sand cover. Sheree and Seth informed Jack Wiggins to add 1 foot of sand over the sump geotextile for protection.

17:00 ERC installed the cleanout pipe up the North slope with blind flange. They continue to grade protective cover sand at the east side of cell-3.

18:35 ERC personnel stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 58 Tue

Page 1 of 2

Project: Cell-3

Date: 10/23/2012

Project: No.: 101 07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 82 Low 65 Rain

Contractor(s)

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	1
Excavator Link Belt	330	1	0
Excavator Kobelco	235	1	1
Trucks Volvo	25 ton	1	1
Compactor Ingersoll Rand	SD100	1	0

Visitors

Representing

Daily Notations:

06:40 I arrived on site at Vista Landfill. ERC personnel are arriving on site.

07:20 ERC personnel are grading protective cover sand in cell-3 and fusing leachate collection and cleanout pipe at the sump and south slope.

10:00 ERC has the rock boxes. They are preparing to place No. 4 stone in the sump. The survey crew is on site to start as-built of protective cover sand and the pipe.

11:00 ERC placed No. 4 stone in the sump and covered with geotextile. They started placing #57 stone over the 6" perforated leachate collection pipe. They are keeping

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

11.0

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 58 Tue

Date: 10/23/2012

Page: 2 of 2

The perforations in the pipe down at 120°. The rock box is 6.5' long x 32" wide and they are placing 1.5 feet of stone in the box.

13:00 ERC personnel continues placing #57 leachate collection stone over the 6" leachate collection pipe. They are using the hand held GPS to insure the pipe is on the center line and stone is the correct elevation. They are using a rock box to install stone.

15:00 Yves Carrion was on site and observed the drainage stone placement.

17:30 ERC stopped stone placement for the day. They are sewing geotextile around the stone.

18:45 ERC personnel stopped work for the day. They are fueling thier equipment. ERC installed 400 Lft of pipe and stone at the center of Cell-3 today. They completed No. 4 stone in the sump but not up the south slope. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 59 Wed

Page 1 of 2

Project: Cell -3

Date: 10/24/2012

Project: No.: 101.07.08

Weather: A.M. PC P.M. PC

Temp.(EF): High 82 Low 70 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	2
Excavator LinkBelt	330	1	0
Excavator Kobelco	235	1	1
Trucks Volvo	25 Ton	1	1
Compactor Ingersoll Rand	SD100	1	0

Visitors Representing

Daily Notations:

06:50 I Arrived on site at Vista Landfill. ERC personnel Are on site.

07:15 ERC has 2 GPS dozers fine grading the sand surface in cell-3. They Are short of stone to complete the last 100' of Leachate collection trench. They have stone Ordered. ERC completed fusion welding the last section of Solid 6" pipe (cleanout) up the South Slope.

10:00 ERC personnel Are grading the surface of protective cover sand in cell-3 with 2 GPS dozers. Thier stone has not Arrived on site yet.

11:00 ERC personnel are installing 6" pipe inside 10"

Signature: Tony C [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.5

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 59 Wed

Date: 10/24/2012

Page: 2 of 2

pipe for the force main pipe. They continue to fine grade protective cover sand in cell-3.

13:30 ERC continues installing 6" pipe inside 10" pipe for the force main. They are fine grading the sand surface with 2 GPS dozers.

16:00 ERC started placing #57 stone in the leachate collection trench. They have about 100 Lf. of trench to complete. They are also grading sand in cell-3.

18:35 ERC completed placing #57 stone to complete the leachate trench in cell-3. They did not complete sewing the geotextile. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 60 Thurs

Page 1 of 2

Project: Cell - 3

Date: 10/25/2012

Project: No.: 101.07.08

Weather: A.M. OC/RAIN P.M. OC/RAIN

Temp.(EF): High 82 Low 70° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	3	2
Excavator Link Belt	330	1	1
Excavator Kobelco	235	1	1
Truck Volvo	25 ton	1	1
Compactor Ingersoll Rand	SD100	1	0

Visitors | Representing

Daily Notations:

06:45 I arrived on site. ERC personnel are on site. There is a drizzle rain this morning.

07:15 ERC personnel has 2 dozers grading sand in cell-3. They have 2 dozers grading sand in cell-3. They are placing No. 4 stone up the leachate trench on the south slope.

10:00 ERC personnel continues grading sand in cell-3. The weather is cloudy. They are removing the road along the leachate collection trench. ERC continues placing No. 4 stone in the riser trench on the south slope.

12:00 ERC completed the leachate collection system including

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

8.5

CEC

Project No.: 106.07.08 Report No.: 60 Thurs

Date: 10/25/2012 Page: 2 of 2

the 6" perforated leachate collection pipe from North toe of slope to the sump with solid clean out pipe at the north and south side. The sump riser pipe, all stone and all geotextile sewing. ERC continues grading sand in cell-3. They started fusing sections of force main 6" & 10".

14:00 Rain started. ERC personnel continues grading sand in cell-3. Thier 330 excavator blew a hose.

16:00 ERC has problems with thier GPS. Rain continues. They can not fuse pipe. They stopped work for the day. I departed the site.

Signature

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 61 FRI

Page 1 of 2

Project: Cell - 3

Date: 10/26/2012

Project: No.: 101.07.08

Weather: A.M. OC P.M. PC

Temp.(EF): High 84 Low 73 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760 - 7A	1	1
Dozer CAT	D6	3	2
Excavator Link Belt	330	1	0
Excavator Kobelco	235	1	0
Truck Volvo	25 Ton	1	0
Compactor Ingersoll Rand	SD 100	1	0

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:30 ERC started grading sand in Cell-3. They are also working on fusing dual contained force main pipe. Jack Wiggins requested the location and elevation of the ditch block at the south west outside ditch. I will check with Peter Walls.

09:30 ERC personnel are grading sand in Cell-3 with 2 GPS dozers. They are checking the GPS dozers with the hand rover. ERC personnel are working on the temporary force main pipe, 3" and 6".

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

810

Daily Field Report

CEC

Project No.: 101.07.08

Report No.: 61 FRI

Date: 10/26/2012

Page: 2 of 2

11:30 ERC personnel are installing 3" pipe inside 6" pipe for the temporary force main.

13:30 ERC personnel are installing force main pipe inside the outer carrier pipes. They are fusing centralizers. They are also grading sand in cell-3 with 2 GPS dozers. They had a few problems with the GPS.

15:30 ERC personnel stopped work for the day. They will not work this weekend. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 02 Mon

Page 1 of 2

Project: Cell-3

Date: 10/29/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. C

Temp.(EF): High 65° Low 51° Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	2
Excavator Link Belt	330	1	1
Excavator Kobelco	235	1	1
Trucks Volvo	25 Ton	2	2
Compactor Ingersoll Rand	SD100	1	0

Visitors	Representing

Daily Notations:

06:55 I arrived on site at Vista Landfill. ERC personnel are on site.

07:30 ERC personnel started hauling protective cover sand from Cell-5 area to Cell-3. They are 0.01 to 0.02 low in some area's in cell-3.

08:30 ERC personnel are building a road accross Cell-3 from the south west corner to the east side to get sand in the Cell. They are using 2 dozers and 2 trucks.

10:00 ERC personnel are excavating the force main trench from the riser pipe toward the east edge. They continue to haul sand and grade sand inside Cell-3.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.0

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 62 Mon

Date: 10/29/2012 Page: 2 of 2

12:00 ERC personnel are installing 6" force main pipe inside the 10" casing pipe. They are cleaning pipe with high pressure air. They continue to grade sand inside cell-3.

14:00 ERC started fusing sections of 6"x10" force main at the south slope area. ERC continues grading sand inside cell-3 with 2 GPS dozers. They continue installing 6" pipe inside 10" pipe at the north side of cell-3.

17:30 ERC personnel stopped work for the day. They did not complete the south force main section. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 63 Tue

Page 1 of 2

Project: Cell-3

Date: 10/30/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. C

Temp.(EF): High 69 Low 49 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	2
Excavator Link Belt	330	1	
Excavator Kobelco	235	1	1
Trucks Volvo	25 Ton	2	
Compactor Ingersoll Rand	SD100	1	

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill. ERC personnel are on site.

07:20 ERC personnel started grading sand in Cell-3. They are using 2 GPS dozers. They are also fusing pipe for the south section of force main pipe.

10:00 ERC completed fusing the force main pipe from the sump riser pipe to the east end of the pipe. They are preparing force main pipe for the north side of Cell-3. They continue to grade sand in Cell-3.

11:30 ERC personnel are grading sand in Cell-3 with 2 GPS dozers. They are fusing force main pipe at the north side

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

10.0

Daily Field Report

CEC

Project No.: 161.07.08.

Report No.: 63 Tue

Date: 10/30/2012

of cell-3.

14:00 ERC personnel are fusing the temporary 3"x6" force main pipe for the intercell berm. They are hauling more sand and grading the cell-floor. ERC personnel are also installing the 2" electrical conduit at the south side of cell-3. I had a lunch meeting with Sheree Grant, Daniel Galarza and Debbie Perez. Discussed cell-6 construction and items to complete.

16:30 ERC personnel are grading sand in cell-3 and fusing 3"x6" force main pipe.

17:35 ERC has stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 64 Wed

Page 1 of 2

Project: Cell-3

Date: 10/31/2012

Project: No.: 106.07.08

Weather: A.M. C P.M. C

Temp.(EF): High 69 Low 48 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	2
Excavator LinkBelt	330	1	0
Excavator Kobelco	235	1	1
Trucks Volvo	25 ton	2	0
Compactor Ingersoll Rand	SD100	1	0

Visitors

Representing

Daily Notations:

06:45 I arrived on site. ERC personnel are arriving on site. Jack Wiggins is not on site today. Jerry Binder is on site today.

07:15 ERC personnel started grading sand in Cell-3 and outside the south berm.

07:30 ERC started fusing 3" x 6" force main pipe for the temporary section on the intercell berm.

09:30 ERC has 2 GPS dozers grading sand in Cell-3. They are fusing 6" x 10" force main at the North side of Cell-3 and 3" x 6" force main next to the intercell berm.

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

9.5

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 64 Wed

Date: 10/31/2012 Page: 2 of 2

11:30 ERC continues grading sand in cell-3 with 2 GPS dozers. They continue to fuse 6"x10" and 3"x6" force main pipes.

14:00 ERC continues fusing 3"x6" force main for the temporary line for the inter cell berm. They are also fusing 6"x10" force main for the north side of cell-3. They have 1 dozer grading sand inside cell-3 and 1 dozer grading the ditch south of cell-3.

16:30 ERC continues grading sand inside cell-3 and on the south road area and ditch of cell-3. They are fusing a 3"x6" elbow off the 6"x10" force main at the sump riser pipe.

17:35 ERC personnel stopped work for the day. I departed the site.

Note: I took 1 hour off of todays time for maintance on vehicle.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 65 Thurs

Page 1 of 2

Project: Cell - 3

Date: 11/01/2012

Project: No.: 100208

Weather: A.M. C P.M. PC

Temp.(EF): High 79 Low 59 Rain

Contractor(s) ERC

Contractor Super(s) Jack W

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	7

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozers CAT	D6	3	2
Excavator Link Belt	330	1	1
Excavator Kobelco	235	1	1
Trucks Volvo	25 Ton	2	1
Compactor Ingersoll Rand	SD/00	1	0

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are on site.

07:20 ERC started grading sand in Cell-3. They have 2 GPS dozers grading.

07:45 ERC started excavating for the concrete structures and 30 inch pipes.

08:30 ERC personnel are fusing a 6" x 10" T at the east end of the North force main pipe. ERC has too much fill in the road area. They are grading the excess fill off the road.

11:30 ERC set the corner concrete structure. They set grades

Signature: Tony C Br[illegible]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

12

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 65 Thurs

Date: 11/01/2012 Page: 2 of 2

with the GPS, One foot of crush stone was placed for bedding for the structure. They are using a pad compactor to compact fill around the pipe.

13:30 ERC personnel continues grading sand in Cell-3. They are excavating for the 30" pipe and concrete structure in the drainage ditch south of Cell-3. They are also excavating the North force main trench. I picked up a copy of Panel drawings from Fedex Kenkos. ERC Replaced the Link Belt excavator with a 330 Kobelco.

16:00 ERC personnel are excavating the North force main trench. They set the other drainage structure. They are sealing the 30" pipe with concrete at the structure. ERC personnel are hauling cover sand to the east berm area. They continue to grade sand in Cell-3.

18:00 ERC personnel are placing grout around pipe at the concrete structures. They are excavating the North force main trench.

19:00 ERC placed the force main in the section of trench completed at the North side of Cell-3. They have not located the force main tie-in yet. They stopped work for the day. I departed the site.

Signature [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 66 FRI

Page 1 of 2

Project: Cell - 3

Date: 11/02/2012

Project: No.: 101.07.08

Weather: A.M. C P.M. C

Temp.(EF): High 80 Low 53 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760 7A	1	1
Dozer CAT	D6	3	2
Excavator Kobelco	330, 235		2
Trucks Volvo	25 Ton	2	0
Compactor Ingersoll Rand	SD100	1	0
Excavator mini Komatsu		1	1

Visitors

Representing

Daily Notations:

06:45 I arrived on site at Vista Landfill, ERC personnel are on site.

07:20 ERC started excavating the north leachate force main trench toward Cell-2. They have 2 dozers grading the run out area.

08:30 ERC personnel are fusing force main pipe at the south east corner, 6" x 10" to 3" x 6".

10:30 ERC continues fusing pipe, grading sand and they are excavating the north leachate force main trench.

12:30 ERC personnel tried to fill the south force main pipe with water. They do not have enough pipe

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101.07.08 Report No.: 66 PRJ

Date: 11/02/2012 Page: 2 of 2

to complete the force main. They are short over 100 LF of 6"x10" force main. Jerry Pinder ordered the pipe. The survey crew is on site to as-built the sand layer in cell 3. I informed them to as-built all points including extra points added for subgrade.

13:00 ERC has stopped until Monday. I am working on the panel drawing.

14:30 I departed the site.

Signature

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 67 Mon

Page 1 of 2

Project: Cell - 3

Date: 11/05/2012

Project: No.: 101. 07. 08

Weather: A.M. PC P.M. PC

Temp.(EF): High 78 Low 64 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	6

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer CAT	D6	3	2
Excavator Kobelco	330, 235	2	1
Trucks Volvo	25 ton	2	0
Compactor Ingersoll Rand	SD100	1	0
Excavator Mini Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:55 I arrived on site at Vista Landfill. ERC personnel are on site.

07:15 ERC personnel are fusing fittings for testing pipe at the North east corner of Cell-3. They are also grading the south road area.

09:30 Isco delivered 1 section of SDR-11 3" pipe 40' long, 120 LF of 6" SDR-11, 120 LF of 10" SDR-17 pipe, 6 each 6"x10" spacer clips and 6 each 6"x10" centralizers. They also have 1 each 3"x6" SDR 11 end Dual Containment termination. ERC personnel are grading excess fill at the south road area. They are fusing pipe centralizers.

Signature: [signature]

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101, 07. 08 Report No.: 67 MON

Date: 11/05/2012 Page: 2 of 2

11:30 ERC personnel are excavating the north force main trench. They located the tie-in for the force main at cell-2.

1400 ERC personnel are grading the road at the south side of cell-3. They are fusing force main pipe and adding water for the force main test from the N.E. corner to the sump.

17:00 ERC personnel are Hydro pressure testing the 3" temporary force main and 6" force main from the N.E. corner accross the intercell berm (3") accross the south edge (6") to the sump. They cut the existing force main at cell-2 and pumped water into cell-2.

17:45 ERC has stopped work for the day. The force main test only dropped 1 lb. 130 to 129 over 1 hour. They will leave overnight. I departed the site.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Owner: Vista Landfill

Report No.: 68 Tue

Page 1 of 2

Project: Cell 3

Date: 11/06/2012

Project: No.: 101.07.08

Weather: A.M. MC / Trace P.M. PC

Temp.(EF): High 76 Low 59 Rain

Contractor(s) ERC

Contractor Super(s) Jack Wiggins

Number and Function of Contractors' Personnel, Hours Worked (Identify Subcontractors Separately)

Contractor	No. of People
ERC	8

Major Constr. Equip. Description	Size/Capacity	No.	No. in Use
Loader Hyundai	760-7A	1	1
Dozer Cat	D6	3	2
Excavator Kobelco	330, 235	2	2
Trucks Volvo	25 Ton	1	1
Compactor Ingersoll Rand	SD100	1	0
Excavator mini Komatsu	88	1	1

Visitors

Representing

Daily Notations:

06:50 I arrived on site at Vista Landfill. ERC personnel are on site. I checked the pressure on the pipe tested yesterday, Pressure is the same, 129 PSI.

07:20 ERC personnel are grading the south road, They have excess fill, ERC personnel are fusing fittings at the North East Corner of Cell 3 to complete testing of the force main pipe.

08:15 There is a light drizzle of rain, It's not enough to stop work.

10:00 ERC personnel are fusing pipe at the north force main pipe. They are using the water tanker to fill the north

Signature:

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

Daily Field Report

CEC

Project No.: 101 07.98

Report No.: 68 Tue

Date: 11/06/2012

Page: 2 of 2

force main pipe.

13:00 ERC personnel are grading the south road area, cleaning up the north side, preparing to test the north force main.

15:00 ERC personnel tested the North force main pipe. It passed. They are preparing the Air test of the containment pipe at the North side.

17:30 ERC completed test on the containment pipe at the North side. This completes the test for cell-3 force main. They still need to connect the force main to the existing force main at cell-2.

17:45 I gave Sheree a Punch list of items to complete for cell-3.

17:55 I departed the site, I will demobilize from the site today.

Signature

White Copy - Library File Yellow Copy - Owner Pink Copy - Employee's Field File

D.4 MEETING MINUTES

Preconstruction Meeting

Vista Class III Landfill

8/13/2012

The following items were discussed;

1. Site safety was discussed; All personnel will wear personal protective equipment safety vest and hard hats while working at Vista Landfill. Sheree stated there are some large dogs that roam the Landfill.
2. ERC will work Monday through Friday to start. Their work hours will be from 6:30 AM to 6:00PM. ERC has no plans to work Labor Day. ERC will start work 7 days early.
3. The gate will be locked at 3:30 PM daily. ERC to keep the gate locked. The rear gate will not be used to access the site.
4. ERC will keep a daily sign in sheet. All personnel will sign in and out daily. Tommy Bradford will keep sign in/out records.
5. ERC will expose the tie-in liner at Cell-2 and they will check sand thickness at the top of tie in berm at Cell 2.
6. Surveyors will be on site today to set bench marks for ERC to use.
7. CEC will have a moisture density gauge on site next week. The gauge was schooled prior to moving the start date up a week.
8. TRI Environmental of Austin TX, will perform geosynthetics testing for this project. Genesis Testing Services of Conyers GA, will perform laboratory soil testing.
9. Geosynthetic materials has been ordered. Materials will be tested pripr to shipping. ERC will unload and store materials.
10. ERC said they will complete the road and structures prior to starting geosynthetics.
11. ERC will get water at the tank next to the road. They should not run out of watwe.

VISTA CLASS III LANDFILL

GEOSYNTHETICS PRECONSTRUCTION MEETING

9/19 2012

1. Discussed site safety. All personnel working at Vista Landfill must have a hard hat and safety vest. ESI has personnel that need Waste Management Safety Training. Sheree will let them know when they can get training. Tommy Bradford will document safety meetings on the daily report.
2. ERC will unlock and lock the main gate for ESI. The back gate cannot be used by contractor personnel. A daily sign in sheet will be kept by Tommy Bradford.
3. Seth Nunes said that he received the survey certification shots this morning and are being checked. Only the inside top of berm and floor were shot.
4. Tommy Bradford stated that ESI and CEC will walk all areas prior to placing liner over sub-base and sign a subgrade acceptance form. Areas accepted will be on a daily basis.
5. Trial seams will be performed every 5 hours. Test will be 2 peel and 2 shear for each test. At least 1 test for each welder that wells each day.
6. Equipment used on geocomposite must not damage the material. CEC will monitor equipment used to insure there is no damage.
7. Destructive samples will be sent to TRI Environmental in Austin Texas. Tommy will let ESI know the latest time to get samples to Fedex. Only 10 peel allowed with 4 out of 5 passing specifications and the 5th sample must meet 80 % of specifications. Shear strength for fusion and extrusion is 120 lb/in. Peel for fusion is 91 lb/in and peel for extrusion is 78 lb/in.
8. Non-destructive testing is as follows; Air pressure test is 25 to 30 psi for 5 minutes with no more than 3 lbs loss. Vacuum test will be for 20 seconds with 5 psig. There should not be any spark testing for cell 3.
9. All liner panels will be as-built prior to covering with geocomposite.
10. CEC will contact the geocomposite manufacture to find out how long the fabric can be exposed before covering with protective cover soil.
11. Seth Nunes stated that slopes that cannot be smooth drum rolled must be raked to remove high spots from equipment tracks. All areas must be smooth and dry.
12. Jack Wiggins said they are getting drainage stone samples for # 57 and # 4 stone. They may have problems getting # 57 stone.
13. ESI will complete all geosynthetics in 7 days or less.
14. There is a wet spot at the toe of east berm that will be investigated.
15. All completed work including sub-base completion, liner completion, Geocomposite completion, leachate pipe and collection system and protective cover completion will require a certificate of completion.

Progress Meeting

Vista Class III Landfill

10/04/2012

The following items were discussed;

1. Geocomposite was completed on Saturday. Excess materials was inventoried and stored at the storage area across the road.
2. Jerry Pinder said that they should complete items inside of Cell 3 by 23 October. ERC has 4 trucks on site and has placed 10,000 cubic yards of protective cover sand to date.
3. Jack Wiggins has ordered # 57 and # 4 stone, but it will not be delivered until it passes the laboratory test.
4. ERC will start installation of leachate collection pipe and stone system next week. ERC will use a rock box for # 57 drainage stone installation to keep the stone uniform.
5. All pipe, leachate collection and force main pipe will be cleaned prior to fusion welding. Jack said that he will need parts for the force main pipe. ERC will order the parts and WMI will provide the P O.
6. Seth Nunes said that survey point locations were added to Cell 3 grid points to insure the 50 foot grid requirement was met. Pipe survey is 50 foot along the pipe.
7. Jack with ERC and Debby with WMI will check the borrow area for protective cover sand and agree on an area to excavate sand.
8. Sheree said ERC will build the concrete structure but Electric, Pumps and pipe inside the concrete structure will be done by others.

D.5 JETCLEAN LEACHATE PIPE TESTING REPORT

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING
PIPELINE VIDEO INSPECTION (EX)
VACUUM TRUCK SERVICES
LASER PROFILING / NO DIG REPAIRS

7538 DUNBRIDGE DR., ODESSA, FL 33556
TEL: 800-226-8013 FAX: 813-926-4616
WEB: WWW.FLORIDAJETCLEAN.COM
EMAIL: FLORIDAJETCLEAN@YAHOO.COM

DATE : 11/14/2012
TO : Sheree Grant – Waste Management
FROM : Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT : Vista Landfill Cell #3

Florida Jetclean completed the high-pressure water-jetting of the new Cell 3 leachate collection piping on 11/13/2012.

As the below jetting log indicates, the Cell 3 collection pipe was cleaned end-to-end utilizing high-pressure water-jetting nozzle.

VISTA LANDFILL – CELL 3
LEACHATE COLLECTION SYSTEM JETTING LOG
JETTING PERFORMED BY FLORIDA JETCLEAN
NOVEMBER 2012

LOCATION	ACHIEVED DISTANCE (ft)	COMMENTS
Cell 2 North C/O	715'	Entire pipe cleaned.

Based on the ability of the jet nozzle to pass through the entire pipe length without obstruction, the leachate collection system appears to be in a sound condition to deliver leachate.

Please call us with questions or concerns.

Regards,
Ralph Calistri
Ralph Calistri - Florida Jetclean - 800-226-8013

Cell-3 prior to excavating to subgrade elevation.

Excess fill in Cell-3 was used for berm construction at the North and South Sides of Cell-3.

CEC

Proof rolling was performed throughout Cell-3 Placement.

A D6 Dozer with GPS was used to control lift thickness and soil elevations

CEC

A Water Tanker was used to add moisture to the fill as it was placed.

Each lift was compacted with a Drum Vibrator Roller.

CEC

View of a loaded truck on the cell floor, proof rolling.

Moisture Density Test was performed using the drive cylinder.

Drive cylinder being weighed in the field laboratory.

Performing a moisture test.

An oven was used to dry samples for moisture test.

Anchor trench excavation. The 2 foot elevation was checked during excavation.

The completed anchor trench.

Geosynthetic materials were unloaded and stored until used.
Inventor was made as the materials were unloaded.

\

The liner crew deployed rolls of liner using a skid steer with a spreader bar.

Tracks made in sub base was hand raked to ensure a smooth surface.

Each panel was numbered and roll numbers were recorded.

View of geosynthetic clay liner (GCL) at the center of Cell-3 under the leachate trench.

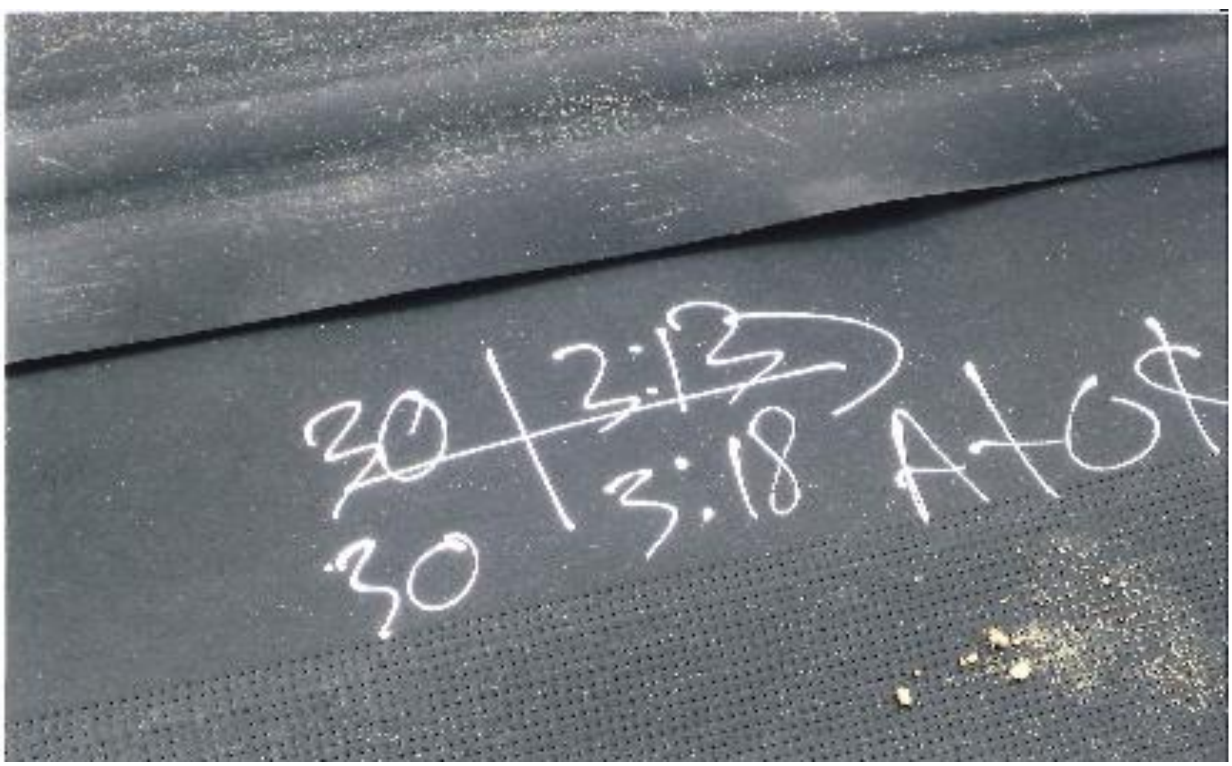
Powder bentonite was placed where the GCL panel overlaps.

GCL in the sump and up the south berm riser trench.

Panel seaming was performed using a double track wedge welder.

Destructive seam samples were marked on completed seams.

All double track fusion seams were air tested and passed.
Air pressure tests lasted for five minutes.



Air test information written next to the seam tested.

Trial weld samples were made, tested, and passed before any welding was performed. Both new and old samples of the liner were used for welding at tie-in areas.

View of extrusion welding along the tie-in at Cell-2.

All extrusion welds including tie-in seams and repairs were vacuum tested.

A leaf blower was used to clean the liner in front of the geocomposite installation.

Geocomposite being pulled into place using an ATV.

Geocomposite seams were overlapped and plastic ties were used to connect the net.

All geotextile seams were sewn.

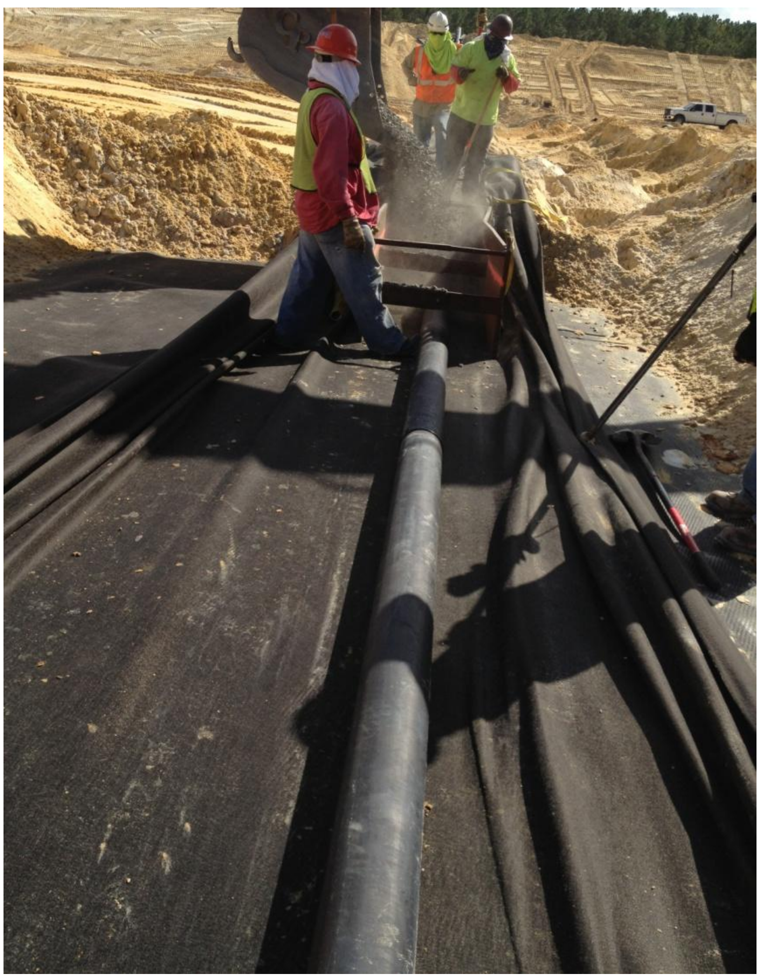
View of Cell-3 with completed geocomposite.

Protective soil placement started at the Southwest corner of Cell-3.
All trucks were kept on a minimum of 3.5 feet of sand.

Protective cover sand in the anchor trench was compacted and tested.

CEC

The Cell-3 sump with the 1 inch HDPE plate and sump riser pipe in place.



Drainage stone was placed over the perforated leachate collection pipe.
The pipe was centered with a GPS unit to ensure it was on the center line.

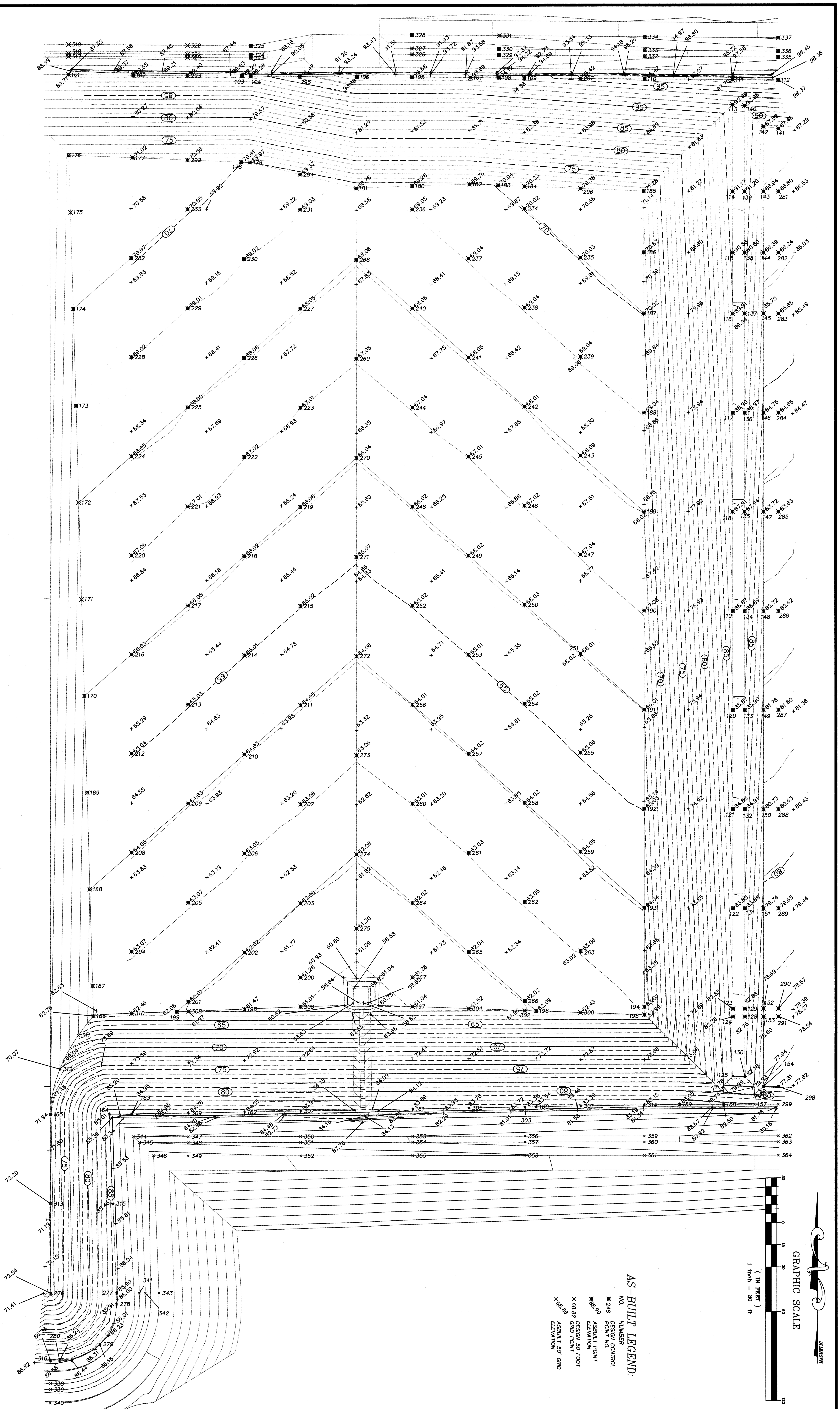
All geotextile around the drainage and sump stone was wrapped closed and then sealed by sewing.

Cell-3 protective cover sand after completion.

Hydro testing the forcemain pipe in place.

Fusing the forcemain pipe.

F. RECORD DRAWINGS



DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7726

9/17-25/2012
SURVEY DATE

SCALE	DRAWING NO.
1"=30'	135
PROJECT NO. 135	SHEET 2

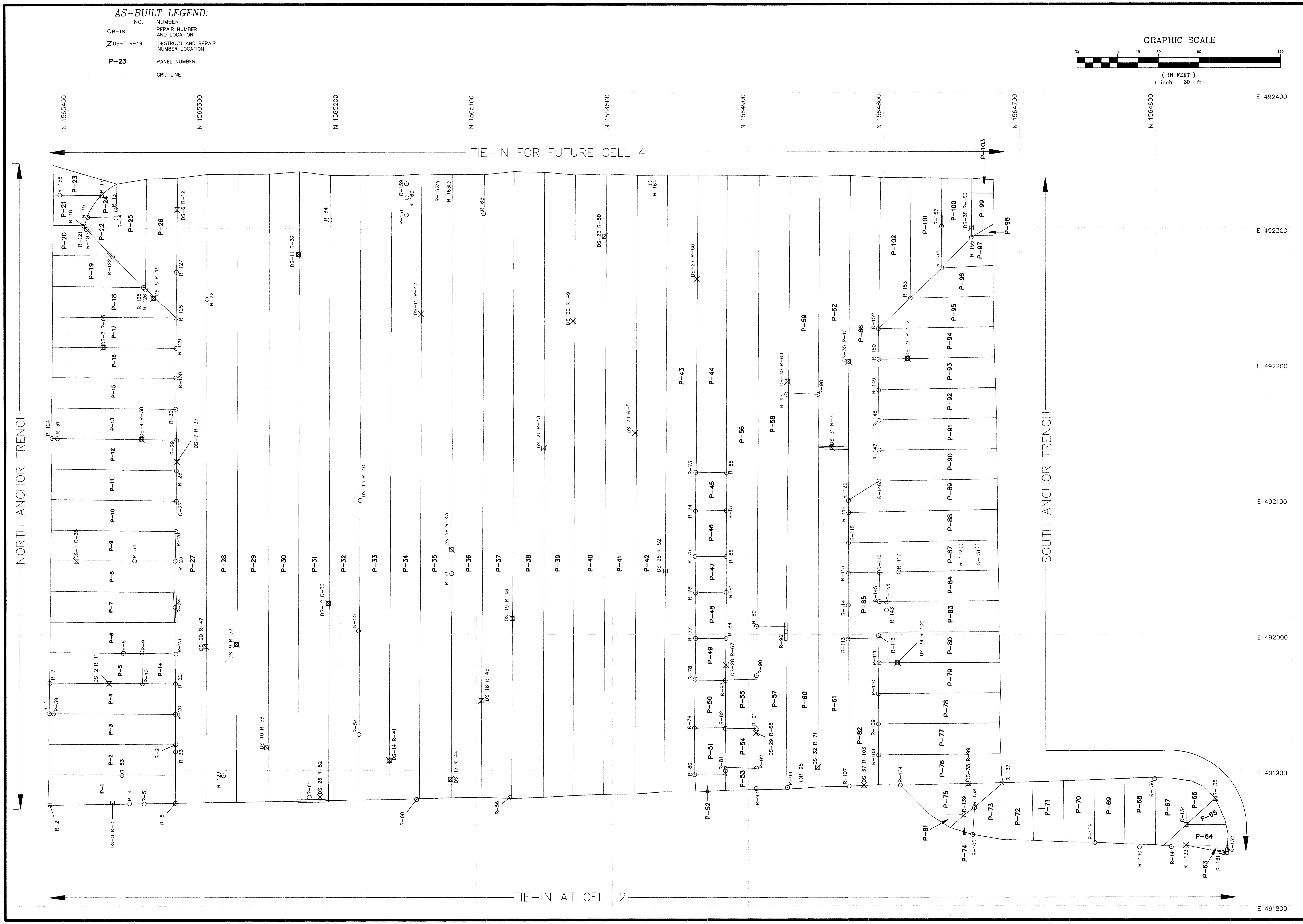
AS-BUILT SURVEY VISTA CELL 3
SUB-BASE-CONTROL POINTS
KEENE ROAD RECYCLING AND DISPOSAL FACILITY LOCATED IN APOPKA, FL

CLIENT:

ERC GENERAL CONTRACTOR
890 Carter Road Suite 170
Winter Garden, Fl 34787

Drawn By: DLP	THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
Party Chief: DR	
Field Book: 18	
Page: 2-26	FILE NAME: 135 erc vista cell 3 asb subgrade

NO.	DATE	REVISION



REVISION	NO.	DATE

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 135 erc vista cell 3 asb liner.dwg

Drawn By: DLP
Party Chief: DR
Field Book: 18
Page: 2-26

Peavey & Associates
SURVEYING & MAPPING PA
690 ALICE PLACE
BARTOW, FL 33830
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

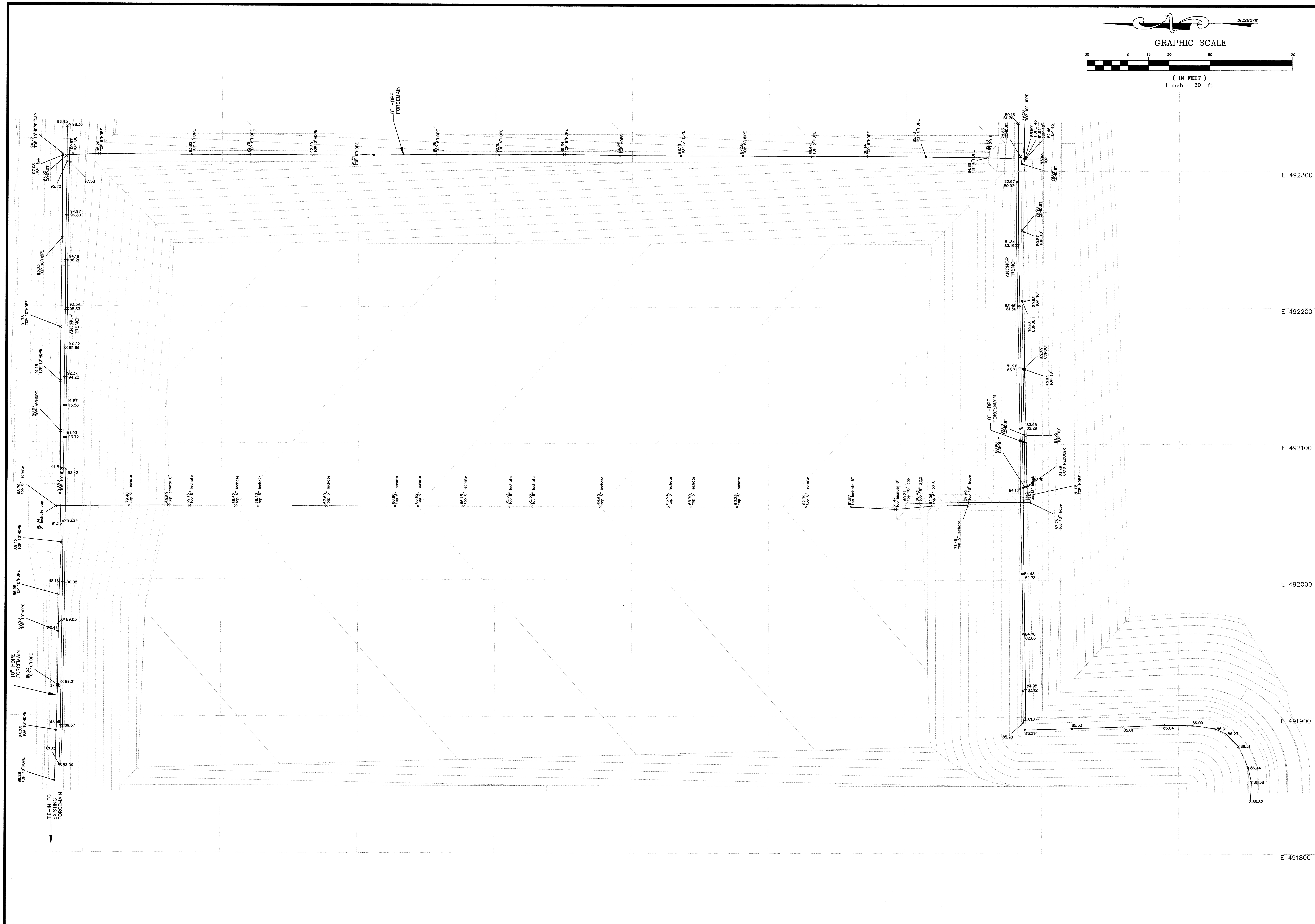
CLIENT:
ERC GENERAL CONTRACTOR
890 Carter Road Suite 170
Winter Garden, Fl 34787

AS-BUILT SURVEY VISTA CELL 3
Geomembrane Panel Record Drawing
KEENE ROAD RECYCLING AND DISPOSAL FACILITY LOCATED IN APOPKA, FL

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7779

9/17-25/2012
SURVEY DATE

SCALE	DRAWING NO.
1"=30'	135
PROJECT NO.	SHEET
135	3



NO.	DATE	REVISION

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 135 erc vista cell 3 asb pipe.dwg

Drawn By: DLP
Party Chief: DR
Field Book: 18
Page: 2-26

Peavey & Associates
SURVEYING & MAPPING PA
690 ALICE PLACE
BARTOW, FL 33830
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

CLIENT:
ERC GENERAL CONTRACTOR
890 Carter Road Suite 170
Winter Garden, Fl 34787

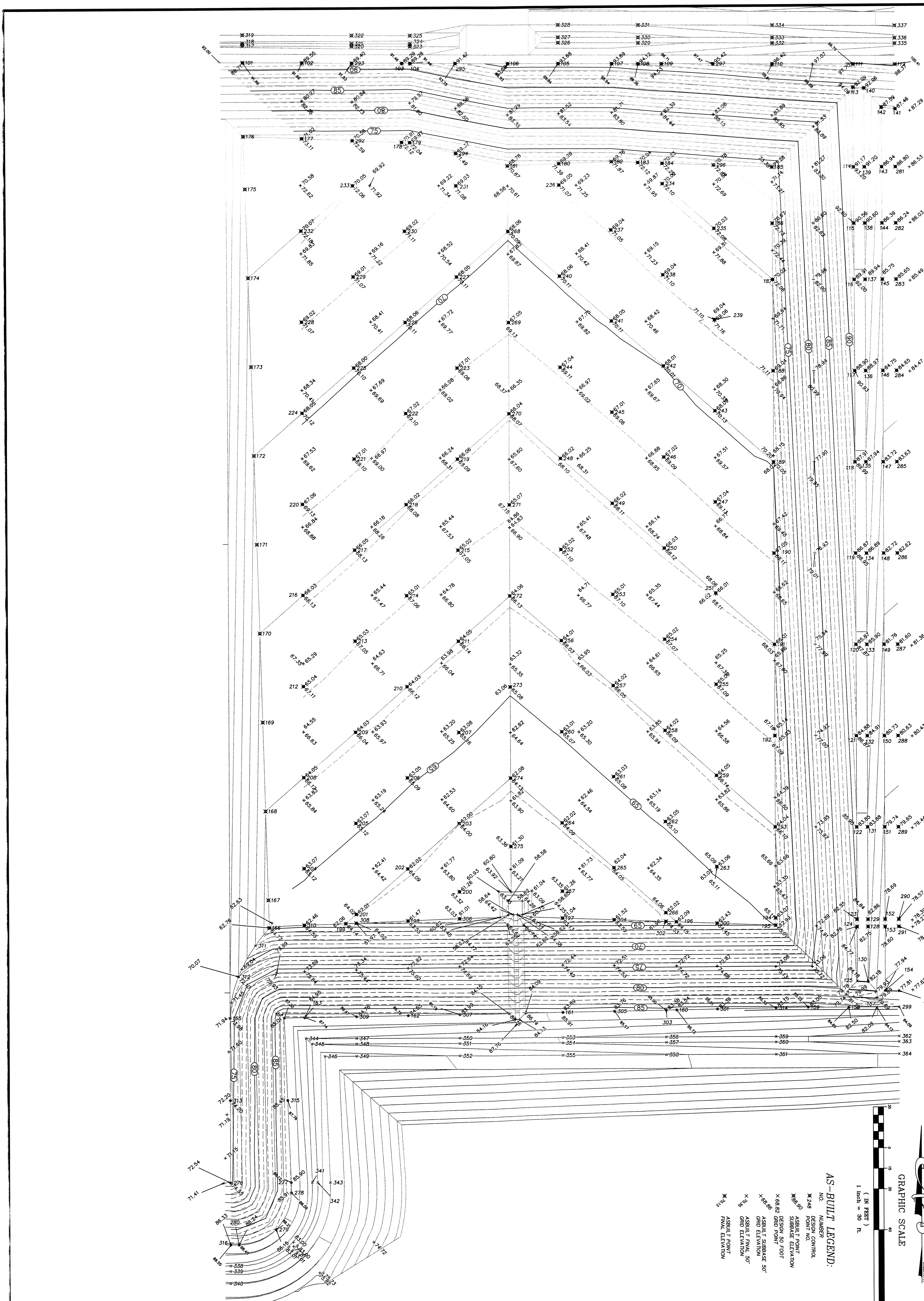
AS-BUILT SURVEY VISTA CELL 3 LEACHATE SYSTEM

KEENE ROAD RECYCLING AND DISPOSAL FACILITY LOCATED IN APOPKA, FL

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7726

9/17-25/2012
SURVEY DATE

SCALE	DRAWING NO.
1"=30'	135
PROJECT NO.	SHEET
135	4



AS-BUILT SURVEY VISTA CELL 3
FINAL COVER-CONTROL POINTS
KEENE ROAD RECYCLING AND DISPOSAL FACILITY LOCATED IN APOPKA, FL

CLIENT:

ERC GENERAL CONTRACTOR
890 Carter Road Suite 170
Winter Garden, Fl 34787

Peavey & Associates
SURVEYING & MAPPING PA
690 ALICE PLACE
BARTOW, FL 33830
PHONE: 863-738-4960
FLORIDA BUSINESS NO.7779

Drawn By:	DLP
Party Chief:	DR
Field Book:	18
Page:	2-26

THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

FILE NAME: 135 erc vista cell 3 asb FINAL.dwg

NO.	DATE	REVISION

DEBORAH L. PEAVEY, P.S.M.
FLORIDA REGISTRATION NUMBER 6345
FLORIDA BUSINESS NUMBER 7726

9/17-25/2012
SURVEY DATE

SCALE	DRAWING NO.
1"=30'	135
PROJECT NO.	SHEET
135	5