FINAL CERTIFICATION REPORT
JED LEACHATE STORAGE FACILITY RELOCATION

JED SOLID WASTE MANAGEMENT FACILITY
OSCEOLA COUNTY, FLORIDA

PREPARED FOR:

OMNI WASTE OF OSCEOLA COUNTY, LLC
1501 OMNI WAY
ST. CLOUD, FLORIDA 34773
Tel: (407) 981-3720

PREPARED BY:

BRANTLEY ENGINEERING, LLC
13933 TREE LOFT ROAD
MILTON, GEORGIA 30004
Tel: (678) 427-2533

WSI Waste Services, Inc.

Brantley Engineering, LLC

Submitted: April 12, 2013

Volume (2 of 2)

APPENDIX A

Listing of CQA Monitoring and Installation Personnel

Section 1
Brantley Engineering, LLC

Brantley Engineering, LLC

Listing of Construction Quality Assurance Monitoring Personnel

JED Leachate Storage Facility Relocation

Name	Initials	Title
Allan Brantley, PE	ASB	Certifying Engineer
Sam Nejad, PE	SMN	Sr. Project Manager
Chris Johnson	CSJ	Sr. QA Monitor

Section 2

Comanco Environmental Corporation

COMANCO®
ENVIRONMENTAL CORPORATION

Project Superintendent

Arnulfo Martinez

Arnulfo has 13 years of experience in the supervision of the installation and seaming of a variety of synthetic liners and components in a wide range of industry applications. He has extensive experience in the on site supervision of safety, quality control, and all required documentation. In addition to his supervisory experience Arnulfo also has actual hands on installation experience which far exceed all of the requirements to be qualified as a Leadman, Quality Control Technician and Master Seamer. As the on site COMANCO Superintendent he is also responsible for the direct, day to day, on site safety management of the crew.

Recent Projects:
Citrus County
Mosaic Projects
Orange County

Components Installed ☒

- ☒ HDPE (Textured and Smooth)
- ☒ LLDPE (Textured and Smooth
- ☒ Super Grip Drain Liner
- ☒ XR-5
- ☒ Polypropylene
- ☒ PVC
- ☒ Geotextiles
- ☒ Geonets
- ☒ Geocomposite
- ☒ GCL
- ☒ Pipe Boots
- ☒ Batten Systems
- ☒ HDPE Sumps
- ☐

Applications ☒

- ☒ Landfill Cells
- ☒ Landfill Caps
- ☒ Leachate Ponds
- ☒ Wastewater Treatment Ponds
- ☒ Potable Water Reservoirs
- ☒ Evaporation Ponds
- ☒ Leach Pads
- ☐ Process Ponds
- ☒ Tank Liners
- ☒ Cut Off Trench
- ☒ Methane Barriers
- ☒ Tank Farm
- ☒ Floating Covers
- ☐

COMANCO®

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Master Seamer

Sarbelio Mendez

Sarbelio has 10 years of experience in the installation and seaming of a variety of synthetic liners and components. A Master Seamer qualification requires a minimum of five million square feet of actual hands on geomembrane welding experience. Sarbelio is familiar with all currently utilized welding techniques, welder set-up / maintenance, safety and installation procedures. He is also familiar with and has experience with detail work including pipe boots, sumps, batten seals, and other miscellaneous appurtenances. He is also qualified to assist in training of Geomembrane Welders.

Components Installed ☒

- ☒ HDPE (Textured and Smooth)
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- ☐

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Nevada Office: 7911 Terminal Way #204A Drive · Reno, NV 89502 · (775) 324-7707 · FAX (775) 324-7708

COMANCO®

ENVIRONMENTAL CORPORATION

Master Seamer

Bersain Velasquez

Bersain has 6 years of experience in the installation and seaming of a variety of synthetic liners and components. A Master Seamer qualification requires a minimum of five million square feet of actual hands on geomembrane welding experience. Bersain is familiar with all currently utilized welding techniques, welder set-up / maintenance, safety and installation procedures. He is also familiar with and has experience with detail work including pipe boots, sumps, batten seals, and other miscellaneous appurtenances. He is also qualified to assist in training of Geomembrane Welders.

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- ☒ Pipe Boots
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Applications ☒

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Quality Control Technician

Carlos Lopez Gomez

Carlos has 8 years of experience in the installation and seaming of a variety of synthetic liners and components. Carlos is familiar with all current field welding techniques, installation testing and documentation requirements. He has experience and training for the execution of and documentation required for on the site testing, QC and safety procedures. He is also qualified to assist in training of Welders, Installers and QC Technicians.
Carlos is fluent in both English and Spanish.

Components Installed ☒

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Fax: (775) 324-7708

Geosynthetics Installer

Roberto Fernandez

Roberto has 4 years of experience in installation of a variety of geosynthetic liners and components and has successfully completed over 1 million square feet of liner installation. He is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, and sewing. As part of his ongoing task training he is allowed to operate the wedge welder, extrusion welder, and air testing equipment under the direct supervision of a Comanco Superintendent, Master Seamer, or Quality Control Technician. He is familiar with all currently utilized safety procedures.

Components Installed ☒

- ☒ HDPE (Textured and Smooth)
- ☒ LLDPE (Textured and Smooth
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Heavy Equipment Operator

Misael Barrera

Misael has 5 years of experience in operating heavy equipment during the installation of a variety of geosynthetic liners and components. He is qualified to operate equipment to include the following machines: dozer, loader, excavator, forklift, skid steer, haul truck, water truck, and crawler. He is familiar with all currently utilized safety procedures.

Components Installed ☒

- ☒ HDPE (Textured and Smooth)
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Geosynthetics Installer

Marcelo Garcia

Marcelo has 2 years of experience in installation of a variety of geosynthetic liners and components and has successfully completed over 1 million square feet of liner installation. He is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, and sewing. As part of his ongoing task training he is allowed to operate the wedge welder, extrusion welder, and air testing equipment under the direct supervision of a Comanco Superintendent, Master Seamer, or Quality Control Technician. He is familiar with all currently utilized safety procedures.

Components Installed ☒

- ☒ HDPE (Textured and Smooth)
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ENVIRONMENTAL CORPORATION

Geosynthetics Installer

Manuel Solis

Manuel has 3 years of experience in the installation and seaming of a variety of synthetic liners and components. Manuel is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, wedge welder, extrusion, and air testing equipment under the direct supervision of a COMANCO Superintendent, Master Seamer or Quality Control Technician. He is familiar with all currently, installation and safety procedures

Components Installed ☒

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Master Seamer

Jose Luis Palestiano

Jose has 7 years of experience in the installation and seaming of a variety of synthetic liners and components. A Master Seamer qualification requires a minimum of five million square feet of actual hands on geomembrane welding experience. Jose is familiar with all currently utilized welding techniques, welder set-up / maintenance, safety and installation procedures. He is also familiar with and has experience with detail work including pipe boots, sumps, batten seals, and other miscellaneous appurtenances. He is also qualified to assist in training of Geomembrane Welders.

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ENVIRONMENTAL CORPORATION

Geosynthetics Installer

Andres Hernandez

Andres has 5 years of experience in the installation and seaming of a variety of synthetic liners and components. Andres is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, wedge welder, extrusion, and air testing equipment under the direct supervision of a COMANCO Superintendent, Master Seamer or Quality Control Technician. He is familiar with all currently, installation and safety procedures

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Geosynthetics Installer

Alejandro Losa

Alejandro has 6 months of experience in installation of a variety of geosynthetic liners and components and has successfully completed over 1 million square feet of liner installation. He is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, and sewing. As part of his ongoing task training he is allowed to operate the wedge welder, extrusion welder, and air testing equipment under the direct supervision of a Comanco Superintendent, Master Seamer, or Quality Control Technician. He is familiar with all currently utilized safety procedures.

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Geosynthetics Installer

Nicolas Virgen Rubio

Nicolas has 9 years of experience in installation of a variety of geosynthetic liners and components and has successfully completed over 1 million square feet of liner installation. He is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, and sewing. As part of his ongoing task training he is allowed to operate the wedge welder, extrusion welder, and air testing equipment under the direct supervision of a Comanco Superintendent, Master Seamer, or Quality Control Technician. He is familiar with all currently utilized safety procedures.

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Heavy Equipment Operator

Gonzalo Lopez

Gonzalo has 5 years of experience in operating heavy equipment during the installation of a variety of geosynthetic liners and components. He is qualified to operate equipment to include the following machines: dozer, loader, excavator, forklift, skid steer, haul truck, water truck, and crawler. He is familiar with all currently utilized safety procedures.

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Geosynthetics Installer

Bonifilio Lopez

Bonifilio has 3 years of experience in installation of a variety of geosynthetic liners and components and has successfully completed over 1 million square feet of liner installation. He is qualified to set-up and operate equipment to include the following machines: Vacuum box, hand held hot air, and sewing. As part of his ongoing task training he is allowed to operate the wedge welder, extrusion welder, and air testing equipment under the direct supervision of a Comanco Superintendent, Master Seamer, or Quality Control Technician. He is familiar with all currently utilized safety procedures.

Components Installed ☒

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APPENDIX B

Pre-Construction Soils Laboratory Testing Results

Section 1
General Fill

November 2, 2012

Allan Brantley, PE
President
BRANTLEY ENGINEERING, LLC
13933 Tree Loft Road
Milton, Georgia 30004
abrantley@brantleyeng.com

RE: Brantley Field-Lab Testing Report – October 2012
AMEC Project No. 300751

Dear Mr. Brantley:

Please find attached the laboratory test results completed in accordance with the American Society for Testing and Materials (ASTM) and project specifications. As requested AMEC Environment & Infrastructure, Inc. completed the following testing:

- Ten Standard Proctor (ASTM D698) tests, one for each of the ten samples (P1 through P10).
- Twenty-four Grain Size (ASTM D422) tests, two for each of the ten samples and one additional grain size on P4, P5, P8, and P9.
- One Hydraulic Conductivity (ASTM D2434) test on sample P2.

Please do not hesitate to contact us if you have any further questions regarding the information provided.

Sincerely,

Ricardo C. Kiriakidis L., P.E.
Geotechnical Project Manager
Florida License No. 70602

rk/dl
attachments
via e-mail

AMEC
Environment & Infrastructure
2000 E. Edgewood Drive, Suite 215
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USA 33803
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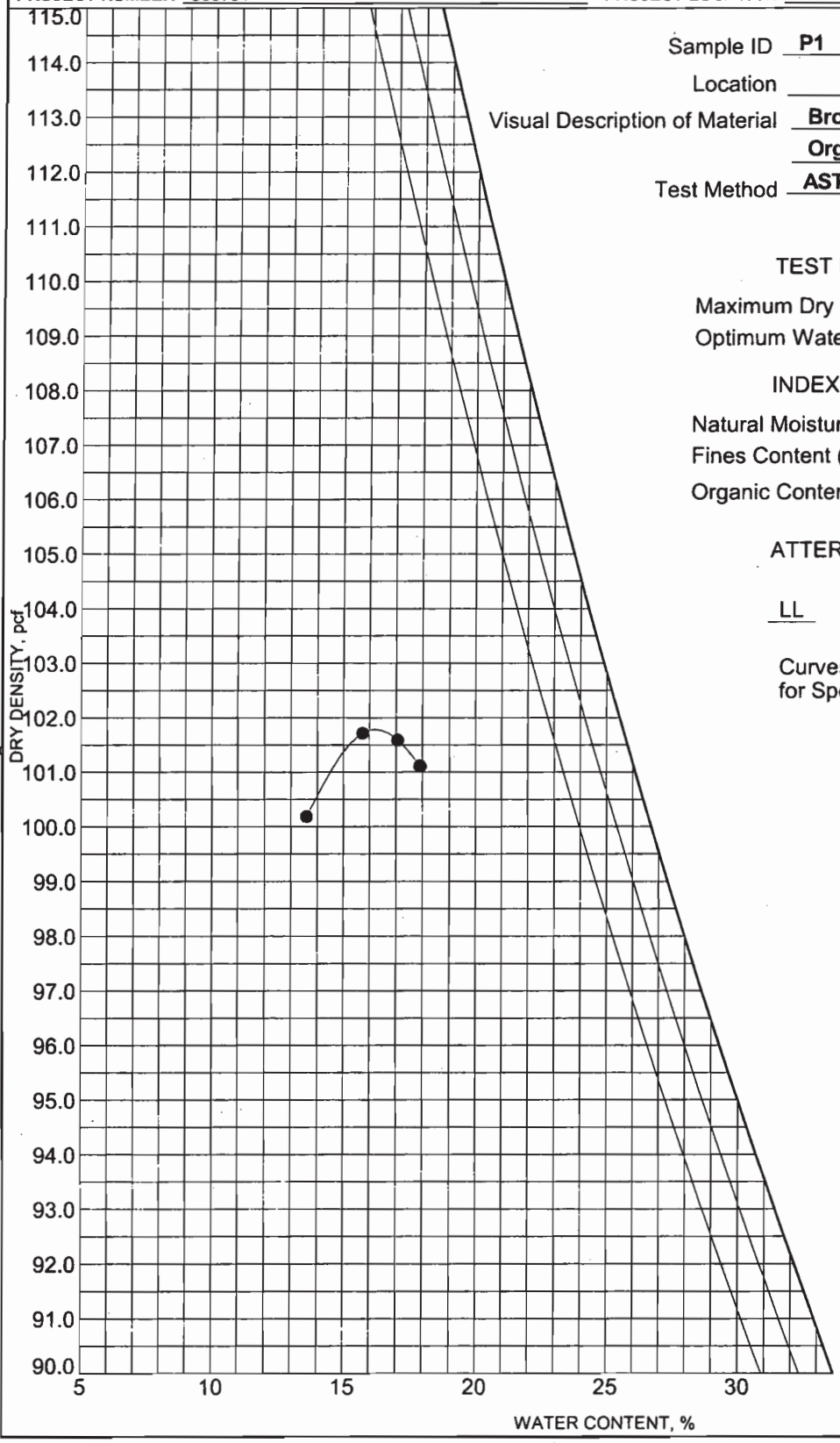
Fax (863) 667-2662
www.amec.com

MOISTURE-DENSITY RELATIONSHIP

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



Sample ID **P1**

Location

Visual Description of Material **Brown Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **101.8** **PCF**

Optimum Water Content **16.2** **%**

INDEX PROPERTIES

Natural Moisture Content ____ %

Fines Content (%<200 Mesh) ____ %

Organic Content ____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number _____

MOISTURE-DENSITY RELATIONSHIP

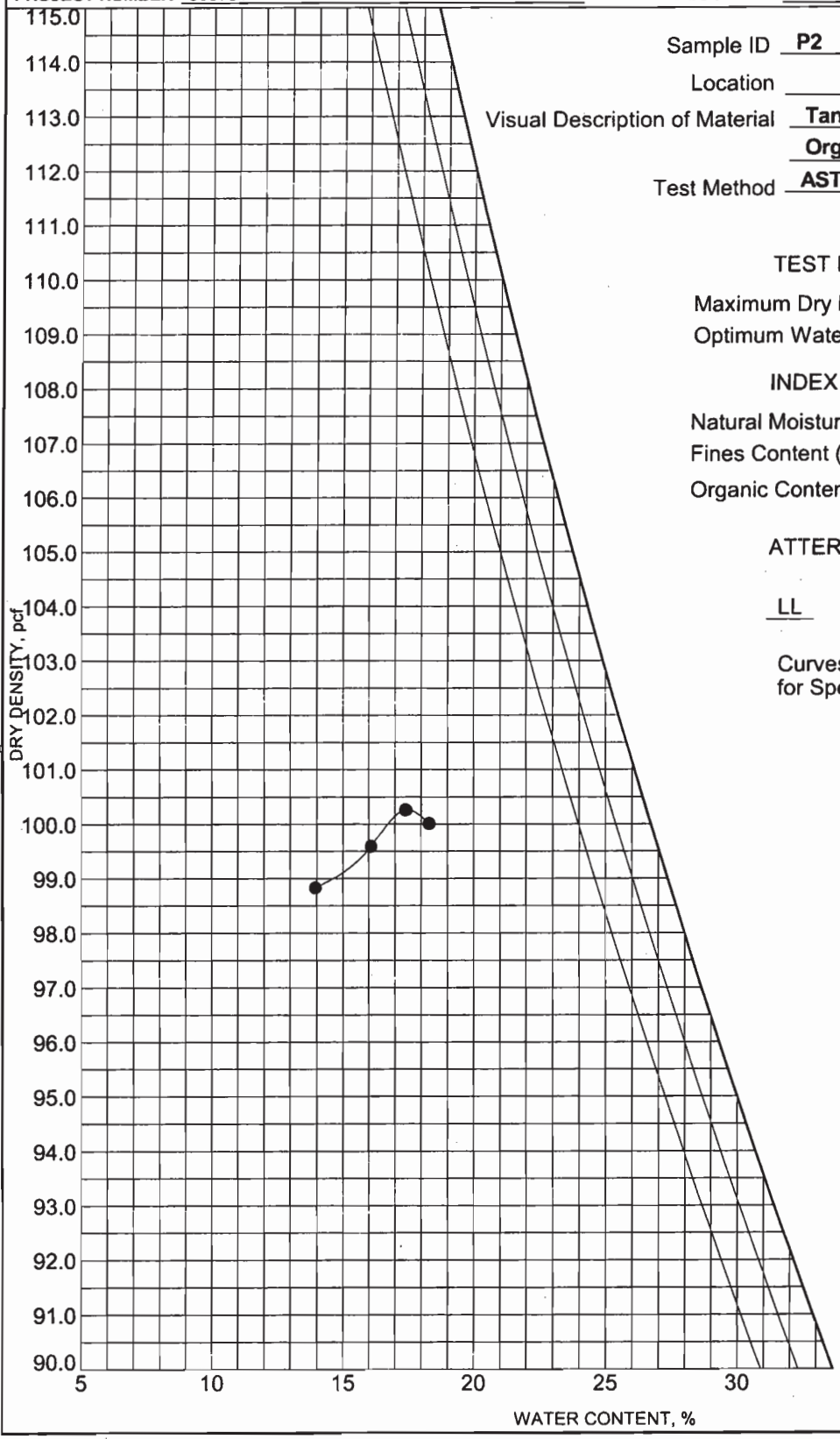
amec

CLIENT BRANTLEY ENGINEERING, LLC

PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P2**

Location

Visual Description of Material **Tan/White Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density	**100.3**	**PCF**
Optimum Water Content	**17.5**	**%**

INDEX PROPERTIES

Natural Moisture Content		%
Fines Content (%<200 Mesh)		%
Organic Content		%

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number

MOISTURE-DENSITY RELATIONSHIP

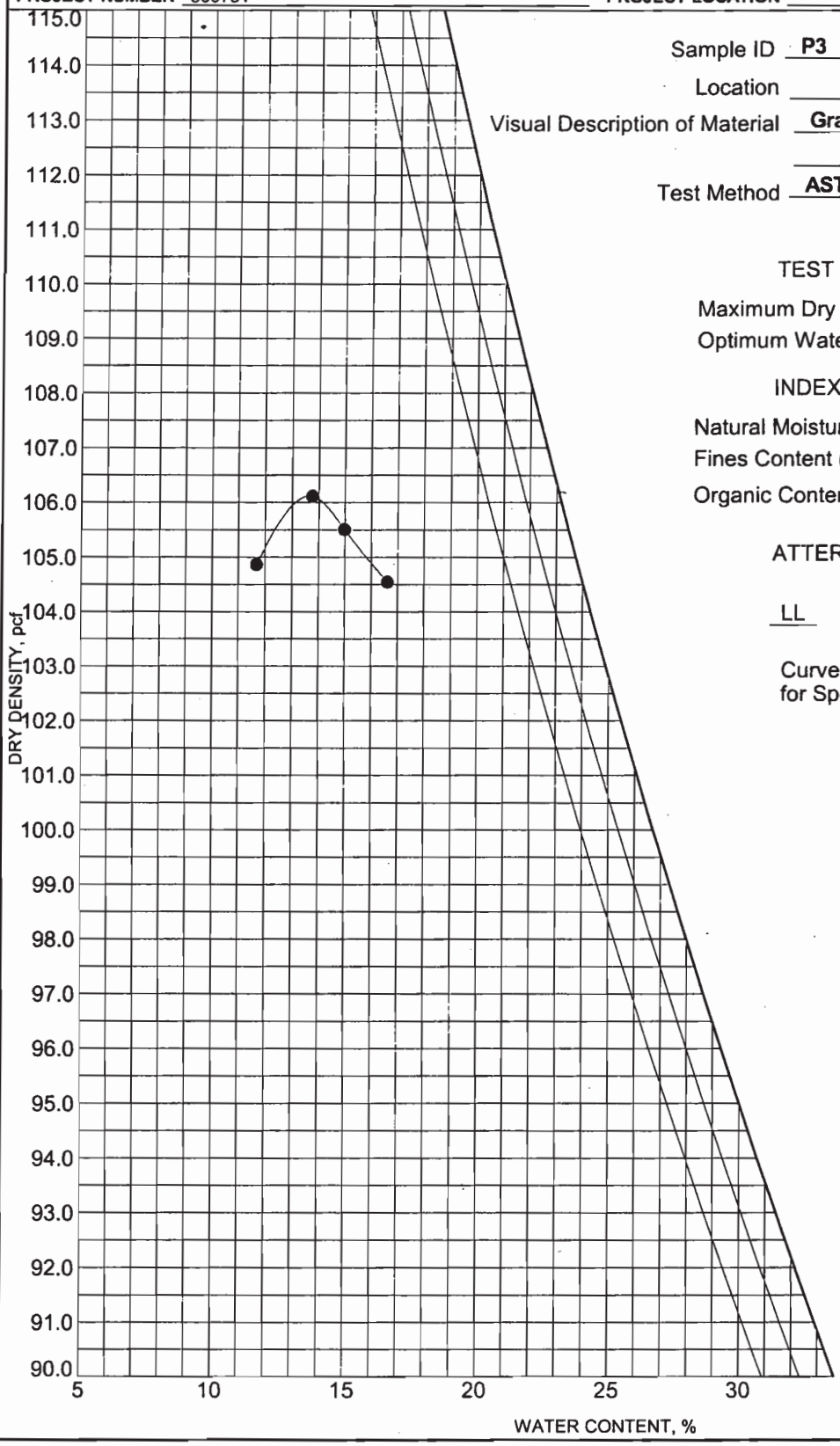
amec

CLIENT BRANTLEY ENGINEERING, LLC

PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P3**

Location

Visual Description of Material **Gray Fine SAND**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density	**106.1**	**PCF**
Optimum Water Content	**13.7**	**%**

INDEX PROPERTIES

Natural Moisture Content		%
Fines Content (%<200 Mesh)		%
Organic Content		%

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number

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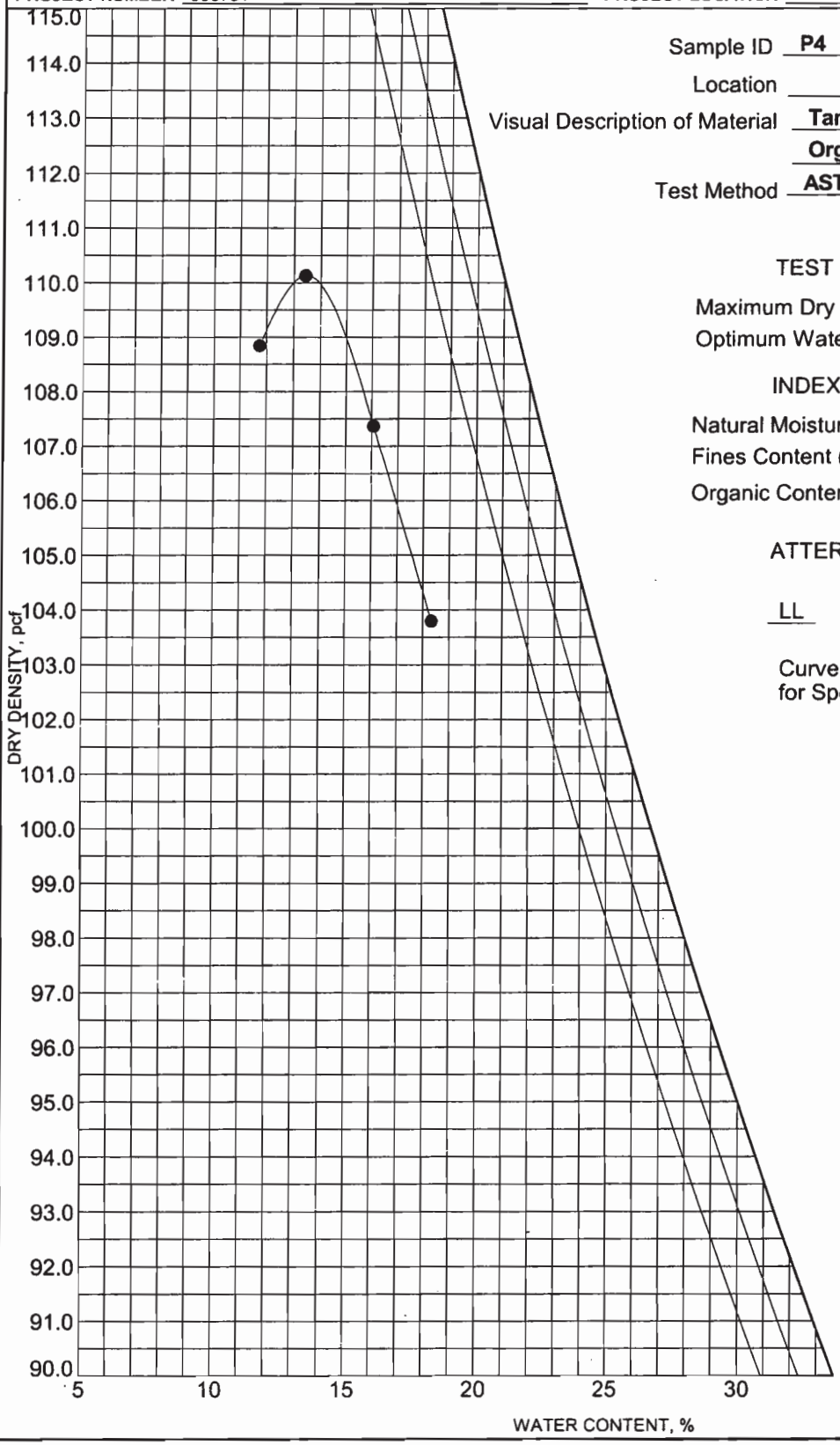
PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P4**

Location

Visual Description of Material **Tan Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **110.1** **PCF**

Optimum Water Content **13.4** **%**

INDEX PROPERTIES

Natural Moisture Content ____ %

Fines Content (%<200 Mesh) ____ %

Organic Content ____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number _____

MOISTURE-DENSITY RELATIONSHIP

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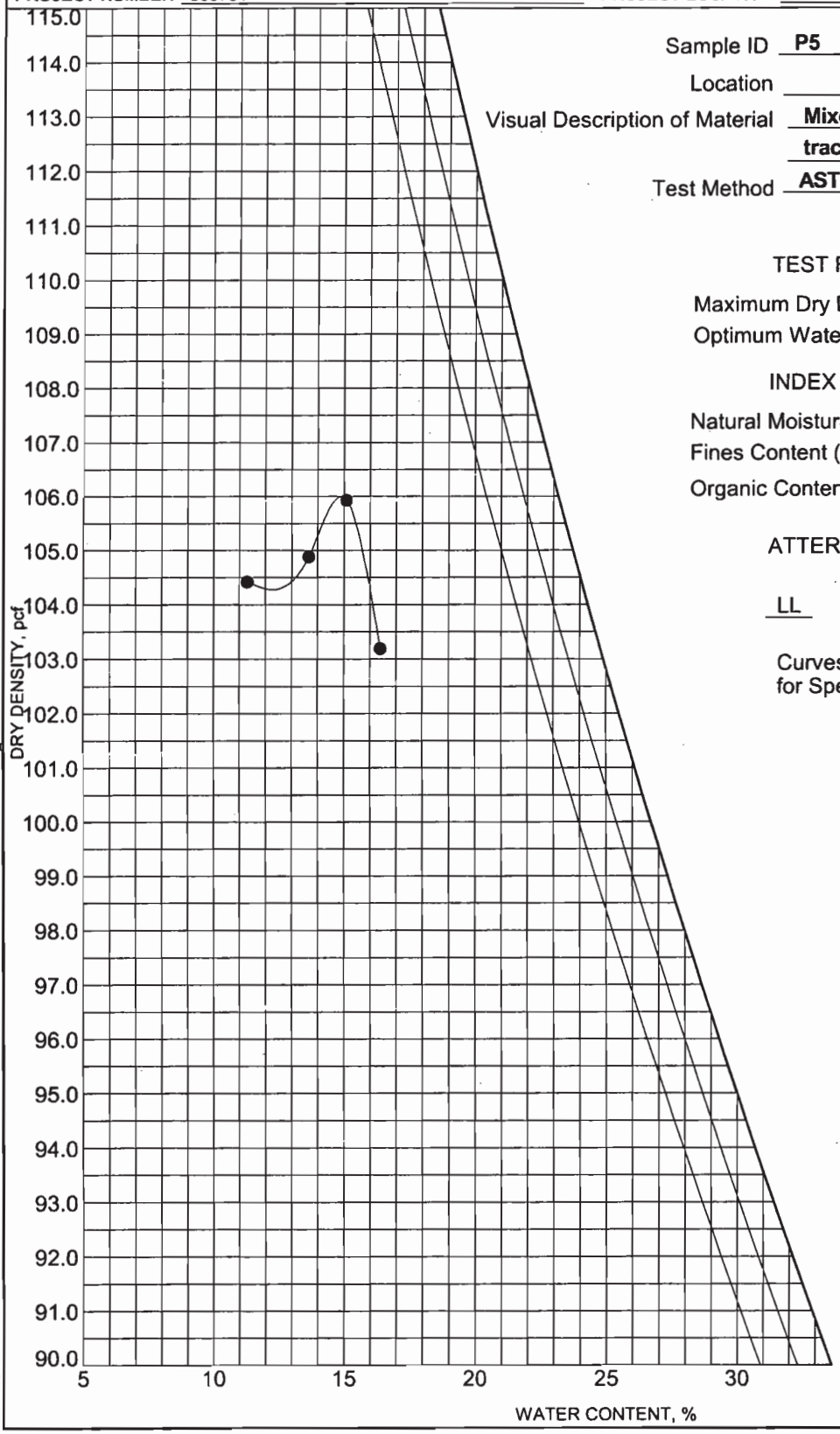
PROJECT NUMBER 300751 **PROJECT LOCATION**



Sample ID **P5**

Location

Visual Description of Material **Mixed Brown Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **106.0** **PCF**

Optimum Water Content **14.9** **%**

INDEX PROPERTIES

Natural Moisture Content _____ %

Fines Content (%<200 Mesh) _____ %

Organic Content _____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

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MOISTURE-DENSITY RELATIONSHIP

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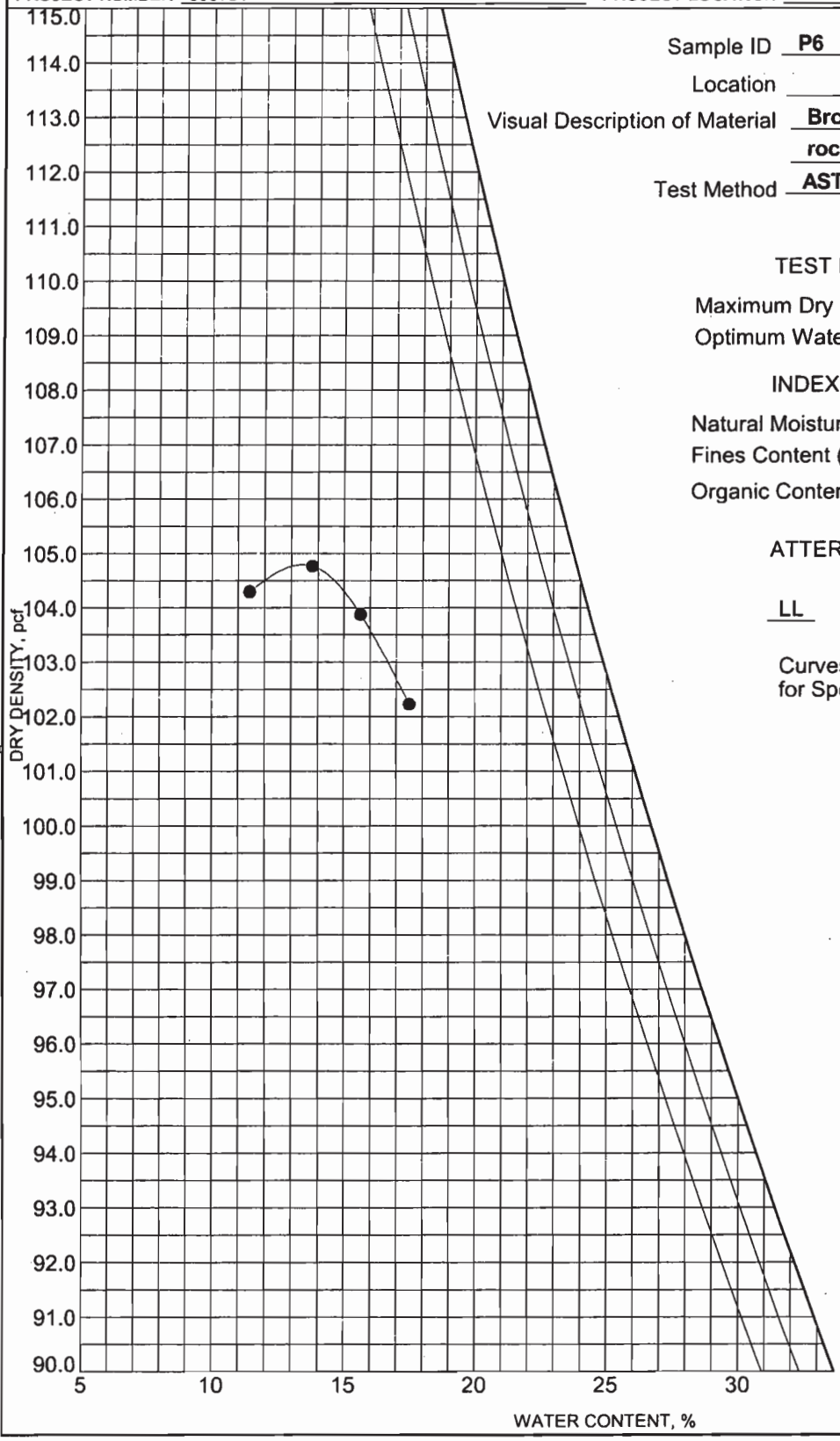
PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P6**

Location

Visual Description of Material **Brown Fine SAND with trace rocks**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density	**104.8**	**PCF**
Optimum Water Content	**13.4**	**%**

INDEX PROPERTIES

Natural Moisture Content		%
Fines Content (%<200 Mesh)		%
Organic Content		%

ATTERBERG LIMITS

LL	PL	PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number

MOISTURE-DENSITY RELATIONSHIP

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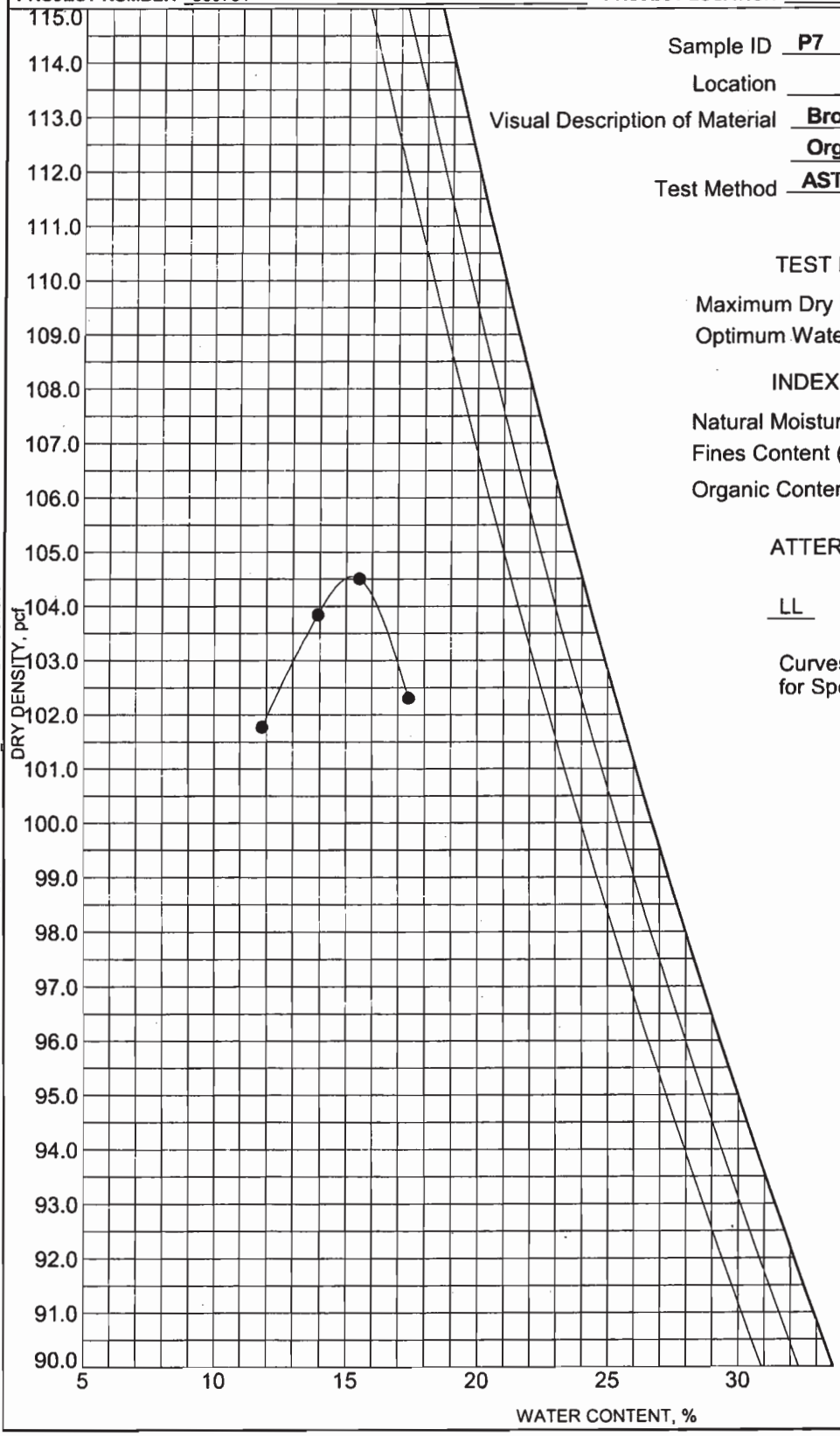
PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P7**

Location

Visual Description of Material **Brown Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **104.6** **PCF**

Optimum Water Content **15.3** **%**

INDEX PROPERTIES

Natural Moisture Content _____ %

Fines Content (%<200 Mesh) _____ %

Organic Content _____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

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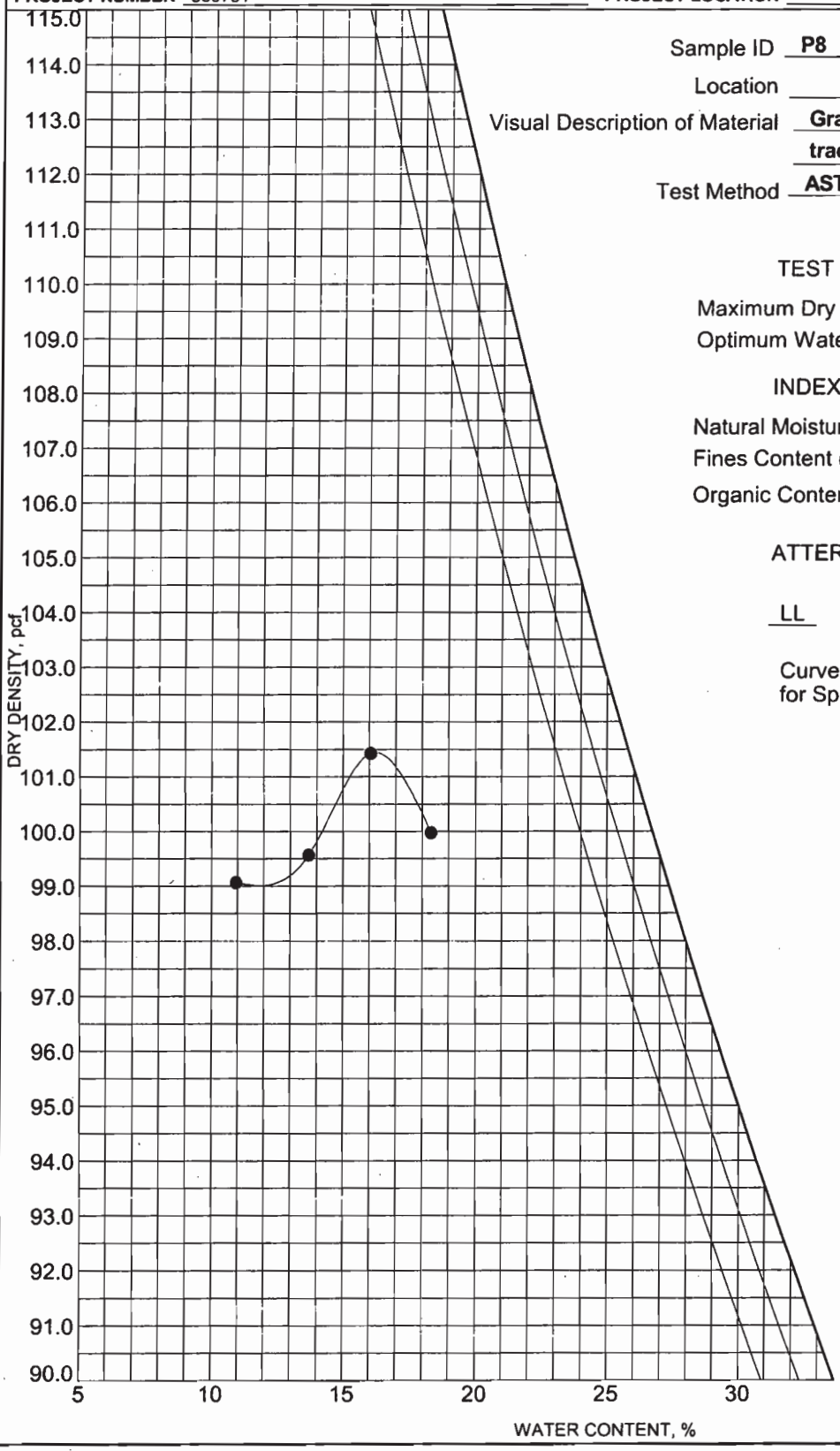
PROJECT NUMBER 300751 **PROJECT LOCATION**



Sample ID **P8**

Location

Visual Description of Material **Grayish-Brown Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **101.4** **PCF**

Optimum Water Content **16.2** **%**

INDEX PROPERTIES

Natural Moisture Content ____ %

Fines Content (%<200 Mesh) ____ %

Organic Content ____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number _____

MOISTURE-DENSITY RELATIONSHIP

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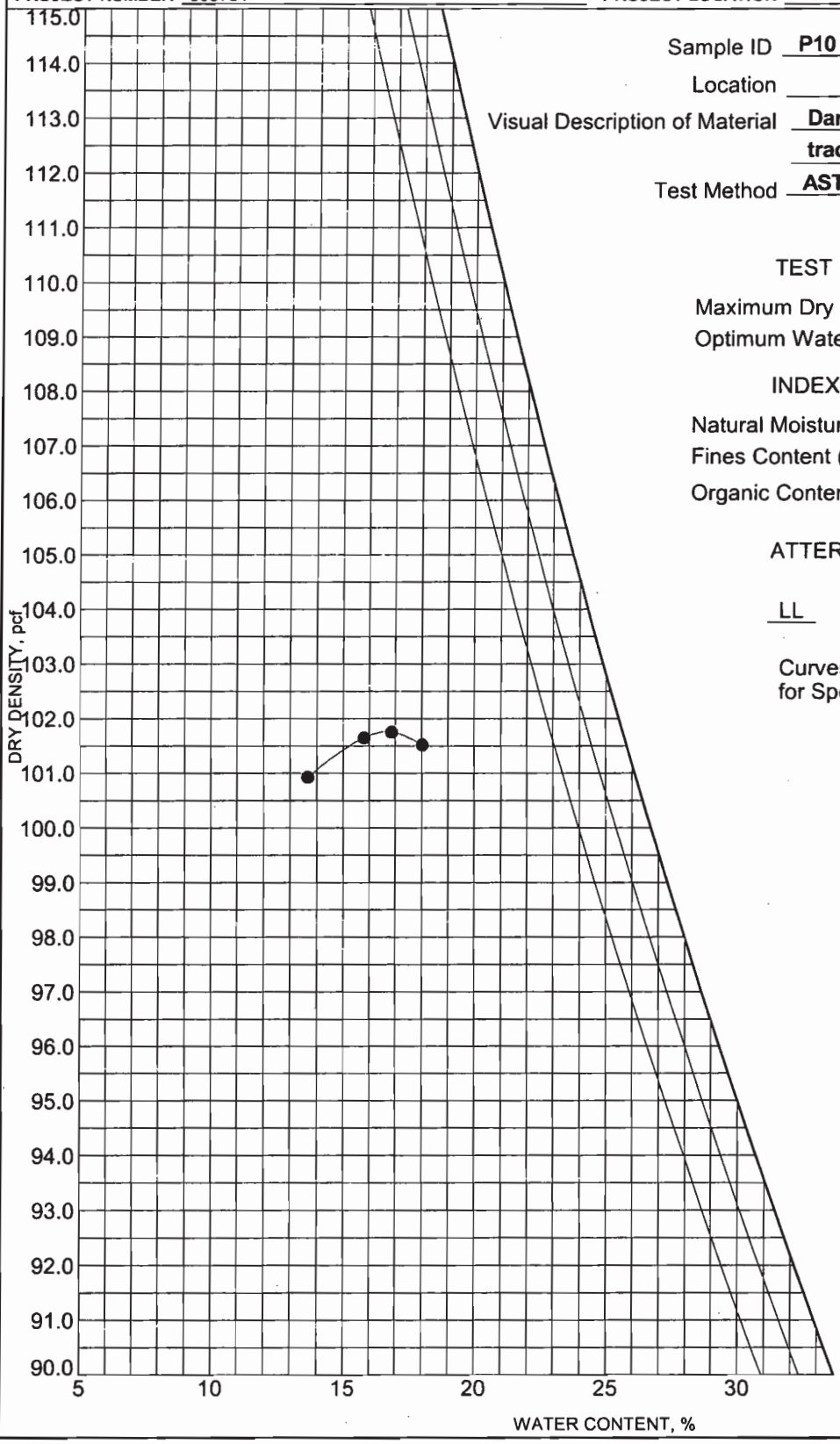
CLIENT BRANTLEY ENGINEERING, LLC

PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION



Sample ID **P10**

Location

Visual Description of Material **Dark Brown Fine SAND with trace Organics**

Test Method **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density **101.8** **PCF**

Optimum Water Content **16.7** **%**

INDEX PROPERTIES

Natural Moisture Content _____ %

Fines Content (%<200 Mesh) _____ %

Organic Content _____ %

ATTERBERG LIMITS

LL PL PI

Curves of 100% Saturation for Specific Gravity Equal to:

2.80

2.70

2.60

COMPACTION - C-44 GINT STD US LABS.GDT - 11/5/12 10:55 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

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GRAIN SIZE DISTRIBUTION

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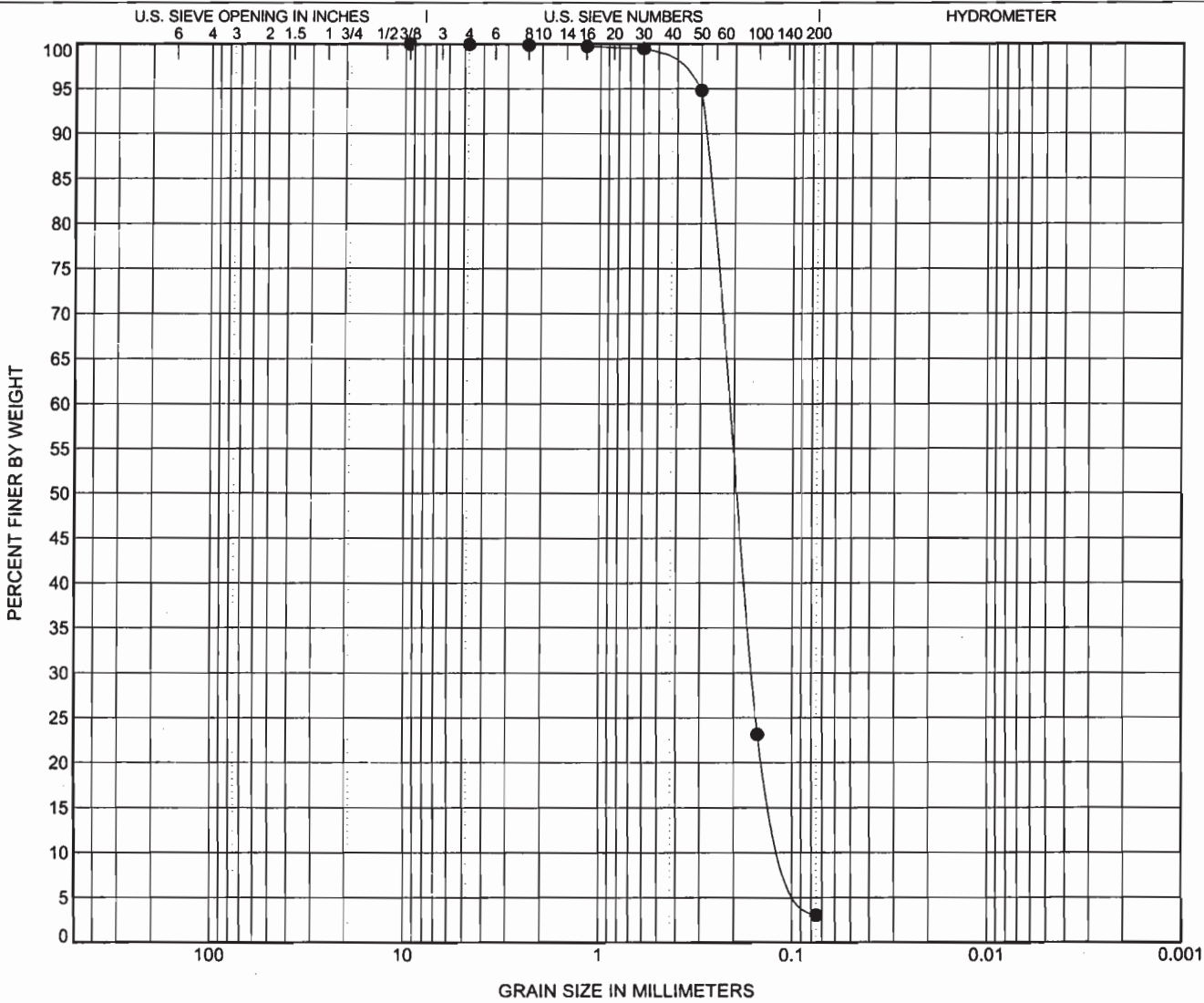
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P1a	**POORLY GRADED SAND(SP)**				**1.26**	**2.25**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P1a	**9.5**	**0.214**	**0.16**	**0.095**	**0.0**	**96.9**	**3.1**	

CT Number _____

GRAIN SIZE DISTRIBUTION

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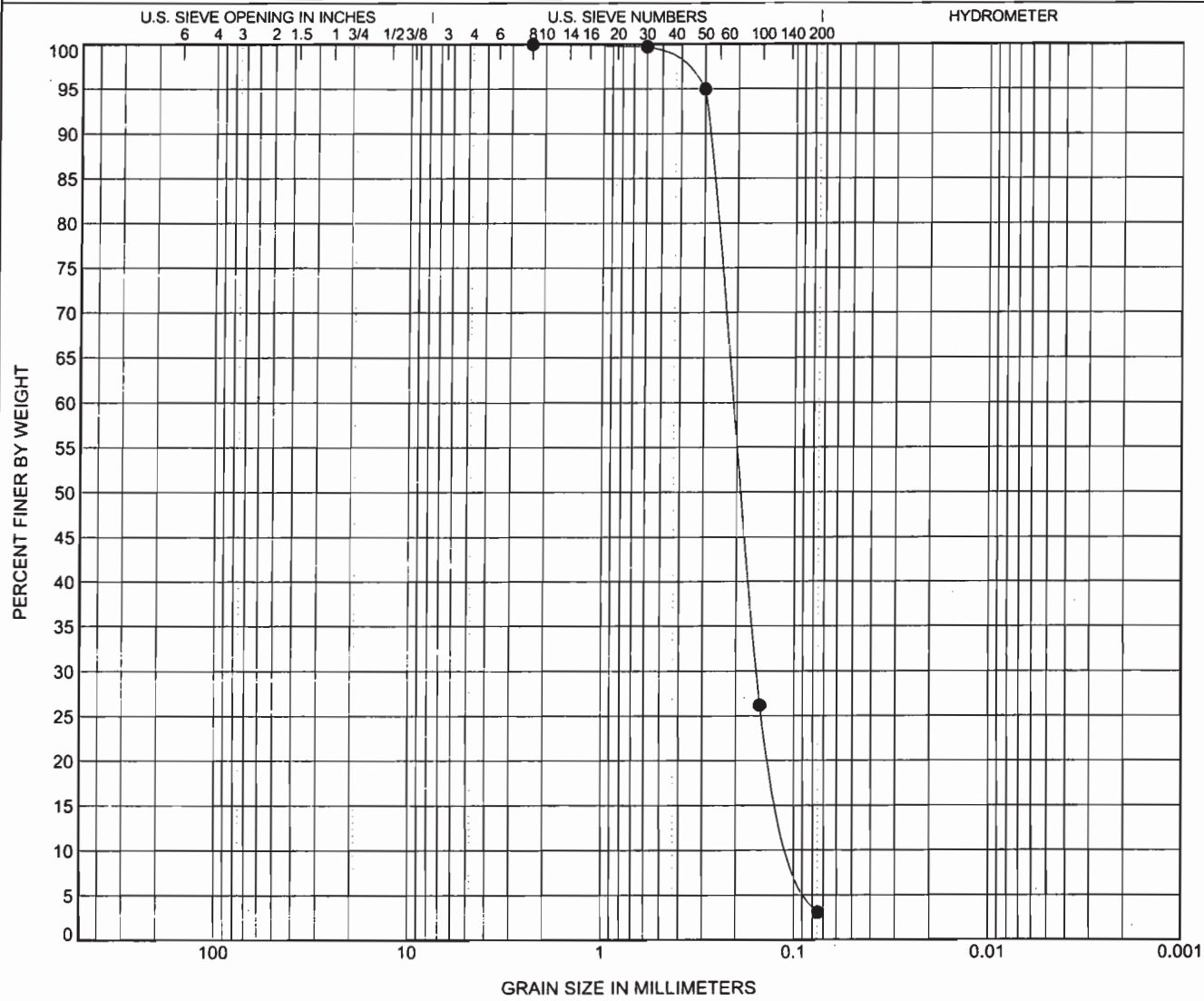
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● **P1b**	**POORLY GRADED SAND(SP)**				**1.25**	**2.29**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **P1b**	**2.36**	**0.211**	**0.156**	**0.092**	**0.0**	**96.9**	**3.1**	

CT Number

GRAIN SIZE DISTRIBUTION

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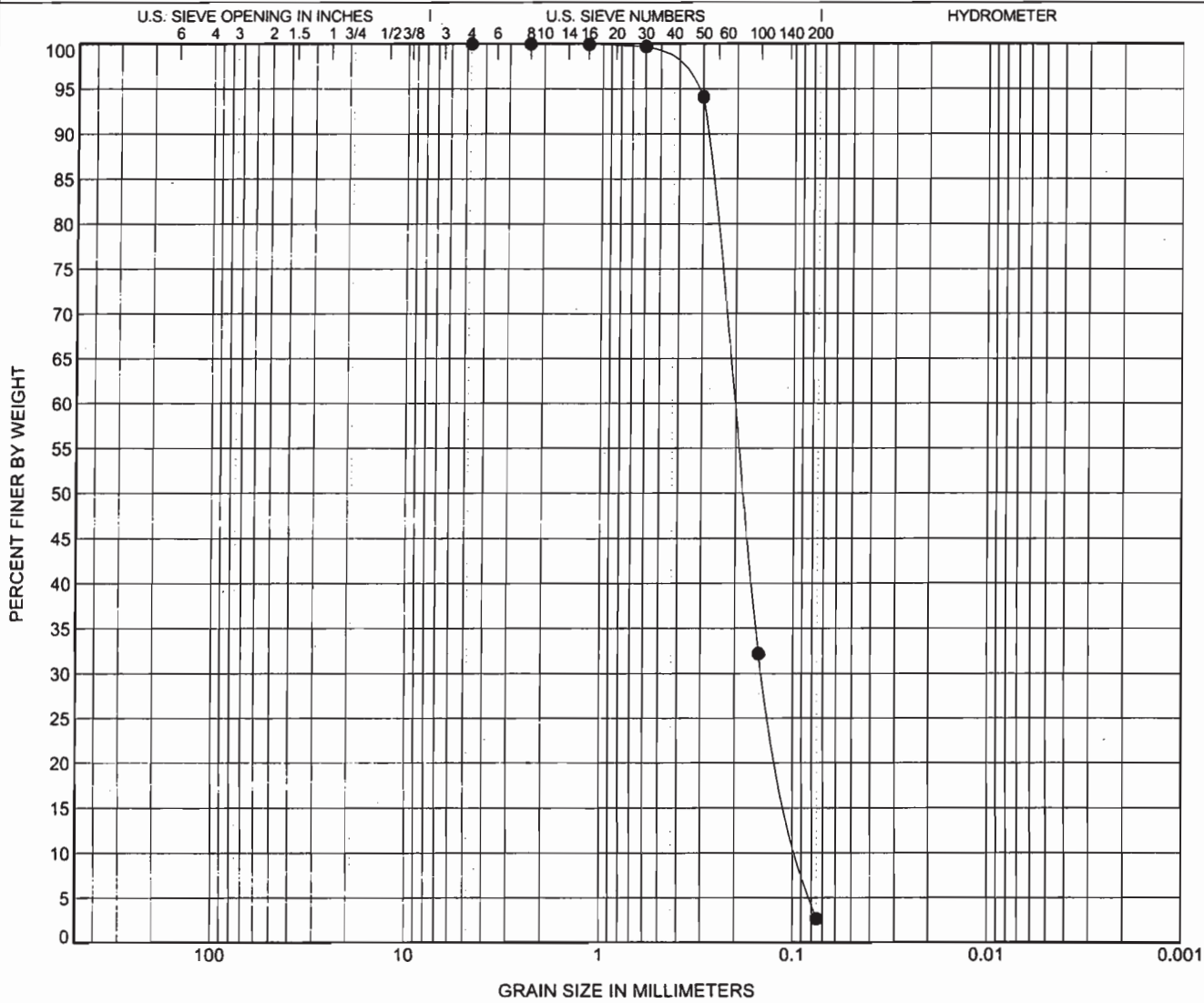
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P2a	POORLY GRADED SAND(SP)				1.11	2.30

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P2a	4.75	0.205	0.142	0.089	0.0	97.3	2.7	

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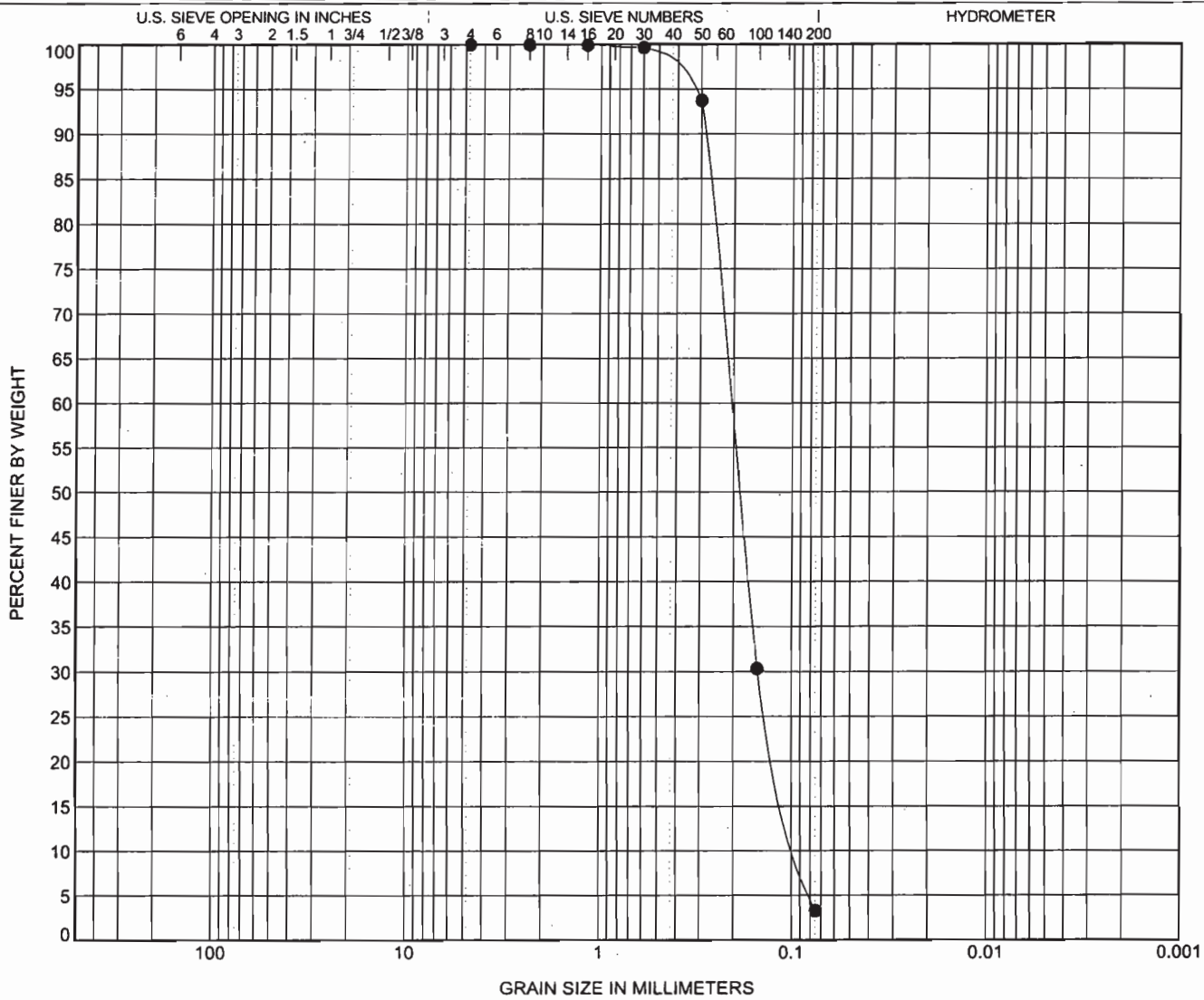
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P2b	POORLY GRADED SAND(SP)				1.20	2.33

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P2b	4.75	0.207	0.149	0.089	0.0	96.7	3.3	

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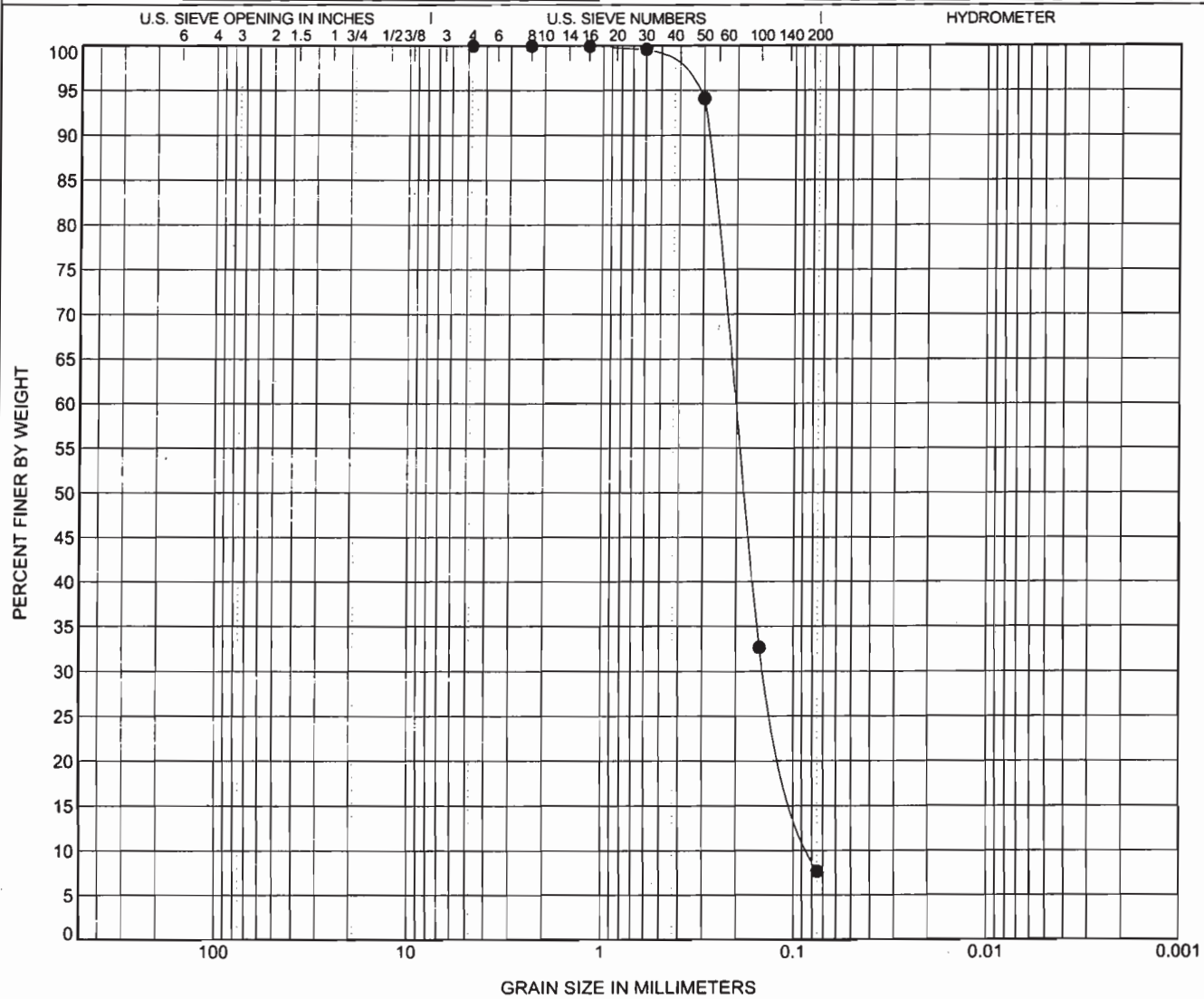
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P3a	**POORLY GRADED SAND with SILT(SP-SM)**				**1.19**	**2.55**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P3a	**4.75**	**0.204**	**0.139**	**0.08**	**0.0**	**92.3**	**7.7**	

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GRAIN SIZE DISTRIBUTION

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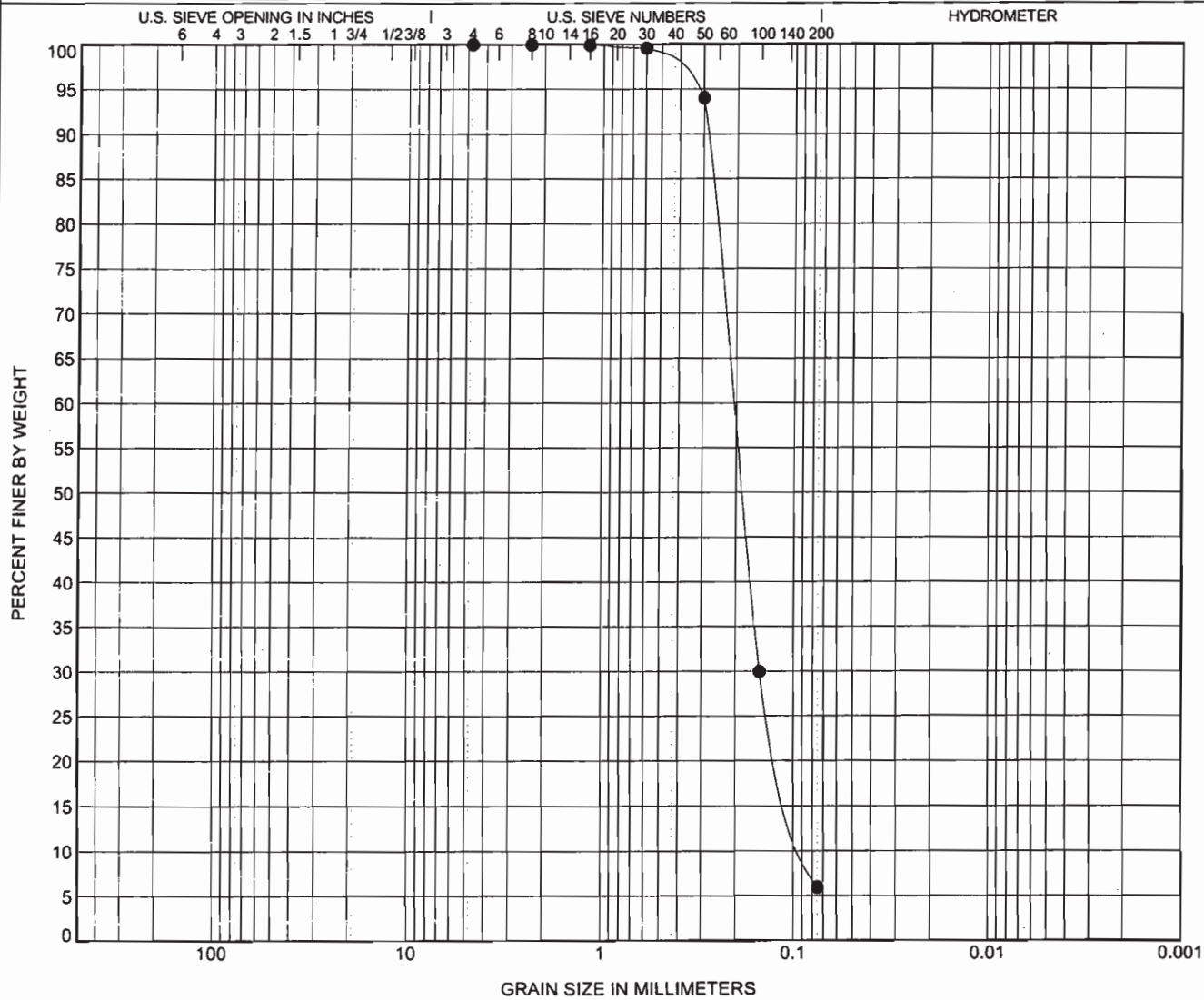
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P3b	POORLY GRADED SAND with SILT(SP-SM)				1.29	2.46

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P3b	4.75	0.208	0.15	0.084	0.0	94.0	6.0	

CT Number

GRAIN SIZE DISTRIBUTION

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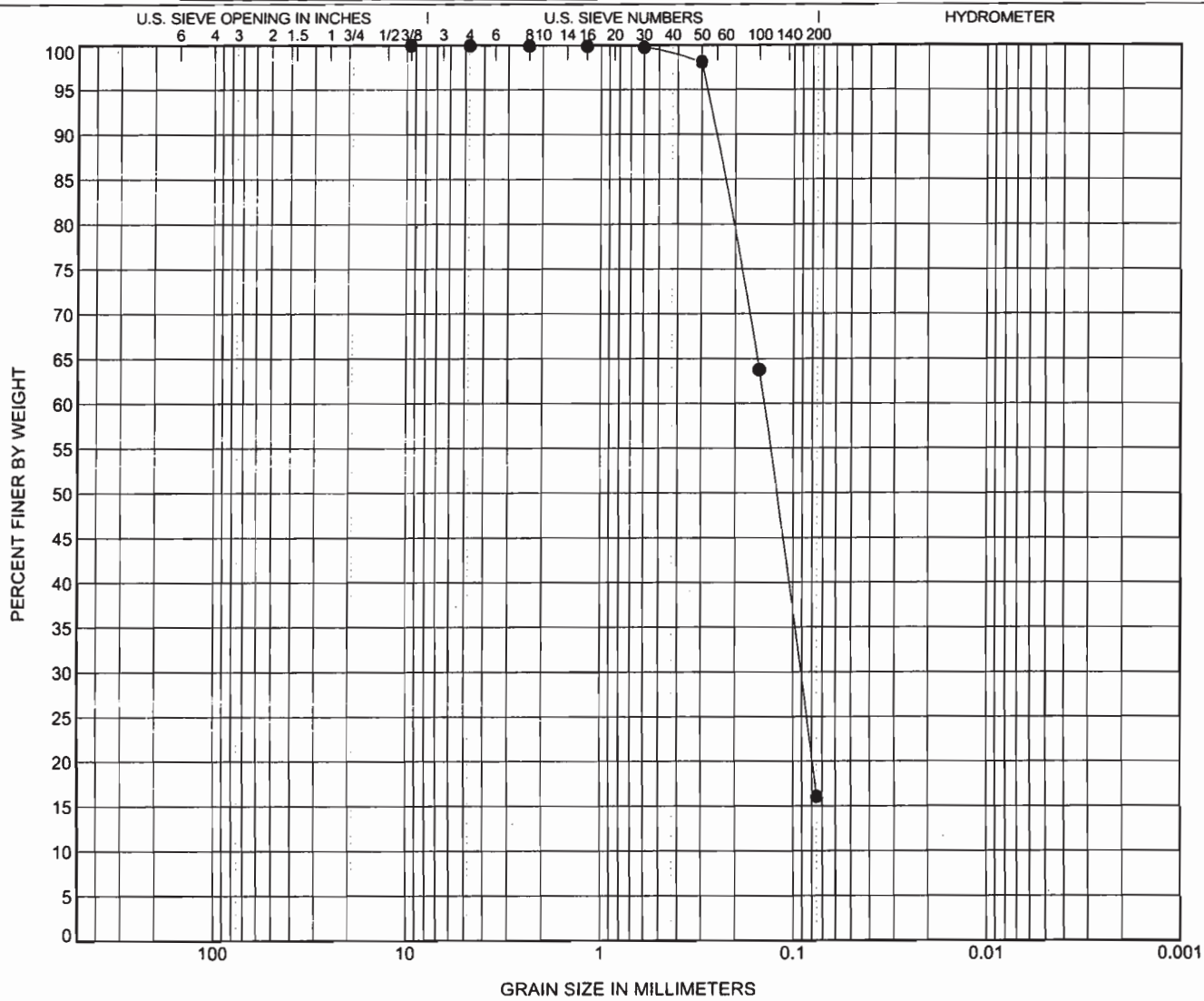
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	Classification	LL	PL	PI	Cc	Cu
●	**P4a**	**SILTY SAND(SM)**					

	BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**P4a**	**9.51**	**0.142**	**0.092**		**0.0**	**83.9**	**16.1**	

CT Number

GRAIN SIZE DISTRIBUTION

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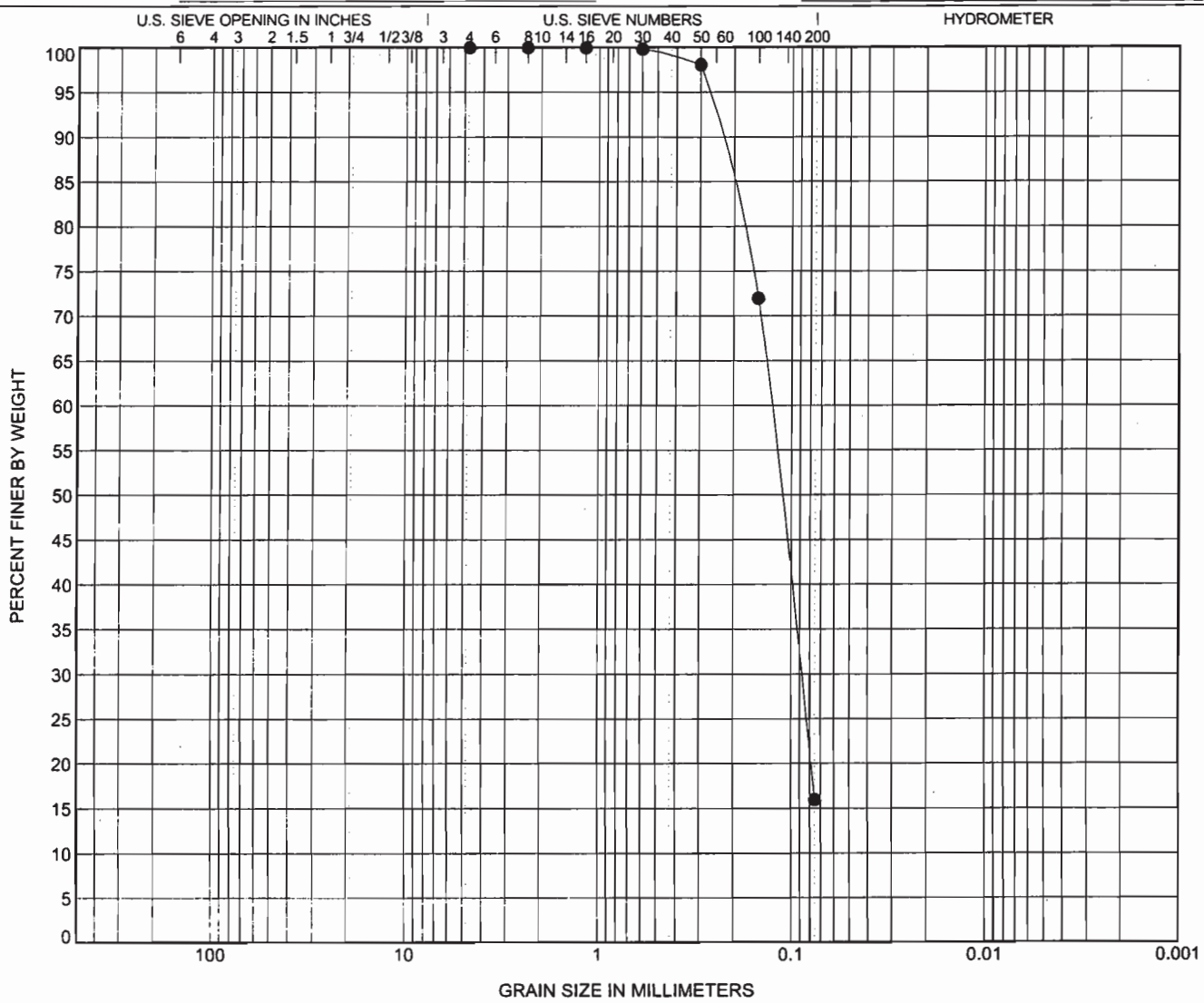
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	Classification	LL	PL	PI	Cc	Cu
●	**P4b**	**SILTY SAND(SM)**					

	BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**P4b**	**4.75**	**0.129**	**0.089**		**0.0**	**84.0**	**16.0**	

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GRAIN SIZE DISTRIBUTION

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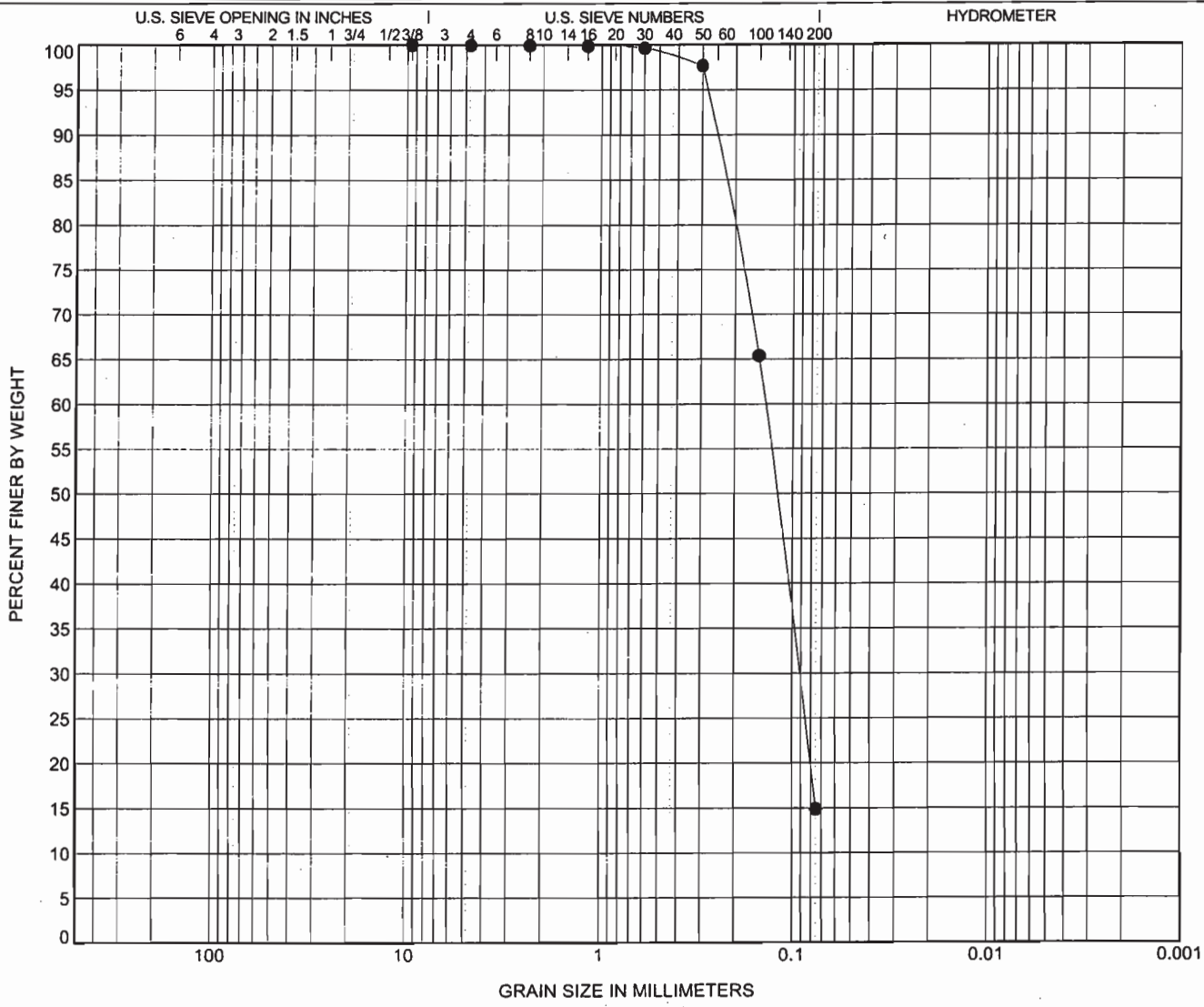
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P4c	**SILTY SAND(SM)**					

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P4c	**9.5**	**0.139**	**0.092**		**0.0**	**85.1**	**14.9**	

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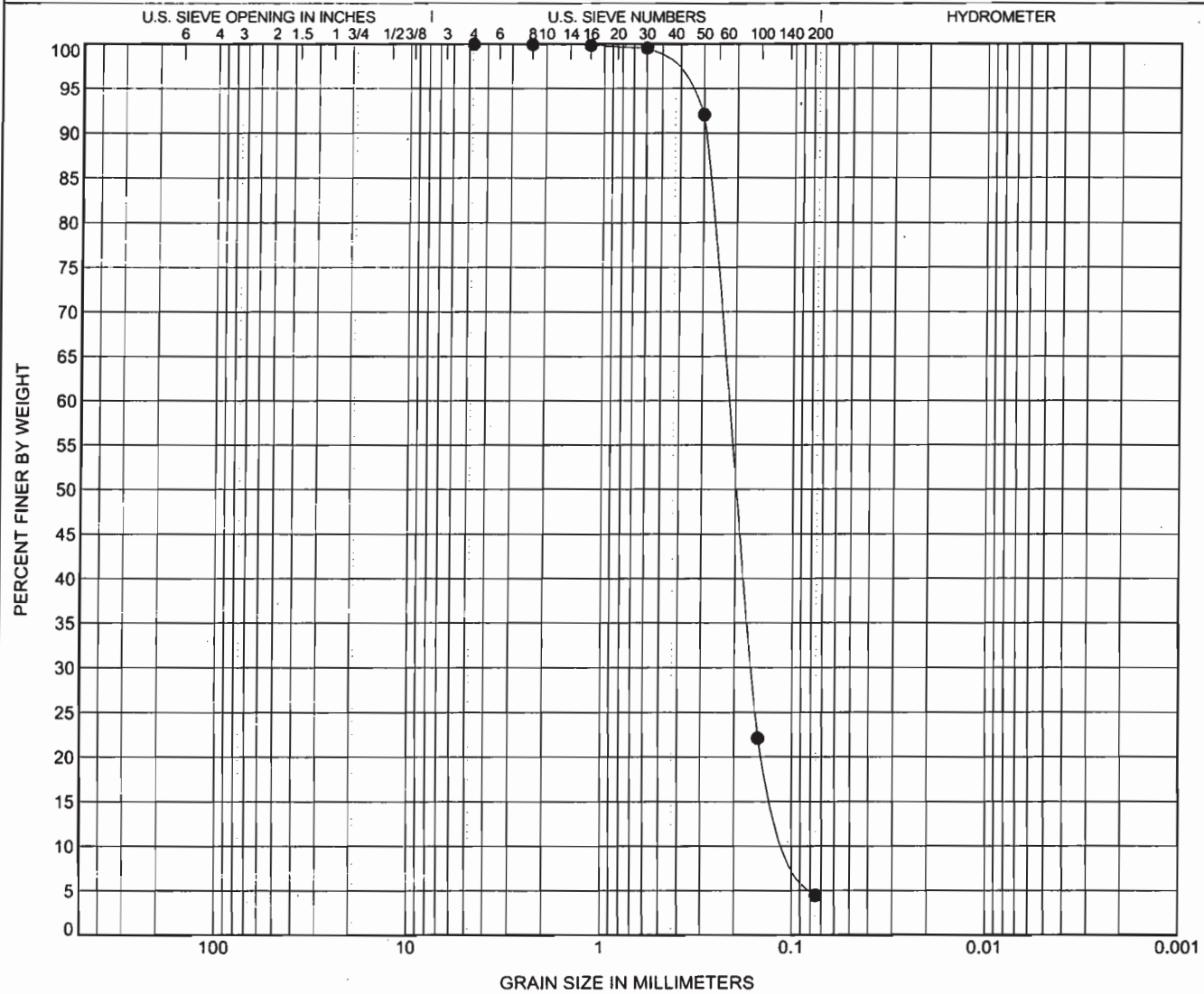
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P5a	POORLY GRADED SAND(SP)				1.29	2.34

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P5a	4.75	0.218	0.162	0.093	0.0	95.5	4.5	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:34 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

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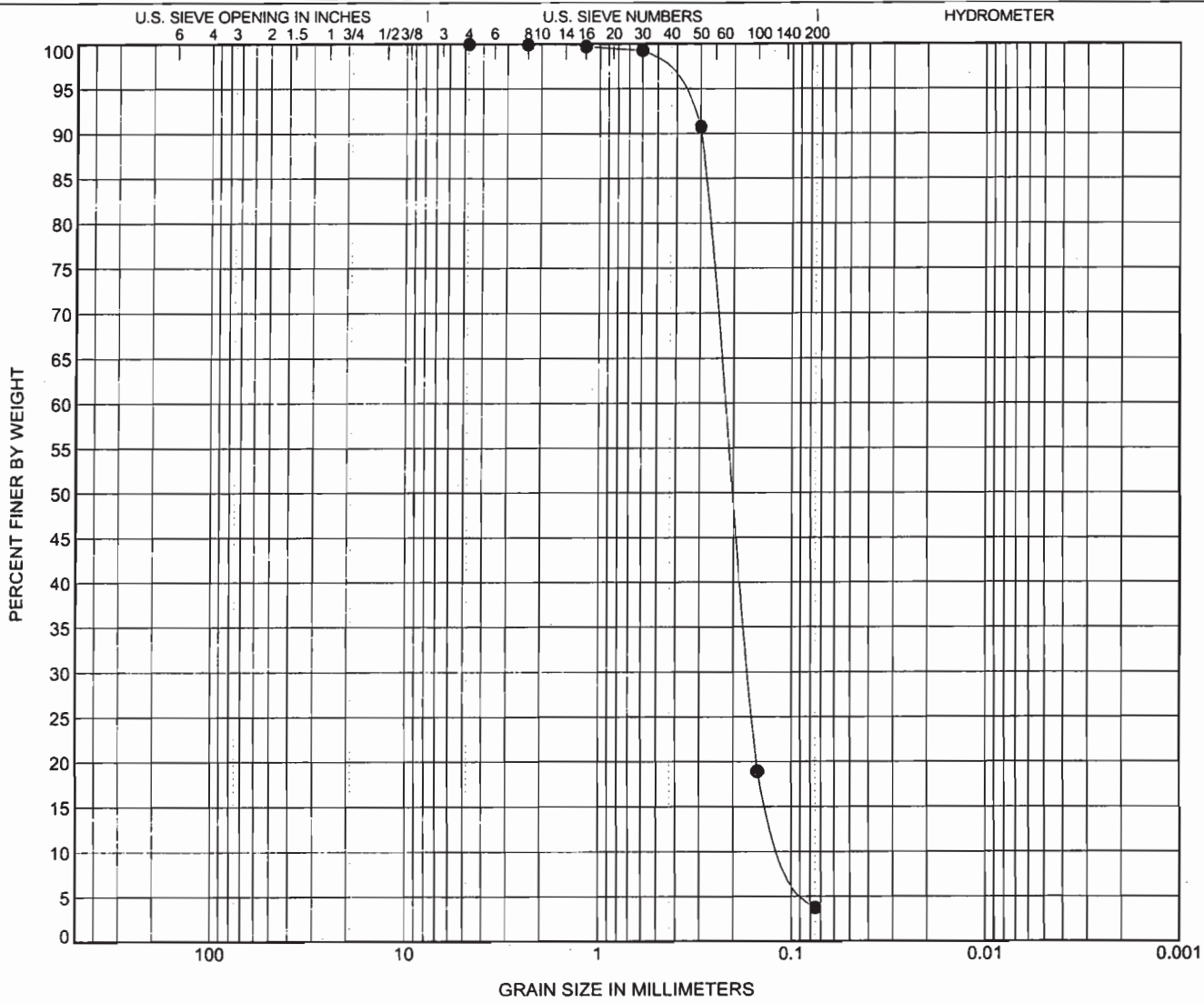
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P5b	POORLY GRADED SAND(SP)				1.25	2.24

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P5b	4.75	0.223	0.167	0.1	0.0	96.2	3.8	

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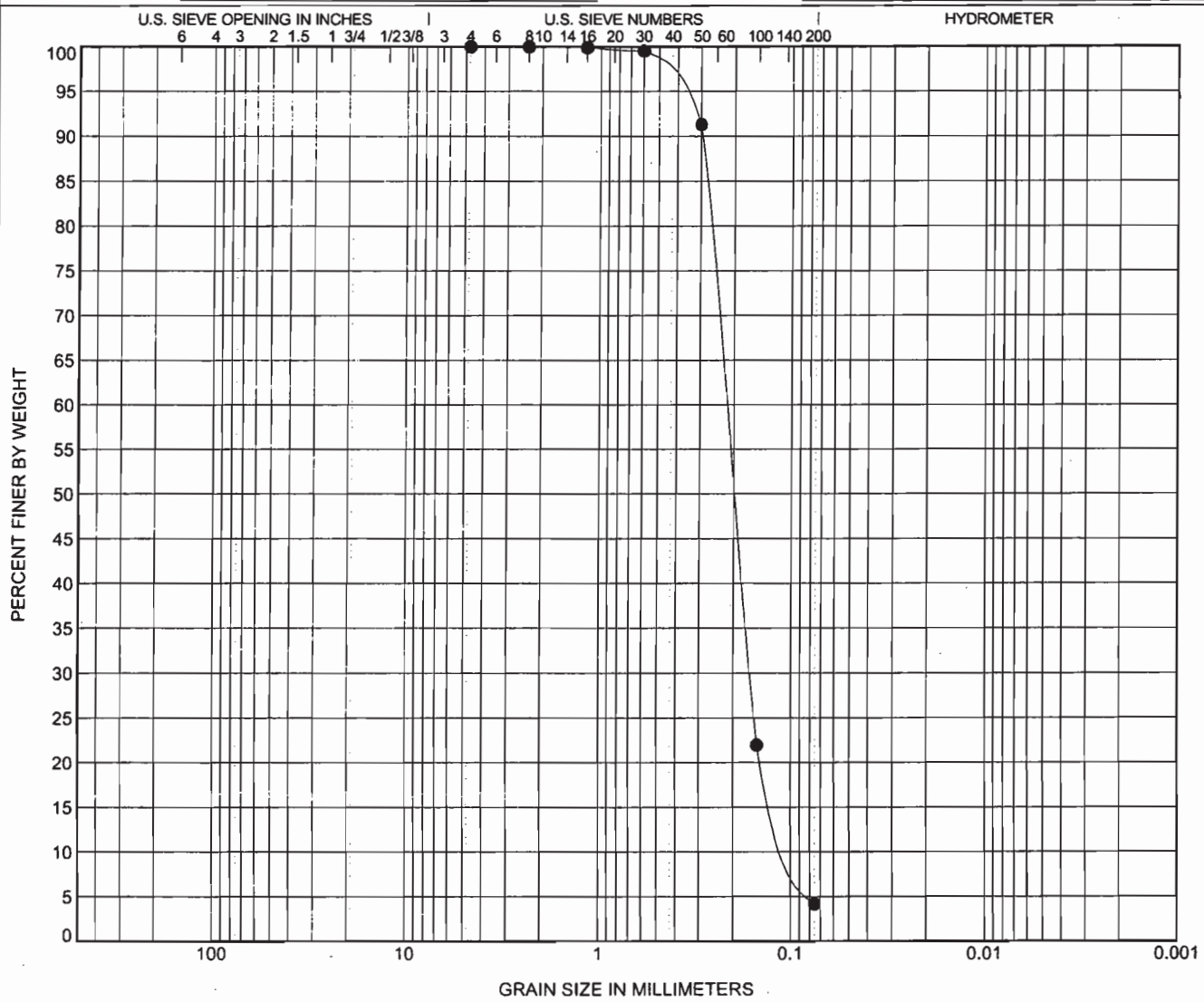
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P5c	POORLY GRADED SAND(SP)				1.28	2.33

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P5c	4.75	0.219	0.163	0.094	0.0	95.8	4.2	

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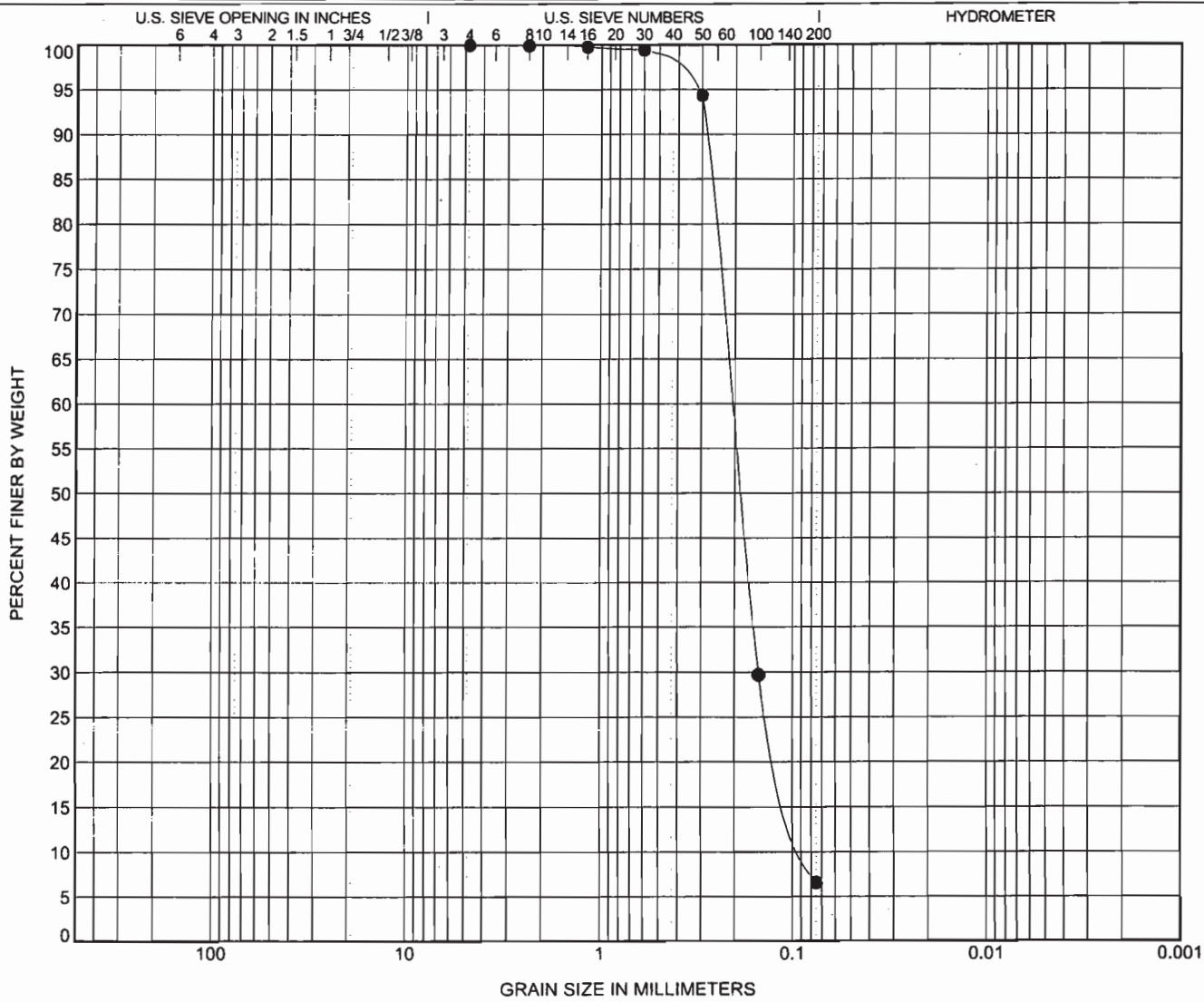
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P6a	**POORLY GRADED SAND with SILT(SP-SM)**				**1.31**	**2.50**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P6a	**4.75**	**0.208**	**0.15**	**0.083**	**0.0**	**93.4**	**6.6**	

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GRAIN SIZE DISTRIBUTION

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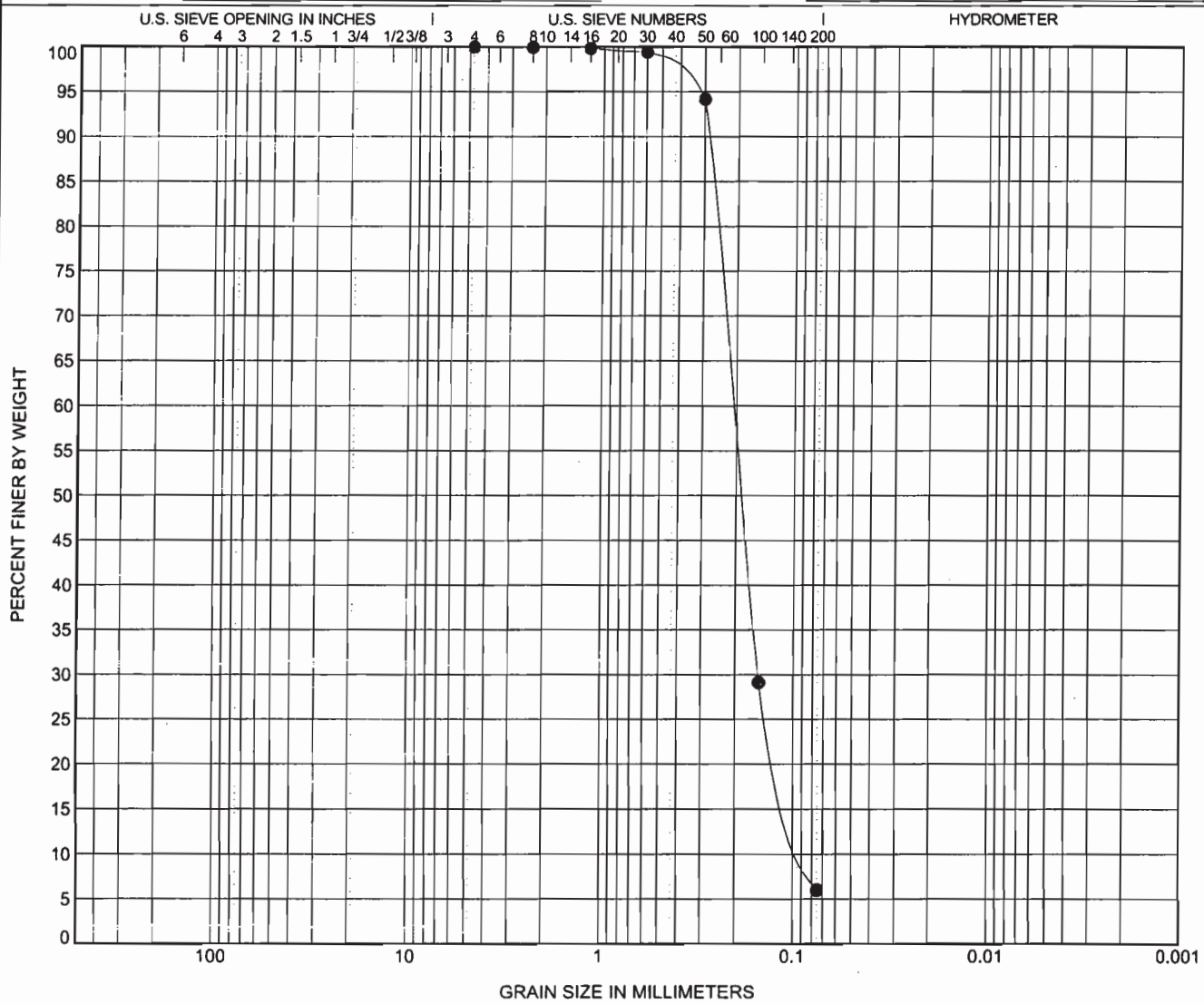
PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● **P6b**	**POORLY GRADED SAND with SILT(SP-SM)**				**1.30**	**2.47**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **P6b**	**4.75**	**0.208**	**0.151**	**0.085**	**0.0**	**94.0**	**6.0**	

CT Number _____

GRAIN SIZE DISTRIBUTION

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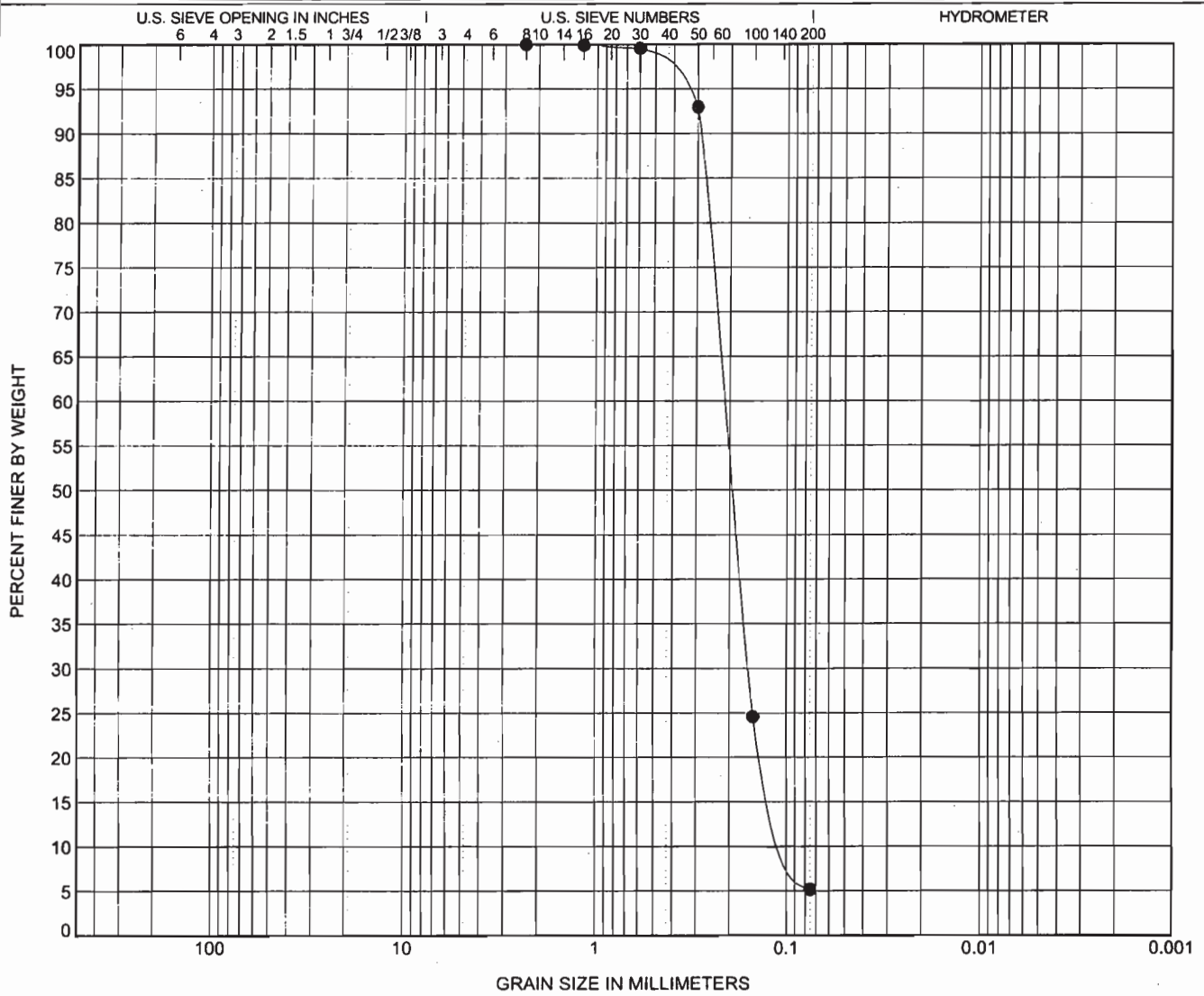
CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P7a	**POORLY GRADED SAND with SILT(SP-SM)**				**1.31**	**2.41**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P7a	**2.36**	**0.215**	**0.158**	**0.089**	**0.0**	**94.8**	**5.2**	

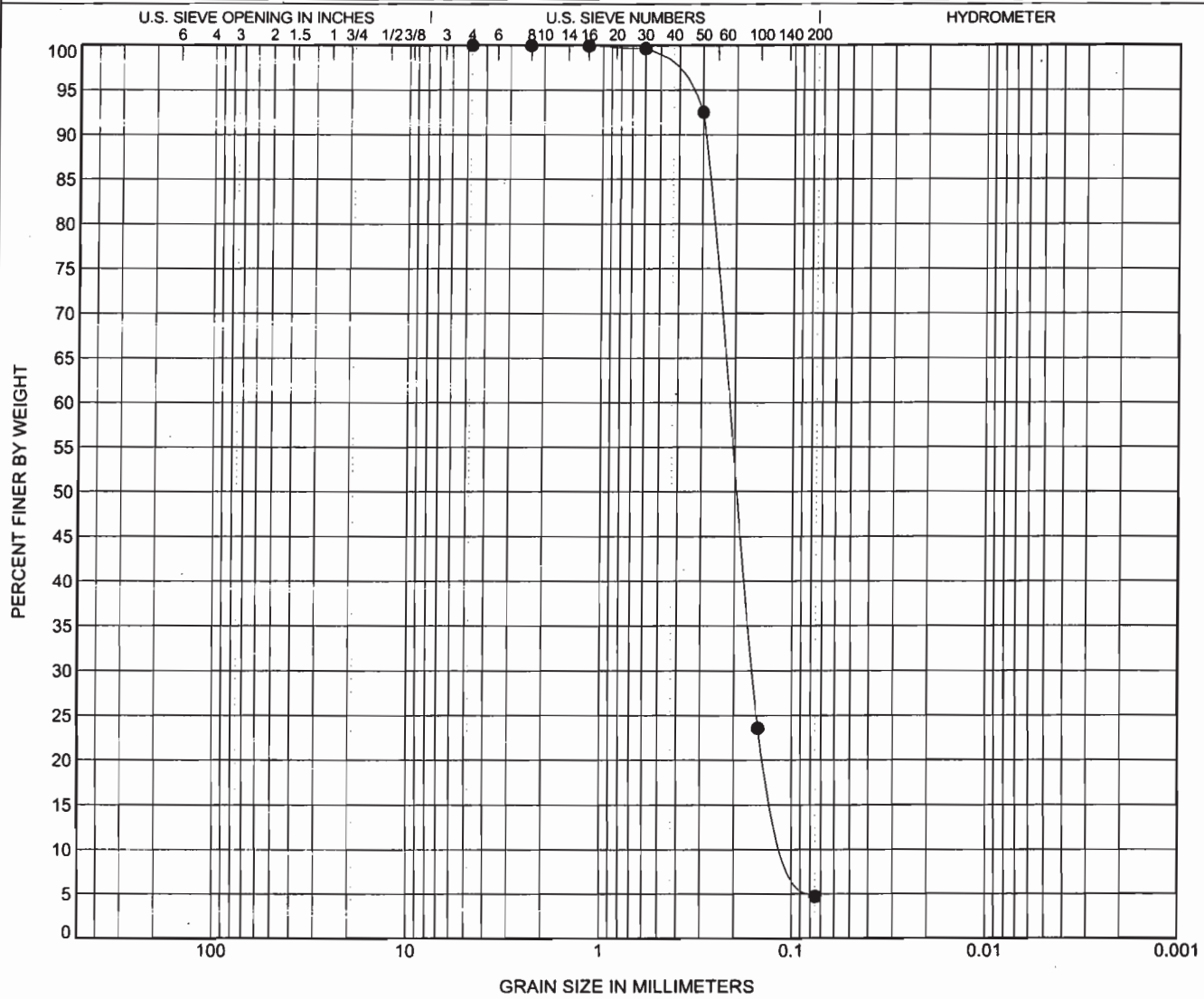
CT Number _____

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P7b	**POORLY GRADED SAND(SP)**				**1.30**	**2.38**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P7b	**4.75**	**0.216**	**0.16**	**0.091**	**0.0**	**95.3**	**4.7**	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:36 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

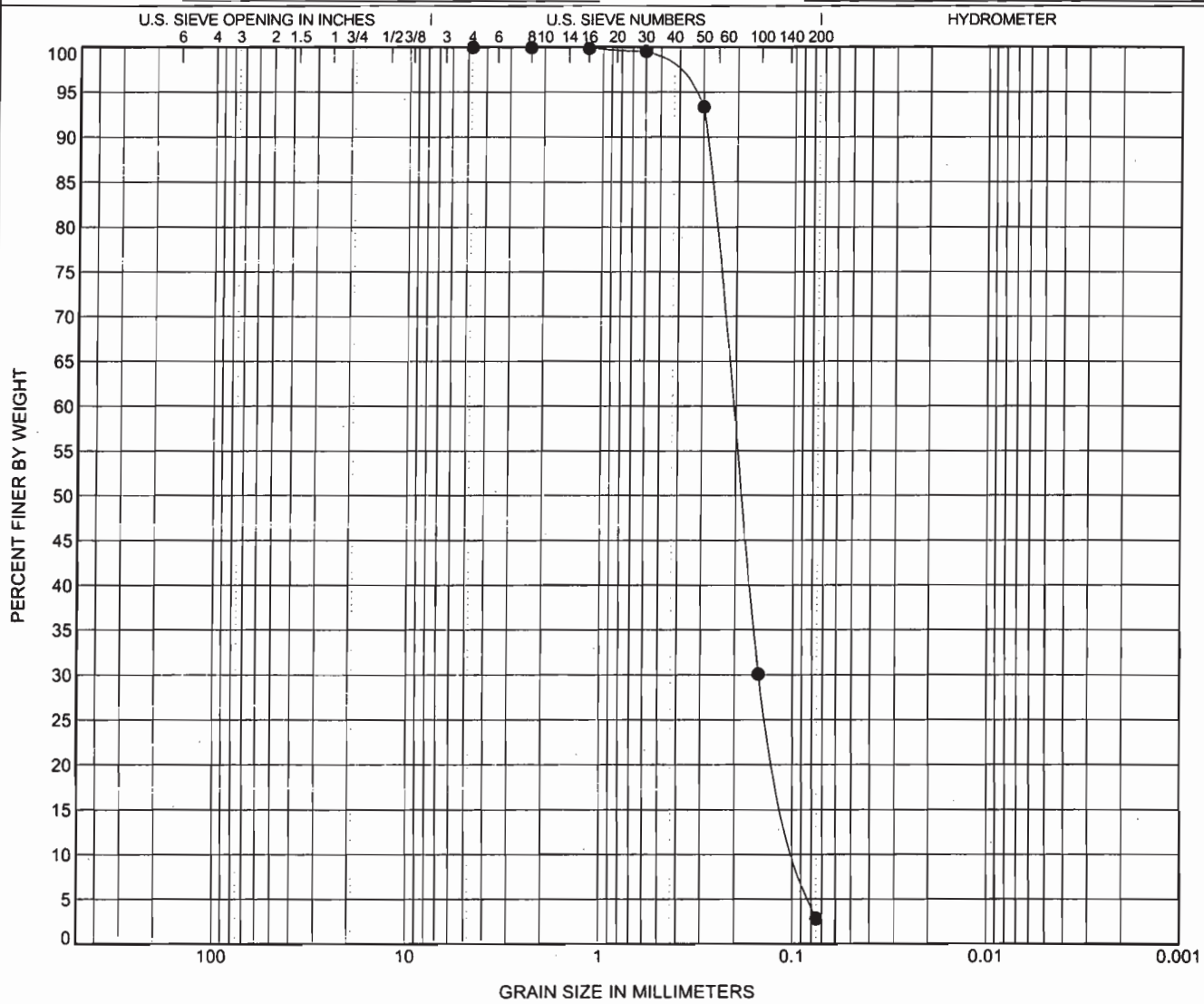
CT Number _____

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P8a	**POORLY GRADED SAND(SP)**				**1.20**	**2.31**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P8a	**4.75**	**0.208**	**0.15**	**0.09**	**0.0**	**97.1**	**2.9**	

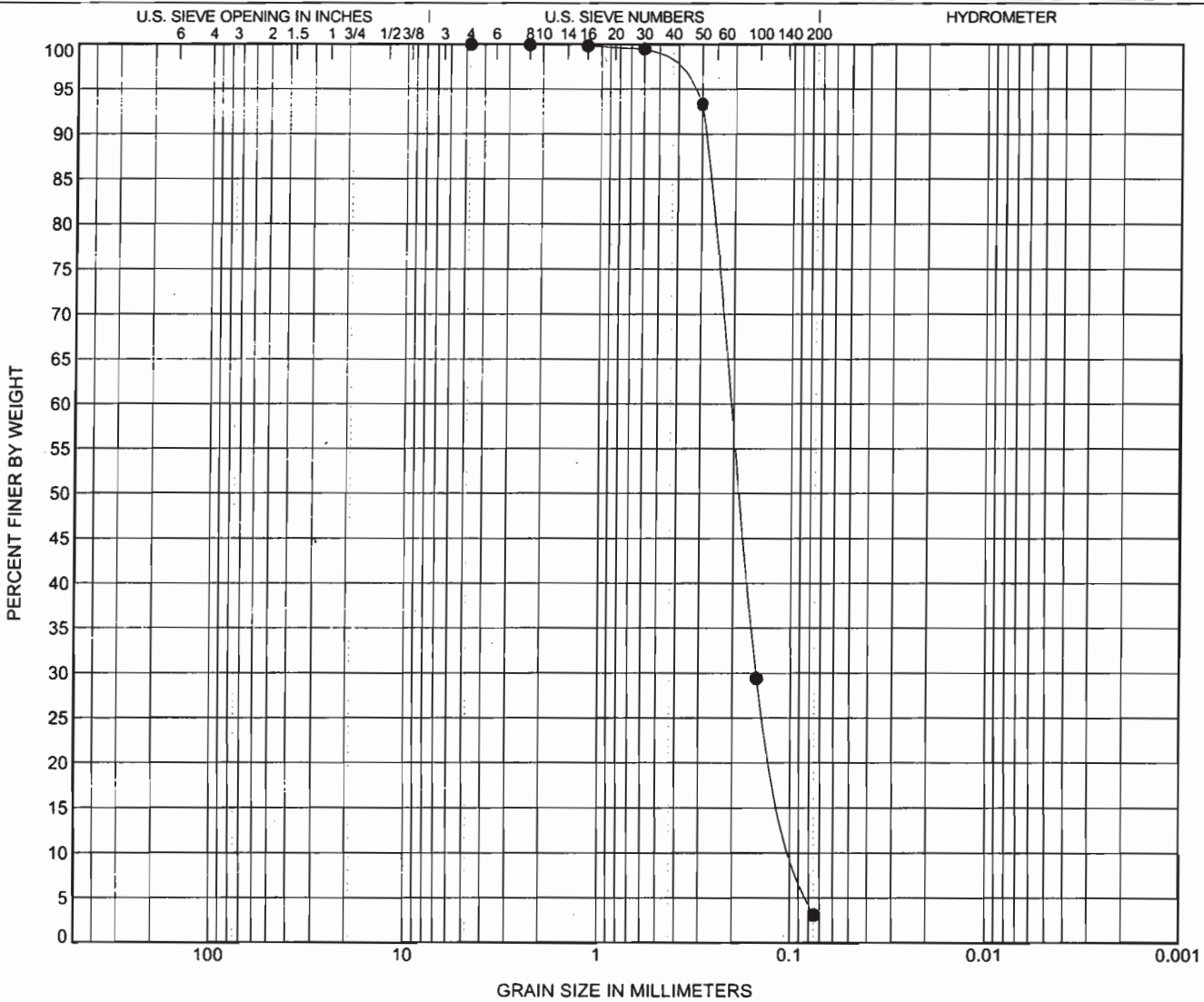
CT Number

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P8b	POORLY GRADED SAND(SP)				1.21	2.32

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P8b	4.75	0.209	0.151	0.09	0.0	96.9	3.1	

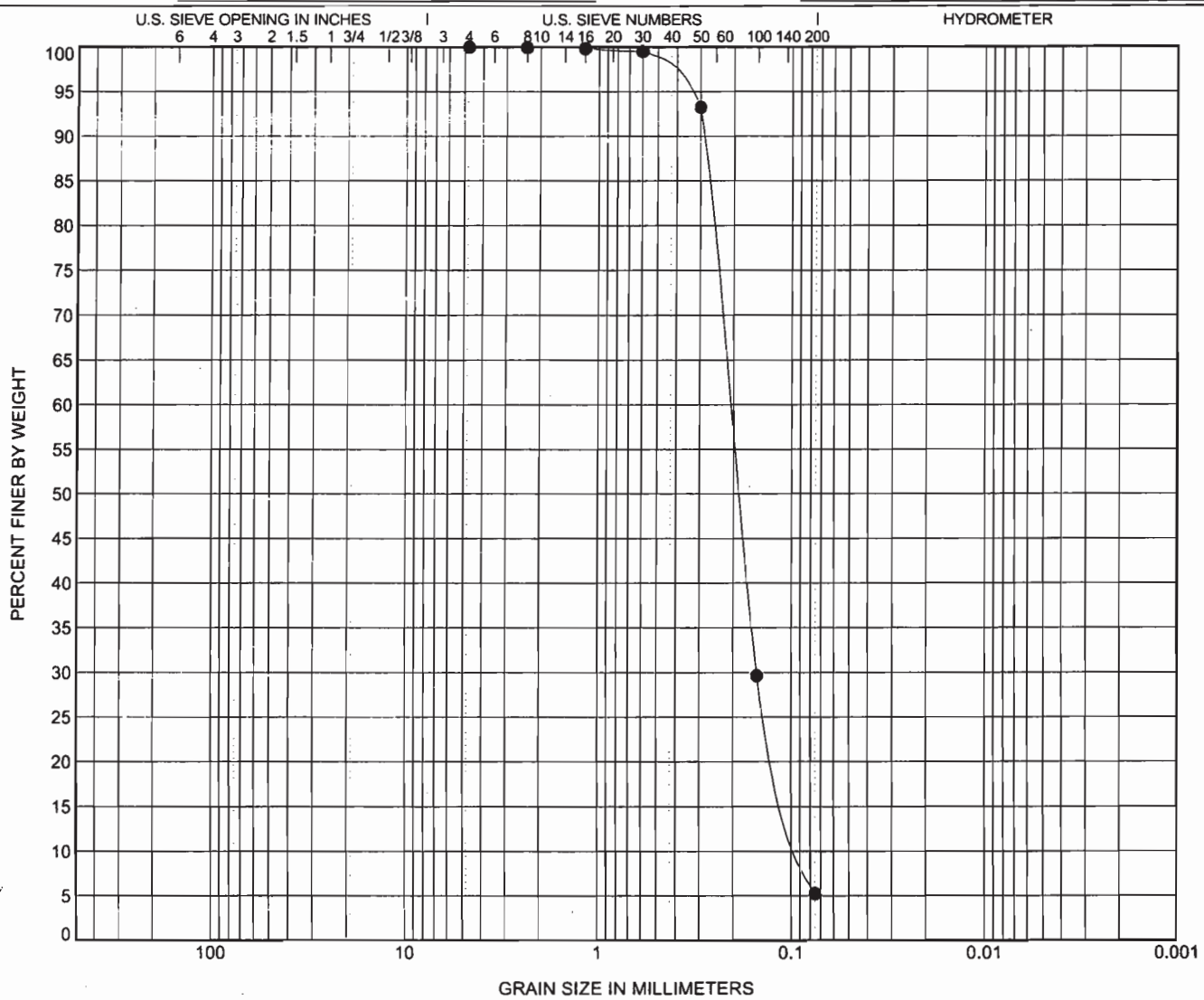
CT Number

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	Classification	LL	PL	PI	Cc	Cu
●	**P8c**	**POORLY GRADED SAND with SILT(SP-SM)**				**1.27**	**2.43**

	BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**P8c**	**4.75**	**0.209**	**0.151**	**0.086**	**0.0**	**94.7**	**5.3**	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:37 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

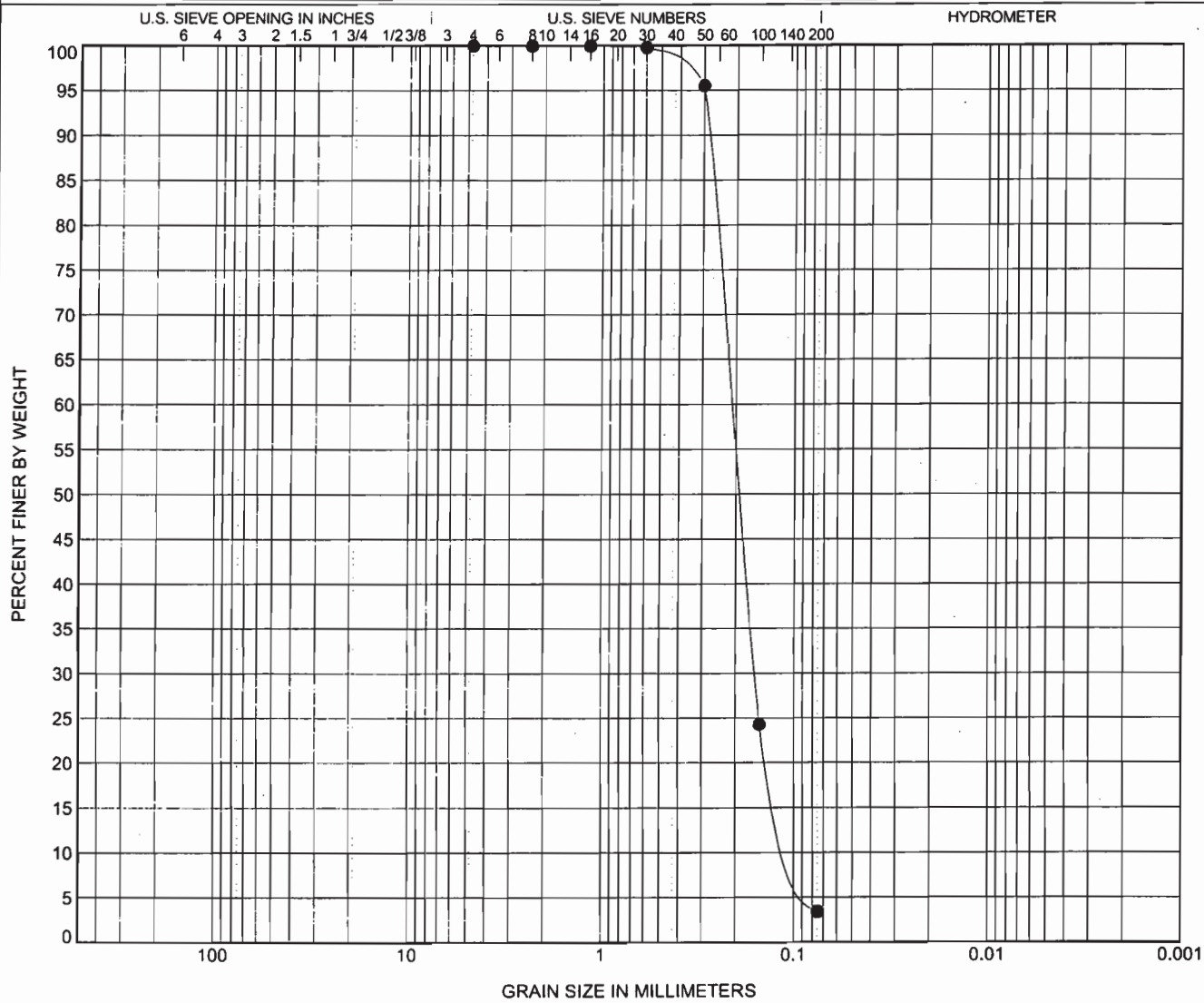
CT Number _____

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P9a	POORLY GRADED SAND(SP)				1.27	2.28

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P9a	4.75	0.212	0.159	0.093	0.0	96.6	3.4	

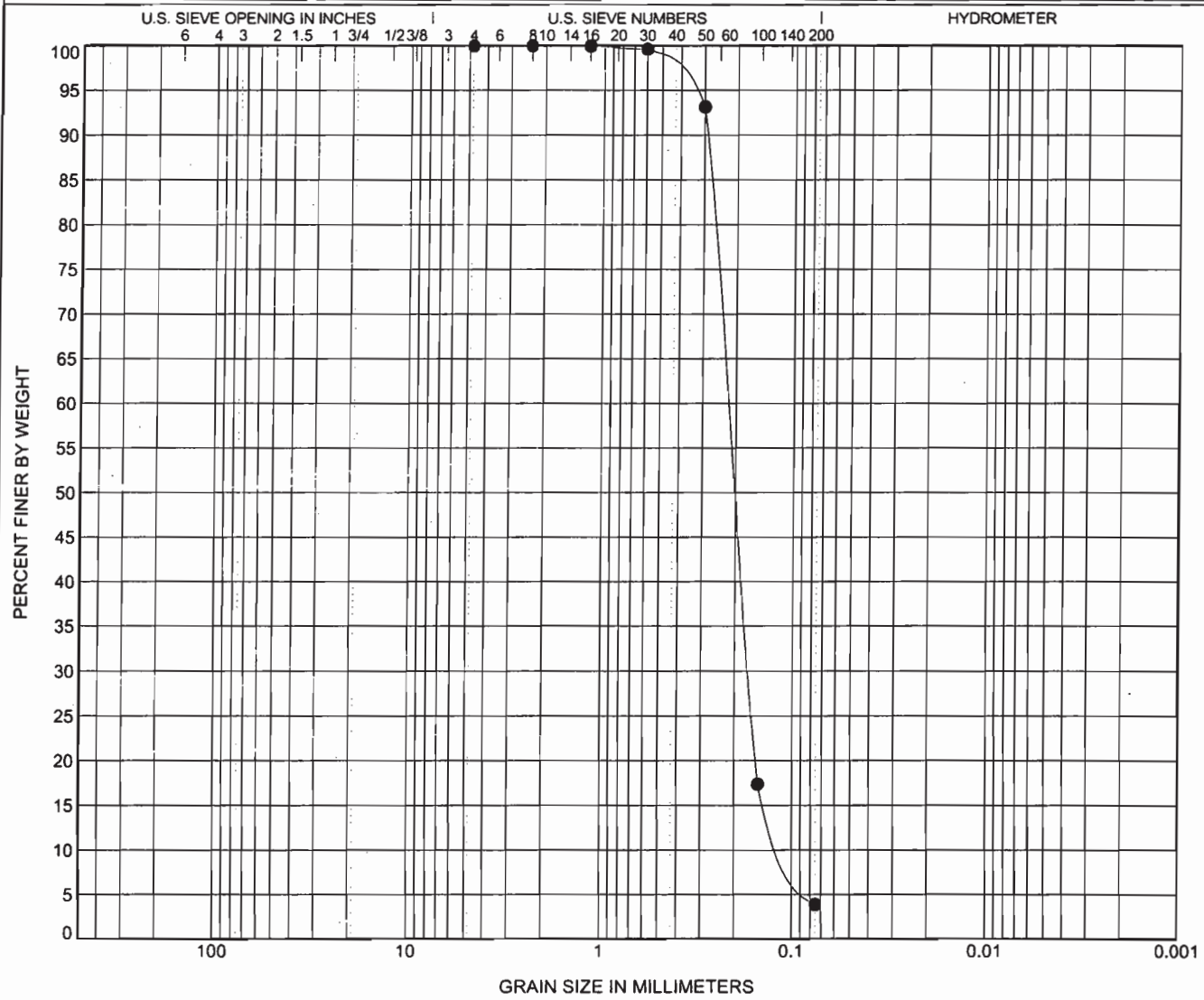
CT Number

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P9c	**POORLY GRADED SAND(SP)**				**1.25**	**2.16**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P9c	**4.75**	**0.221**	**0.168**	**0.103**	**0.0**	**96.1**	**3.9**	

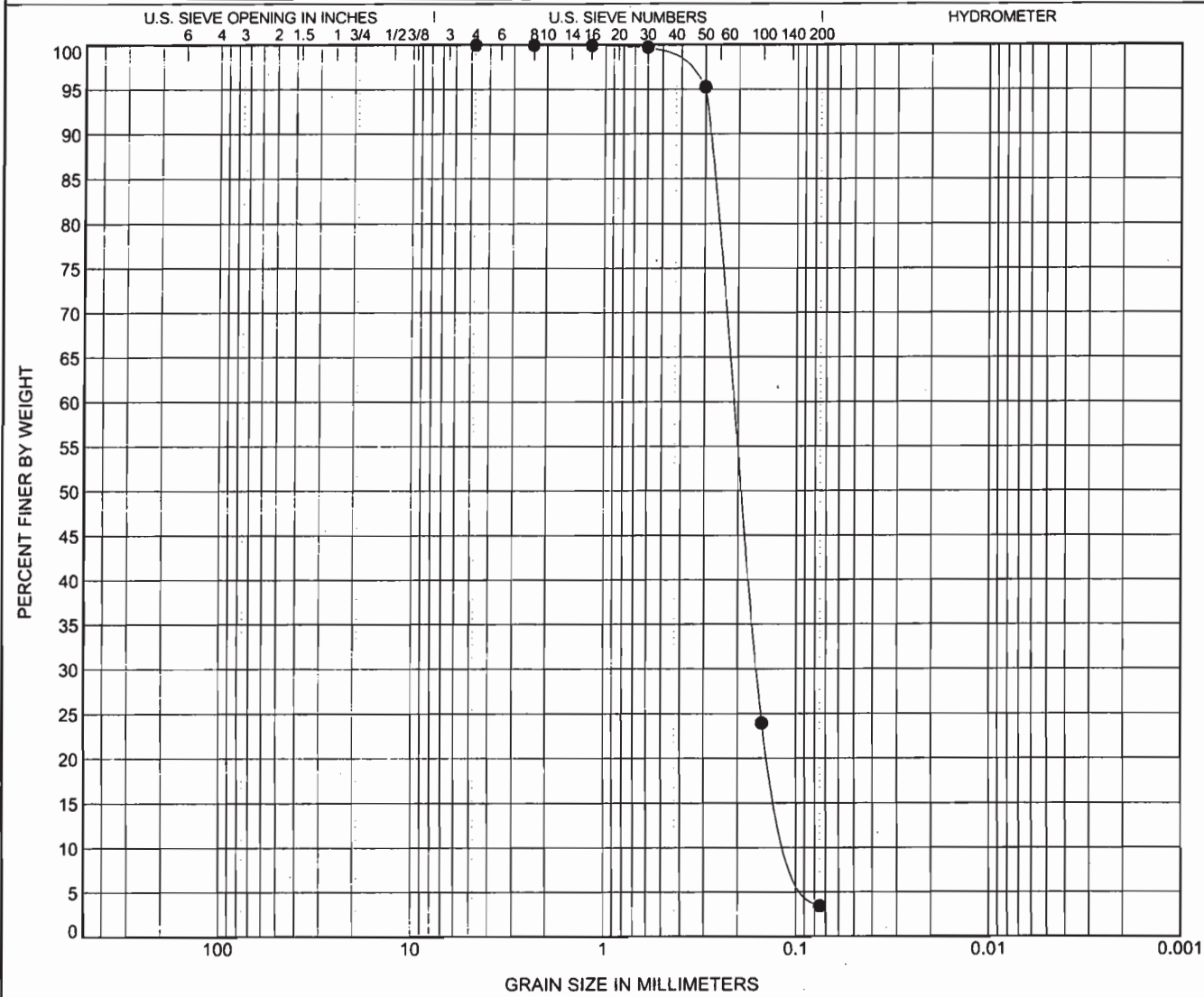
CT Number

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● **P10b**	**POORLY GRADED SAND(SP)**				**1.27**	**2.28**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **P10b**	**4.75**	**0.213**	**0.159**	**0.094**	**0.0**	**96.5**	**3.5**	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:39 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number _____

GRAIN SIZE DISTRIBUTION

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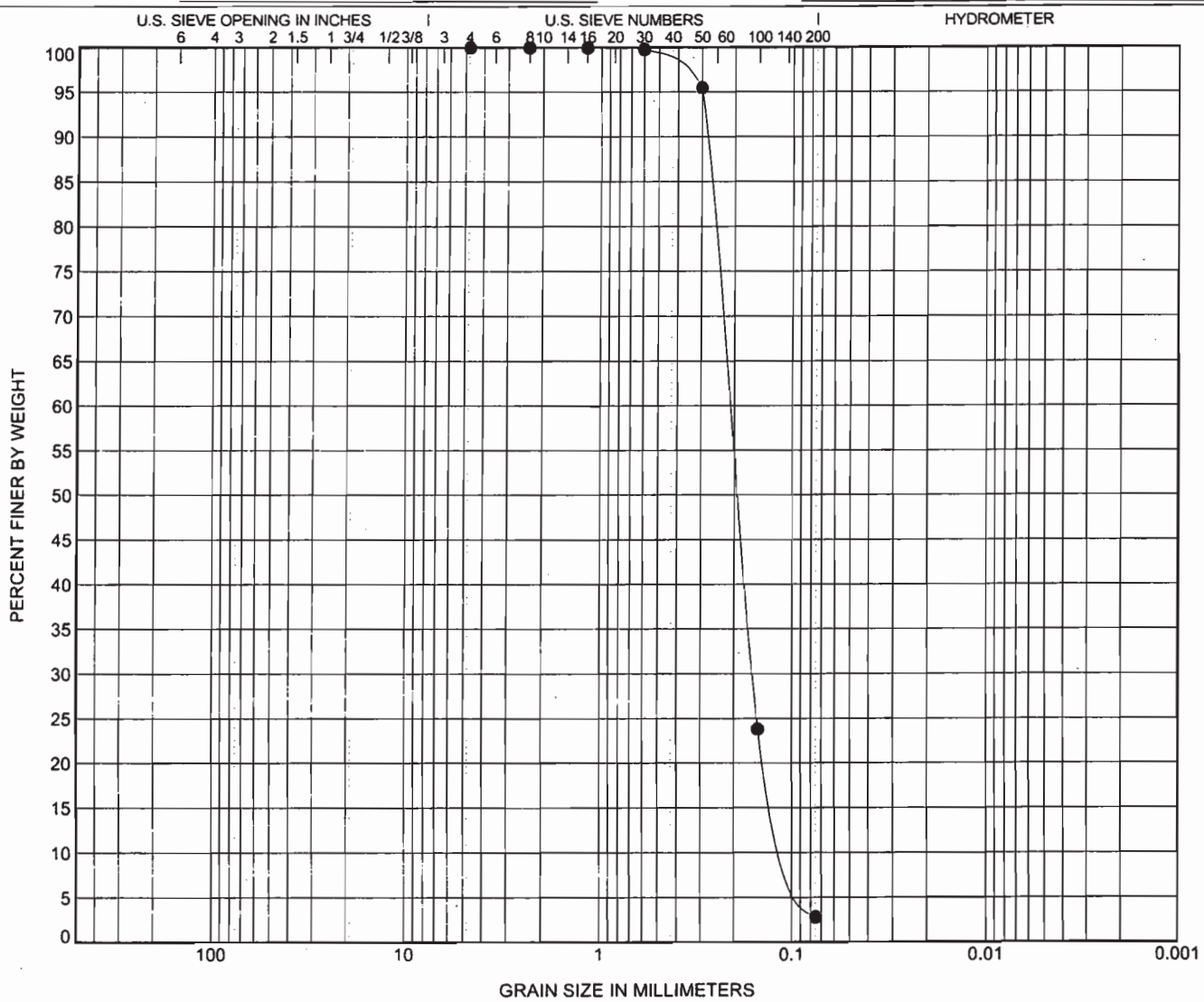
CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P10a	POORLY GRADED SAND(SP)				1.25	2.24

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P10a	4.75	0.213	0.159	0.095	0.0	97.2	2.8	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:38 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

CT Number _____

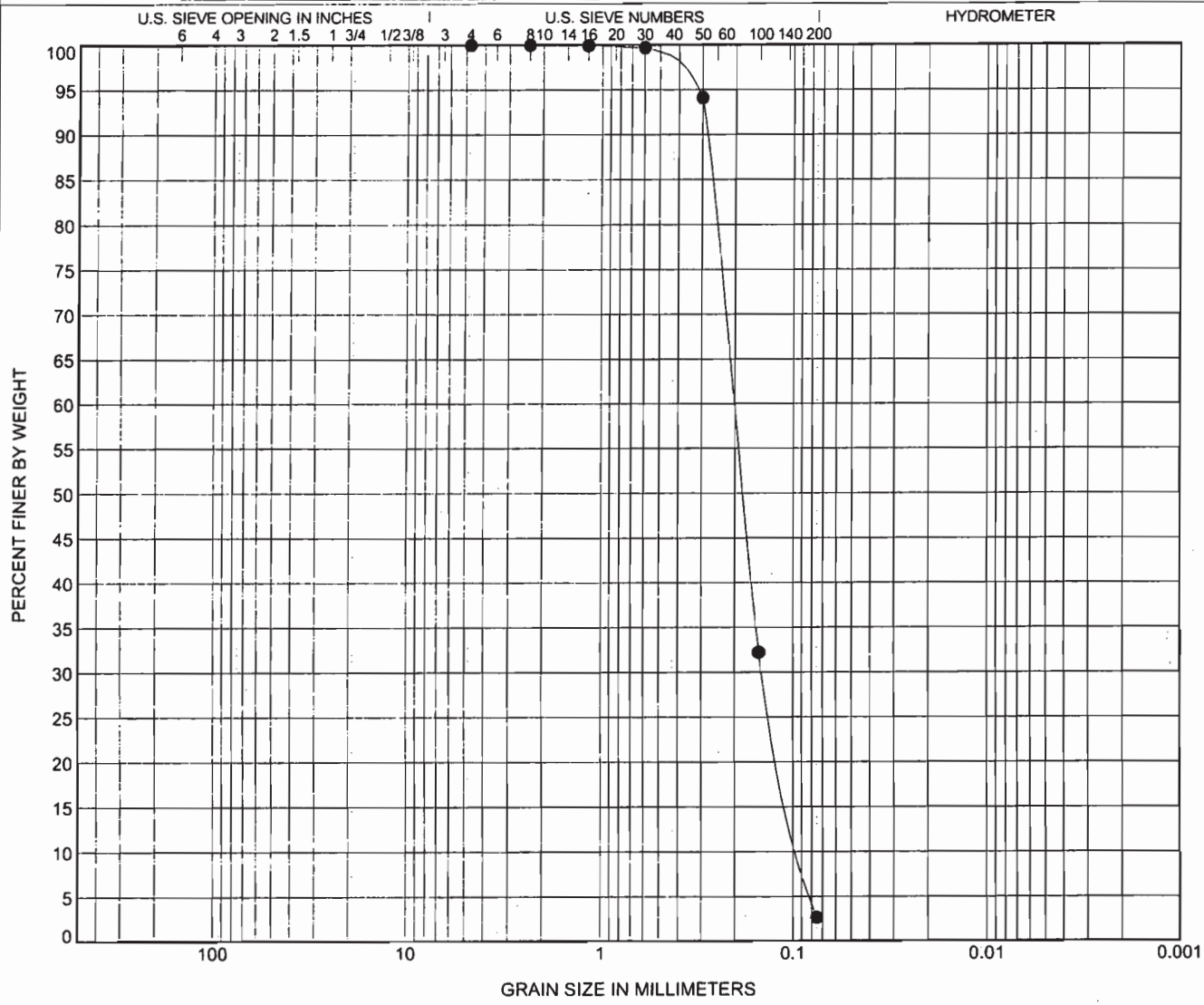
Section 2
Protective Cover

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● **P2a**	**POORLY GRADED SAND(SP)**				**1.11**	**2.30**

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● **P2a**	**4.75**	**0.205**	**0.142**	**0.089**	**0.0**	**97.3**	**2.7**	

GRAIN SIZE - C-44 GINT STD US LABS.GDT - 11/5/12 09:28 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\SEPT-OCT.GPJ

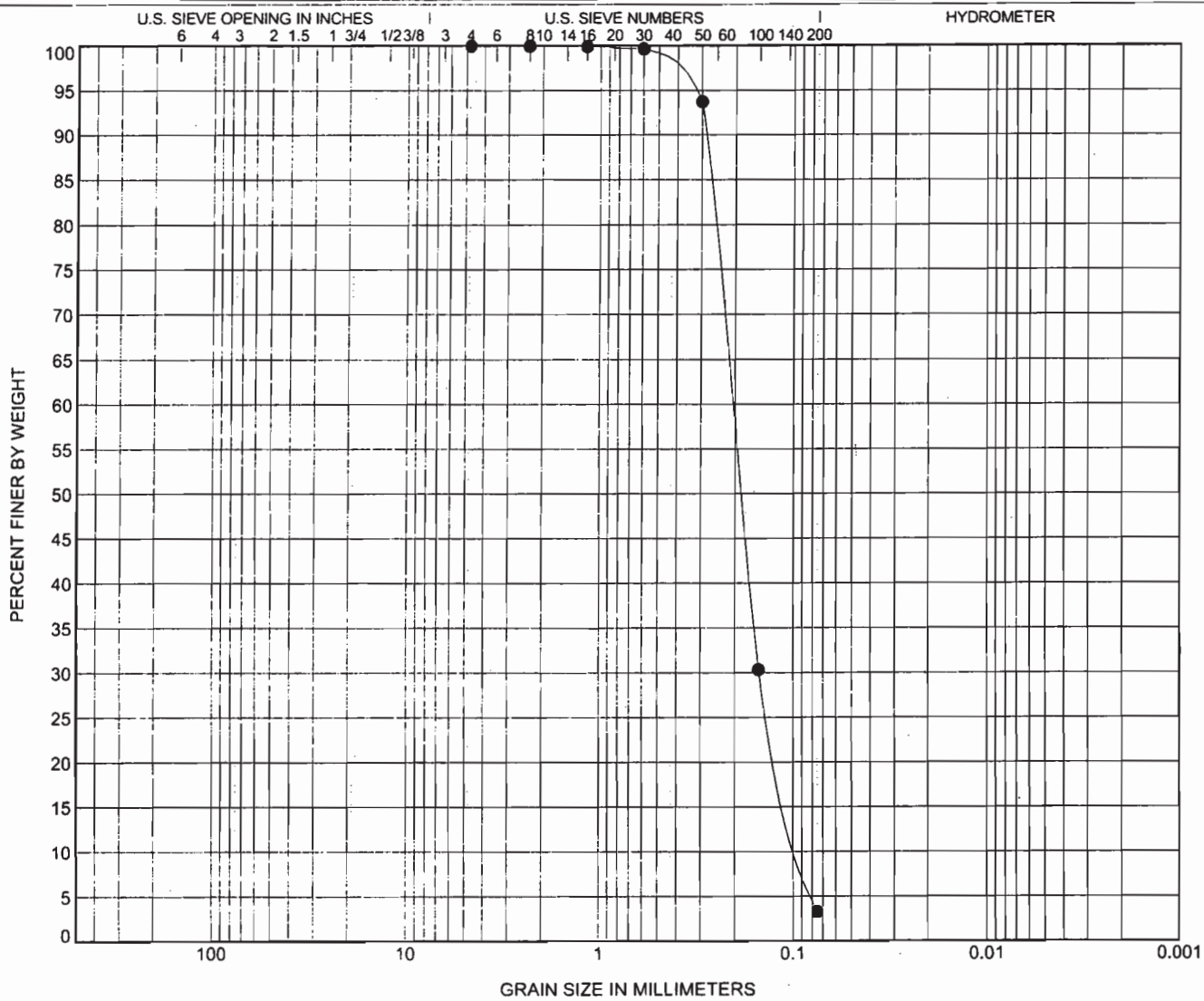
CT Number _____

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	Classification	LL	PL	PI	Cc	Cu
● P2b	POORLY GRADED SAND(SP)				1.20	2.33

BOREHOLE	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● P2b	4.75	0.207	0.149	0.089	0.0	96.7	3.3	

CT Number

amec

REPORT OF SOIL PERMEABILITY TESTING

Project:	Brantley-Osceola	**Project Number:**	300751
Client	Brantley Engineering, LLC	**Date Completed:**	October 29, 2012

P-2

The sample was oven dried and poured into the permeameter, dry, loose. The sample was tested for permeability and the results are outlined below.

Sample Information:

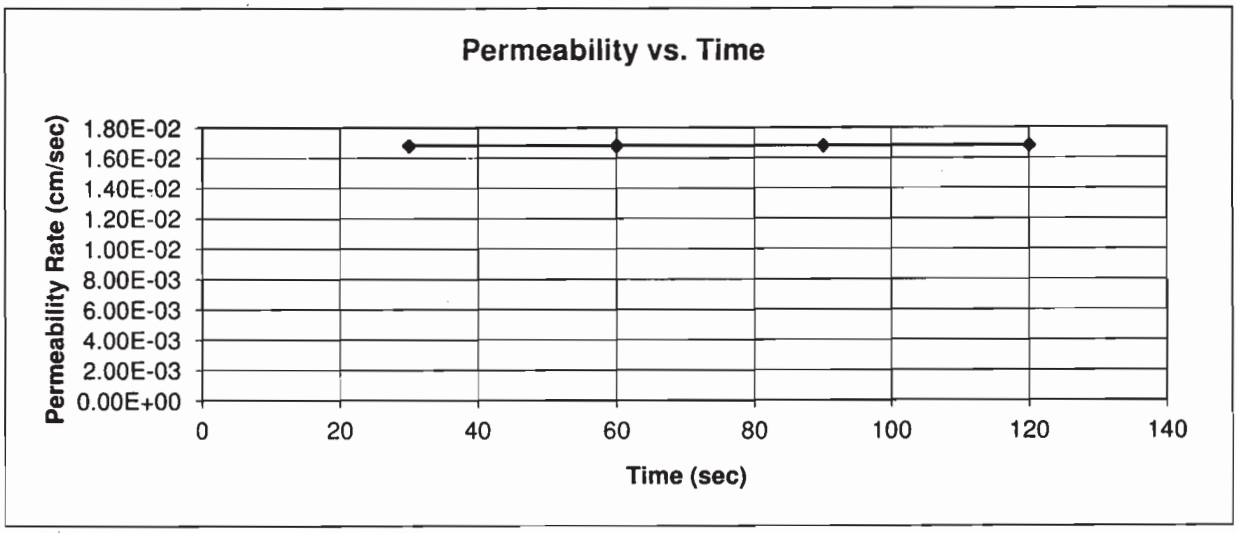
Dia. (in.)	4.08	**Length (in)**	4.59	**Weight (gr)**	1455
Wet Density (pcf)	92.1	**Moisture Content (%)**	0.3	**Dry Density (pcf)**	91.8

Test Parameters

Test Method Used:	ASTM D-2434	**Permeant Fluid:**	Tap water

Permeability Rate

1.7E-02



Reviewed By:

Draft

Daniel Eisman, P.E.

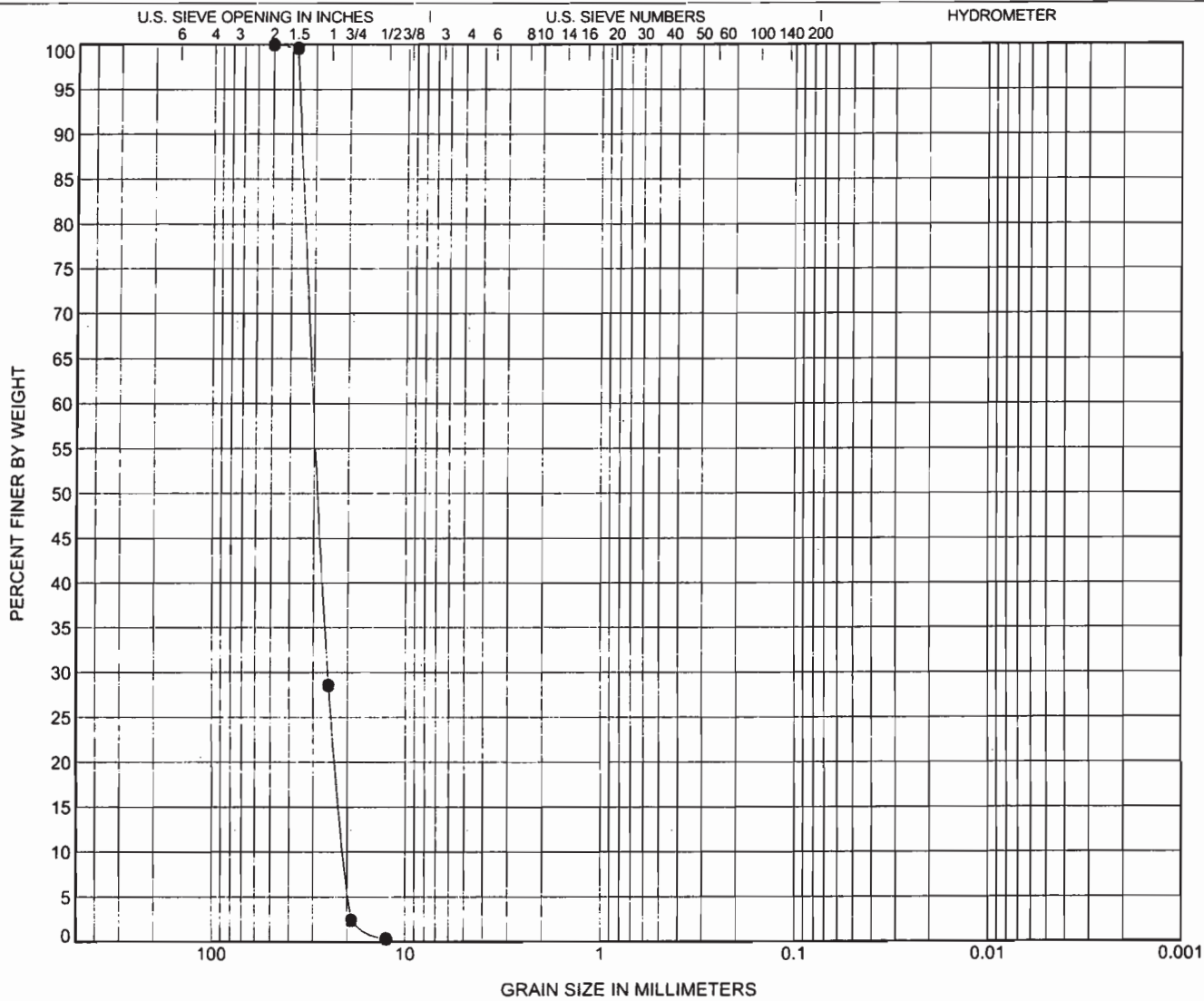
Section 3
Sump Stone

GRAIN SIZE DISTRIBUTION

amec

CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION**



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**STONE2**	**1.0**	**POORLY GRADED GRAVEL (GP)**				**1.03**	**1.45**

	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**STONE2**	**1.0**	**50**	**29.91**	**25.201**	**20.566**				

#4 Stone Gradation Chart

Sieve Size (mm)	Sieve Name	Cumulative Soil Retained (gr)	Percent Passing (%)
87.5	3½"	0	100.0
75	3"	0	100.0
50	2"	0	100.0
37.5	1½"	100	99.6
25	1"	18050	28.6
19	3/4"	24660	2.5
12.5	1/2"	25180	0.4
4.75	#4	0	0
2.36	#8	0	0
0.075	#200	0	0

PERMEABILITY OF GRANULAR SOILS CONSTANT HEAD
ASTM D2434-68

2000 E. Edgewood Drive
Suite 215
Lakeland, FL 33803
Phone: (863) 667-2345
Fax: (863) 667-2662

amec

CLIENT:	Brantley Engineering	Date:	12/21/2012
Sample ID:	Stone 2	Project#	300751
Sample Description:	2" minus gravel sample	Requested By:	Ricardo Kiriakidis
		Tested By:	Jeffrey Ingersoll
		Checked By:	Ricardo Kiriakidis

Sample Diameter:	20.32	cm	Dry Sample Weight;	25,280	grams
Sample Area:	324.29	cm^2	Dry Unit Weight:	91.32	pcf
Sample Length:	21.27	cm	Moisture Content:	2	%
Wet Sample Weight:	10,314	grams	Constant Head (h):	14.04	cm
Sample Volume:	6,898.52	cm^3	Temperature (T):	15.6	°C
Wet Unit Weight:	93.14	pcf	Correction Factor (R_T):	0.9	

Run	Time (s)	Q (ml)	k (cm/s)	k (ft/day)
1	7.1	18,950	12.4700	3.53E+04
2	7.1	18,930	12.4568	3.53E+04
3	7.3	18,990	12.1539	3.45E+04
4	7	18,050	12.0474	3.42E+04
		k (avg)=	12.2820	3.48E+04
		k_{20} (avg)=	11.55	3.27E+04

Section 4
Limerock

FM 5-515
VERSION
english

COMPACTION TEST LIMEROCK BEARING RATIO (LBR)
MOLD VOLUME 1/13.33 CF
FSTM FM5-515

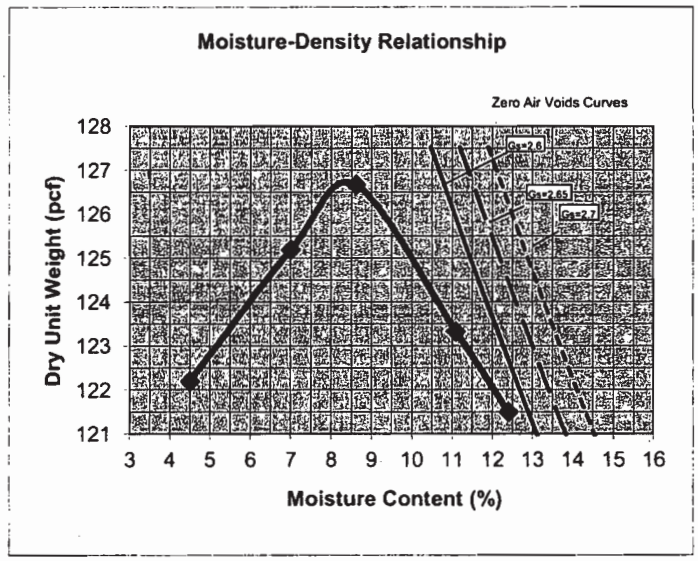
amec

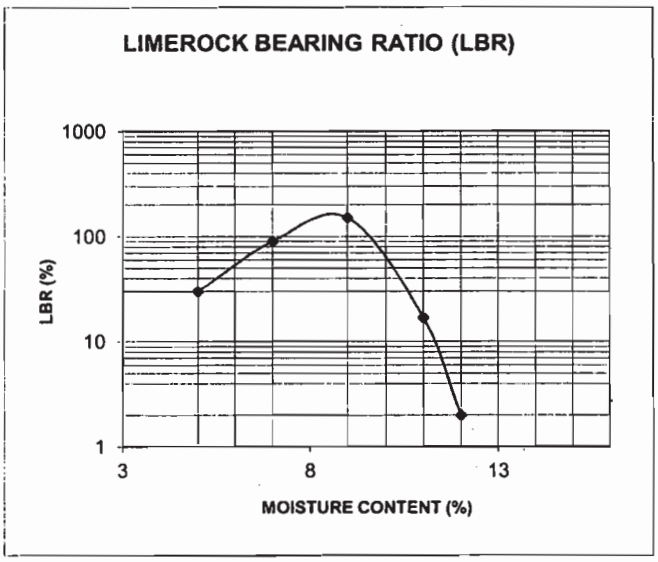
PROJECT NO.	300751	PROJECT NAME	JED Landfill Leachate	PEN BY:	ew
MATERIAL NO.			Relocation Facility	PEN. DATE	1/21/13
SAMPLE NO.	Base-1	DATE COMPACTED	1/19/2013	LAB NO.	C6843
LIMS NO.		MATERIAL DESCRIPTION	Clayey Sand with Gravel (SC)	TESTED BY:	ew

NOTE: IF TEST IS ENGLISH WEIGH IN LBS, IF METRIC WEIGH IN KG.

MOLD NO	46	51	49	37	27
WET WT. + MOLD	25.01	25.46	25.66	25.83	25.66
WT OF MOLD	15.43	15.41	15.34	15.55	15.43
WET WT.	9.58	10.05	10.32	10.28	10.23
WET UNIT WT	127.7	134.0	137.6	137.0	136.4
DRY UNIT WT.	122.2	125.2	126.7	123.3	121.5
LBR VALUE	30	90	151	17	2
BEGIN SOAK	1/19 1315	1315	1315	1315	1315
END SOAK	1/21 1210	1220	1235	1250	1205
TIME OF TEST	46hrs 55mins	47hrs 05min	47hrs 20min	47hrs 35min	47hrs 50min
MOISTURE CONTENT	5	7	9	11	12
PAN NO.	I	A	1313	TG-5	ooo
PAN & WET SOIL	711.2	637.1	611.1	598.1	696.8
PAN & DRY SOIL	684.5	601.4	569.9	547.2	629.3
WT OF WATER	26.7	35.7	41.2	50.9	67.5
WT OF PAN	92.0	87.8	90.8	87.4	87.0
WT OF DRY SOIL	592.5	513.6	479.1	459.8	542.3
MOISTURE CONTENT	4.5	7.0	8.6	11.1	12.4

Maximum Density	Optimum Moisture	L.B.R. Value
126.7	8.6	151





GRAIN SIZE DISTRIBUTION

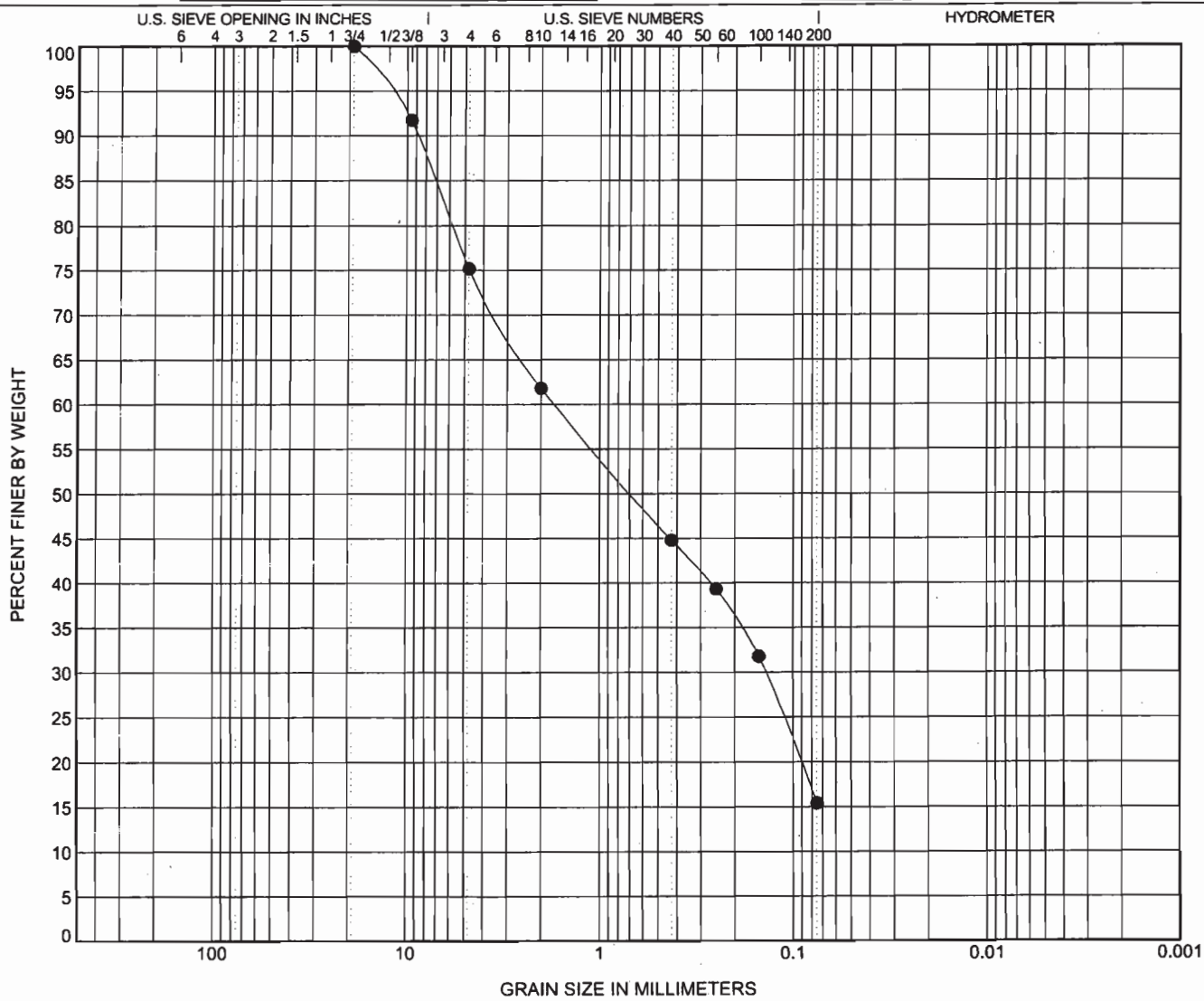
amec

CLIENT BRANTLEY ENGINEERING, LLC

PROJECT NAME Brantley Field-Lab Testing Report

PROJECT NUMBER 300751

PROJECT LOCATION JED Landfill Leachate Storage Facility Relocation



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**Base-1**	**1.0**	**CLAYEY SAND WITH GRAVEL (SC)**					

	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**Base-1**	**1.0**	**19**	**1.692**	**0.139**		**24.8**	**59.8**	**15.4**	

Base Gradation Chart

Sieve #	Cumulative Soil Retained (gr)	Percent Passing (%)
3/4"	0	100
3/8"	85.7	91.77
#4	258	75.21
#10	397.2	61.84
#40	574.5	44.81
#60	631.3	39.35
#100	710	31.79
#200	880.2	15.44

FM 5-515
VERSION
english

COMPACTION TEST LIMEROCK BEARING RATIO (LBR)
MOLD VOLUME 1/13.33 CF
FSTM FM5-515

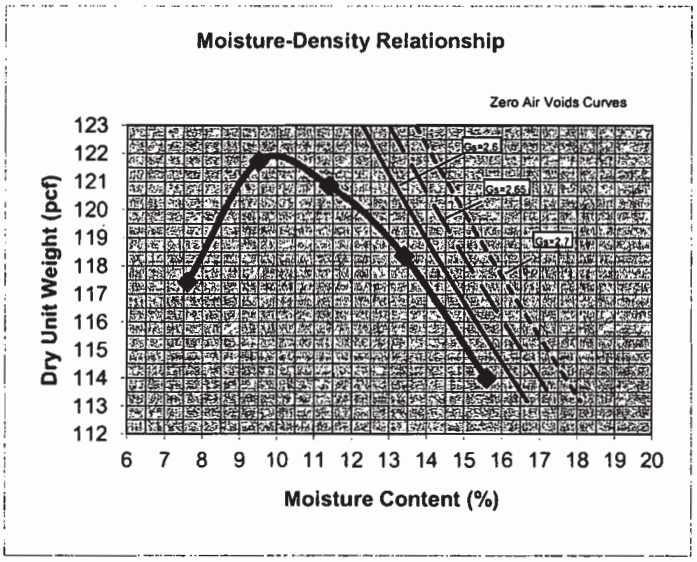
amec

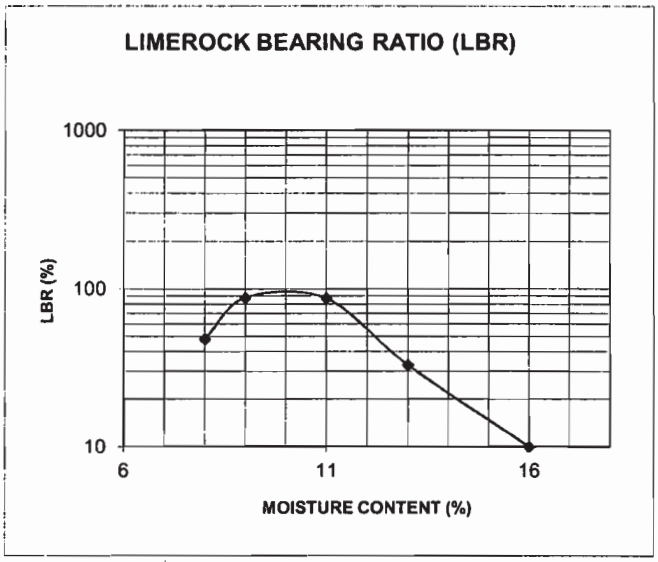
PROJECT NO.	300751	PROJECT NAME	JED Landfill Leachate	PEN BY:	ew
MATERIAL NO.			Relocation Facility	PEN. DATE	1/21/13
SAMPLE NO.	Sub-base-1	DATE COMPACTED	1/19/2013	LAB NO.	C6842
LIMS NO.		MATERIAL DESCRIPTION	Clayey Sand (SC)	TESTED BY:	ew

NOTE: IF TEST IS ENGLISH WEIGH IN LBS, IF METRIC WEIGH IN KG.

MOLD NO	A5	A7	A2	38	110
WET WT. + MOLD	25.25	25.75	26.03	25.47	25.81
WT OF MOLD	15.77	15.75	15.93	15.40	15.94
WET WT.	9.48	10.00	10.10	10.07	9.87
WET UNIT WT	126.4	133.3	134.6	134.2	131.6
DRY UNIT WT.	117.4	121.7	120.9	118.4	114.0
LBR VALUE	48	88	87	33	10
BEGIN SOAK	1/19 1100	1100	1100	1100	1100
END SOAK	1/21 0945	1000	1015	1030	1045
TIME OF TEST	46hrs 45mins	47hrs 00min	47hrs 15min	47hrs 30min	47hrs 45min
MOISTURE CONTENT	8	9	11	13	16
PAN NO.	1976	89B	H	oooo	TG-1
PAN & WET SOIL	584.8	600.0	657.8	615.5	720.7
PAN & DRY SOIL	549.4	555.5	599.3	553.1	635.0
WT OF WATER	35.4	44.5	58.5	62.4	85.7
WT OF PAN	86.0	86.4	85.0	86.9	85.6
WT OF DRY SOIL	463.4	469.1	514.3	466.2	549.4
MOISTURE CONTENT	7.6	9.5	11.4	13.4	15.6

Maximum Density	Optimum Moisture	L.B.R. Value
122.0	9.9	88





GRAIN SIZE DISTRIBUTION

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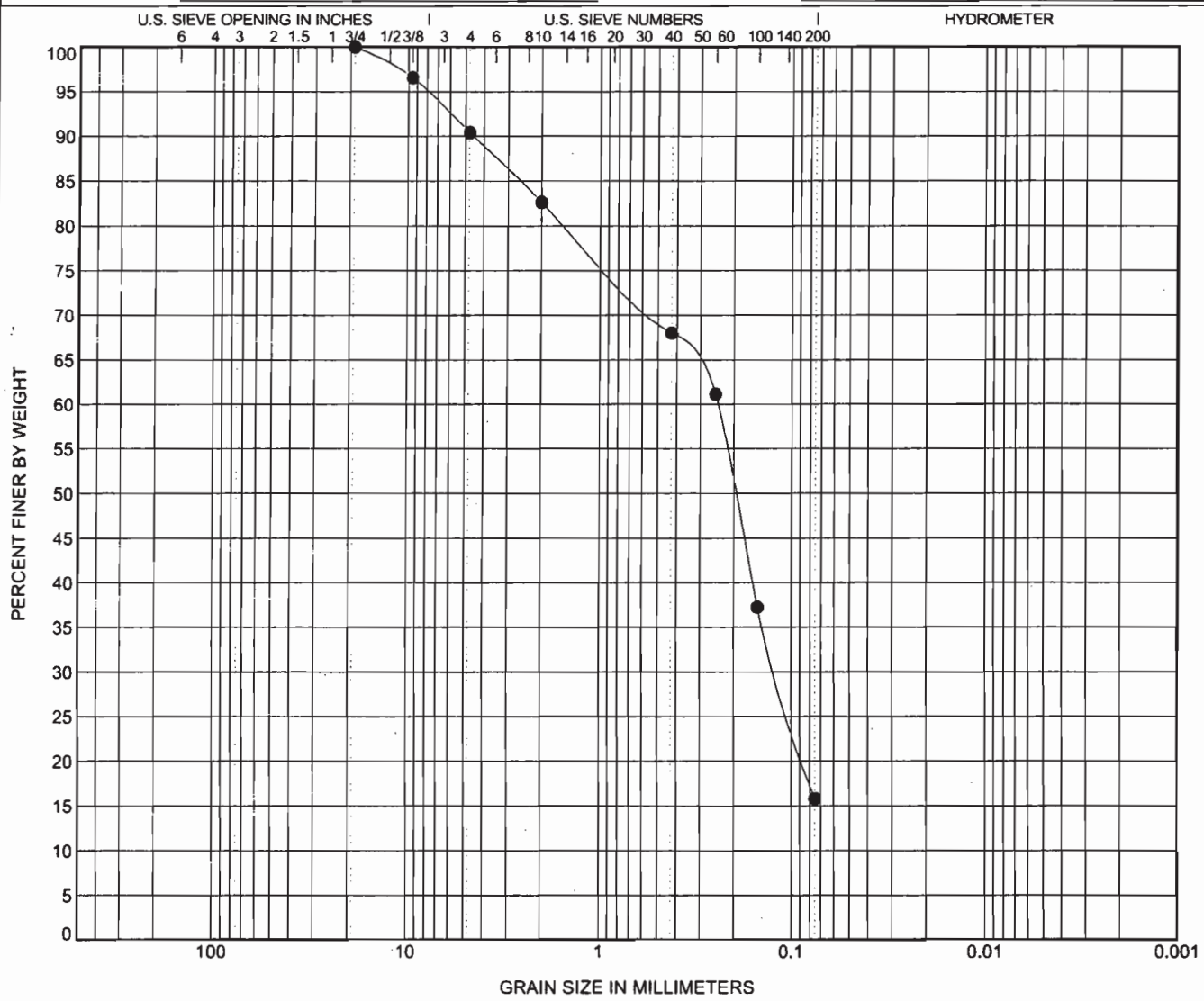
CLIENT BRANTLEY ENGINEERING, LLC **PROJECT NAME** Brantley Field-Lab Testing Report

PROJECT NUMBER 300751 **PROJECT LOCATION** JED Landfill Leachate Storage Facility Relocation



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**Sub-base-1**	**1.0**	**CLAYEY SAND (SC)**					

	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**Sub-base-1**	**1.0**	**19**	**0.244**	**0.119**		**9.6**	**74.6**	**15.8**	

GRAIN SIZE - GINT STD US LAB.GDT - 1/25/13 09:25 - T:\300751 BRANTLEY FIELD-LAB TESTING\LAB_RESULTS\LABS.GPJ

Sub-base Gradation Chart

Sieve #	Cumulative Soil Retained (gr)	Percent Passing (%)
3/4"	0	100
3/8"	75.1	96.58
#4	210	90.45
#10	381	82.67
#40	702.6	68.04
#60	854.1	61.14
#100	1378.5	37.29
#200	1850.3	15.82

APPENDIX C
Soils Field Testing Results

Section 1
General Fill Density Summary and Field Tests
(Leachate Pond)

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/03/12 TO 11/07/12

PAGE 1

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	11/03/12	-	-	96.30	17.0	P-9	100.9	17.1	-	-	-	
DR1	11/03/12	2803.1852 N 08105.1154 W	1	97.40	15.6	P-9	100.9	17.1	96.5	-1.5	P	
1	11/03/12	2803.1852 N 08105.1154 W	1	101.86	13.3	P-5	105.9	15.0	96.2	-1.7	P	
2	11/03/12	2803.1985 N 08105.1127 W	1	96.05	15.1	P-9	100.9	17.1	95.2	-2.0	P	
3	11/03/12	2803.2270 N 08105.1143 W	1	98.05	14.6	P-9	100.9	17.1	97.2	-2.5	P	
CP	11/05/12	-	-	100.0	17.7	P-2	100.2	17.5	-	-	-	
DR2	11/05/12	2803.2142 N 08105.1176 W	1	97.2	16.9	P-2	100.2	17.5	97.0	-0.6	P	
4	11/05/12	2803.2142 N 08105.1176 W	1	98.0	13.4	P-8	101.3	16.1	96.7	-2.7	P	
5	11/05/12	2803.2182 N 08105.1198 W	2	95.9	17.4	P-2	100.2	17.5	95.7	-0.1	P	
6	11/05/12	2803.2292 N 08105.1201 W	2	95.5	16.1	P-2	100.2	17.5	95.3	-1.4	P	
7	11/05/12	2803.2004 N 08105.1316 W	1	98.9	17.2	P-2	100.2	17.5	98.7	-0.3	P	
CP	11/06/12	-	-	101.30	16.3	P-1	101.7	16.0	-	-	-	
DR3	11/06/12	2803.2130 N 08105.1247 W	2	98.50	14.0	P-1	101.7	16.0	96.9	-2.0	P	
8	11/06/12	2803.2130 N 08105.1247 W	2	96.2	17.6	P-2	100.2	17.5	96.0	0.1	P	
9	11/06/12	2803.2358 N 08105.1740 W	1	99.0	13.5	P-1	101.7	16.0	97.4	-2.5	P	
10	11/06/12	2803.2137 N 08105.1948 W	1	98.8	13.7	P-1	101.7	16.0	97.2	-2.3	P	
CP	11/07/12	-	-	97.0	15.0	P-2	100.2	17.5	-	-	-	
DR4	11/07/12	2803.1979 N 08105.1426 W	1	97.1	14.9	P-2	100.2	17.5	96.9	-2.6	P	
11	11/07/12	2803.1979 N 08105.1426 W	1	96.8	14.7	P-2	100.2	17.5	96.6	-2.8	P	
12	11/07/12	2803.1834 N 08105.1591 W	1	94.3	13.9	P-2	100.2	17.5	94.1	-3.6	F	

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11/07/12
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Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/07/12 TO 11/08/12

PAGE 2

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
12R	11/07/12	-	1	96.1	17.4	P-2	100.2	17.5	95.9	-0.1	P	
13	11/07/12	2803.1872 N 08105.1380 W	2	93.1	19.3	P-2	100.2	17.5	92.9	1.8	F	
13R	11/07/12	-	2	95.2	15.5	P-2	100.2	17.5	95.1	-2.0	P	
14	11/07/12	2803.2086 N 08105.1330 W	2	95.7	16.3	P-2	100.2	17.5	95.5	-1.2	P	
15	11/07/12	2803.1893 N 08105.1561 W	2	95.5	16.1	P-2	100.2	17.5	95.3	-1.4	P	
CP	11/08/12	-	-	99.8	16.4	P-2	100.2	17.5	-	-		
DR5	11/08/12	2803.2215 N 08105.1465 W	1	97.9	15.4	P-2	100.2	17.5	97.7	-2.1	P	
16	11/08/12	2803.2215 N 08105.1465 W	1	92.2	17.5	P-2	100.2	17.5	92.1	0.0	F	
16R	11/08/12	-	1	97.3	14.6	P-2	100.2	17.5	97.1	-2.9	P	
17	11/08/12	2803.2271 N 08105.1503 W	1	96.4	16.0	P-2	100.2	17.5	96.2	-1.5	P	
18	11/08/12	2803.2053 N 08105.1510 W	1	95.3	16.3	P-2	100.2	17.5	95.1	-1.2	P	
19	11/08/12	2803.2220 N 08105.1628 W	2	95.7	16.8	P-2	100.2	17.5	95.5	-0.7	P	
20	11/08/12	2803.2233 N 08105.1679 W	1	95.3	16.2	P-2	100.2	17.5	95.1	-1.3	P	
21	11/08/12	2803.2298 N 08105.1625 W	2	96.7	14.8	P-2	100.2	17.5	96.5	-2.7	P	
22	11/08/12	2803.2325 N 08105.1804 W	2	97.1	16.1	P-2	100.2	17.5	96.9	-1.4	P	
23	11/08/12	2803.2292 N 08105.1979 W	1	95.9	16.8	P-2	100.2	17.5	95.7	-0.7	P	
24	11/08/12	2803.2202 N 08105.1778 W	2	98.6	15.0	P-2	100.2	17.5	98.4	-2.5	P	
25	11/08/12	2803.2119 N 08105.1924 W	2	97.5	14.9	P-2	100.2	17.5	97.3	-2.6	P	
26	11/08/12	2803.2002 N 08105.1983 W	1	95.2	17.9	P-2	100.2	17.5	95.0	0.4	P	
27	11/08/12	2803.1891 N 08105.1965 W	1	94.8	14.7	P-2	100.2	17.5	94.6	-2.8	P	

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11/08/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/08/12 TO 11/10/12

PAGE 3

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
28	11/08/12	2803.1818 N 08105.1652 W	1	95.6	17.0	P-2	100.2	17.5	95.4	-0.5	P	
29	11/08/12	2803.1866 N 08105.1565 W	2	99.6	16.9	P-2	100.2	17.5	99.4	-0.6	P	
30	11/08/12	2803.2053 N 08105.1876 W	1	90.3	18.0	P-2	100.2	17.5	90.2	0.5	F	
31	11/08/12	2803.2073 N 08105.1653 W	1	93.9	18.3	P-2	100.2	17.5	93.7	0.8	F	
CP	11/09/12	-	-	99.7	17.0	P-2	100.2	17.5	-	-	-	
DR6	11/09/12	2803.2045 N 08105.1622 W	2	96.4	15.8	P-2	100.2	17.5	96.2	-1.7	P	
30R	11/09/12	-	1	96.1	16.5	P-2	100.2	17.5	95.9	-1.0	P	
31R	11/09/12	-	1	97.3	14.7	P-2	100.2	17.5	97.1	-2.8	P	
32	11/09/12	2803.2045 N 08105.1622 W	2	96.3	16.9	P-2	100.2	17.5	96.1	-0.6	P	
33	11/09/12	2803.1880 N 08105.1664 W	1	96.6	15.4	P-2	100.2	17.5	96.4	-2.1	P	
34	11/09/12	2803.0404 N 08105.0339 W	1	95.6	16.4	P-2	100.2	17.5	95.4	-1.1	P	
35	11/09/12	2803.0819 N 08105.2260 W	1	96.1	18.7	P-2	100.2	17.5	95.9	1.2	P	
36	11/09/12	2803.1891 N 08105.1851 W	1	96.5	15.0	P-2	100.2	17.5	96.3	-2.5	P	
37	11/09/12	2803.1730 N 08105.1907 W	1	97.7	15.2	P-2	100.2	17.5	97.5	-2.3	P	
38	11/09/12	2803.1601 N 08105.1816 W	1	95.8	14.8	P-2	100.2	17.5	95.6	-2.7	P	
CP	11/10/12	-	-	99.7	16.9	P-2	100.2	17.5	-	-	-	
DR7	11/10/12	2803.1674 N 08105.1482 W	1	97.2	14.9	P-2	100.2	17.5	97.0	-2.6	P	
39	11/10/12	2803.1674 N 08105.1482 W	1	96.8	15.1	P-2	100.2	17.5	96.6	-2.4	P	
40	11/10/12	2803.1649 N 08105.1400 W	1	95.2	15.1	P-2	100.2	17.5	95.0	-2.4	P	
41	11/10/12	2803.1652 N 08105.1326 W	1	96.4	15.5	P-2	100.2	17.5	96.2	-2.0	P	

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DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/10/12 TO 11/12/12

PAGE 4

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
42	11/10/12	2803.1661 N 08105.1293 W	1	97.0	15.0	P-2	100.2	17.5	96.8	-2.5	P	
43	11/10/12	2803.1627 N 08105.1146 W	1	103.6	13.0	P-3	106	14.0	97.7	-1.0	P	
44	11/10/12	2803.1882 N 08105.1898 W	2	96.3	14.6	P-2	100.2	17.5	96.1	-2.9	P	
45	11/10/12	2803.1724 N 08105.1961 W	1	95.3	15.8	P-2	100.2	17.5	95.1	-1.7	P	
46	11/10/12	2803.1717 N 08105.1854 W	1	97.4	15.0	P-2	100.2	17.5	97.2	-2.5	P	
47	11/10/12	2803.1870 N 08105.1777 W	2	97.4	14.6	P-2	100.2	17.5	97.2	-2.9	P	
48	11/10/12	2803.1684 N 08105.1686 W	1	95.3	17.1	P-2	100.2	17.5	95.1	-0.4	P	
49	11/10/12	2803.1786 N 08105.1691 W	2	95.8	18.1	P-2	100.2	17.5	95.6	0.6	P	
50	11/10/12	2803.1766 N 08105.1972 W	2	95.8	15.0	P-2	100.2	17.5	95.6	-2.5	P	
51	11/10/12	2803.2278 N 08105.1752 W	2	97.8	15.3	P-2	100.2	17.5	97.6	-2.2	P	
CP	11/12/12	-	-	101.3	16.5	P-1	101.7	16.0	-	-	-	
DR8	11/12/12	2803.1884 N 08105.1147 W	2	100.2	14.5	P-1	101.7	16.0	98.5	-1.5	P	
52	11/12/12	2803.1884 N 08105.1147 W	2	96.7	13.3	P-1	101.7	16.0	95.1	-2.7	P	
53	11/12/12	2803.2286 N 08105.1472 W	2	97.5	15.2	P-1	101.7	16.0	95.9	-0.8	P	
54	11/12/12	2803.1960 N 08105.1278 W	2	100.0	13.1	P-1	101.7	16.0	98.4	-2.9	P	
55	11/12/12	2803.2044 N 08105.1162 W	2	100.8	14.3	P-1	101.7	16.0	99.1	-1.7	P	
56	11/12/12	2803.2183 N 08105.1202 W	3	97.8	13.3	P-1	101.7	16.0	96.2	-2.7	P	
57	11/12/12	2803.2265 N 08105.1184 W	3	98.6	13.1	P-1	101.7	16.0	96.9	-2.9	P	
58	11/12/12	2803.2084 N 08105.1964 W	2	95.6	19.7	P-2	100.2	17.5	95.4	2.2	P	
59	11/12/12	2803.1911 N 08105.1785 W	3	95.7	18.2	P-2	100.2	17.5	95.5	0.7	P	

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11/12/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/12/12 TO 11/13/12

PAGE 5

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
60	11/12/12	2803.1902 N 08105.1792 W	3	95.0	14.5	P-2	100.2	17.5	94.8	-3.0	F	
60R	11/12/12	-	3	95.2	18.4	P-2	100.2	17.5	95.0	0.9	P	
61	11/12/12	2803.2024 N 08105.1829 W	2	97.5	15.0	P-2	100.2	17.5	97.3	-2.5	P	
62	11/12/12	2803.1620 N 08105.1518 W	2	96.4	15.8	P-2	100.2	17.5	96.2	-1.7	P	
63	11/12/12	2803.1986 N 08105.1762 W	3	96.5	15.0	P-2	100.2	17.5	96.3	-2.5	P	
64	11/12/12	2803.2056 N 08105.1614 W	3	95.4	15.2	P-2	100.2	17.5	95.2	-2.3	P	
65	11/12/12	2803.1983 N 08105.1454 W	2	95.3	18.8	P-2	100.2	17.5	95.1	1.3	P	
CP	11/13/12	-	-	99.9	18.0	P-2	100.2	17.5	-	-	-	
DR9	11/13/12	2803.1870 N 08105.1549 W	3	98.9	16.2	P-2	100.2	17.5	98.7	-1.3	P	
66	11/13/12	2803.1870 N 08105.1549 W	3	100.4	14.4	P-1	101.7	16.0	98.7	-1.6	P	
67	11/13/12	2803.1937 N 08105.1203 W	3	99.1	14.6	P-2	100.2	17.5	98.9	-2.9	P	
68	11/13/12	2803.2134 N 08105.1257 W	3	95.3	17.2	P-2	100.2	17.5	95.1	-0.3	P	
69	11/13/12	2803.2266 N 08105.1204 W	3	95.9	16.1	P-2	100.2	17.5	95.7	-1.4	P	
70	11/13/12	2803.2279 N 08105.1330 W	3	98.4	15.3	P-2	100.2	17.5	98.2	-2.2	P	
71	11/13/12	2803.2133 N 08105.1932 W	3	95.2	18.4	P-2	100.2	17.5	95.0	0.9	P	
72	11/13/12	2803.2132 N 08105.1942 W	2	99.3	18.3	P-2	100.2	17.5	99.1	0.8	P	
73	11/13/12	2803.2274 N 08105.1718 W	2	97.8	17.6	P-2	100.2	17.5	97.6	0.1	P	
74	11/13/12	2803.1861 N 08105.1950 W	3	96.7	18.8	P-2	100.2	17.5	96.5	1.3	P	
75	11/13/12	2803.1778 N 08105.1809 W	2	96.8	17.7	P-2	100.2	17.5	96.6	0.2	P	
76	11/13/12	2803.1781 N 08105.1810 W	2	95.4	15.7	P-2	100.2	17.5	95.2	-1.8	P	

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11/13/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/19/12 TO 11/21/12

PAGE 6

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
CP	11/19/12	-	-			P-8	101.3	16.1	-	-	-	
DR10	11/19/12	2803.1938 N 08105.1166 W	2	98.8	14.7	P-8	101.3	16.1	97.5	-1.4	P	
77	11/19/12	2803.1938 N 08105.1166 W	2	99.2	14.6	P-8	101.3	16.1	97.9	-1.5	P	
78	11/19/12	2803.2097 N 08105.1223 W	2	101.1	14.7	P-8	101.3	16.1	99.8	-1.4	P	
79	11/19/12	2803.2243 N 08105.1217 W	2	98.2	14.7	P-8	101.3	16.1	96.9	-1.4	P	
80	11/19/12	2803.1969 N 08105.1248 W	3	99.0	18.9	P-8	101.3	16.1	97.7	2.8	P	
CP	11/20/12	-	-	99.6	17.8	P-2	100.2	17.5	-	-	-	
DR11	11/20/12	2803.2031 N 08105.1264 W	2	97.1	15.3	P-2	100.2	17.5	96.9	-2.2	P	
81	11/20/12	2803.2031 N 08105.1264 W	2	95.8	17.1	P-2	100.2	17.5	95.6	-0.4	P	
82	11/20/12	2803.2166 N 08105.1250 W	2	95.3	18.4	P-2	100.2	17.5	95.1	0.9	P	
83	11/20/12	2803.2228 N 08105.1406 W	2	96.1	17.2	P-2	100.2	17.5	95.9	-0.3	P	
84	11/20/12	2803.2237 N 08105.1589 W	2	96.0	14.9	P-2	100.2	17.5	95.8	-2.6	P	
85	11/20/12	2803.2075 N 08105.1783 W	3	98.6	15.8	P-2	100.2	17.5	98.4	-1.7	P	
86	11/20/12	2803.2039 N 08105.1590 W	3	98.1	15.1	P-2	100.2	17.5	97.9	-2.4	P	
87	11/20/12	2803.2191 N 08105.1923 W	4	98.5	14.7	P-2	100.2	17.5	98.3	-2.8	P	
88	11/20/12	2803.2002 N 08105.1903 W	4	100.1	16.0	P-2	100.2	17.5	99.9	-1.5	P	
89	11/20/12	2803.1855 N 08105.1543 W	4	98.3	16.5	P-2	100.2	17.5	98.1	-1.0	P	
90	11/20/12	2803.1840 N 08105.1933 W		97.1	16.6	P-2	100.2	17.5	96.9	-0.9	P	
CP	11/21/12	-	-	100.1	17.7	P-2	100.2	17.5	-	-	-	
DR12	11/21/12	2803.1668 N 08105.1288 W	4	96.4	15.8	P-2	100.2	17.5	96.2	-1.7	P	

Chris Johnson
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11/21/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/21/12 TO 11/23/12

PAGE 7

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
91	11/21/12	2803.1668 N 08105.1288 W	4	95.2	18.0	P-2	100.2	17.5	95.0	0.5	P	
92	11/21/12	2803.1713 N 08105.1397 W	4	97.7	17.0	P-2	100.2	17.5	97.5	-0.5	P	
93	11/21/12	2803.1809 N 08105.1740 W	4	100.3	13.7	P-8	101.3	16.1	99.0	-2.4	P	
94	11/21/12	2803.2023 N 08105.1611 W	4	98.3	14.8	P-2	100.2	17.5	98.1	-2.7	P	
95	11/21/12	2803.1990 N 08105.1760 W	4	95.6	18.8	P-2	100.2	17.5	95.4	1.3	P	
96	11/21/12	2803.2043 N 08105.1723 W	5	95.7	20.1	P-2	100.2	17.5	95.5	2.6	P	
97	11/21/12	2803.2001 N 08105.1378 W	5	98.5	16.7	P-2	100.2	17.5	98.3	-0.8	P	
98	11/21/12	2803.1724 N 08105.1515 W	5	96.2	19.8	P-2	100.2	17.5	96.0	2.3	P	
99	11/21/12	2803.1722 N 08105.1348 W	5	96.3	15.8	P-2	100.2	17.5	96.1	-1.7	P	
CP	11/23/12	-	-	100.0	17.0	P-2	100.2	17.5	-	-	-	
DR13	11/23/12	2803.2018 N 08105.1377 W	5	96.3	15.9	P-2	100.2	17.5	96.1	-1.6	P	
100	11/23/12	2803.2018 N 08105.1377 W	5	96.8	17.1	P-2	100.2	17.5	96.6	-0.4	P	
101	11/23/12	2803.2018 N 08105.1656 W	5	96.3	15.6	P-2	100.2	17.5	96.1	-1.9	P	
102	11/23/12	2803.2003 N 08105.1772 W	5	95.7	17.4	P-2	100.2	17.5	95.5	-0.1	P	
103	11/23/12	2803.2203 N 08105.1913 W	5	100.8	14.7	P-8	101.3	16.1	99.5	-1.4	P	
104	11/23/12	2803.2036 N 08105.1897 W	5	99.6	15.5	P-2	100.2	17.5	99.4	-2.0	P	
105	11/23/12	2803.1825 N 08105.1926 W	5	100.4	15.2	P-8	101.3	16.1	99.1	-0.9	P	
106	11/23/12	2803.1870 N 08105.1572 W	5	97.0	15.4	P-2	100.2	17.5	96.8	-2.1	P	
107	11/23/12	2803.1956 N 08105.1558 W	5	97.8	17.0	P-2	100.2	17.5	97.6	-0.5	P	
108	11/23/12	2803.1955 N 08105.1231 W	5	96.1	14.8	P-2	100.2	17.5	95.9	-2.7	P	

Chris Johnson
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11/23/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/23/12 TO 11/23/12

PAGE 8

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
109	11/23/12	2803.2045 N 08105.1200 W	5	98.6	14.7	P-2	100.2	17.5	98.4	-2.8	P	
110	11/23/12	2803.2188 N 08105.1195 W	5	97.9	14.7	P-2	100.2	17.5	97.7	-2.8	P	
111	11/23/12	2803.1717 N 08105.1831 W	5	102.9	12.6	P-7	104.4	15.1	98.6	-2.5	P	
112	11/23/12	2803.1719 N 08105.1669 W	5	95.8	17.3	P-2	100.2	17.5	95.6	-0.2	P	
113	11/23/12	2803.1346 N 08105.1990 W	5	98.5	15.3	P-2	100.2	17.5	98.3	-2.2	P	
114	11/23/12	2803.1192 N 08105.2012 W	6	97.1	14.9	P-2	100.2	17.5	96.9	-2.6	P	
115	11/23/12	2803.1068 N 08105.1964 W	6	99.1	15.5	P-2	100.2	17.5	98.9	-2.0	P	
116	11/23/12	2803.1031 N 08105.1853 W	6	99.9	14.8	P-2	100.2	17.5	99.7	-2.7	P	
117	11/23/12	2803.1049 N 08105.1831 W	6	98.7	15.0	P-2	100.2	17.5	98.5	-2.5	P	
118	11/23/12	2803.1219 N 08105.1925 W	6	97.2	14.7	P-2	100.2	17.5	97.0	-2.8	P	
119	11/23/12	2803.1354 N 08105.1896 W	6	98.3	14.6	P-2	100.2	17.5	98.1	-2.9	P	
120	11/23/12	2803.1373 N 08105.1785 W	6	98.1	15.2	P-2	100.2	17.5	97.9	-2.3	P	
CP	11/23/12	-	-	100.0	17.9	P-2	100.2	17.5	-	-	-	
121	11/23/12	2803.1206 N 08105.1762 W	6	97.4	15.2	P-2	100.2	17.5	97.2	-2.3	P	
122	11/23/12	2803.1028 N 08105.1780 W	6	96.6	17.7	P-2	100.2	17.5	96.5	0.2	P	
123	11/23/12	2803.1059 N 08105.1690 W	6	96.0	17.0	P-2	100.2	17.5	95.8	-0.5	P	
124	11/23/12	2803.1228 N 08105.1697 W	6	95.6	17.6	P-2	100.2	17.5	95.4	0.1	P	
125	11/23/12	2803.1339 N 08105.1691 W	6	99.3	14.8	P-2	100.2	17.5	99.1	-2.7	P	
126	11/23/12	2803.1320 N 08105.1608 W	6	97.0	14.8	P-2	100.2	17.5	96.8	-2.7	P	
127	11/23/12	2803.1159 N 08105.1618 W	6	95.2	17.0	P-2	100.2	17.5	95.0	-0.5	P	

Chris Johnson
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11/23/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/23/12 TO 11/24/12

PAGE 9

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
128	11/23/12	2803.1031 N 08105.1619 W	6	95.7	15.0	P-2	100.2	17.5	95.5	-2.5	P	
129	11/23/12	2803.1059 N 08105.1503 W	6	98.1	15.8	P-2	100.2	17.5	97.9	-1.7	P	
130	11/23/12	2803.1863 N 08105.1204 W	6	96.6	17.6	P-2	100.2	17.5	96.4	0.1	P	
131	11/23/12	2803.2052 N 08105.1189 W	6	95.2	17.4	P-2	100.2	17.5	95.1	-0.1	P	
132	11/23/12	2803.2170 N 08105.1169 W	6	98.0	15.3	P-2	100.2	17.5	97.8	-2.2	P	
133	11/23/12	2803.1707 N 08105.1292 W	6	96.7	18.5	P-2	100.2	17.5	96.5	1.0	P	
CP	11/24/12	-	-	100.0	17.0	P-2	100.2	17.5	-	-	-	
DR14	11/24/12	2803.1695 N 08105.1142 W	5	96.2	16.0	P-2	100.2	17.5	96.0	-1.5	P	
134	11/24/12	2803.1695 N 08105.1142 W	5	95.9	16.4	P-2	100.2	17.5	95.8	-1.1	P	
135	11/24/12	2803.1800 N 08105.1926 W	5	97.0	17.0	P-2	100.2	17.5	96.8	-0.5	P	
136	11/24/12	2803.1977 N 08105.1932 W	5	97.9	17.8	P-2	100.2	17.5	97.7	0.3	P	
137	11/24/12	2803.2132 N 08105.1913 W	6	98.0	15.2	P-2	100.2	17.5	97.8	-2.3	P	
138	11/24/12	2803.2025 N 08105.1801 W	6	95.9	18.5	P-2	100.2	17.5	95.7	1.0	P	
139	11/24/12	2803.1151 N 08105.1473 W	6	102.3	14.2	P-7	104.4	15.1	98.0	-0.9	P	
140	11/24/12	2803.1299 N 08105.1510 W	5	102.3	13.0	P-7	104.4	15.1	98.0	-2.1	P	
141	11/24/12	2803.1299 N 08105.1406 W	5	101.4	12.8	P-7	104.4	15.1	97.1	-2.3	P	
142	11/24/12	2803.1169 N 08105.1392 W	6	96.5	14.9	P-2	100.2	17.5	96.3	-2.6	P	
143	11/24/12	2803.1026 N 08105.1391 W	4	96.9	15.0	P-2	100.2	17.5	96.7	-2.5	P	
144	11/24/12	2803.1049 N 08105.1282 W	5	99.1	16.1	P-2	100.2	17.5	98.9	-1.4	P	
145	11/24/12	2803.1179 N 08105.1257 W	5	95.9	14.5	P-2	100.2	17.5	95.7	-3.0	P	

Chris Johnson
PREPARED BY

11/24/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/24/12 TO 11/24/12

PAGE 10

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
146	11/24/12	2803.1287 N 08105.1273 W	5	99.1	15.3	P-2	100.2	17.5	98.9	-2.2	P	
147	11/24/12	2803.1297 N 08105.1177 W	6	98.2	16.0	P-2	100.2	17.5	98.0	-1.5	P	
CP	11/24/12	-	-	99.3	17.5	P-2	100.2	17.5	-	-	-	
148	11/24/12	2803.1194 N 08105.1158 W	6	99.1	15.3	P-2	100.2	17.5	98.9	-2.2	P	
149	11/24/12	2803.1065 N 08105.1181 W	6	100.2	16.4	P-2	100.2	17.5	100.0	-1.1	P	
150	11/24/12	2803.1054 N 08105.1024 W	6	97.6	14.9	P-2	100.2	17.5	97.4	-2.6	P	
151	11/24/12	2803.1183 N 08105.1023 W	7	95.4	15.0	P-2	100.2	17.5	95.2	-2.5	P	
152	11/24/12	2803.1301 N 08105.0995 W	7	95.7	17.6	P-2	100.2	17.5	95.5	0.1	P	
153	11/24/12	2803.1826 N 08105.1556 W	6	95.4	17.2	P-2	100.2	17.5	95.2	-0.3	P	
154	11/24/12	2803.1870 N 08105.1563 W	6	96.6	14.7	P-2	100.2	17.5	96.4	-2.8	P	
155	11/24/12	2803.2004 N 08105.1739 W	6	99.3	16.1	P-2	100.2	17.5	99.1	-1.4	P	
156	11/24/12	2803.1976 N 08105.1505 W	6	96.4	19.2	P-2	100.2	17.5	96.2	1.7	P	
157	11/24/12	2803.2008 N 08105.1387 W	7	96.9	18.2	P-2	100.2	17.5	96.7	0.7	P	
158	11/24/12	2803.2264 N 08105.1400 W	7	97.5	16.0	P-2	100.2	17.5	97.3	-1.5	P	
159	11/24/12	2803.2320 N 08105.1539 W	6	98.1	19.1	P-2	100.2	17.5	97.9	1.6	P	
160	11/24/12	2803.2280 N 08105.1737 W	6	96.7	18.7	P-2	100.2	17.5	96.5	1.2	P	
161	11/24/12	2803.2277 N 08105.1888 W	6	95.5	19.1	P-2	100.2	17.5	95.3	1.6	P	
162	11/24/12	2803.2122 N 08105.1837 W	6	95.3	16.1	P-2	100.2	17.5	95.1	-1.4	P	
163	11/24/12	2803.1778 N 08105.1890 W	6	97.5	14.5	P-2	100.2	17.5	97.3	-3.0	P	
164	11/24/12	2803.1915 N 08105.1378 W	6	96.0	14.7	P-2	100.2	17.5	95.8	-2.8	P	

Chris Johnson
PREPARED BY

11/24/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/24/12 TO 11/27/12

PAGE 11

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
165	11/24/12	2803.1864 N 08105.1473 W	7	96.1	15.8	P-2	100.2	17.5	95.9	-1.7	P	
166	11/24/12	2803.2051 N 08105.1688 W	7	95.8	18.8	P-2	100.2	17.5	95.6	1.3	P	
167	11/24/12	2803.1940 N 08105.1555 W	7	96.1	15.8	P-2	100.2	17.5	95.9	-1.7	P	
168	11/24/12	2803.2465 N 08105.1883 W	7	96.2	18.7	P-2	100.2	17.5	96.0	1.2	P	
169	11/24/12	2803.2286 N 08105.1613 W	7	97.1	18.1	P-2	100.2	17.5	96.9	0.6	P	
CP	11/26/12	-	-	99.9	17.0	P-2	100.2	17.5	-	-	-	
DR15	11/26/12	2803.1724 N 08105.1274 W	7	97.0	15.9	P-2	100.2	17.5	96.8	-1.6	P	
170	11/26/12	2803.1724 N 08105.1274 W	7	96.8	15.7	P-2	100.2	17.5	96.6	-1.8	P	
171	11/26/12	2803.1740 N 08105.1704 W	8	96.6	18.6	P-2	100.2	17.5	96.4	1.1	P	
172	11/26/12	2803.2082 N 08105.1903 W	8	98.1	18.9	P-2	100.2	17.5	97.9	1.4	P	
173	11/26/12	2803.2274 N 08105.1820 W	8	98.5	18.4	P-2	100.2	17.5	98.3	0.9	P	
174	11/26/12	2803.1722 N 08105.1346 W	8	97.4	14.6	P-2	100.2	17.5	97.2	-2.9	P	
CP	11/27/12	-	-	101.1	16.3	P-8	101.3	16.1	-	-	-	
DR16	11/27/12	2803.2016 N 08105.1213 W	7	98.7	14.0	P-8	101.3	16.1	97.4	-2.1	P	
175	11/27/12	2803.2016 N 08105.1213 W	7	99.1	16.9	P-8	101.3	16.1	97.8	0.8	P	
176	11/27/12	2803.2195 N 08105.1206 W	8	100.9	15.5	P-8	101.3	16.1	99.6	-0.6	P	
177	11/27/12	2803.2244 N 08105.1360 W	8	99.7	16.6	P-8	101.3	16.1	98.4	0.5	P	
178	11/27/12	2803.2245 N 08105.1658 W	8	100.7	13.9	P-8	101.3	16.1	99.4	-2.2	P	
179	11/27/12	2803.1914 N 08105.1169 W	8	101.0	13.4	P-8	101.3	16.1	99.7	-2.7	P	
180	11/27/12	2803.1704 N 08105.1322 W	8	99.6	13.2	P-8	101.3	16.1	98.3	-2.9	P	

Chris Johnson
PREPARED BY

11/27/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Pond Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/27/12 TO 01/00/00

PAGE 12

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
181	11/27/12	2803.1717 N 08105.1517 W	8	97.0	14.2	P-8	101.3	16.1	95.8	-1.9	P	
182	11/27/12	2803.1722 N 08105.1710 W	8	95.9	17.2	P-8	101.3	16.1	94.7	1.1	F	
182R	11/27/12	-		100.1	15.8	P-8	101.3	16.1	98.8	-0.3	P	
183	11/27/12	2803.2063 N 08105.1924 W	8	96.8	16.3	P-8	101.3	16.1	95.6	0.2	P	
184	11/27/12	2803.2083 N 08105.1825 W	8	97.0	14.5	P-8	101.3	16.1	95.8	-1.6	P	
185	11/27/12	2803.2169 N 08105.1746 W	8	100.1	13.8	P-8	101.3	16.1	98.8	-2.3	P	
186	11/27/12	2803.2117 N 08105.1644 W	8	99.5	17.4	P-8	101.3	16.1	98.2	1.3	P	
187	11/27/12	2803.2159 N 08105.1550 W	7	96.8	15.1	P-8	101.3	16.1	95.5	-1.0	P	
188	11/27/12	2803.2055 N 08105.1855 W	7	97.0	13.6	P-8	101.3	16.1	95.8	-2.5	P	
189	11/27/12	2803.2045 N 08105.1588 W	7	99.5	14.0	P-8	101.3	16.1	98.2	-2.1	P	
190	11/27/12	2803.2068 N 08105.1378 W	7	101.1	14.3	P-8	101.3	16.1	99.8	-1.8	P	
191	11/27/12	2803.1831 N 08105.1561 W	7	99.1	15.9	P-8	101.3	16.1	97.9	-0.2	P	
192	11/27/12	2803.1846 N 08105.1524 W	7	96.7	17.7	P-8	101.3	16.1	95.5	1.6	P	
CP	11/28/12	-	-	104.1	14.9	P-7	104.4	15.1	-	-	-	
DR17	11/28/12	2803.2106 N 08105.1339 W	8	101.8	14.0	P-7	104.4	15.1	97.5	-1.1	P	
193	11/28/12	2803.2106 N 08105.1339 W	8	99.1	13.4	P-7	104.4	15.1	95.0	-1.7	P	
194	11/28/12	2803.1871 N 08105.1787 W	8	102.2	14.1	P-7	104.4	15.1	97.9	-1.0	P	
195	11/28/12	2803.1821 N 08105.1704 W	8	99.3	13.9	P-7	104.4	15.1	95.2	-1.2	P	

Chris Johnson
PREPARED BY

11/28/12
DATE

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/3/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR1	2303			15.6		P9			
	601	3.75	112.6	-1.5	97.4		96.5%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/5/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR2	2319			16.9		P2			
	601	3.79	113.6	-0.6	97.2		97.0%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/6/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR3	2299			14.0		P1			
	601	3.74	112.3	-2.0	98.5		96.9%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/7/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR4	2288			14.9		P2			
	601	3.72	111.6	-2.6	97.1		96.9%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 11/8/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR5	2309			15.4		P2			
	601	3.77	113.0	-2.1	97.9		97.7%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/9/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR6	2289			15.8		P2			
	601	3.72	111.6	-1.7	96.4		96.2%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/10/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR7	2290			14.9		P2			
	601	3.72	111.7	-2.6	97.2		97.0%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/12/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR8	2336			14.5		P1			
	601	3.82	114.7	-1.5	100.2		98.5%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/13/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR9	2339			16.2		P2			
	601	3.83	114.9	-1.3	98.9		98.7%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/19/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR10	2314			14.7		P8			
	601	3.78	113.3	-1.4	98.8		97.5%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/20/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR11	2294			15.3		P2			
	601	3.73	112.0	-2.2	97.1		96.9%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/21/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR12	2289			15.8		P2			
	601	3.72	111.6	-1.7	96.4		96.2%		4

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 11/23/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR13	2289			15.9		P2			
	601	3.72	111.6	-1.6	96.3		96.1%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/24/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR14	2288			16.0		P2			
	601	3.72	111.6	-1.5	96.2		96.0%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 11/26/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR15	2301			15.9		P2			
	601	3.75	112.4	-1.6	97.0		96.8%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/27/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR16	2302			14.0		P8			
	601	3.75	112.5	-2.1	98.7		97.4%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/28/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR17	2356			14.0		P7			
	601	3.87	116.1	-1.1	101.8		97.5%		7

Section 2
General Fill Density Summary and Field Tests
(LFGTE Pad)

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/14/12 TO 11/14/12

PAGE 1

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	11/14/12	-	-	100.7	17.2	P-9	100.9	17.1	-	-	-	
DR1	11/14/12	2803.1748 N 08105.1754 W	1	99.4	16.7	P-9	100.9	17.1	98.5	-0.4	P	
1	11/14/12	2803.1748 N 08105.1754 W	1	96.9	15.9	P-9	100.9	17.1	96.0	-1.2	P	
2	11/14/12	2803.2105 N 08105.1932 W	1	96.0	14.6	P-9	100.9	17.1	95.1	-2.5	P	
3	11/14/12	2803.1520 N 08105.1891 W	1	98.4	14.5	P-9	100.9	17.1	97.6	-2.6	P	
4	11/14/12	2803.1480 N 08105.1723 W	1	97.5	14.3	P-9	100.9	17.1	96.6	-2.8	P	
5	11/14/12	2803.1494 N 08105.1586 W	1	96.7	14.3	P-9	100.9	17.1	95.8	-2.8	P	
6	11/14/12	2803.1478 N 08105.1382 W	1	96.7	14.9	P-9	100.9	17.1	95.8	-2.2	P	
7	11/14/12	2803.1470 N 08105.1266 W	1	98.1	15.7	P-9	100.9	17.1	97.2	-1.4	P	
8	11/14/12	2803.1622 N 08105.1095 W	1	96.1	16.5	P-9	100.9	17.1	95.2	-0.6	P	
9	11/14/12	2803.1737 N 08105.1153 W	1	99.8	14.3	P-9	100.9	17.1	98.9	-2.8	P	
10	11/14/12	2803.1708 N 08105.1275 W	1	97.3	14.7	P-9	100.9	17.1	96.4	-2.4	P	
11	11/14/12	2803.2119 N 08105.1886 W	1	97.0	19.4	P-9	100.9	17.1	96.1	2.3	P	
12	11/14/12	2803.2132 N 08105.1877 W	1	96.4	20.0	P-9	100.9	17.1	95.5	2.9	P	
13	11/14/12	2803.1743 N 08105.1751 W	1	97.0	15.0	P-9	100.9	17.1	96.1	-2.1	P	
14	11/14/12	2803.2102 N 08105.1931 W	1	98.1	15.0	P-9	100.9	17.1	97.2	-2.1	P	
15	11/14/12	2803.1521 N 08105.1891 W	1	95.9	0.1	P-9	100.9	17.1	95.0	-17.0	P	
16	11/14/12	2803.1480 N 08105.1724 W	1	96.2	14.7	P-9	100.9	17.1	95.3	-2.4	P	
17	11/14/12	2803.1496 N 08105.1586 W	1	98.8	16.2	P-9	100.9	17.1	97.9	-0.9	P	
18	11/14/12	2803.1478 N 08105.1384 W	1	99.1	15.9	P-9	100.9	17.1	98.2	-1.2	P	

Chris Johnson
PREPARED BY

11/14/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/14/12 TO 11/29/12

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
19	11/14/12	2803.1473 N 08105.1266 W	1	97.6	17.0	P-9	100.9	17.1	96.7	-0.1	P	
20	11/14/12	2803.1622 N 08105.1098 W	1	97.1	16.8	P-9	100.9	17.1	96.2	-0.3	P	Density
21	11/14/12	2803.1736 N 08105.1153 W	1	96.8	17.1	P-9	100.9	17.1	95.9	0.0	P	
22	11/14/12	2803.1708 N 08105.1276 W	1	95.9	16.6	P-9	100.9	17.1	95.0	-0.5	P	
23	11/14/12	2803.2117 N 08105.1886 W	1	97.2	15.9	P-9	100.9	17.1	96.3	-1.2	P	
24	11/14/12	2803.2132 N 08105.1879 W	1	98.5	14.9	P-9	100.9	17.1	97.6	-2.2	P	
CP	11/17/12	-	-	100.0	17.8	P-2	100.2	17.5	-	-	-	
DR2	11/17/12	2803.2155 N 08105.1936 W	1	98.3	14.9	P-2	100.2	17.5	98.1	-2.6	P	
25	11/17/12	2803.2155 N 08105.1936 W	1	97.2	16.0	P-2	100.2	17.5	97.0	-1.5	P	
26	11/17/12	2803.1956 N 08105.0813 W	1	101.1	16.9	P-1	101.7	16.0	99.4	0.9	P	
27	11/17/12	2803.1954 N 08105.1285 W	1	96.0	15.1	P-2	100.2	17.5	95.8	-2.4	P	
28	11/17/12	2803.2151 N 08105.1907 W	1	96.0	15.9	P-2	100.2	17.5	95.8	-1.6	-	
29	11/17/12	2803.2155 N 08105.1946 W	1	98.0	16.1	P-2	100.2	17.5	97.8	-1.4	P	
30	11/17/12	2803.1946 N 08105.0813 W	1	101.5	16.2	P-1	101.7	16.0	99.8	0.2	P	
31	11/17/12	2803.1954 N 08105.1284 W	1	97.1	15.5	P-2	100.2	17.5	96.9	-2.0	P	
32	11/17/12	2803.2158 N 08105.1907 W	1	96.2	16.0	P-2	100.2	17.5	96.0	-1.5	P	
33	11/17/12	2803.2509 N 08105.0805 W	1	108.8	11.0	P-10	110.1	13.6	98.9	-2.6	P	
34	11/17/12	2803.1944 N 08105.0882 W	1	95.1	14.9	P-2	100.2	17.5	94.9	-2.6	F	Density
34R	11/17/12	2803.1944 N 08105.0882 W	1	99.0	15.0	P-2	100.2	17.5	98.8	-2.5	P	
CP	11/29/12	-	-	104.2	14.7	P-7	104.4	15.1	-	-	-	

Chris Johnson
PREPARED BY

11/29/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/29/12 TO 11/30/12

PAGE 3

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
DR3	11/29/12	2803.1848 N 08105.1330 W	1	100.6	14.3	P-7	104.4	15.1	96.4	-0.8	P	
35	11/29/12	2803.1848 N 08105.1330 W	1	102.2	13.8	P-7	104.4	15.1	97.9	-1.3	P	
36	11/29/12	2803.1889 N 08105.1364 W	1	104.0	12.7	P-7	104.4	15.1	99.6	-2.4	P	
37	11/29/12	2803.1561 N 08105.1884 W	1	99.3	18.1	P-7	104.4	15.1	95.1	3.0	P	
38	11/29/12	2803.1503 N 08105.1766 W	1	101.1	12.9	P-7	104.4	15.1	96.8	-2.2	P	
39	11/29/12	2803.1497 N 08105.1476 W	1	101.1	14.1	P-7	104.4	15.1	96.9	-1.0	P	
40	11/29/12	2803.1444 N 08105.1343 W	1	99.7	12.9	P-7	104.4	15.1	95.5	-2.2	P	
41	11/29/12	2803.1845 N 08105.1330 W	1	102.3	14.0	P-7	104.4	15.1	98.0	-1.1	P	
42	11/29/12	2803.1889 N 08105.1354 W	1	104.1	13.8	P-7	104.4	15.1	99.7	-1.3	P	
43	11/29/12	2803.1564 N 08105.1884 W	1	98.7	17.5	P-7	104.4	15.1	94.5	2.4	P	
44	11/29/12	2803.1503 N 08105.1756 W	1	101.8	13.8	P-7	104.4	15.1	97.5	-1.3	P	
45	11/29/12	2803.1498 N 08105.1476 W	1	101.1	15.0	P-7	104.4	15.1	96.9	-0.1	P	
46	11/29/12	2803.1444 N 08105.1344 W	1	100.0	13.4	P-7	104.4	15.1	95.8	-1.7	P	
CP	11/30/12	-	-	104.0	15.2	P-7	104.4	15.1	-	-	-	
DR4	11/30/12	2803.1502 N 08105.1703 W	1	102.1	15.1	P-7	104.4	15.1	97.8	0.0	P	
47	11/30/12	2803.1502 N 08105.1703 W	2	100.1	15.8	P-7	104.4	15.1	95.9	0.7	P	
48	11/30/12	2803.1260 N 08105.1904 W	2	99.8	14.2	P-7	104.4	15.1	95.6	-0.9	P	
49	11/30/12	2803.1152 N 08105.1917 W	2	100.4	13.1	P-7	104.4	15.1	96.2	-2.0	P	
50	11/30/12	2803.1024 N 08105.1904 W	2	102.3	13.0	P-7	104.4	15.1	97.9	-2.1	P	
51	11/30/12	2803.1055 N 08105.1785 W	2	101.3	12.9	P-7	104.4	15.1	97.0	-2.2	P	

Chris Johnson
PREPARED BY

11/30/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 11/30/12 TO 12/01/12

PAGE 4

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
52	11/30/12	2803.1187 N 08105.1773 W	2	100.4	14.6	P-7	104.4	15.1	96.2	-0.5	P	
53	11/30/12	2803.1306 N 08105.1777 W	2	101.7	13.8	P-7	104.4	15.1	97.4	-1.3	P	
54	11/30/12	2803.1504 N 08105.1703 W	2	100.5	16.5	P-7	104.4	15.1	96.3	1.4	P	
55	11/30/12	2803.1260 N 08105.1914 W	2	99.1	15.2	P-7	104.4	15.1	94.9	0.1	P	
56	11/30/12	2803.1154 N 08105.1917 W	2	101.0	14.3	P-7	104.4	15.1	96.7	-0.8	P	
57	11/30/12	2803.1024 N 08105.1905 W	2	102.5	15.8	P-7	104.4	15.1	98.2	0.7	P	
58	11/30/12	2803.1056 N 08105.1785 W	2	101.5	16.0	P-7	104.4	15.1	97.2	0.9	P	
59	11/30/12	2803.1187 N 08105.1775 W	2	101.0	16.1	P-7	104.4	15.1	96.7	1.0	P	
60	11/30/12	2803.1304 N 08105.1777 W	2	101.4	15.2	P-7	104.4	15.1	97.1	0.1	P	
CP	12/01/12	-	-	104.3	14.8	P-7	104.4	15.1	-	-	-	
DR5	12/01/12	2803.1064 N 08105.1654 W	2	100.8	13.9	P-7	104.4	15.1	96.6	-1.2	P	
61	12/01/12	2803.1064 N 08105.1654 W	2	100.5	13.8	P-7	104.4	15.1	96.3	-1.3	P	
62	12/01/12	2803.1163 N 08105.1662 W	2	101.1	12.1	P-7	104.4	15.1	96.8	-3.0	P	
63	12/01/12	2803.1261 N 08105.1656 W	2	101.7	14.3	P-7	104.4	15.1	97.4	-0.8	P	
64	12/01/12	2803.1327 N 08105.1572 W	2	101.8	12.6	P-7	104.4	15.1	97.5	-2.5	P	
65	12/01/12	2803.1161 N 08105.1558 W	2	101.2	14.1	P-7	104.4	15.1	97.0	-1.0	P	
66	12/01/12	2803.1038 N 08105.1533 W	2	99.2	13.2	P-7	104.4	15.1	95.0	-1.9	P	
67	12/01/12	2803.1053 N 08105.1415 W	2	99.3	15.6	P-7	104.4	15.1	95.1	0.5	P	
68	12/01/12	2803.1187 N 08105.1410 W	2	99.3	13.4	P-7	104.4	15.1	95.1	-1.7	P	
69	12/01/12	2803.1314 N 08105.1438 W	2	101.4	14.3	P-7	104.4	15.1	97.1	-0.8	P	

Chris Johnson
PREPARED BY

12/01/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/01/12 TO 01/14/13

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
70	12/01/12	2803.1659 N 08105.0766 W	2	99.9	13.8	P-7	104.4	15.1	95.7	-1.3	P	
71	12/01/12	2803.1924 N 08105.0876 W	2	101.9	13.9	P-7	104.4	15.1	97.6	-1.2	P	
72	12/01/12	2803.2196 N 08105.0842 W	2	102.0	16.1	P-7	104.4	15.1	97.7	1.0	P	
73	12/01/12	2803.2527 N 08105.0858 W	2	102.0	13.6	P-7	104.4	15.1	97.7	-1.5	P	
74	12/01/12	2803.1322 N 08105.1334 W	2	98.4	13.7	P-7	104.4	15.1	94.3	-1.4	F	Density
75	12/01/12	2803.1322 N 08105.1334 W	2	103.2	14.0	P-7	104.4	15.1	98.9	-1.1	P	
76	12/01/12	2803.1033 N 08105.1280 W	2	103.0	12.9	P-7	104.4	15.1	98.6	-2.2	P	
77	12/01/12	2803.1060 N 08105.1103 W	2	100.0	16.5	P-7	104.4	15.1	95.8	1.4	P	
78	12/01/12	2803.1220 N 08105.1182 W	2	102.5	13.5	P-7	104.4	15.1	98.2	-1.6	P	
79	12/01/12	2803.1063 N 08105.1654 W	2	100.9	13.5	P-7	104.4	15.1	96.6	-1.6	P	
80	12/01/12	2803.1163 N 08105.1661 W	2	103.2	14.6	P-7	104.4	15.1	98.9	-0.5	P	
81	12/01/12	2803.1263 N 08105.1656 W	2	102.1	14.9	P-7	104.4	15.1	97.8	-0.2	P	
82	12/01/12	2803.1327 N 08105.1574 W	2	101.9	15.1	P-7	104.4	15.1	97.6	0.0	P	
83	12/01/12	2803.1151 N 08105.1558 W	2	103.2	15.8	P-7	104.4	15.1	98.9	0.7	P	
84	12/01/12	2803.1036 N 08105.1533 W	2	103.1	16.0	P-7	104.4	15.1	98.8	0.9	P	
CP	01/14/13	-	-	99.7	16.8	P-2	100.2	17.5	-	-	-	
DR6	01/14/13	2803.1950 N 08105.2093 W	3	98.0	16.1	P-2	100.2	17.5	-	-	-	
85	01/14/13	2803.1950 N 08105.2093 W	3	97.6	17.0	P-2	100.2	17.5	97.4	-0.5	P	
86	01/14/13	2803.1671 N 08105.2236 W	3	97.9	15.7	P-2	100.2	17.5	97.7	-1.8	P	
87	01/14/13	2803.1376 N 08105.2138 W	3	98.8	14.8	P-2	100.2	17.5	98.6	-2.7	P	

Chris Johnson
PREPARED BY

01/14/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/14/13 TO 01/14/13

PAGE 6

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
88	01/14/13	2803.2195 N 08105.0842 W	2	100.7	15.6	P-7	104.4	15.1	96.5	0.5	P	
89	01/14/13	2803.2527 N 08105.0857 W	2	103.5	15.9	P-7	104.4	15.1	99.1	0.8	P	
90	01/14/13	2803.1186 N 08105.1410 W	2	102.0	15.9	P-7	104.4	15.1	97.7	0.8	P	
91	01/14/13	2803.1314 N 08105.1435 W	2	101.6	15.5	P-7	104.4	15.1	97.3	0.4	P	
92	01/14/13	2803.1657 N 08105.0766 W	2	99.9	15.2	P-7	104.4	15.1	95.7	0.1	P	
93	01/14/13	2803.1924 N 08105.0875 W	2	100.8	14.6	P-7	104.4	15.1	96.6	-0.5	P	
94	01/14/13	2803.1054 N 08105.2098 W	3	100.1	15.9	P-2	100.2	17.5	99.9	-1.6	P	
95	01/14/13	2803.2150 N 08105.2161 W	3	99.3	17.1	P-2	100.2	17.5	99.2	-0.4	P	
96	01/14/13	2803.2474 N 08105.2154 W	3	99.3	16.5	P-2	100.2	17.5	99.1	-1.0	P	
97	01/14/13	2803.2774 N 08105.2195 W	3	95.6	16.3	P-2	100.2	17.5	95.4	-1.2	P	
98	01/14/13	2803.3014 N 08105.2422 W	3	96.8	16.0	P-2	100.2	17.5	96.6	-1.5	P	
99	01/14/13	2803.3076 N 08105.2846 W	3	95.4	16.5	P-2	100.2	17.5	95.2	-1.0	P	
100	01/14/13	2803.2951 N 08105.1008 W	3	99.8	17.0	P-2	100.2	17.5	99.6	-0.5	P	
101	01/14/13	2803.2754 N 08105.1221 W	3	100.0	17.3	P-2	100.2	17.5	99.8	-0.2	P	
102	01/14/13	2803.2688 N 08105.1529 W	3	95.2	15.6	P-2	100.2	17.5	95.1	-1.9	P	
103	01/14/13	2803.2911 N 08105.1829 W	3	97.7	14.9	P-2	100.2	17.5	97.5	-2.6	P	
104	01/14/13	2803.1950 N 08105.2043 W	3	97.8	17.0	P-2	100.2	17.5	97.6	-0.5	P	
105	01/14/13	2803.1675 N 08105.2236 W	3	98.0	16.0	P-2	100.2	17.5	97.8	-1.5	P	
106	01/14/13	2803.1377 N 08105.2138 W	3	99.0	15.8	P-2	100.2	17.5	98.8	-1.7	P	
107	01/14/13	2803.1055 N 08105.2098 W	3	100.4	16.2	P-2	100.2	17.5	100.2	-1.3	P	

Chris Johnson
PREPARED BY

01/14/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/14/13 TO 01/15/13

PAGE 7

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
108	01/14/13	2803.2153 N 08105.2161 W	3	100.0	17.1	P-2	100.2	17.5	99.8	-0.4	P	
109	01/14/13	2803.2474 N 08105.2156 W	3	99.4	16.2	P-2	100.2	17.5	99.2	-1.3	P	
CP	01/15/13	-	-	100.1	16.8	P-2	100.2	17.5	-	-	-	
DR7	01/15/13	2803.6009 N 08105.4337 W	3	103.0	12.0	P-3	106	14.0	97.2	-2.0	P	
110	01/15/13	2803.6009 N 08105.4337 W	3	103.9	11.4	P-3	106	14.0	98.0	-2.6	P	
111	01/15/13	2803.5565 N 08105.4331 W	3	97.3	15.1	P-2	100.2	17.5	97.1	-2.4	P	
112	01/15/13	2803.5565 N 08105.4326 W	3	95.2	15.0	P-2	100.2	17.5	95.0	-2.5	P	
113	01/15/13	2803.5064 N 08105.4224 W	3	97.4	14.7	P-2	100.2	17.5	97.2	-2.8	P	
114	01/15/13	2803.4641 N 08105.4051 W	3	97.5	15.1	P-2	100.2	17.5	97.3	-2.4	P	
115	01/15/13	2803.4337 N 08105.3822 W	3	97.0	16.0	P-2	100.2	17.5	96.8	-1.5	P	
116	01/15/13	2803.3876 N 08105.3503 W	3	95.7	15.2	P-2	100.2	17.5	95.5	-2.3	P	
117	01/15/13	2803.3426 N 08105.3229 W	3	96.4	15.4	P-2	100.2	17.5	96.3	-2.1	P	
118	01/15/13	2803.2786 N 08105.0854 W	3	102.1	14.8	P-3	106	14.0	96.3	0.8	P	
119	01/15/13	2803.2563 N 08105.0801 W	3	105.4	14.0	P-3	106	14.0	99.4	0.0	P	
120	01/15/13	2803.2187 N 08105.0820 W	3	99.9	14.6	P-2	100.2	17.5	99.7	-2.9	P	
121	01/15/13	2803.1860 N 08105.0840 W	3	102.7	15.3	P-3	106	14.0	96.9	1.3	P	
122	01/15/13	2803.1556 N 08105.0836 W	3	94.6	15.2	P-2	100.2	17.5	94.4	-2.3	F	Density
123	01/15/13	2803.1556 N 08105.0836 W	3	97.6	16.0	P-2	100.2	17.5	97.4	-1.5	P	
124	01/15/13	2803.2920 N 08105.1045 W	3	96.1	14.5	P-2	100.2	17.5	95.9	-3.0	P	
125	01/15/13	2803.2681 N 08105.1319 W	3	97.1	15.5	P-2	100.2	17.5	96.9	-2.0	P	

Chris Johnson
PREPARED BY

01/15/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill
PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC
CONTRACTOR: RCS Excavation

DATES: FROM 01/15/13 TO 01/22/13

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
126	01/15/13	2803.2776 N 08105.2195 W	3	95.6	17.0	P-2	100.2	17.5	95.4	-0.5	P	
127	01/15/13	2803.3014 N 08105.2424 W	3	97.8	16.1	P-2	100.2	17.5	97.6	-1.4	P	
128	01/15/13	2803.3073 N 08105.2846 W	3	96.2	15.9	P-2	100.2	17.5	96.0	-1.6	P	
129	01/15/13	2803.2951 N 08105.1018 W	3	100.0	17.0	P-2	100.2	17.5	99.8	-0.5	P	
CP	01/22/13	-	-	99.9	16.9	P-2	100.2	17.5	-	-	-	
DR8	01/22/13	2803.2943 N 08105.1011 W	3	95.6	16.7	P-2	100.2	17.5	95.4	-0.8	P	
130	01/22/13	2803.1705 N 08105.1325 W	3	96.2	15.0	P-2	100.2	17.5	96.0	-2.5	P	
131	01/22/13	2803.1692 N 08105.1084 W	3	97.8	16.1	P-2	100.2	17.5	97.6	-1.4	P	
132	01/22/13	2803.1350 N 08105.0887 W	3	95.3	16.5	P-2	100.2	17.5	95.1	-1.0	P	
133	01/22/13	2803.2943 N 08105.1011 W	3	95.5	15.6	P-2	100.2	17.5	95.3	-1.9	P	
134	01/22/13	2803.2703 N 08105.1275 W	3	97.4	14.0	P-2	100.2	17.5	97.2	-3.5	P	
135	01/22/13	2803.2718 N 08105.1534 W	3	99.4	15.2	P-2	100.2	17.5	99.2	-2.3	P	
136	01/22/13	2803.2884 N 08105.1856 W	3	99.7	15.8	P-2	100.2	17.5	99.5	-1.7	P	
137	01/22/13	2803.3145 N 08105.2263 W	3	96.5	17.0	P-2	100.2	17.5	96.3	-0.5	P	
138	01/22/13	2803.3230 N 08105.2655 W	3	99.0	16.0	P-2	100.2	17.5	98.8	-1.5	P	
139	01/22/13	2803.3284 N 08105.2978 W	3	99.0	16.4	P-2	100.2	17.5	98.8	-1.1	P	
140	01/22/13	2803.3542 N 08105.3145 W	3	97.6	15.7	P-2	100.2	17.5	97.4	-1.8	P	
141	01/22/13	2803.3977 N 08105.3407 W	3	101.4	13.4	P-7	104.4	15.1	97.1	-1.7	P	
142	01/22/13	2803.4483 N 08105.3658 W	3	101.3	12.6	P-7	104.4	15.1	97.0	-2.5	P	
143	01/22/13	2803.4532 N 08105.3315 W	3	101.5	13.2	P-7	104.4	15.1	97.2	-1.9	P	

Chris Johnson
PREPARED BY

01/22/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/22/13 TO 01/23/13

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TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
144	01/22/13	2803.6598 N 08105.4392 W	3	103.3	14.2	P-7	104.4	15.1	98.9	-0.9	P	
145	01/22/13	2803.6569 N 08105.4320 W	3	102.7	12.8	P-7	104.4	15.1	98.4	-2.3	P	
146	01/22/13	2803.1067 N 08105.1100 W	4	101.8	13.2	P-7	104.4	15.1	97.5	-1.9	P	
147	01/22/13	2803.2755 N 08105.1221 W	3	97.5	17.1	P-2	100.2	17.5	97.3	-0.4	P	
148	01/22/13	2803.2688 N 08105.1524 W	3	98.0	16.0	P-2	100.2	17.5	97.8	-1.5	P	
149	01/22/13	2803.2921 N 08105.1829 W	3	97.5	15.3	P-2	100.2	17.5	97.3	-2.2	P	
CP	01/23/13	-	-	99.8	16.7	P-2	100.2	17.5	-	-	-	
DR9	01/23/13	2803.1668 N 08105.1799 W	4	97.8	15.2	P-2	100.2	17.5	97.6	-2.3	P	
150	01/23/13	2803.1668 N 08105.1799 W	4	98.1	17.0	P-2	100.2	17.5	97.9	-0.5	P	
151	01/23/13	2803.1426 N 08105.1916 W	4	96.2	16.3	P-2	100.2	17.5	96.0	-1.2	P	
152	01/23/13	2803.1155 N 08105.1915 W	4	97.4	15.8	P-2	100.2	17.5	97.2	-1.7	P	
153	01/23/13	2803.1031 N 08105.1849 W	4	96.5	15.5	P-2	100.2	17.5	96.3	-2.0	P	
154	01/23/13	2803.5485 N 08105.3992 W	4	97.5	16.8	P-2	100.2	17.5	97.3	-0.7	P	
155	01/23/13	2803.5542 N 08105.4019 W	4	99.6	16.1	P-2	100.2	17.5	99.4	-1.4	P	
156	01/23/13	2803.5576 N 08105.4024 W	4	100.0	15.9	P-2	100.2	17.5	99.8	-1.6	P	
157	01/23/13	2803.5533 N 08105.3988 W	4	97.2	16.4	P-2	100.2	17.5	97.0	-1.1	P	
158	01/23/13	2803.5631 N 08105.4090 W	4	99.9	17.0	P-2	100.2	17.5	99.7	-0.5	P	
159	01/23/13	2803.5625 N 08105.4078 W	4	97.0	16.7	P-2	100.2	17.5	96.8	-0.8	P	
160	01/23/13	2803.6009 N 08105.4337 W	3	103.9	11.4	P-3	106	14.0	98.0	-2.6	P	
161	01/23/13	2803.5565 N 08105.4331 W	3	97.3	15.1	P-2	100.2	17.5	97.1	-2.4	P	

Chris Johnson
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01/23/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/23/13 TO 01/24/13

PAGE 10

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
162	01/23/13	2803.5564 N 08105.4326 W	3	96.0	16.0	P-2	100.2	17.5	95.8	-1.5	P	
163	01/23/13	2803.5064 N 08105.4223 W	3	98.0	15.2	P-2	100.2	17.5	97.8	-2.3	P	
164	01/23/13	2803.4631 N 08105.4051 W	3	98.1	16.1	P-2	100.2	17.5	97.9	-1.4	P	
165	01/23/13	2803.4337 N 08105.3824 W	3	98.2	15.9	P-2	100.2	17.5	98.0	-1.6	P	
166	01/23/13	2803.3875 N 08105.3503 W	3	99.5	16.4	P-2	100.2	17.5	99.3	-1.1	P	
167	01/23/13	2803.3426 N 08105.3227 W	3	96.3	17.0	P-2	100.2	17.5	96.1	-0.5	P	
168	01/23/13	2803.2785 N 08105.0854 W	3	102.3	15.2	P-3	106	14.0	96.5	1.2	P	
169	01/23/13	2803.2563 N 08105.0811 W	3	104.8	15.1	P-3	106	14.0	98.9	1.1	P	
170	01/23/13	2803.2188 N 08105.0820 W	3	100.0	17.0	P-2	100.2	17.5	99.8	-0.5	P	
171	01/23/13	2803.1705 N 08105.1325 W	3	96.2	15.0	P-2	100.2	17.5	96.0	-2.5	P	
172	01/23/13	2803.1692 N 08105.1084 W	3	97.8	16.1	P-2	100.2	17.5	97.6	-1.4	P	
173	01/23/13	2803.1350 N 08105.0887 W	3	95.3	16.5	P-2	100.2	17.5	95.1	-1.0	P	
CP	01/24/13	-	-	99.9	17.0	P-2	100.2	17.5	-	-	-	
DR10	01/24/13	2803.1487 N 08105.1738 W	4	99.5	15.5	P-2	100.2	17.5	99.3	-2.0	P	
174	01/24/13	2803.1487 N 08105.1738 W	4	99.9	15.0	P-2	100.2	17.5	99.7	-2.5	P	
175	01/24/13	2803.1434 N 08105.1779 W	4	96.4	15.3	P-2	100.2	17.5	96.2	-2.2	P	
176	01/24/13	2803.1333 N 08105.1754 W	4	98.9	16.0	P-2	100.2	17.5	98.7	-1.5	P	
177	01/24/13	2803.1206 N 08105.1760 W	4	102.1	12.5	P-7	104.4	15.1	97.8	-2.6	P	
178	01/24/13	2803.1136 N 08105.1682 W	4	103.3	13.6	P-7	104.4	15.1	98.9	-1.5	P	
179	01/24/13	2803.1253 N 08105.1660 W	4	100.0	13.9	P-7	104.4	15.1	95.8	-1.2	P	

Chris Johnson
PREPARED BY

01/24/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/24/13 TO 01/28/13

PAGE 11

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
180	01/24/13	2803.1364 N 08105.1666 W	4	101.3	13.3	P-7	104.4	15.1	97.1	-1.8	P	
181	01/24/13	2803.1468 N 08105.1686 W	4	97.1	14.8	P-2	100.2	17.5	96.9	-2.7	P	
182	01/24/13	2803.1615 N 08105.1669 W	4	103.6	14.0	P-7	104.4	15.1	99.2	-1.1	P	
183	01/24/13	2803.1596 N 08105.1594 W	4	101.6	13.5	P-7	104.4	15.1	97.3	-1.6	P	
184	01/24/13	2803.1476 N 08105.1560 W	4	96.2	15.1	P-2	100.2	17.5	96.0	-2.4	P	
185	01/24/13	2803.1381 N 08105.1526 W	4	99.7	14.2	P-2	100.2	17.5	99.5	-3.3	P	
186	01/24/13	2803.1259 N 08105.1552 W	4	98.1	13.9	P-2	100.2	17.5	97.9	-3.6	P	
187	01/24/13	2803.1117 N 08105.1537 W	4	96.0	15.7	P-2	100.2	17.5	95.8	-1.8	P	
188	01/24/13	2803.1592 N 08105.1411 W	4	98.6	15.4	P-2	100.2	17.5	98.4	-2.1	P	
189	01/24/13	2803.1435 N 08105.1381 W	4	95.3	16.1	P-2	100.2	17.5	95.1	-1.4	P	
190	01/24/13	2803.1259 N 08105.1406 W	4	98.6	14.9	P-2	100.2	17.5	98.4	-2.6	P	
191	01/24/13	2803.1084 N 08105.1403 W	4	96.8	15.3	P-2	100.2	17.5	96.6	-2.2	P	
192	01/24/13	2803.1054 N 08105.1285 W	4	98.0	15.3	P-2	100.2	17.5	97.8	-2.2	P	
193	01/24/13	2803.1271 N 08105.1258 W	4	97.6	15.6	P-2	100.2	17.5	97.4	-1.9	P	
194	01/24/13	2803.1441 N 08105.1263 W	4	97.0	16.0	P-2	100.2	17.5	96.9	-1.5	P	
195	01/24/13	2803.1628 N 08105.1251 W	4	95.8	15.8	P-2	100.2	17.5	95.6	-1.7	P	
196	01/24/13	2803.1606 N 08105.1118 W	4	98.2	14.9	P-2	100.2	17.5	98.0	-2.6	P	
197	01/24/13	2803.1436 N 08105.1056 W	4	95.5	15.8	P-2	100.2	17.5	95.3	-1.7	P	
198	01/24/13	2803.1227 N 08105.1100 W	4	97.1	15.2	P-2	100.2	17.5	96.9	-2.3	P	
CP	01/28/13	-	-	100.0	16.7	P-2	100.2	17.5	-	-	-	

Chris Johnson
PREPARED BY

01/28/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/28/13 TO 01/28/13

PAGE 12

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
DR11	01/28/13	2803.6048 N 08105.4111 W	4	98.0	15.3	P-2	100.2	17.5	97.8	-2.2	P	
199	01/28/13	2803.6048 N 08105.4111 W	4	97.7	15.0	P-2	100.2	17.5	97.5	-2.5	P	
200	01/28/13	2803.6289 N 08105.4120 W	4	99.3	16.1	P-2	100.2	17.5	99.1	-1.4	P	
201	01/28/13	2803.6395 N 08105.4150 W	4	98.2	16.3	P-2	100.2	17.5	98.0	-1.2	P	
202	01/28/13	2803.6158 N 08105.4158 W	5	100.1	15.9	P-2	100.2	17.5	99.9	-1.6	P	
203	01/28/13	2803.6487 N 08105.4211 W	5	99.8	14.9	P-2	100.2	17.5	99.6	-2.6	P	
204	01/28/13	2803.6181 N 08105.4148 W	5	99.9	17.2	P-2	100.2	17.5	99.7	-0.3	P	
205	01/28/13	2803.2944 N 08105.1011 W	5	96.0	15.0	P-2	100.2	17.5	95.8	-2.5	P	
206	01/28/13	2803.2703 N 08105.1265 W	5	97.5	16.0	P-2	100.2	17.5	97.3	-1.5	P	
207	01/28/13	2803.2717 N 08105.1534 W	5	98.8	16.5	P-2	100.2	17.5	98.6	-1.0	P	
208	01/28/13	2803.2884 N 08105.1856 W	5	99.1	16.1	P-2	100.2	17.5	98.9	-1.4	P	
209	01/28/13	2803.3145 N 08105.2263 W	5	96.3	17.1	P-2	100.2	17.5	96.1	-0.4	P	
210	01/28/13	2803.3232 N 08105.2655 W	5	98.7	16.5	P-2	100.2	17.5	98.5	-1.0	P	
211	01/28/13	2803.3284 N 08105.2977 W	5	98.5	16.9	P-2	100.2	17.5	98.3	-0.6	P	
212	01/28/13	2803.3542 N 08105.3145 W	5	98.5	16.2	P-2	100.2	17.5	98.3	-1.3	P	
213	01/28/13	2803.3975 N 08105.3407 W	5	101.5	14.8	P-7	104.4	15.1	97.2	-0.3	P	
214	01/28/13	2803.4485 N 08105.3658 W	5	101.9	13.8	P-7	104.4	15.1	97.6	-1.3	P	
215	01/28/13	2803.4532 N 08105.3325 W	5	101.8	14.8	P-7	104.4	15.1	97.5	-0.3	P	
216	01/28/13	2803.1668 N 08105.1799 W	5	98.1	17.0	P-2	100.2	17.5	97.9	-0.5	P	
217	01/28/13	2803.1426 N 08105.1916 W	5	96.2	16.3	P-2	100.2	17.5	96.0	-1.2	P	

Chris Johnson
PREPARED BY

01/28/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/28/13 TO 01/29/13

PAGE 13

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
218	01/28/13	2803.1155 N 08105.1915 W	5	97.4	15.8	P-2	100.2	17.5	97.2	-1.7	P	
219	01/28/13	2803.1031 N 08105.1849 W	5	96.5	15.5	P-2	100.2	17.5	96.3	-2.0	P	
220	01/28/13	2803.5485 N 08105.3992 W	5	97.5	16.8	P-2	100.2	17.5	97.3	-0.7	P	
221	01/28/13	2803.5542 N 08105.4019 W	5	99.6	16.1	P-2	100.2	17.5	99.4	-1.4	P	
222	01/28/13	2803.5576 N 08105.4024 W	5	100.0	15.9	P-2	100.2	17.5	99.8	-1.6	P	
CP	01/29/13	-	-	100.2	17.0	P-2	100.2	17.5	-	-	-	
DR12	01/29/13	2803.6426 N 08105.4159 W	5	98.7	16.4	P-2	100.2	17.5	98.5	-1.1	P	
223	01/29/13	2803.6426 N 08105.4159 W	5	100.1	15.4	P-2	100.2	17.5	99.9	-2.1	P	
224	01/29/13	2803.6095 N 08105.4195 W	5	100.1	15.6	P-2	100.2	17.5	99.9	-1.9	P	
225	01/29/13	2803.6492 N 08105.4220 W	5	98.8	16.0	P-2	100.2	17.5	98.6	-1.5	P	
226	01/29/13	2803.6222 N 08105.4152 W	5	99.2	16.3	P-2	100.2	17.5	99.0	-1.2	P	
227	01/29/13	2803.5533 N 08105.3988 W	5	97.2	16.4	P-2	100.2	17.5	97.0	-1.1	P	
228	01/29/13	2803.5631 N 08105.4090 W	5	99.9	17.0	P-2	100.2	17.5	99.7	-0.5	P	
229	01/29/13	2803.5625 N 08105.4078 W	5	97.0	16.7	P-2	100.2	17.5	96.8	-0.8	P	
230	01/29/13	2803.1468 N 08105.1686 W	5	97.1	14.8	P-2	100.2	17.5	96.9	-2.7	P	
231	01/29/13	2803.1615 N 08105.1669 W	5	103.6	14.0	P-7	104.4	15.1	99.2	-1.1	P	
232	01/29/13	2803.1596 N 08105.1594 W	5	101.6	13.5	P-7	104.4	15.1	97.3	-1.6	P	
233	01/29/13	2803.1476 N 08105.1560 W	5	96.2	15.1	P-2	100.2	17.5	96.0	-2.4	P	
234	01/29/13	2803.1381 N 08105.1526 W	5	99.7	14.2	P-2	100.2	17.5	99.5	-3.3	P	
235	01/29/13	2803.1259 N 08105.1552 W	5	98.1	13.9	P-2	100.2	17.5	97.9	-3.6	P	

Chris Johnson
PREPARED BY

01/29/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/29/13 TO 01/29/13

PAGE 14

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
236	01/29/13	2803.1117 N 08105.1537 W	5	96.0	15.7	P-2	100.2	17.5	95.8	-1.8	P	
237	01/29/13	2803.1592 N 08105.1411 W	5	98.6	15.4	P-2	100.2	17.5	98.4	-2.1	P	
238	01/29/13	2803.1435 N 08105.1381 W	5	95.3	16.1	P-2	100.2	17.5	95.1	-1.4	P	
239	01/29/13	2803.1259 N 08105.1406 W	5	98.6	14.9	P-2	100.2	17.5	98.4	-2.6	P	
240	01/29/13	2803.1084 N 08105.1403 W	5	96.8	15.3	P-2	100.2	17.5	96.6	-2.2	P	
241	01/29/13	2803.1054 N 08105.1285 W	5	98.0	15.3	P-2	100.2	17.5	97.8	-2.2	P	
242	01/29/13	2803.1271 N 08105.1258 W	5	97.6	15.6	P-2	100.2	17.5	97.4	-1.9	P	
243	01/29/13	2803.1441 N 08105.1263 W	5	97.0	16.0	P-2	100.2	17.5	96.9	-1.5	P	
244	01/29/13	2803.1628 N 08105.1251 W	5	95.8	15.8	P-2	100.2	17.5	95.6	-1.7	P	
245	01/29/13	2803.1606 N 08105.1118 W	5	98.2	14.9	P-2	100.2	17.5	98.0	-2.6	P	
246	01/29/13	2803.1436 N 08105.1056 W	5	95.5	15.8	P-2	100.2	17.5	95.3	-1.7	P	
CP	01/31/13	-	-	100.0	16.6	P-2	100.2	17.5	-	-	-	
DR13	01/31/13	2803.7347 N 08105.6430 W	5	101.9	13.1	P-3	106	14.0	96.1	-0.9	P	
247	01/31/13	2803.1023 N 08105.1597 W	5	101.2	11.9	P-3	106	14.0	95.5	-2.1	P	
248	01/31/13	2803.0992 N 08105.1347 W	5	100.9	11.0	P-3	106	14.0	95.2	-3.0	P	
249	01/31/13	2803.7347 N 08105.6430 W	5	103.9	13.1	P-3	106	14.0	98.0	-0.9	P	
250	01/31/13	2803.7229 N 08105.6145 W	5	97.6	14.8	P-2	100.2	17.5	97.4	-2.7	P	
251	01/31/13	2803.7064 N 08105.5808 W	5	95.9	15.0	P-2	100.2	17.5	95.7	-2.5	P	
252	01/31/13	2803.6914 N 08105.5480 W	5	102.1	13.2	P-3	106	14.0	96.3	-0.8	P	
253	01/31/13	2803.6914 N 08105.5481 W	5	101.8	13.4	P-3	106	14.0	96.0	-0.6	P	

Chris Johnson
PREPARED BY

01/29/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/31/13 TO 01/31/13

PAGE 15

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
254	01/31/13	2803.1023 N 08105.1595 W	5	102.1	12.0	P-3	106	14.0	96.3	-2.0	P	
255	01/31/13	2803.0982 N 08105.1347 W	5	102.3	12.5	P-3	106	14.0	96.5	-1.5	P	
256	01/31/13	2803.7347 N 08115.6430 W	5	104.0	13.1	P-3	106	14.0	98.1	-0.9	P	
257	01/31/13	2803.7229 N 08105.6144 W	5	98.1	16.4	P-2	100.2	17.5	97.9	-1.1	P	
258	01/31/13	2803.7063 N 08105.5808 W	5	99.2	15.9	P-2	100.2	17.5	99.0	-1.6	P	
259	01/31/13	2803.6914 N 08105.5481 W	5	101.8	13.4	P-3	106	14.0	96.0	-0.6	P	
260	01/31/13	2803.6725 N 08105.5111 W	5	102.6	15.6	P-3	106	14.0	96.8	1.6	P	
261	01/31/13	2803.6533 N 08105.4743 W	5	103.4	12.2	P-3	106	14.0	97.6	-1.8	P	
262	01/31/13	2803.6227 N 08105.4449 W	5	96.1	17.8	P-2	100.2	17.5	95.9	0.3	P	
263	01/31/13	2803.5774 N 08105.4351 W	5	100.8	14.7	P-3	106	14.0	95.1	0.7	P	
264	01/31/13	2803.5310 N 08105.4278 W	5	96.7	16.1	P-2	100.2	17.5	96.5	-1.4	P	
265	01/31/13	2803.4848 N 08105.4193 W	5	101.8	15.0	P-3	106	14.0	96.1	1.0	P	
CP	02/01/13	-	-	99.8	17.1	P-2	100.2	17.5	-	-	-	
DR14	02/01/13	2803.4525 N 08105.4005 W	5	98.5	15.4	P-2	100.2	17.5	98.3	-2.1	P	
266	02/01/13	2803.4525 N 08105.4005 W	5	99.8	14.9	P-2	100.2	17.5	99.6	-2.6	P	
267	02/01/13	2803.4089 N 08105.3706 W	5	97.5	15.6	P-2	100.2	17.5	97.3	-1.9	P	
268	02/01/13	2803.3619 N 08105.3391 W	5	102.3	16.2	P-3	106	14.0	96.5	2.2	P	
269	02/01/13	2803.3180 N 08105.3076 W	5	99.7	17.0	P-2	100.2	17.5	99.5	-0.5	P	
270	02/01/13	2803.3093 N 08105.2739 W	5	98.2	16.1	P-2	100.2	17.5	98.0	-1.4	P	
271	02/01/13	2803.2918 N 08105.2244 W	5	97.7	15.8	P-2	100.2	17.5	97.5	-1.7	P	

Chris Johnson
PREPARED BY

01/31/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 02/01/13 TO 02/01/13

PAGE 16

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
272	02/01/13	2803.1813 N 08105.0826 W	5	97.4	15.4	P-2	100.2	17.5	97.2	-2.1	P	
273	02/01/13	2803.2245 N 08105.0809 W	5	95.3	16.2	P-2	100.2	17.5	95.1	-1.3	P	
274	02/01/13	2803.2576 N 08105.0821 W	6	96.0	14.9	P-2	100.2	17.5	95.8	-2.6	P	
275	02/01/13	2803.2972 N 08105.1050 W	6	98.1	16.0	P-2	100.2	17.5	97.9	-1.5	P	
276	02/01/13	2803.2691 N 08105.1407 W	6	94.5	17.0	P-2	100.2	17.5	94.3	-0.5	P	
277	02/01/13	2803.2879 N 08105.1787 W	6	98.9	17.8	P-2	100.2	17.5	98.7	0.3	P	
278	02/01/13	2803.3129 N 08105.2214 W	6	99.7	17.5	P-2	100.2	17.5	99.5	0.0	P	
279	02/01/13	2803.3271 N 08105.2662 W	6	97.1	17.9	P-2	100.2	17.5	96.9	0.4	P	
280	02/01/13	2803.3425 N 08105.3047 W	6	96.6	16.8	P-2	100.2	17.5	96.4	-0.7	P	
281	02/01/13	2803.3748 N 08105.3267 W	6	95.5	17.8	P-2	100.2	17.5	95.4	0.3	P	
282	02/01/13	2803.4181 N 08105.3565 W	6	100.8	16.4	P-3	106	14.0	95.0	2.4	P	
283	02/01/13	2803.4494 N 08105.3479 W	6	101.8	16.1	P-3	106	14.0	96.0	2.1	P	
284	02/01/13	2803.4587 N 08105.3118 W	6	98.0	16.4	P-2	100.2	17.5	97.8	-1.1	P	
285	02/01/13	2803.4820 N 08105.3286 W	6	98.5	16.2	P-2	100.2	17.5	98.3	-1.3	P	
286	02/01/13	2803.5169 N 08105.3656 W	6	103.8	14.9	P-3	106	14.0	97.9	0.9	P	
287	02/01/13	2803.5549 N 08105.3949 W	6	97.3	17.3	P-2	100.2	17.5	97.1	-0.2	P	
288	02/01/13	2803.3129 N 08105.2213 W	6	99.5	17.0	P-2	100.2	17.5	99.3	-0.5	P	
289	02/01/13	2803.3273 N 08105.2662 W	6	98.2	17.2	P-2	100.2	17.5	98.0	-0.3	P	
290	02/01/13	2803.3424 N 08105.3047 W	6	95.9	17.0	P-2	100.2	17.5	95.7	-0.5	P	
291	02/01/13	2803.3748 N 08105.3268 W	6	96.0	16.5	P-2	100.2	17.5	95.8	-1.0	P	

Chris Johnson
PREPARED BY

02/01/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 02/18/13 TO 02/18/13

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TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	02/18/13	-	-	99.7	17.4	P-2	100.2	17.5	-	-	-	
DR15	02/18/13	2803.2814 N 08105.2147 W	6	100.0	16.7	P-2	100.2	17.5	99.8	-0.8	P	
292	02/18/13	2803.2814 N 08105.2147 W	6	99.9	15.7	P-2	100.2	17.5	99.7	-1.8	P	
293	02/18/13	2803.2536 N 08105.2143 W	6	95.4	16.2	P-2	100.2	17.5	95.3	-1.3	P	
294	02/18/13	2803.2197 N 08105.2129 W	6	98.3	17.0	P-2	100.2	17.5	98.1	-0.5	P	
295	02/18/13	2803.4182 N 08105.3565 W	6	104.2	16.0	P-3	106	14.0	98.3	2.0	P	
296	02/18/13	2803.4494 N 08105.3474 W	6	101.0	16.3	P-3	106	14.0	95.3	2.3	P	
297	02/18/13	2803.4585 N 08105.3118 W	6	98.1	15.9	P-2	100.2	17.5	97.9	-1.6	P	
298	02/18/13	2803.4820 N 08105.3285 W	6	98.2	16.2	P-2	100.2	17.5	98.0	-1.3	P	
299	02/18/13	2803.5165 N 08105.3656 W	6	102.4	14.9	P-3	106	14.0	96.6	0.9	P	
CP	02/20/13	-	-	105.8	14.6	P-3	106	14.0	-	-	-	
DR16	02/20/13	2803.1753 N 08105.1191 W	6	103.5	11.8	P-3	106	14.0	97.6	-2.2	P	
300	02/20/13	2803.1753 N 08105.1191 W	6	104.3	12.1	P-3	106	14.0	98.4	-1.9	P	
301	02/20/13	2803.2033 N 08105.1201 W	6	104.1	12.5	P-3	106	14.0	98.2	-1.5	P	
302	02/20/13	2803.2280 N 08105.1245 W	6	103.2	12.1	P-3	106	14.0	97.4	-1.9	P	
303	02/20/13	2803.2288 N 08105.1541 W	6	103.9	12.2	P-3	106	14.0	98.0	-1.8	P	
304	02/20/13	2803.2231 N 08105.1907 W	6	105.0	13.1	P-3	106	14.0	99.1	-0.9	P	
305	02/20/13	2803.1958 N 08105.1874 W	6	103.8	12.8	P-3	106	14.0	97.9	-1.2	P	
CP	02/21/13	-	-	105.8	13.7	P-3	106	14.0	-	-	-	
DR17	02/21/13	2803.6505 N 08105.4231 W	6	101.0	13.1	P-3	106	14.0	95.3	-0.9	P	

Chris Johnson
PREPARED BY

02/18/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

LFGTE
Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 02/21/13 TO 02/21/13

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TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE (%)	PASS/ FAIL	
306	02/21/13	2803.6505 N 08105.4231 W	6	101.2	12.6	P-3	106	14.0	95.5	-1.4	P	
307	02/21/13	2803.6186 N 08105.4131 W	6	102.8	13.6	P-3	106	14.0	97.0	-0.4	P	

Chris Johnson
PREPARED BY

02/21/13
DATE

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/14/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR1	2355			16.7		P9			
	601	3.87	116.0	-0.4	99.4		98.5%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 11/17/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR2	2309			14.9		P2			
	601	3.76	112.9	-2.6	98.3		98.1%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 11/29/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR3	2340			14.3		P7			
	601	3.83	115.0	-0.8	100.6		96.4%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 11/30/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR4	2378			15.1		P7			
	601	3.92	117.5	0.0	102.1		97.8%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/1/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR5	2337			13.9		P7			
	601	3.83	114.8	-1.2	100.8		96.6%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/14/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR6	2321			16.1		P2			
	601	3.79	113.8	-1.4	98.0		97.8%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/15/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR7	2345			12.0		P3			
	601	3.85	115.4	-2.0	103.0		97.2%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/22/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR8	2288			16.7		P2			
	601	3.72	111.6	-0.8	95.6		95.4%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/23/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR9	2305			15.2		P2			
	601	3.76	112.7	-2.3	97.8		97.6%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/24/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR10	2339			15.5		P2			
	601	3.83	114.9	-2.0	99.5		99.3%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/28/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR11	2309			15.3		P2			
	601	3.77	113.0	-2.2	98.0		97.8%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/29/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR12	2338			16.4		P2			
	601	3.83	114.9	-1.1	98.7		98.5%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/31/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR13	2344			13.1		P3			
	601	3.84	115.2	-0.9	101.9		96.1%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 2/1/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR14	2320			15.4		P2			
	601	3.79	113.7	-2.1	98.5		98.3%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 2/18/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR15	2366			16.7		P2			
	601	3.89	116.7	-0.8	100.0		99.8%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 2/21/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR17	2328			13.1		P3			
	601	3.81	114.2	-0.9	101.0		95.3%		3

Section 3
General Fill Density Summary and Field Tests
(Limerock Road)

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Road Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/22/13 TO 02/20/13

PAGE 1

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	01/22/13	-	-						-	-	-	Road Base
1	01/22/13	0+50	1	122.8	9.4	LB-1	126.7	8.6	96.9	0.8	P	Road Base
CP		-	-						-	-	-	Road Base
2	01/23/13	2+31	1	122.0	10.0	LB-1	126.7	8.6	96.3	1.4	P	Road Base
3	01/23/13	4+25	1	122.1	10.8	LB-1	126.7	8.6	96.4	2.2	P	Road Base
4	01/23/13	6+20	1	122.4	11.0	LB-1	126.7	8.6	96.6	2.4	P	Road Base
5	01/23/13	8+10	1	123.0	11.3	LB-1	126.7	8.6	97.1	2.7	P	Road Base
6	01/23/13	10+00	1	121.4	9.5	LB-1	126.7	8.6	95.8	0.9	P	Road Base
7	01/23/13	11+00	1	122.5	9.0	LB-1	126.7	8.6	96.7	0.4	P	Road Base
CP												
8	01/31/13	0+67	1	125.3	7.9	LB-1	126.7	8.6	98.9	-0.7	P	Subbase
9	01/31/13	2+50	1	124.0	11.0	LB-1	126.7	8.6	97.9	2.4	F	Subbase
9R	01/31/13	2+50	1	125.0	11.0	LB-1	126.7	8.6	98.7	2.4	P	Subbase
CP	02/20/13	-	-	126.0	9.1	LB-1	126.7	8.6	-	-	-	Subbase
10	02/20/13	4+00	1	125.1	7.7	LB-1	126.7	8.6	98.7	-0.9	P	Subbase
11	02/20/13	5+90	1	126.2	7.5	LB-1	126.7	8.6	99.6	-1.1	P	Subbase
12	02/20/13	7+80	1	125.0	8.4	LB-1	126.7	8.6	98.7	-0.2	P	Subbase
13	02/20/13	9+70	1	124.3	9.0	LB-1	126.7	8.6	98.1	0.4	P	Subbase
14	02/20/13	11+50	1	125.4	9.4	LB-1	126.7	8.6	99.0	0.8	P	Subbase
15	02/20/13	13+40	1	124.9	8.0	LB-1	126.7	8.6	98.6	-0.6	P	Subbase

Chris Johnson
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02/20/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Road Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 02/20/13 TO 02/22/13

PAGE 2

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
16	02/20/13	15+35	1	125.6	7.1	LB-1	126.7	8.6	99.1	-1.5	P	Subbase
17	02/20/13	17+25	1	124.6	6.7	LB-1	126.7	8.6	98.3	-1.9	P	Subbase
18	02/20/13	19+20	1	124.9	7.9	LB-1	126.7	8.6	98.6	-0.7	P	Subbase
CP	02/22/13	-	-	124.0	9.1	LB-1	126.7	8.6	-	-	-	Asphalt Base
19	02/22/13	0+90	2	122.8	9.4	LB-1	126.7	8.6	96.9	0.8	P	Asphalt Base
20	02/22/13	2+80	2	125.6	9.3	LB-1	126.7	8.6	99.1	0.7	P	Asphalt Base
21	02/22/13	4+70	2	124.8	8.4	LB-1	126.7	8.6	98.5	-0.2	P	Asphalt Base
22	02/22/13	6+60	2	125.0	7.9	LB-1	126.7	8.6	98.7	-0.7	P	Asphalt Base
23	02/22/13	8+50	2	124.5	9.0	LB-1	126.7	8.6	98.3	0.4	P	Asphalt Base
24	02/22/13	10+40	2	124.9	9.7	LB-1	126.7	8.6	98.6	1.1	P	Asphalt Base
25	02/22/13	12+20	2	125.8	9.3	LB-1	126.7	8.6	99.3	0.7	P	Asphalt Base
26	02/22/13	14+00	2	125.0	10.0	LB-1	126.7	8.6	98.7	1.4	P	Asphalt Base
27	02/22/13	15+80	2	124.7	9.0	LB-1	126.7	8.6	98.4	0.4	P	Asphalt Base
28	02/22/13	17+60	2	124.8	9.9	LB-1	126.7	8.6	98.5	1.3	P	Asphalt Base
29	02/22/13	19+50	2	124.6	9.4	LB-1	126.7	8.6	98.3	0.8	P	Asphalt Base

Chris Johnson
PREPARED BY

02/22/13
DATE

Section 4

General Fill Density Summary and Field Tests (Storm Water Management Berm &Disposal Boundary Perimeter Berm)

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/03/12 TO 12/03/12

PAGE 1

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	12/03/12	-	-	100.0	17.9	P-2	100.2	17.5	-	-	-	
DR 1	12/03/12	2803.1537 N 08105.1855 W	1	97.8	15.2	P-2	100.2	17.5	97.6	-2.3	P	
1	12/03/12	2803.1537 N 08105.1855 W	1	97.8	16.9	P-2	100.2	17.5	97.7	-0.6	P	
2	12/03/12	2803.1391 N 08105.1861 W	1	98.2	15.1	P-2	100.2	17.5	98.0	-2.4	P	
3	12/03/12	2803.1313 N 08105.1866 W	1	96.7	17.0	P-2	100.2	17.5	96.5	-0.5	P	
4	12/03/12	2803.1083 N 08105.1871 W	1	95.8	15.6	P-2	100.2	17.5	95.6	-1.9	P	
5	12/03/12	2803.1093 N 08105.1769 W	1	95.2	14.5	P-2	100.2	17.5	95.0	-3.0	P	
6	12/03/12	2803.1221 N 08105.1755 W	1	95.6	15.4	P-2	100.2	17.5	95.4	-2.1	P	
7	12/03/12	2803.1380 N 08105.1733 W	1	95.6	15.0	P-2	100.2	17.5	95.4	-2.5	P	
8	12/03/12	2803.1507 N 08105.1727 W	1	97.7	15.3	P-2	100.2	17.5	97.5	-2.2	P	
9	12/03/12	2803.1571 N 08105.1618 W	1	100.1	16.0	P-2	100.2	17.5	99.9	-1.5	P	
10	12/03/12	2803.1408 N 08105.1598 W	1	97.7	14.7	P-2	100.2	17.5	97.5	-2.8	P	
11	12/03/12	2803.1198 N 08105.1631 W	1	95.7	15.9	P-2	100.2	17.5	95.5	-1.6	P	
12	12/03/12	2803.1043 N 08105.1619 W	1	97.3	14.6	P-2	100.2	17.5	97.1	-2.9	P	
13	12/03/12	2803.1431 N 08105.1486 W	1	98.4	16.2	P-2	100.2	17.5	98.2	-1.3	P	
14	12/03/12	2803.1416 N 08105.1251 W	1	97.8	15.3	P-2	100.2	17.5	97.6	-2.2	P	
15	12/03/12	2803.1359 N 08105.1091 W	1	98.0	14.8	P-2	100.2	17.5	97.8	-2.7	P	
16	12/03/12	2803.1521 N 08105.1004 W	1	98.1	15.0	P-2	100.2	17.5	97.9	-2.5	P	
17	12/03/12	2803.1508 N 08105.1173 W	1	98.3	14.9	P-2	100.2	17.5	98.1	-2.6	P	
18	12/03/12	2803.1515 N 08105.1356 W	1	95.9	15.4	P-2	100.2	17.5	95.7	-2.1	P	

Chris Johnson
PREPARED BY

12/03/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/04/12 TO 12/04/12

PAGE 2

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	12/04/12	-	-	104.2	14.8	P-7	104.4	15.1	-	-	-	
DR2	12/04/12	2803.1064 N 08105.0924 W	1	102.1	14.0	P-7	104.4	15.1	97.8	-1.1	P	
19	12/04/12	2803.1064 N 08105.0924 W	1	101.2	13.8	P-7	104.4	15.1	96.9	-1.3	P	
20	12/04/12	2803.1091 N 08105.1121 W	1	101.6	12.6	P-7	104.4	15.1	97.4	-2.5	P	
21	12/04/12	2803.1070 N 08105.1339 W	2	101.5	13.2	P-7	104.4	15.1	97.2	-1.9	P	
22	12/04/12	2803.1080 N 08105.1527 W	2	96.7	19.2	P-2	100.2	17.5	96.5	1.7	P	
23	12/04/12	2803.1191 N 08105.1505 W	2	102.8	14.4	P-7	104.4	15.1	98.5	-0.7	P	
24	12/04/12	2803.1178 N 08105.1353 W	1	98.1	14.6	P-2	100.2	17.5	97.9	-2.9	P	
25	12/04/12	2803.1188 N 08105.1134 W	1	96.1	15.9	P-2	100.2	17.5	95.9	-1.6	P	
26	12/04/12	2803.1205 N 08105.0951 W	1	99.5	15.5	P-2	100.2	17.5	99.3	-2.0	P	
27	12/04/12	2803.1322 N 08105.1041 W	2	101.7	14.7	P-7	104.4	15.1	97.4	-0.4	P	
28	12/04/12	2803.1299 N 08105.1261 W	2	99.7	15.7	P-2	100.2	17.5	99.5	-1.8	P	
29	12/04/12	2803.1319 N 08105.1441 W	2	97.0	16.0	P-2	100.2	17.5	96.8	-1.5	P	
30	12/04/12	2803.2624 N 08105.0802 W	2	104.3	13.9	P-7	104.4	15.1	99.9	-1.2	P	
31	12/04/12	2803.2871 N 08105.0806 W	2	103.6	12.7	P-7	104.4	15.1	99.3	-2.4	P	
32	12/04/12	2803.2939 N 08105.1021 W	2	101.1	13.0	P-7	104.4	15.1	96.9	-2.1	P	
33	12/04/12	2803.2747 N 08105.1320 W	2	96.2	15.8	P-2	100.2	17.5	96.0	-1.7	P	
34	12/04/12	2803.2670 N 08105.1569 W	1	99.1	14.8	P-2	100.2	17.5	98.9	-2.7	P	
35	12/04/12	2803.1569 N 08105.1844 W	1	96.6	14.9	P-2	100.2	17.5	96.4	-2.6	P	
36	12/04/12	2803.1567 N 08105.1656 W	1	97.7	14.5	P-2	100.2	17.5	97.5	-3.0	P	

Chris Johnson
PREPARED BY

12/04/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/04/12 TO 12/06/12

PAGE 3

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE	TEST RESULTS PASS/ FAIL	REMARK
37	12/04/12	2803.1555 N 08105.1468 W	2	95.9	17.4	P-2	100.2	17.5	95.7	-0.1	P	
38	12/04/12	2803.1559 N 08105.1283 W	2	96.5	16.7	P-2	100.2	17.5	96.3	-0.8	P	
39	12/04/12	2803.1494 N 08105.1298 W	2	95.2	17.6	P-2	100.2	17.5	95.0	0.1	P	
40	12/04/12	2803.1384 N 08105.1360 W	2	96.3	15.5	P-2	100.2	17.5	96.1	-2.0	P	
41	12/04/12	2803.1502 N 08105.1628 W	2	96.2	15.7	P-2	100.2	17.5	96.0	-1.8	P	
42	12/04/12	2803.1500 N 08105.1804 W	2	97.1	16.3	P-2	100.2	17.5	96.9	-1.2	P	
CP	12/06/12	-	-	100.1	16.7	P-2	100.2	17.5	-	-	-	
DR3	12/06/12	2803.0817 N 08105.1886 W	2	99.0	16.2	P-2	100.2	17.5	98.8	-1.3	P	
43	12/06/12	2803.0817 N 08105.1886 W	2	98.4	15.8	P-2	100.2	17.5	98.2	-1.7	P	
44	12/06/12	2803.1468 N 08105.0954 W	2	99.9	14.8	P-2	100.2	17.5	99.7	-2.7	P	
45	12/06/12	2803.1491 N 08105.1137 W	2	95.8	13.6	P-2	100.2	17.5	95.6	-3.9	P	
46	12/06/12	2803.1585 N 08105.1123 W	2	98.6	15.1	P-2	100.2	17.5	98.4	-2.4	P	
47	12/06/12	2803.1528 N 08105.0832 W	2	97.7	10.7	P-2	100.2	17.5	97.5	-6.8	P	
48	12/06/12	2803.1767 N 08105.0838 W	2	95.8	11.4	P-2	100.2	17.5	95.6	-6.1	P	
49	12/06/12	2803.2110 N 08105.0841 W	2	96.2	14.2	P-2	100.2	17.5	96.0	-3.3	P	
50	12/06/12	2803.2486 N 08105.0832 W	2	98.0	15.1	P-2	100.2	17.5	97.8	-2.4	P	
51	12/06/12	2803.2912 N 08105.0826 W	2	97.6	13.4	P-2	100.2	17.5	97.4	-4.1	P	
52	12/06/12	2803.2916 N 08105.1062 W	2	96.7	14.9	P-2	100.2	17.5	96.5	-2.6	P	
53	12/06/12	2803.0827 N 08105.1986 W	2	97.6	15.0	P-2	100.2	17.5	97.4	-2.5	P	
54	12/06/12	2803.1438 N 08105.0854 W	2	98.6	14.7	P-2	100.2	17.5	98.4	-2.8	P	

Chris Johnson
PREPARED BY

12/06/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/06/12 TO 12/07/12

PAGE 4

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
55	12/06/12	2803.0491 N 08105.1037 W	2	96.5	16.0	P-2	100.2	17.5	96.3	-1.5	P	
56	12/06/12	2803.1525 N 08105.1133 W	2	97.8	15.0	P-2	100.2	17.5	97.6	-2.5	P	
57	12/06/12	2803.1525 N 08105.0830 W	2	99.0	16.2	P-2	100.2	17.5	98.8	-1.3	P	
58	12/06/12	2803.1747 N 08105.0832 W	2	95.9	16.7	P-2	100.2	17.5	95.7	-0.8	P	
59	12/06/12	2803.2120 N 08105.0811 W	2	97.5	15.9	P-2	100.2	17.5	97.3	-1.6	P	
60	12/06/12	2803.2456 N 08105.0842 W	2	96.1	17.0	P-2	100.2	17.5	95.9	-0.5	P	
61	12/06/12	2803.2922 N 08105.0836 W	2	96.0	16.9	P-2	100.2	17.5	95.8	-0.6	P	
62	12/06/12	2803.2926 N 08105.1042 W	2	96.3	17.1	P-2	100.2	17.5	96.1	-0.4	P	
63	12/06/12	2803.2671 N 08105.1350 W	2	99.1	14.8	P-2	100.2	17.5	98.9	-2.7	P	
CP	12/07/12	-	-	99.9	17.1	P-2	100.2	17.5	-	-	-	
DR4	12/07/12	2803.0855 N 08105.1946 W	3	98.0	16.0	P-2	100.2	17.5	97.8	-1.5	P	
64	12/07/12	2803.0855 N 08105.1946 W	3	97.7	15.3	P-2	100.2	17.5	97.5	-2.2	P	
65	12/07/12	2803.2681 N 08105.1634 W	3	102.2	12.9	P-7	104.4	15.1	97.9	-2.2	P	
66	12/07/12	2803.2715 N 08105.1385 W	3	100.9	13.0	P-7	104.4	15.1	96.6	-2.1	P	
67	12/07/12	2803.2828 N 08105.1124 W	3	98.7	15.3	P-2	100.2	17.5	98.5	-2.2	P	
68	12/07/12	2803.2990 N 08105.0895 W	3	98.3	14.7	P-2	100.2	17.5	98.1	-2.8	P	
69	12/07/12	2803.0835 N 08105.1942 W	3	98.0	15.0	P-2	100.2	17.5	97.8	-2.5	P	
70	12/07/12	2803.26815N 08105.1644 W	3	101.0	13.0	P-7	104.4	15.1	96.7	-2.1	P	
71	12/07/12	2803.2713 N 08105.1382 W	3	101.5	13.2	P-7	104.4	15.1	97.2	-1.9	P	
72	12/07/12	2803.2825 N 08105.1114 W	3	96.0	15.2	P-2	100.2	17.5	95.8	-2.3	P	

Chris Johnson
PREPARED BY

12/07/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/07/12 TO 12/10/12

PAGE 5

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
73	12/07/12	2803.2970 N 08105.0890 W	3	97.3	15.0	P-2	100.2	17.5	97.1	-2.5	P	
CP	12/08/12	-	-	104.0	15.4	P-7	104.4	15.1	-	-	-	
DR5	12/08/12	2803.0770 N 08105.1934 W	3	96.2	17.0	P-2	100.2	17.5	96.0	-0.5	P	
74	12/08/12	2803.0770 N 08105.1934 W	3	95.7	16.7	P-2	100.2	17.5	95.5	-0.8	P	
75	12/08/12	2803.1084 N 08105.2101 W	3	101.1	16.9	P-7	104.4	15.1	96.8	1.8	P	
76	12/08/12	2803.1350 N 08105.2153 W	3	101.9	16.7	P-7	104.4	15.1	97.6	1.6	P	
CP	12/10/12	-	-	99.7	16.9	P-2	100.2	17.5	-	-	-	
DR6	12/10/12	2803.1656 N 08105.2140 W	3	97.8	16.0	P-2	100.2	17.5	97.6	-1.5	P	
77	12/10/12	2803.1656 N 08105.2140 W	3	99.8	16.9	P-2	100.2	17.5	99.6	-0.6	P	
78	12/10/12	2803.1938 N 08105.2159 W	3	98.9	16.9	P-2	100.2	17.5	98.7	-0.6	P	
79	12/10/12	2803.2327 N 08105.2150 W	3	102.8	12.2	P-7	104.4	15.1	98.5	-2.9	P	
80	12/10/12	2803.2639 N 08105.2150 W	3	103.3	14.7	P-7	104.4	15.1	99.0	-0.4	P	
81	12/10/12	2803.2879 N 08105.2228 W	3	100.2	14.6	P-2	100.2	17.5	100.0	-2.9	P	
82	12/10/12	2803.1654 N 08105.21402W	3	99.7	17.0	P-2	100.2	17.5	99.5	-0.5	P	
83	12/10/12	2803.1918 N 08105.2139 W	3	99.0	17.3	P-2	100.2	17.5	98.8	-0.2	P	
84	12/10/12	2803.2323 N 08105.2156 W	3	103.0	13.1	P-7	104.4	15.1	98.7	-2.0	P	
85	12/10/12	2803.2634 N 08105.2130 W	3	103.1	15.2	P-7	104.4	15.1	98.8	0.1	P	
86	12/10/12	2803.2869 N 08105.2218 W	3	100.1	15.3	P-2	100.2	17.5	99.9	-2.2	P	
87	12/10/12	2803.3081 N 08105.2569 W	3	99.0	17.6	P-2	100.2	17.5	98.8	0.1	P	
88	12/10/12	2803.3126 N 08105.2975 W	3	100.2	18.4	P-2	100.2	17.5	100.0	0.9	P	

Chris Johnson
PREPARED BY

12/10/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/11/12 TO 12/18/12

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TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
CP	12/11/12	-	-	100.0	17.2	P-2	100.2	17.5	-	-	-	
DR7	12/11/12	2803.2797 N 08105.1706 W	3	99.1	15.7	P-2	100.2	17.5	98.9	-1.8	P	
89	12/11/12	2803.2797 N 08105.1706 W	3	98.4	14.9	P-2	100.2	17.5	98.2	-2.6	P	
90	12/11/12	2803.3007 N 08105.2034 W	3	103.0	12.8	P-7	104.4	15.1	98.6	-2.3	P	
91	12/11/12	2803.3223 N 08105.2392 W	4	101.0	15.9	P-7	104.4	15.1	96.7	0.8	P	
92	12/11/12	2803.3223 N 08105.2774 W	4	96.1	16.0	P-2	100.2	17.5	95.9	-1.5	P	
93	12/11/12	2803.3412 N 08105.3029 W	4	99.5	14.9	P-2	100.2	17.5	99.3	-2.6	P	
94	12/11/12	2803.3715 N 08105.3240 W	4	104.3	13.1	P-7	104.4	15.1	99.9	-2.0	P	
95	12/11/12	2803.2793 N 08105.1704 W	3	99.0	15.0	P-2	100.2	17.5	98.8	-2.5	P	
96	12/11/12	2803.3003 N 08105.2030 W	3	102.3	12.1	P-7	104.4	15.1	98.0	-3.0	P	
97	12/11/12	2803.3220 N 08105.2397 W	4	101.4	14.9	P-7	104.4	15.1	97.1	-0.2	P	
98	12/11/12	2803.3226 N 08105.2764 W	4	97.0	15.0	P-2	100.2	17.5	96.8	-2.5	P	
99	12/11/12	2803.3432 N 08105.3024 W	4	98.4	15.5	P-2	100.2	17.5	98.2	-2.0	P	
100	12/11/12	2803.3710 N 08105.32409W	4	103.7	14.0	P-7	104.4	15.1	99.3	-1.1	P	
CP	12/18/12	-	-	103.9	15.6	P-7	104.4	15.1	-	-	-	
DR8	12/18/12	2803.1243 N 08105.2179 W	4	103.0	14.8	P-7	104.4	15.1	98.7	-0.3	P	
101	12/18/12	2803.1243 N 08105.2179 W	4	102.7	14.1	P-7	104.4	15.1	98.4	-1.0	P	
102	12/18/12	2803.1563 N 08105.2153 W	4	101.8	13.8	P-7	104.4	15.1	97.5	-1.3	P	
103	12/18/12	2803.1930 N 08105.2171 W	4	100.6	15.8	P-7	104.4	15.1	96.4	0.7	P	
104	12/18/12	2803.2325 N 08105.2189 W	4	96.2	15.5	P-2	100.2	17.5	96.0	-2.0	P	

Chris Johnson
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12/18/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102

JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/18/12 TO 12/22/12

PAGE 7

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
105	12/18/12	2803.2672 N 08105.2161 W	4	99.3	17.6	P-2	100.2	17.5	99.1	0.1	P	
106	12/18/12	2803.2965 N 08105.2336 W	4	101.5	14.4	P-7	104.4	15.1	97.2	-0.7	P	
107	12/18/12	2803.3094 N 08105.2683 W	4	102.6	12.7	P-7	104.4	15.1	98.3	-2.4	P	
108	12/18/12	2803.1245 N 08105.21785 V	4	102.9	14.0	P-7	104.4	15.1	98.6	-1.1	P	
109	12/18/12	2803.1564 N 08105.2159 W	4	102.0	14.2	P-7	104.4	15.1	97.7	-0.9	P	
110	12/18/12	2803.1932 N 08105.2176 W	4	101.1	15.1	P-7	104.4	15.1	96.8	0.0	P	
111	12/18/12	2803.2329 N 08105.2179 W	4	97.0	14.9	P-2	100.2	17.5	96.8	-2.6	P	
112	12/18/12	2803.2677 N 08105.2165 W	4	98.7	16.5	P-2	100.2	17.5	98.5	-1.0	P	
CP	12/22/12	-	-	105.8	14.6	P-3	106	14.0	-	-	-	
DR9	12/22/12	2803.2793 N 08105.1602 W	4	105.7	13.9	P-3	106	14.0	99.7	-0.1	P	
113	12/22/12	2803.2793 N 08105.1602 W	4	106.0	14.0	P-3	106	14.0	100.0	0.0	P	
114	12/22/12	2803.2895 N 08105.1872 W	4	105.8	11.1	P-3	106	14.0	99.8	-2.9	P	
115	12/22/12	2803.3115 N 08105.2204 W	4	105.3	12.2	P-3	106	14.0	99.3	-1.8	P	
116	12/22/12	2803.3216 N 08105.2594 W	4	105.3	13.0	P-3	106	14.0	99.3	-1.0	P	
117	12/22/12	2803.3338 N 08105.2995 W	4	104.1	14.5	P-3	106	14.0	98.3	0.5	P	
118	12/22/12	2803.3626 N 08105.3115 W	4	102.0	12.7	P-3	106	14.0	96.3	-1.3	P	
119	12/22/12	2803.3878 N 08105.3360 W	4	101.6	11.7	P-3	106	14.0	95.8	-2.3	P	
120	12/22/12	2803.4163 N 08105.3608 W	4	101.2	14.3	P-3	106	14.0	95.5	0.3	P	
121	12/22/12	2803.4490 N 08105.3589 W	4	97.6	17.8	P-2	100.2	17.5	97.4	0.3	P	
122	12/22/12	2803.4528 N 08105.3202 W	4	104.1	11.0	P-3	106	14.0	98.2	-3.0	P	

Chris Johnson
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12/22/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/22/12 TO 12/26/12

PAGE 8

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE	TEST RESULTS PASS/ FAIL	REMARK
123	12/22/12	2803.4826 N 08105.3307 W	4	104.7	15.2	P-3	106	14.0	98.8	1.2	P	
124	12/22/12	2803.5091 N 08105.3571 W	4	102.3	14.6	P-3	106	14.0	96.5	0.6	P	
125	12/22/12	2803.5407 N 08105.3759 W	4	101.5	14.3	P-3	106	14.0	95.8	0.3	P	
126	12/22/12	2803.5578 N 08105.3994 W	4	101.9	16.4	P-3	106	14.0	96.1	2.4	P	
127	12/22/12	2803.4522 N 08105.3202 W	4	104.5	12.0	P-3	106	14.0	98.6	-2.0	P	
128	12/22/12	2803.4826 N 08105.3317 W	4	103.8	14.9	P-3	106	14.0	97.9	0.9	P	
129	12/22/12	2803.5095 N 08105.3579 W	4	103.0	15.0	P-3	106	14.0	97.2	1.0	P	
130	12/22/12	2803.5417 N 08105.3754 W	4	100.9	14.9	P-3	106	14.0	95.2	0.9	P	
131	12/22/12	2803.5575 N 08105.3991 W	4	101.0	15.6	P-3	106	14.0	95.3	1.6	P	
CP	12/26/12	-	-	105.8	14.4	P-3	106	14.0	-	-	-	
DR10	12/26/12	2803.3302 N 08105.3239 W	4	105.0	14.9	P-3	106	14.0	99.1	0.9	P	
132	12/26/12	2803.3302 N 08105.3239 W	4	104.9	14.7	P-3	106	14.0	99.0	0.7	P	
133	12/26/12	2803.3756 N 08105.3538 W	4	103.0	13.3	P-3	106	14.0	97.1	-0.7	P	
134	12/26/12	2803.4164 N 08105.3808 W	4	105.8	11.3	P-3	106	14.0	99.8	-2.7	P	
135	12/26/12	2803.4459 N 08105.4032 W	4	103.6	13.6	P-3	106	14.0	97.7	-0.4	P	
136	12/26/12	2803.5066 N 08105.4228 W	4	99.2	17.1	P-2	100.2	17.5	99.0	-0.4	P	
137	12/26/12	2803.3301 N 08105.3235 W	4	104.5	14.2	P-3	106	14.0	98.6	0.2	P	
138	12/26/12	2803.3754 N 08105.3533 W	4	103.4	14.0	P-3	106	14.0	97.5	0.0	P	
139	12/26/12	2803.4162 N 08105.3818 W	4	104.1	13.0	P-3	106	14.0	98.2	-1.0	P	
140	12/26/12	2803.4454 N 08105.4022 W	4	103.0	13.9	P-3	106	14.0	97.2	-0.1	P	

Chris Johnson
PREPARED BY

12/26/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/26/12 TO 12/28/12

PAGE 9

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
141	12/26/12	2803.5064 N 08105.4221 W	4	98.7	16.4	P-2	100.2	17.5	98.5	-1.1	P	
142	12/26/12	2803.5407 N 08105.4274 W	4	102.1	16.6	P-3	106	14.0	96.4	2.6	P	
143	12/26/12	2803.5775 N 08105.4346 W	4	104.1	11.8	P-3	106	14.0	98.2	-2.2	P	
144	12/26/12	2803.5770 N 08105.4256 W	4	103.9	12.6	P-3	106	14.0	98.1	-1.4	P	
145	12/26/12	2803.6074 N 08105.4202 W	4	103.4	12.7	P-3	106	14.0	97.5	-1.3	P	
CP	12/27/12	-	-	100.0	17.8	P-2	100.2	17.5	-	-	-	
DR11	12/27/12	2803.3520 N 08105.3119 W	5	99.1	15.0	P-2	100.2	17.5	98.9	-2.5	P	
146	12/27/12	2803.3520 N 08105.3119 W	5	98.4	14.9	P-2	100.2	17.5	98.2	-2.6	P	
147	12/27/12	2803.3860 N 08105.3359 W	5	100.1	15.2	P-2	100.2	17.5	99.9	-2.3	P	
148	12/27/12	2803.4174 N 08105.3564 W	5	97.6	15.0	P-2	100.2	17.5	97.4	-2.5	P	
149	12/27/12	2803.4636 N 08105.3167 W	5	100.1	15.9	P-2	100.2	17.5	99.9	-1.6	P	
150	12/27/12	2803.4985 N 08105.3557 W	5	100.1	16.1	P-2	100.2	17.5	99.9	-1.4	P	
151	12/27/12	2803.3525 N 08105.3115 W	5	99.0	15.0	P-2	100.2	17.5	98.8	-2.5	P	
152	12/27/12	2803.3865 N 08105.3353 W	5	99.8	14.9	P-2	100.2	17.5	99.6	-2.6	P	
153	12/27/12	2803.4177 N 08105.3568 W	5	96.4	15.8	P-2	100.2	17.5	96.2	-1.7	P	
154	12/27/12	2803.4633 N 08105.3165 W	5	98.4	16.0	P-2	100.2	17.5	98.2	-1.5	P	
155	12/27/12	2803.4982 N 08105.3555 W	5	99.2	16.1	P-2	100.2	17.5	99.0	-1.4	P	
CP	12/28/12	-	-	105.2	13.9	P-3	106	14.0	-	-	-	
DR12	12/28/12	2803.3175 N 08105.2973 W	5	105.1	14.2	P-3	106	14.0	99.2	0.2	P	
156	12/28/12	2803.3175 N 08105.2973 W	5	105.0	14.9	P-3	106	14.0	99.1	0.9	P	

Chris Johnson
PREPARED BY

12/28/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/28/12 TO 12/29/12

PAGE 10

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
157	12/28/12	2803.4502 N 08105.3426 W	5	102.8	12.1	P-3	106	14.0	97.0	-1.9	P	
158	12/28/12	2803.5084 N 08105.3584 W	5	103.2	15.7	P-3	106	14.0	97.4	1.7	P	
159	12/28/12	2803.5507 N 08105.3822 W	5	100.8	16.8	P-3	106	14.0	95.1	2.8	P	
160	12/28/12	2803.5696 N 08105.4222 W	5	100.7	17.0	P-3	106	14.0	95.0	3.0	P	
161	12/28/12	2803.6073 N 08105.4213 W	5	101.1	12.1	P-3	106	14.0	95.4	-1.9	P	
162	12/28/12	2803.5943 N 08105.4389 W	5	99.0	14.9	P-2	100.2	17.5	98.8	-2.6	P	
163	12/28/12	2803.3172 N 08105.2973 W	5	104.8	15.0	P-3	106	14.0	98.9	1.0	P	
164	12/28/12	2803.4502 N 08105.3416 W	5	103.0	13.2	P-3	106	14.0	97.2	-0.8	P	
165	12/28/12	2803.5081 N 08105.3574 W	5	102.7	16.4	P-3	106	14.0	96.9	2.4	P	
166	12/28/12	2803.5502 N 08105.3821 W	5	101.0	15.9	P-3	106	14.0	95.3	1.9	P	
167	12/28/12	2803.5692 N 08105.4212 W	5	101.8	16.5	P-3	106	14.0	96.0	2.5	P	
CP	12/29/12	-	-	100.0	16.9	P-2	100.2	17.5	-	-	-	
DR13	12/29/12	2803.2812 N 08105.1811 W	5	99.7	14.9	P-2	100.2	17.5	99.5	-2.6	P	
168	12/29/12	2803.2812 N 08105.1811 W	5	100.2	15.2	P-2	100.2	17.5	100.0	-2.3	P	
169	12/29/12	2803.3075 N 08105.2165 W	5	95.7	16.0	P-2	100.2	17.5	95.5	-1.5	P	
170	12/29/12	2803.3247 N 08105.2563 W	5	98.3	14.7	P-2	100.2	17.5	98.1	-2.8	P	
171	12/29/12	2803.3396 N 08105.3042 W	5	95.4	14.7	P-2	100.2	17.5	95.2	-2.8	P	
172	12/29/12	2803.3753 N 08105.3264 W	5	97.5	15.8	P-2	100.2	17.5	97.3	-1.7	P	
173	12/29/12	2803.4080 N 08105.3495 W	5	93.7	15.0	P-2	100.2	17.5	93.5	-2.5	P	
174	12/29/12	2803.4047 N 08105.3485 W	5	93.8	15.6	P-2	100.2	17.5	93.6	-1.9	P	

Chris Johnson
PREPARED BY

12/29/12
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 12/29/12 TO 01/02/13

PAGE 11

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
175	12/29/12	2803.4009 N 08105.3479 W	5	100.2	16.0	P-2	100.2	17.5	100.0	-1.5	P	
176	12/29/12	2803.4485 N 08105.3360 W	5	95.2	15.3	P-2	100.2	17.5	95.0	-2.2	P	
177	12/29/12	2803.2813 N 08105.1826 W	5	98.9	15.0	P-2	100.2	17.5	98.7	-2.5	P	
178	12/29/12	2803.3072 N 08105.2152 W	5	96.2	15.5	P-2	100.2	17.5	96.0	-2.0	P	
179	12/29/12	2803.3241 N 08105.2563 W	5	97.5	15.1	P-2	100.2	17.5	97.3	-2.4	P	
180	12/29/12	2803.3398 N 08105.3037 W	5	96.5	16.0	P-2	100.2	17.5	96.3	-1.5	P	
181	12/29/12	2803.3751 N 08105.3272 W	5	98.1	15.1	P-2	100.2	17.5	97.9	-2.4	P	
CP	01/02/13	-	-	105.8	13.7	P-3	106	14.0	-	-	-	
DR14	01/02/13	2803.3376 N 08105.3244 W	5	105.0	14.1	P-3	106	14.0	99.1	0.1	P	
182	01/02/13	2803.3376 N 08105.3244 W	5	105.6	14.5	P-3	106	14.0	99.7	0.5	P	
183	01/02/13	2803.3697 N 08105.3406 W	5	105.1	12.3	P-3	106	14.0	99.2	-1.7	P	
184	01/02/13	2803.3958 N 08105.3609 W	5	106.0	13.5	P-3	106	14.0	100.0	-0.5	P	
185	01/02/13	2803.4226 N 08105.3835 W	5	105.3	11.4	P-3	106	14.0	99.4	-2.6	P	
186	01/02/13	2803.4617 N 08105.4063 W	5	102.7	13.0	P-3	106	14.0	96.9	-1.0	P	
187	01/02/13	2803.4880 N 08105.4224 W	5	97.4	18.6	P-2	100.2	17.5	97.2	1.1	P	
188	01/02/13	2803.6303 N 08105.4561 W	5	101.4	11.9	P-3	106	14.0	95.6	-2.1	P	
189	01/02/13	2803.5852 N 08105.4419 W	5	99.7	15.7	P-2	100.2	17.5	99.5	-1.8	P	
190	01/02/13	2803.5469 N 08105.4253 W	5	103.4	11.8	P-3	106	14.0	97.5	-2.2	P	
191	01/02/13	2803.5143 N 08105.4207 W	5	103.9	15.5	P-3	106	14.0	98.0	1.5	P	
192	01/02/13	2803.4789 N 08105.4130 W	5	102.7	14.4	P-3	106	14.0	96.9	0.4	P	

Chris Johnson
PREPARED BY

01/02/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/02/13 TO 01/04/13

PAGE 12

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
193	01/02/13	2803.4429 N 08105.3901 W	5	95.8	18.9	P-2	100.2	17.5	95.6	1.4	P	
194	01/02/13	2803.4081 N 08105.3698 W	5	97.7	15.8	P-2	100.2	17.5	97.5	-1.7	P	
195	01/02/13	2803.3372 N 08105.3241 W	5	104.8	14.2	P-3	106	14.0	98.9	0.2	P	
196	01/02/13	2803.3694 N 08105.3402 W	5	104.5	13.1	P-3	106	14.0	98.6	-0.9	P	
197	01/02/13	2803.3955 N 08105.3601 W	5	104.0	12.9	P-3	106	14.0	98.1	-1.1	P	
198	01/02/13	2803.4223 N 08105.3830 W	5	105.1	12.4	P-3	106	14.0	99.2	-1.6	P	
199	01/02/13	2803.4611 N 08105.4068 W	5	103.0	11.9	P-3	106	14.0	97.2	-2.1	P	
CP	01/03/13	-	-	110.0	14.1	P-10	110.1	13.6	-	-	-	
DR15	01/03/13	2803.1850 N 08105.2186 W	5	110.1	13.5	P-10	110.1	13.6	100.0	-0.1	P	
200	01/03/13	2803.1850 N 08105.2186 W	5	109.7	11.1	P-10	110.1	13.6	99.7	-2.5	P	
201	01/03/13	2803.2213 N 08105.2157 W	5	107.5	12.3	P-10	110.1	13.6	97.6	-1.3	P	
202	01/03/13	2803.3859 N 08105.3533 W	5	107.6	15.3	P-10	110.1	13.6	97.8	1.7	P	
203	01/03/13	2803.3571 N 08105.3321 W	5	97.9	19.0	P-2	100.2	17.5	97.7	1.5	P	
204	01/03/13	2803.3253 N 08105.3091 W	5	98.2	15.8	P-2	100.2	17.5	98.0	-1.7	P	
205	01/03/13	2803.1856 N 08105.2182 W	5	108.5	11.8	P-10	110.1	13.6	98.5	-1.8	P	
206	01/03/13	2803.2223 N 08105.2153 W	5	108.0	12.1	P-10	110.1	13.6	98.1	-1.5	P	
207	01/03/13	2803.3855 N 08105.3536 W	5	107.5	15.1	P-10	110.1	13.6	97.6	1.5	P	
208	01/03/13	2803.3576 N 08105.3325 W	5	98.0	18.7	P-2	100.2	17.5	97.8	1.2	P	
209	01/03/13	2803.3257 N 08105.3098 W	5	98.1	16.2	P-2	100.2	17.5	97.9	-1.3	P	
CP	01/04/13	-	-	99.8	17.0	P-2	100.2	17.5	-	-	-	

Chris Johnson
PREPARED BY

01/04/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/04/13 TO 01/08/13

PAGE 13

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
DR16	01/04/13	2803.2810 N 08105.1702 W	5	98.1	16.2	P-2	100.2	17.5	97.9	-1.3	P	
210	01/04/13	2803.2810 N 08105.1702 W	5	97.7	14.9	P-2	100.2	17.5	97.5	-2.6	P	
211	01/07/13	2803.3064 N 08105.2049 W	6	100.1	15.8	P-2	100.2	17.5	99.9	-1.7	P	
212	01/07/13	2803.3225 N 08105.2397 W	6	97.6	17.0	P-2	100.2	17.5	97.4	-0.5	P	
213	01/07/13	2803.3254 N 08105.2696 W	6	97.9	20.5	P-2	100.2	17.5	97.7	3.0	P	
214	01/07/13	2803.3359 N 08105.3006 W	6	97.8	14.8	P-2	100.2	17.5	97.6	-2.7	P	
215	01/07/13	2803.3618 N 08105.3186 W	6	97.1	15.2	P-2	100.2	17.5	96.9	-2.3	P	
216	01/07/13	2803.3944 N 08105.3335 W	6	100.2	17.3	P-2	100.2	17.5	100.0	-0.2	P	
217	01/07/13	2803.4189 N 08105.3602 W	6	97.3	14.9	P-2	100.2	17.5	97.1	-2.6	P	
218	01/07/13	2803.4427 N 08105.3669 W	6	99.2	15.0	P-2	100.2	17.5	99.0	-2.5	P	
219	01/07/13	2803.4518 N 08105.3233 W	6	98.7	16.0	P-2	100.2	17.5	98.5	-1.5	P	
220	01/07/13	2803.4793 N 08105.3256 W	6	98.3	16.3	P-2	100.2	17.5	98.1	-1.2	P	
221	01/07/13	2803.5070 N 08105.3616 W	6	98.7	15.4	P-2	100.2	17.5	98.6	-2.1	P	
222	01/07/13	2803.5330 N 08105.3747 W	6	98.5	20.0	P-2	100.2	17.5	98.3	2.5	P	
223	01/07/13	2803.5562 N 08105.4018 W	6	97.2	20.1	P-2	100.2	17.5	97.0	2.6	P	
224	01/07/13	2803.5966 N 08105.4187 W	6	100.1	16.5	P-2	100.2	17.5	99.9	-1.0	P	
225	01/07/13	2803.6305 N 08105.4217 W	6	97.2	16.2	P-2	100.2	17.5	97.0	-1.3	P	
CP	01/08/13	-	-	105.8	13.2	P-3	106	14.0	-	-	-	
DR17	01/08/13	2803.0986 N 08105.2140 W	6	101.8	13.5	P-3	106	14.0	96.0	-0.5	P	
226	01/08/13	2803.0986 N 08105.2140 W	6	101.2	13.3	P-3	106	14.0	95.4	-0.7	P	

Chris Johnson
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01/08/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/08/13 TO 01/09/13

PAGE 14

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
227	01/08/13	2803.1002 N 08105.2072 W	6	101.1	12.4	P-3	106	14.0	95.4	-1.6	P	
CP	01/09/13	-	-	100.0	16.2	P-2	100.2	17.5	-	-	-	
DR18	01/09/13	2803.1264 N 08105.1652 W	6	97.1	15.8	P-2	100.2	17.5	96.9	-1.7	P	
228	01/09/13	2803.1264 N 08105.1652 W	6	96.3	15.2	P-2	100.2	17.5	96.1	-2.3	P	
229	01/09/13	2803.1336 N 08105.1620 W	6	96.7	16.0	P-2	100.2	17.5	96.5	-1.5	P	
230	01/09/13	2803.1436 N 08105.1672 W	6	100.2	15.7	P-2	100.2	17.5	100.0	-1.8	P	
231	01/09/13	2803.2331 N 08105.2137 W	6	100.1	14.9	P-2	100.2	17.5	99.9	-2.6	P	
232	01/09/13	2803.2521 N 08105.2104 W	6	99.0	15.0	P-2	100.2	17.5	98.8	-2.5	P	
233	01/09/13	2803.2828 N 08105.2145 W	6	95.8	16.1	P-2	100.2	17.5	95.6	-1.4	P	
234	01/09/13	2803.2967 N 08105.2338 W	6	100.1	16.0	P-2	100.2	17.5	99.9	-1.5	P	
235	01/09/13	2803.3061 N 08105.2670 W	6	95.3	16.4	P-2	100.2	17.5	95.1	-1.1	P	
236	01/09/13	2803.3054 N 08105.2642 W	6	97.0	15.9	P-2	100.2	17.5	96.8	-1.6	P	
237	01/09/13	2803.3109 N 08105.3011 W	6	100.1	15.3	P-2	100.2	17.5	99.9	-2.2	P	
238	01/09/13	2803.3319 N 08105.3215 W	6	95.2	16.3	P-2	100.2	17.5	95.1	-1.2	P	
239	01/09/13	2803.1294 N 08105.2107 W	6	97.8	17.0	P-2	100.2	17.5	97.6	-0.5	P	
240	01/09/13	2803.3063 N 08105.2676 W	6	95.6	16.9	P-2	100.2	17.5	95.4	-0.6	P	
241	01/09/13	2803.3052 N 08105.2645 W	6	96.7	17.5	P-2	100.2	17.5	96.5	0.0	P	
242	01/09/13	2803.3105 N 08105.3016 W	6	98.6	16.8	P-2	100.2	17.5	98.4	-0.7	P	
243	01/09/13	2803.3314 N 08105.3211 W	6	96.5	16.2	P-2	100.2	17.5	96.3	-1.3	P	
244	01/09/13	2803.1291 N 08105.2109 W	6	97.1	17.0	P-2	100.2	17.5	96.9	-0.5	P	

Chris Johnson
PREPARED BY

01/09/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/10/13 TO 01/10/13

PAGE 15

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
CP	01/10/13	-	-	99.7	16.8	P-2	100.2	17.5	-	-	-	
DR19	01/10/13	2803.1505 N 08105.2113 W	6	97.4	16.1	P-2	100.2	17.5	97.2	-1.4	P	
245	01/10/13	2803.1505 N 08105.2113 W	6	98.0	17.0	P-2	100.2	17.5	97.8	-0.5	P	
246	01/10/13	2803.1860 N 08105.2139 W	6	97.6	16.8	P-2	100.2	17.5	97.4	-0.7	P	
247	01/10/13	2803.2164 N 08105.2158 W	6	98.8	15.4	P-2	100.2	17.5	98.6	-2.1	P	
248	01/10/13	2803.2398 N 08105.2154 W	6	99.1	16.3	P-2	100.2	17.5	98.9	-1.2	P	
249	01/10/13	2803.2594 N 08105.2144 W	6	96.9	17.2	P-2	100.2	17.5	96.7	-0.3	P	
250	01/10/13	2803.5924 N 08105.4373 W	6	99.6	16.2	P-2	100.2	17.5	99.4	-1.3	P	
251	01/10/13	2803.5599 N 08105.4279 W	6	99.8	15.0	P-2	100.2	17.5	99.6	-2.5	P	
252	01/10/13	2803.5226 N 08105.4214 W	6	97.6	15.8	P-2	100.2	17.5	97.4	-1.7	P	
253	01/10/13	2803.4851 N 08105.4152 W	6	100.0	15.7	P-2	100.2	17.5	99.8	-1.8	P	
254	01/10/13	2803.4454 N 08105.3898 W	6	96.4	16.3	P-2	100.2	17.5	96.3	-1.2	P	
255	01/10/13	2803.4065 N 08105.3728 W	6	96.7	17.0	P-2	100.2	17.5	96.5	-0.5	P	
256	01/10/13	2803.1389 N 08105.1408 W	6	96.8	15.6	P-2	100.2	17.5	96.6	-1.9	P	
257	01/10/13	2803.1207 N 08105.1436 W	6	99.3	16.9	P-2	100.2	17.5	99.1	-0.6	P	
258	01/10/13	2803.1154 N 08105.1297 W	6	98.6	17.8	P-2	100.2	17.5	98.4	0.3	P	
259	01/10/13	2803.1298 N 08105.1297 W	6	98.8	18.0	P-2	100.2	17.5	98.6	0.5	P	
260	01/10/13	2803.1355 N 08105.1187 W	6	99.7	16.4	P-2	100.2	17.5	99.5	-1.1	P	
261	01/10/13	2803.1162 N 08105.1104 W	6	100.2	19.0	P-2	100.2	17.5	100.0	1.5	P	
262	01/10/13	2803.1164 N 08105.1047 W	6	99.7	17.5	P-2	100.2	17.5	99.5	0.0	P	

Chris Johnson
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01/10/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/10/13 TO 01/11/13

PAGE 16

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
263	01/10/13	2803.1324 N 08105.1039 W	6	95.9	16.2	P-2	100.2	17.5	95.7	-1.3	P	
264	01/10/13	2803.1295 N 08105.1292 W	6	99.0	17.8	P-2	100.2	17.5	98.8	0.3	P	
265	01/10/13	2803.1354 N 08105.1181 W	6	98.7	16.0	P-2	100.2	17.5	98.5	-1.5	P	
266	01/10/13	2803.1168 N 08105.1109 W	6	99.8	15.8	P-2	100.2	17.5	99.6	-1.7	P	
267	01/10/13	2803.1161 N 08105.1042 W	6	94.3	17.0	P-2	100.2	17.5	94.1	-0.5	F	Density
267R	01/10/13	2803.1161 N 08105.1042 W	6	96.5	16.4	P-2	100.2	17.5	96.3	-1.1	P	
CP	01/11/13	-	-	98.7	17.4	P-2	100.2	17.5	-	-	-	
DR20	01/11/13	2803.2815 N 08105.2198 W	6	99.2	16.0	P-2	100.2	17.5	99.0	-1.5	P	
268	01/11/13	2803.2815 N 08105.2198 W	6	99.5	17.0	P-2	100.2	17.5	99.3	-0.5	P	
269	01/11/13	2803.3002 N 08105.2415 W	6	96.9	16.4	P-2	100.2	17.5	96.7	-1.1	P	
270	01/11/13	2803.3101 N 08105.2694 W	6	97.1	15.7	P-2	100.2	17.5	96.9	-1.8	P	
271	01/11/13	2803.3081 N 08105.2893 W	6	97.4	16.3	P-2	100.2	17.5	97.2	-1.2	P	
272	01/11/13	2803.3191 N 08105.3112 W	6	100.2	14.9	P-2	100.2	17.5	100.0	-2.6	P	
273	01/11/13	2803.3546 N 08105.3348 W	6	99.7	15.6	P-2	100.2	17.5	99.5	-1.9	P	
274	01/11/13	2803.3744 N 08105.3523 W	6	96.7	15.9	P-2	100.2	17.5	96.5	-1.6	P	
276	01/11/13	2803.3191 N 08105.3112 W	6	100.2	14.9	P-2	100.2	17.5	100.0	-2.6	P	
277	01/11/13	2803.3546 N 08105.3348 W	6	99.7	15.6	P-2	100.2	17.5	99.5	-1.9	P	
278	01/11/13	2803.3744 N 08105.3523 W	6	96.7	15.9	P-2	100.2	17.5	96.5	-1.6	P	
279	01/11/13	2803.4102 N 08105.3745 W	6	97.3	15.6	P-2	100.2	17.5	97.1	-1.9	P	
280	01/11/13	2803.2811 N 08105.2192 W	6	98.5	16.7	P-2	100.2	17.5	98.3	-0.8	P	

Chris Johnson
PREPARED BY

01/11/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/11/13 TO 01/22/13

PAGE 17

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
281	01/11/13	2803.3012 N 08105.2412 W	6	97.5	16.1	P-2	100.2	17.5	97.3	-1.4	P	
282	01/11/13	2803.3105 N 08105.2699 W	6	96.3	16.0	P-2	100.2	17.5	96.1	-1.5	P	
283	01/11/13	2803.3086 N 08105.2893 W	6	98.1	15.9	P-2	100.2	17.5	97.9	-1.6	P	
284	01/11/13	2803.3197 N 08105.3117 W	6	99.4	15.0	P-2	100.2	17.5	99.2	-2.5	P	
CP	01/12/13	-	-	105.8	14.2	P-3	106	14.0	-	-	-	
DR21	01/12/13	2803.5982 N 08105.4394 W	7	100.0	16.9	P-2	100.2	17.5	99.8	-0.6	P	
285	01/12/13	2803.5982 N 08105.4394 W	7	99.6	16.8	P-2	100.2	17.5	99.4	-0.7	P	
286	01/12/13	2803.5607 N 08105.4327 W	7	95.9	17.0	P-2	100.2	17.5	95.7	-0.5	P	
287	01/12/13	2803.5287 N 08105.4262 W	7	98.3	15.3	P-2	100.2	17.5	98.1	-2.2	P	
288	01/12/13	2803.4956 N 08105.4179 W	7	102.2	15.0	P-3	106	14.0	96.4	1.0	P	
289	01/12/13	2803.4636 N 08105.4078 W	7	96.9	15.0	P-2	100.2	17.5	96.7	-2.5	P	
290	01/12/13	2803.4875 N 08105.3402 W	7	104.6	13.4	P-3	106	14.0	98.7	-0.6	P	
291	01/12/13	2803.5085 N 08105.3602 W	7	102.0	13.2	P-3	106	14.0	96.2	-0.8	P	
292	01/12/13	2803.5343 N 08105.3717 W	7	103.3	14.9	P-3	106	14.0	97.5	0.9	P	
293	01/12/13	2803.5554 N 08105.3918 W	7	105.1	11.8	P-3	106	14.0	99.2	-2.2	P	
294	01/12/13	2803.5657 N 08105.4171 W	7	105.5	11.7	P-3	106	14.0	99.5	-2.3	P	
295	01/12/13	2803.5809 N 08105.4281 W	7	98.2	15.2	P-2	100.2	17.5	98.0	-2.3	P	
296	01/12/13	2803.6114 N 08105.4172 W	7	100.0	11.4	P-3	106	14.0	94.3	-2.6	F	Density
296R	01/12/13	2803.6114 N 08105.4172 W	7	102.0	14.9	P-3	106	14.0	96.3	0.9	P	
CP	01/22/13	-	-	99.9	16.9	P-2	100.2	17.5	-	-	-	

Chris Johnson
PREPARED BY

01/12/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/22/13 TO 01/23/13

PAGE 18

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
DR22	01/22/13	2803.2943 N 08105.1011 W	7	95.6	16.7	P-2	100.2	17.5	95.4	-0.8	P	
297	01/22/13	2803.2943 N 08105.1011 W	7	95.5	15.6	P-2	100.2	17.5	95.3	-1.9	P	
298	01/22/13	2803.2703 N 08105.1275 W	7	97.4	14.0	P-2	100.2	17.5	97.2	-3.5	P	
299	01/22/13	2803.2718 N 08105.1534 W	7	99.4	15.2	P-2	100.2	17.5	99.2	-2.3	P	
300	01/22/13	2803.2884 N 08105.1856 W	7	99.7	15.8	P-2	100.2	17.5	99.5	-1.7	P	
301	01/22/13	2803.3145 N 08105.2263 W	7	96.5	17.0	P-2	100.2	17.5	96.3	-0.5	P	
302	01/22/13	2803.3230 N 08105.2655 W	7	99.0	16.0	P-2	100.2	17.5	98.8	-1.5	P	
303	01/22/13	2803.3284 N 08105.2978 W	7	99.0	16.4	P-2	100.2	17.5	98.8	-1.1	P	
304	01/22/13	2803.3542 N 08105.3145 W	7	97.6	15.7	P-2	100.2	17.5	97.4	-1.8	P	
305	01/22/13	2803.3977 N 08105.3407 W	7	101.4	13.4	P-7	104.4	15.1	97.1	-1.7	P	
306	01/22/13	2803.4483 N 08105.3658 W	7	101.3	12.6	P-7	104.4	15.1	97.0	-2.5	P	
307	01/22/13	2803.4532 N 08105.3315 W	7	101.5	13.2	P-7	104.4	15.1	97.2	-1.9	P	
308	01/22/13	2803.6598 N 08105.4392 W	7	103.3	14.2	P-7	104.4	15.1	98.9	-0.9	P	
309	01/22/13	2803.6569 N 08105.4320 W	7	102.7	12.8	P-7	104.4	15.1	98.4	-2.3	P	
310	01/22/13	2803.1067 N 08105.1100 W	7	101.4	13.8	P-7	104.4	15.1	97.1	-1.3	P	
CP	01/23/13	-	-	99.8	16.7	P-2	100.2	17.5	-	-	-	
DR23	01/23/13	2803.1668 N 08105.1799 W	7	97.5	16.1	P-2	100.2	17.5	97.3	-1.4	P	
311	01/23/13	2803.1668 N 08105.1799 W	7	98.2	17.0	P-2	100.2	17.5	98.0	-0.5	P	
312	01/23/13	2803.1426 N 08105.1916 W	7	99.0	17.1	P-2	100.2	17.5	98.8	-0.4	P	
313	01/23/13	2803.1155 N 08105.1915 W	7	97.6	17.8	P-2	100.2	17.5	97.4	0.3	P	

Chris Johnson
PREPARED BY

01/22/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/23/13 TO 01/24/13

PAGE 19

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
314	01/23/13	2803.1031 N 08105.1849 W	7	97.6	15.9	P-2	100.2	17.5	97.4	-1.6	P	
315	01/23/13	2803.5485 N 08105.3992 W	7	97.5	16.3	P-2	100.2	17.5	97.3	-1.2	P	
316	01/23/13	2803.5542 N 08105.4019 W	7	99.6	16.1	P-2	100.2	17.5	99.4	-1.4	P	
317	01/23/13	2803.5576 N 08105.4024 W	7	100.0	15.9	P-2	100.2	17.5	99.8	-1.6	P	
318	01/23/13	2803.5533 N 08105.3988 W	7	97.2	16.4	P-2	100.2	17.5	97.0	-1.1	P	
319	01/23/13	2803.5631 N 08105.4090 W	7	99.9	17.0	P-2	100.2	17.5	99.7	-0.5	P	
320	01/23/13	2803.5625 N 08105.4078 W	7	97.0	16.7	P-2	100.2	17.5	96.8	-0.8	P	
321	01/23/13	2803.1664 N 08105.1795 W	7	96.3	15.4	P-2	100.2	17.5	96.1	-2.1	P	
322	01/23/13	2803.1421 N 08105.1916 W	7	97.1	16.0	P-2	100.2	17.5	96.9	-1.5	P	
323	01/23/13	2803.1153 N 08105.1917 W	7	98.2	17.2	P-2	100.2	17.5	98.0	-0.3	P	
324	01/23/13	2803.1036 N 08105.1844 W	7	97.5	15.8	P-2	100.2	17.5	97.3	-1.7	P	
325	01/23/13	2803.5482 N 08105.3991 W	7	97.5	16.3	P-2	100.2	17.5	97.3	-1.2	P	
326	01/23/13	2803.5544 N 08105.4017 W	7	99.6	16.1	P-2	100.2	17.5	99.4	-1.4	P	
327	01/23/13	2803.5578 N 08105.4025 W	7	100.0	15.9	P-2	100.2	17.5	99.8	-1.6	P	
328	01/23/13	2803.5537 N 08105.3983 W	7	97.2	16.4	P-2	100.2	17.5	97.0	-1.1	P	
329	01/23/13	2803.5632 N 08105.4091 W	7	99.9	17.0	P-2	100.2	17.5	99.7	-0.5	P	
330	01/23/13	2803.5623 N 08105.4077 W	7	97.0	16.7	P-2	100.2	17.5	96.8	-0.8	P	
CP	01/24/13	-	-	104.2	15.8	P-7	104.4	15.1	-	-	-	
DR24	01/24/13	2803.5612 N 08105.4095 W	7	102.5	13.9	P-7	104.4	15.1	98.2	-1.2	P	
331	01/24/13	2803.5628 N 08105.4075 W	7	103.1	14.5	P-7	104.4	15.1	98.8	-0.6	P	

Chris Johnson
PREPARED BY

01/23/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/24/13 TO 01/24/13

PAGE 20

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
332	01/24/13	2803.1036 N 08105.1848 W	7	101.9	15.2	P-7	104.4	15.1	97.6	0.1	P	
333	01/24/13	2803.5481 N 08105.3982 W	7	102.1	16.1	P-7	104.4	15.1	97.8	1.0	P	
334	01/24/13	2803.5543 N 08105.4018 W	7	101.8	14.8	P-7	104.4	15.1	97.5	-0.3	P	
335	01/24/13	2803.5573 N 08105.4028 W	7	100.9	15.2	P-7	104.4	15.1	96.6	0.1	P	
336	01/24/13	2803.5535 N 08105.3985 W	7	102.2	15.0	P-7	104.4	15.1	97.9	-0.1	P	
337	01/24/13	2803.5635 N 08105.4094 W	7	100.8	16.3	P-7	104.4	15.1	96.6	1.2	P	
338	01/24/13	2803.5628 N 08105.4073 W	7	99.8	14.8	P-7	104.4	15.1	95.6	-0.3	P	
339	01/24/13	2803.1668 N 08105.1798 W	7	100.5	14.9	P-7	104.4	15.1	96.3	-0.2	P	
340	01/24/13	2803.1425 N 08105.1918 W	8	101.5	15.9	P-7	104.4	15.1	97.2	0.8	P	
341	01/24/13	2803.1155 N 08105.1915 W	8	101.4	15.4	P-7	104.4	15.1	97.1	0.3	P	
342	01/24/13	2803.1037 N 08105.1842 W	8	100.6	16.3	P-7	104.4	15.1	96.4	1.2	P	
343	01/24/13	2803.5484 N 08105.3995 W	8	102.4	17.0	P-7	104.4	15.1	98.1	1.9	P	
344	01/24/13	2803.5545 N 08105.4015 W	8	102.5	15.4	P-7	104.4	15.1	98.2	0.3	P	
345	01/24/13	2803.5577 N 08105.4015 W	8	101.9	14.1	P-7	104.4	15.1	97.6	-1.0	P	
346	01/24/13	2803.5532 N 08105.3986 W	8	100.5	14.5	P-7	104.4	15.1	96.3	-0.6	P	
347	01/24/13	2803.5631 N 08105.4081 W	8	102.8	16.2	P-7	104.4	15.1	98.5	1.1	P	
348	01/24/13	2803.5628 N 08105.4087 W	8	102.5	15.8	P-7	104.4	15.1	98.2	0.7	P	
349	01/24/13	2803.5533 N 08105.3984 W	8	102.8	15.4	P-7	104.4	15.1	98.5	0.3	P	
350	01/24/13	2803.5631 N 08105.4095 W	8	102.4	16.0	P-7	104.4	15.1	98.1	0.9	P	
351	01/24/13	2803.5624 N 08105.4075 W	8	101.4	14.8	P-7	104.4	15.1	97.1	-0.3	P	

Chris Johnson
PREPARED BY

01/24/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/25/13 TO 01/25/13

PAGE 21

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE (%)	PASS/ FAIL	
CP	01/25/13	-	-	100.0	17.9	P-2	100.2	17.5	-	-	-	
DR25	01/25/13	2803.5481 N 08105.3982 W	8	99.7	16.1	P-2	100.2	17.5	99.5	-1.4	P	
352	01/25/13	2803.5543 N 08105.4018 W	8	98.4	14.8	P-2	100.2	17.5	98.2	-2.7	P	
353	01/25/13	2803.5573 N 08105.4028 W	8	98.1	15.2	P-2	100.2	17.5	97.9	-2.3	P	
354	01/25/13	2803.5535 N 08105.3985 W	8	99.1	15.0	P-2	100.2	17.5	98.9	-2.5	P	
355	01/25/13	2803.5635 N 08105.4094 W	8	100.0	16.3	P-2	100.2	17.5	99.8	-1.2	P	
356	01/25/13	2803.5628 N 08105.4073 W	8	99.8	14.8	P-2	100.2	17.5	99.6	-2.7	P	
357	01/25/13	2803.1668 N 08105.1798 W	8	97.4	14.9	P-2	100.2	17.5	97.2	-2.6	P	
358	01/25/13	2803.1425 N 08105.1918 W	8	96.8	15.9	P-2	100.2	17.5	96.6	-1.6	P	
359	01/25/13	2803.1155 N 08105.1915 W	8	95.9	15.4	P-2	100.2	17.5	95.7	-2.1	P	
360	01/25/13	2803.1037 N 08105.1842 W	8	98.3	16.3	P-2	100.2	17.5	98.1	-1.2	P	
361	01/25/13	2803.5484 N 08105.3995 W	8	97.5	17.0	P-2	100.2	17.5	97.3	-0.5	P	
362	01/25/13	2803.5545 N 08105.4015 W	8	98.1	15.4	P-2	100.2	17.5	97.9	-2.1	P	
363	01/25/13	2803.5577 N 08105.4015 W	8	99.5	14.1	P-2	100.2	17.5	99.3	-3.4	P	
364	01/25/13	2803.5532 N 08105.3986 W	8	96.7	14.5	P-2	100.2	17.5	96.5	-3.0	P	
365	01/25/13	2803.5631 N 08105.4081 W	8	96.6	16.2	P-2	100.2	17.5	96.4	-1.3	P	
366	01/25/13	2803.5628 N 08105.4087 W	8	97.5	15.8	P-2	100.2	17.5	97.3	-1.7	P	
367	01/25/13	2803.5533 N 08105.3984 W	8	98.0	15.4	P-2	100.2	17.5	97.8	-2.1	P	
368	01/25/13	2803.5631 N 08105.4095 W	8	99.0	16.0	P-2	100.2	17.5	98.8	-1.5	P	
369	01/25/13	2803.5624 N 08105.4075 W	8	99.3	14.8	P-2	100.2	17.5	99.1	-2.7	P	

Chris Johnson
PREPARED BY

01/25/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Berm Fill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/25/13 TO 01/00/00

PAGE 22

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
370	01/25/13	2803.5621 N 08105.4073 W	8	97.4	16.2	P-2	100.2	17.5	97.2	-1.3	P	
CP	01/26/13	-	-	99.5	17.0	P-2	100.2	17.5	-	-	-	
DR26	01/26/13	2803.1037 N 08105.1842 W	8	98.4	15.4	P-2	100.2	17.5	98.2	-2.1	P	
371	01/26/13	2803.5484 N 08105.3995 W	8	96.9	15.9	P-2	100.2	17.5	96.7	-1.6	P	
372	01/26/13	2803.5545 N 08105.4015 W	8	97.5	16.1	P-2	100.2	17.5	97.3	-1.4	P	
373	01/26/13	2803.5577 N 08105.4015 W	8	96.3	14.8	P-2	100.2	17.5	96.1	-2.7	P	
374	01/26/13	2803.5532 N 08105.3986 W	8	95.9	16.3	P-2	100.2	17.5	95.7	-1.2	P	
375	01/26/13	2803.5631 N 08105.4081 W	8	97.8	16.5	P-2	100.2	17.5	97.6	-1.0	P	
376	01/26/13	2803.5628 N 08105.4087 W	8	97.7	16.1	P-2	100.2	17.5	97.5	-1.4	P	
377	01/26/13	2803.5533 N 08105.3984 W	8	98.4	15.5	P-2	100.2	17.5	98.2	-2.0	P	
378	01/26/13	2803.5631 N 08105.4095 W	8	99.0	15.4	P-2	100.2	17.5	98.8	-2.1	P	
379	01/26/13	2803.5624 N 08105.4075 W	8	95.6	15.9	P-2	100.2	17.5	95.4	-1.6	P	

Chris Johnson
PREPARED BY

01/26/13
DATE

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 12/3/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR1	2305			15.2		P2			
	601	3.76	112.7	-2.3	97.8		97.6%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 12/4/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR2	2361			14.0		P7			
	601	3.88	116.4	-1.1	102.1		97.8%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/6/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR3	2340			16.2		P2			
	601	3.83	115.0	-1.3	99.0		98.8%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 12/7/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR4	2320			16.0		P2			
	601	3.79	113.7	-1.5	98.0		97.8%		1

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/8/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR5	2303			17.0		P2			
	601	3.75	112.6	-0.5	96.2		96.0%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/10/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR6	2316			16.0		P2			
	601	3.78	113.4	-1.5	97.8		97.6%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/11/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR7	2335			15.7		P2			
	601	3.82	114.7	-1.8	99.1		98.9%		3

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/18/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR8	2389			14.8		P7			
	601	3.94	118.2	-0.3	103.0		98.7%		4

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/22/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR9	2421			13.9		P3			
	601	4.01	120.4	-0.1	105.7		99.7%		4

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/26/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR10	2425			14.9		P3			
	601	4.02	120.6	0.9	105.0		99.1%		4

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 12/27/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR11	2324			15.0		P2			
	601	3.80	114.0	-2.5	99.1		98.9%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 12/28/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR12	2416			14.2		P3			
	601	4.00	120.0	0.2	105.1		99.2%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 12/29/2012

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR13	2333			14.9		P2			
	601	3.82	114.6	-2.6	99.7		99.5%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/2/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR14	2412			14.1		P3			
	601	3.99	119.8	0.1	105.0		99.1%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/3/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR15	2490			13.5		P10			
	601	4.17	125.0	-0.1	110.1		100.0%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/4/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR16	2325			16.2		P2			
	601	3.80	114.0	-1.3	98.1		97.9%		5

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/8/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR17	2348			13.5		P3			
	601	3.85	115.5	-0.5	101.8		96.0%		6

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/9/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR18	2301			15.8		P2			
	601	3.75	112.4	-1.7	97.1		96.9%		6

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/10/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR19	2311			16.1		P2			
	601	3.77	113.1	-1.4	97.4		97.2%		6

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # S22.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/11/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR20	2341			16.0		P2			
	601	3.84	115.1	-1.5	99.2		99.0%		6

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/12/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR21	2369			16.9		P2			
	601	3.90	116.9	-0.6	100.0		99.8%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/22/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR22	2288			16.7		P2			
	601	3.72	111.6	-0.8	95.6		95.4%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/23/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR23	2313			16.1		P2			
	601	3.77	113.2	-1.4	97.5		97.3%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Relocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/24/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR24	2366			13.9		P7			
	601	3.89	116.7	-1.2	102.5		98.2%		7

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/25/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR25	2351			16.1		P2			
	601	3.86	115.8	-1.4	99.7		99.5%		8

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Relocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/26/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. / +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR26	2318			15.4		P2			
	601	3.79	113.6	-2.1	98.4		98.2%		8

Section 5
General Fill Density Summary and Field Tests
(Forcemain Pipe Backfill)

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Force Main Backfill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/29/13 TO 01/29/13

PAGE 1

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE (%)	PASS/ FAIL	
CP	01/29/13	-	-	100.7	17.3	P-9	100.9	17.1	-	-	-	
DR1	01/29/13	2+40	1	99.3	16.7	P-9	100.9	17.1	98.4	-0.4	P	
1	01/29/13	2+40	1	100.0	16.4	P-9	100.9	17.1	99.1	-0.7	P	
2	01/29/13	4+70	1	95.1	16.7	P-9	100.9	17.1	94.3	-0.4	F	Density
2R	01/29/13	4+70	1	96.1	14.9	P-9	100.9	17.1	95.2	-2.2	P	
3	01/29/13	7+00	1	97.0	14.6	P-9	100.9	17.1	96.1	-2.5	P	
4	01/29/13	9+30	1	98.2	13.2	P-9	100.9	17.1	97.3	-3.9	P	
5	01/29/13	11+60	1	97.6	14.3	P-9	100.9	17.1	96.7	-2.8	P	
6	01/29/13	13+90	1	96.8	15.1	P-9	100.9	17.1	95.9	-2.0	P	
7	01/29/13	16+20	1	96.7	16.2	P-9	100.9	17.1	95.8	-0.9	P	
8	01/29/13	18+50	1	98.0	16.6	P-9	100.9	17.1	97.1	-0.5	P	
9	01/29/13	20+80	1	97.0	15.0	P-9	100.9	17.1	96.1	-2.1	P	
10	01/29/13	23+10	1	99.2	14.1	P-9	100.9	17.1	98.3	-3.0	P	
11	01/29/13	25+40	1	96.8	14.7	P-9	100.9	17.1	95.9	-2.4	P	
12	01/29/13	28+70	1	97.1	15.8	P-9	100.9	17.1	96.2	-1.3	P	
13	01/29/13	31+00	1	96.2	19.1	P-9	100.9	17.1	95.3	2.0	P	
14	01/29/13	33+30	1	99.0	17.8	P-2	100.2	17.5	98.8	0.3	P	
15	01/29/13	35+60	1	97.5	15.0	P-2	100.2	17.5	97.3	-2.5	P	
16	01/29/13	38+90	1	96.2	16.0	P-2	100.2	17.5	96.0	-1.5	P	
17	01/29/13	41+20	1	101.1	16.2	P-1	101.7	16.0	99.4	0.2	P	

Chris Johnson
PREPARED BY

01/29/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Force Main Backfill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/29/13 TO 01/29/13

PAGE 2

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION DRY DENSITY (pcf)	IN PLACE DETERMINATION MOISTURE CONTENT (%)	MATCHING PROTOR CURVE NUMBER	MATCHING PROTOR MAX DRY DENSITY (pcf)	MATCHING PROTOR OPTIMUM MOISTURE (%)	TEST RESULTS PERCENT COMP (%)	TEST RESULTS DIFFER FROM OPT MOISTURE (%)	TEST RESULTS PASS/ FAIL	REMARK
18	01/29/13	43+50	1	96.0	15.1	P-2	100.2	17.5	95.8	-2.4	P	
19	01/29/13	45+00	1	97.2	16.2	P-2	100.2	17.5	97.0	-1.3	P	
20	01/29/13	2+00	2	106.8	11.2	P-10	110.1	13.6	97.0	-2.4	P	
21	01/29/13	4+30	2	95.6	14.9	P-2	100.2	17.5	95.4	-2.6	P	
22	01/29/13	6+00	2	97.5	14.8	P-2	100.2	17.5	97.3	-2.7	P	
23	01/29/13	8+30	2	102.9	14.7	P-7	104.4	15.1	98.6	-0.4	P	
24	01/29/13	10+30	2	99.6	14.5	P-7	104.4	15.1	95.4	-0.6	P	
DR2	01/29/13	12+60	2	100.9	12.9	P-7	104.4	15.1	96.6	-2.2	P	
25	01/29/13	14+90	2	101.5	13.8	P-7	104.4	15.1	97.2	-1.3	P	
26	01/29/13	17+10	2	103.2	13.1	P-7	104.4	15.1	98.9	-2.0	P	
27	01/29/13	19+30	2	100.0	18.1	P-7	104.4	15.1	95.8	3.0	P	
28	01/29/13	21+30	2	100.3	13.2	P-7	104.4	15.1	96.1	-1.9	P	
29	01/29/13	23+50	2	101.5	14.2	P-7	104.4	15.1	97.2	-0.9	P	
30	01/29/13	25+00	2	100.0	13.0	P-7	104.4	15.1	95.8	-2.1	P	
31	01/29/13	27+30	2	101.8	16.0	P-7	104.4	15.1	97.5	0.9	P	
32	01/29/13	29+60	2	101.9	15.1	P-7	104.4	15.1	97.6	0.0	P	
33	01/29/13	31+70	2	101.0	14.8	P-7	104.4	15.1	96.7	-0.3	P	
34	01/29/13	34+00	2	99.9	14.2	P-7	104.4	15.1	95.7	-0.9	P	
35	01/29/13	36+30	2	101.1	13.5	P-7	104.4	15.1	96.8	-1.6	P	
36	01/29/13	38+60	2	102.3	13.0	P-7	104.4	15.1	98.0	-2.1	P	

Chris Johnson
PREPARED BY

01/29/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Force Main Backfill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/30/13 TO 01/30/13

PAGE 3

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
CP	01/30/13	-	-	104.3	15.5	P-7	104.4	15.1	-	-	-	
DR3	01/30/13	40+30	2	102.3	14.6	P-7	104.4	15.1	98.0	-0.5	P	
37	01/30/13	40+30	2	101.5	13.5	P-7	104.4	15.1	97.2	-1.6	P	
38	01/30/13	42+60	2	101.4	14.6	P-7	104.4	15.1	97.1	-0.5	P	
39	01/30/13	44+90	2	101.7	13.4	P-7	104.4	15.1	97.4	-1.7	P	
40	01/30/13	2+50	3	104.3	15.0	P-7	104.4	15.1	99.9	-0.1	P	
41	01/30/13	4+90	3	97.9	13.9	P-7	104.4	15.1	93.8	-1.2	F	Density
41R	01/30/13	4+90	3	100.2	13.2	P-7	104.4	15.1	96.0	-1.9	P	
42	01/30/13	7+00	3	101.5	14.5	P-7	104.4	15.1	97.2	-0.6	P	
43	01/30/13	9+50	3	101.7	14.3	P-7	104.4	15.1	97.4	-0.8	P	
44	01/30/13	11+70	3	102.5	13.5	P-7	104.4	15.1	98.2	-1.6	P	
45	01/30/13	14+00	3	101.3	14.1	P-7	104.4	15.1	97.0	-1.0	P	
46	01/30/13	16+50	3	100.0	15.0	P-7	104.4	15.1	95.8	-0.1	P	
47	01/30/13	18+90	3	99.3	15.6	P-7	104.4	15.1	95.1	0.5	P	
48	01/30/13	20+50	3	100.1	13.8	P-7	104.4	15.1	95.9	-1.3	P	
49	01/30/13	22+80	3	101.4	14.3	P-7	104.4	15.1	97.1	-0.8	P	
50	01/30/13	25+30	3	101.2	14.5	P-7	104.4	15.1	96.9	-0.6	P	
51	01/30/13	27+60	3	101.9	13.9	P-7	104.4	15.1	97.6	-1.2	P	
52	01/30/13	29+90	3	103.1	15.1	P-7	104.4	15.1	98.8	0.0	P	
53	01/30/13	32+00	3	99.0	13.6	P-7	104.4	15.1	94.8	-1.5	F	Density

Chris Johnson
PREPARED BY

01/30/13
DATE

Brantley Engineering, LLC

SUMMARY OF FIELD DENSITY TESTING RESULTS

Force Main Backfill

PROJECT NUMBER: 2012-102
JED Landfill

PROJECT TITLE: Leachate Storage Relocation

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATES: FROM 01/30/13 TO 01/30/13

PAGE 5

TEST NUMBER	TEST DATE	LOCATION OF SAMPLE	LIFT NO OR ELEV (ft)	IN PLACE DETERMINATION		MATCHING PROTOR			TEST RESULTS			REMARK
				DRY DENSITY (pcf)	MOISTURE CONTENT (%)	CURVE NUMBER	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	PERCENT COMP (%)	DIFFER FROM OPT MOISTURE	PASS/ FAIL	
71	01/30/13	27+30	4	95.3	15.0	P-2	100.2	17.5	95.1	-2.5	P	
72	01/30/13	29+60	4	98.5	16.0	P-2	100.2	17.5	98.3	-1.5	P	
73	01/30/13	31+70	4	96.4	16.5	P-2	100.2	17.5	96.2	-1.0	P	
74	01/30/13	34+00	4	98.5	16.1	P-2	100.2	17.5	98.3	-1.4	P	
75	01/30/13	36+30	4	96.4	16.5	P-2	100.2	17.5	96.2	-1.0	P	
DR5	01/30/13	38+60	4	97.4	16.2	P-2	100.2	17.5	97.2	-1.3	P	
76	01/30/13	38+60	4	98.5	16.0	P-2	100.2	17.5	98.3	-1.5	P	
77	01/30/13	40+30	4	96.4	16.5	P-2	100.2	17.5	96.2	-1.0	P	
78	01/30/13	42+60	4	98.5	16.0	P-2	100.2	17.5	98.3	-1.5	P	
79	01/30/13	44+90	4	96.4	16.5	P-2	100.2	17.5	96.2	-1.0	P	
80	01/30/13	45+10	4	96.4	16.5	P-2	100.2	17.5	96.2	-1.0	P	

Chris Johnson
PREPARED BY

01/30/13
DATE

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

LOCATION: St. Cloud, FL

OWNER/ENGINEER: Omni Waste of Osceola, LLC

CONTRACTOR: RCS Excavation

DATE TESTED: 1/29/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR1	2353			16.7		P9			
	601	3.86	115.9	-0.4	99.3		98.4%		1
DR2	2323			12.9		P7			
	601	3.80	113.9	-4.2	100.9		96.6%		2

Brantley Engineering, LLC

FIELD DENSITY TEST RECORD

DRIVE CYLINDER METHOD
ASTM D-2937

FILE # 522.3

COMPACTED
FILL

PROJECT NUMBER: 2011-102

OWNER/ENGINEER: Omni Waste of Osceola, LLC

PROJECT NAME: Jed Landfill Leachate Storage Reelocation

CONTRACTOR: RCS Excavation

LOCATION: St. Cloud, FL

DATE TESTED: 1/30/2013

TEST NO.	WT. OF RING & SAMPLE / WT. OF RING	WT. OF SAMPLE (lbs)	WET DENSITY (pcf)	% MOIST. +/- OF OPT.	DRY DENSITY (pcf)	PROCTOR NO.	% COMP.	LOCATION	LIFT OR ELEV.
DR3	2374			14.6		P7			
	601	3.91	117.2	-2.9	102.3		98.0%		2
DR4	2331			14.3		P7			
	601	3.81	114.4	-3.2	100.1		95.9%		3
DR5	2312			16.2		P2			
	601	3.77	113.2	-1.3	97.4		97.2%		4

APPENDIX D
Inventory Log

Section 1
GCL

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GCL

DATE OF ARRIVAL: 11/05/12

DATE OF INVENTORY: 11/05/12

MATERIAL MANUFACTURER: CETCO

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	201245CV	6776	150	15		Y	N	
2	201245CV	6781	150	15		Y	N	
3	201245CV	6790	150	15		Y	N	
4	201245CV	6792	150	15		Y	N	
5	201245CV	6799	150	15		Y	N	
6	201245CV	6802	150	15		Y	N	
7	201245CV	6805	150	15		Y	N	
8	201245CV	6806	150	15		Y	N	
9	201245CV	6807	150	15		Y	N	
10	201245CV	6808	150	15		Y	N	
11	201245CV	6810	150	15		Y	N	
12	201245CV	6811	150	15		Y	N	
13	201245CV	6812	150	15		Y	N	
14	201245CV	6813	150	15		Y	N	
15	201245CV	6814	150	15		Y	N	
16	201245CV	6763	150	15		Y	N	
17	201245CV	6767	150	15		Y	N	
18	201245CV	6786	150	15		Y	N	
19	201245CV	6787	150	15		Y	N	
20	201245CV	6788	150	15		Y	N	
21	201245CV	6789	150	15		Y	N	
22	201245CV	6794	150	15		Y	N	
23	201245CV	6795	150	15		Y	N	
24	201245CV	6796	150	15		Y	N	
25	201245CV	6797	150	15		Y	N	
26	201245CV	6798	150	15		Y	N	
27	201245CV	6800	150	15		Y	N	
TOTAL LENGTH (ft)		4050						
TOTAL AREA (ft)		60750						

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GCL

DATE OF ARRIVAL: 11/05/12

DATE OF INVENTORY: 11/05/12

MATERIAL MANUFACTURER: CETCO

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	201245CV	6801	150	15		Y	N	
2	201245CV	6803	150	15		Y	N	
3	201245CV	6804	150	15		Y	N	
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
TOTAL LENGTH (ft)		450						
TOTAL AREA (ft)		6750						

P A C K I N G L I S T

MENTAL TECH LLC
VENUE
TATES IL 60192

ORDER NO:.. 028849001
ORDER DATE: 10/22/2012
SHIP DATE:. 11/02/2012

SOLD TO: 5099
WASTE SERVICES
1501 OMNI WAY

ST. CLOUD FL 34773

SHIP FROM:. CETCO CARTERSVILLE
FRT TERMS:. PREPAID & ADD
SHIP VIA:.. AMERICO LOGISTICS

SHIP TO: 01
JED LANDFILL CELL 7
WASTE SERVICES
1501 OMNI WAY
SEE DIRECTIONS ATTACHED FOLLOW
ST. CLOUD FL 34773

PO: JED LEACHATE

PRODUCT	SIZE	U/M	LOT #	ROLL#	LNGTH	WIDTH	SHIP QTY	WEIGHT
CV-BENTOMAT ST		SFT	SF	201245CV	00006776	150.0	15.0	2250.0	2661.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006781	150.0	15.0	2250.0	2676.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006790	150.0	15.0	2250.0	2672.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006792	150.0	15.0	2250.0	2695.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006799	150.0	15.0	2250.0	2649.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006802	150.0	15.0	2250.0	2678.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006805	150.0	15.0	2250.0	2634.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006806	150.0	15.0	2250.0	2639.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006807	150.0	15.0	2250.0	2645.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006808	150.0	15.0	2250.0	2642.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006810	150.0	15.0	2250.0	2651.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006811	150.0	15.0	2250.0	2651.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006812	150.0	15.0	2250.0	2653.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006813	150.0	15.0	2250.0	2653.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006814	150.0	15.0	2250.0	2666.0
							========	
							33750.0	
CV-CG 50	50B	EA					15.0	750.0
							========	
							15.0	
CV-LAB FEE-TSG	MSC	EA					1.0	1.0
							========	
							1.0	

ORDER TOTALS..... ========
40616.0

TOTAL ITEMS..... 17

P A C K I N G L I S T

OID ENVIRONMENTAL TECH LLC
0 FORBS AVENUE
FFMAN ESTATES IL 60192

ORDER NO:.. 023849002
ORDER DATE: 10/22/2012
SHIP DATE:. 11/02/2012

SOLD TO: 5099
WASTE SERVICES
1501 OMNI WAY

ST. CLOUD FL 34773

SHIP FROM:. CETCO CARTERSVILLE
FRT TERMS:. PREPAID & ADD
SHIP VIA:.. AMERICO LOGISTICS

SHIP TO: 01
JED LANDFILL CELL 7
WASTE SERVICES
1501 OMNI WAY
SEE DIRECTIONS ATTACHED FOLLOW
ST. CLOUD FL 34773

PO: JED LEACHATE

PRODUCT	SIZE	U/M	LOT #	ROLL#	LNGTH	WIDTH	SHIP QTY	WEIGHT
CV-BENTOMAT ST		SFT	SF 201245CV	00006763	150.0	15.0	2250.0	2667.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006767	150.0	15.0	2250.0	2664.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006786	150.0	15.0	2250.0	2701.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006787	150.0	15.0	2250.0	2687.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006788	150.0	15.0	2250.0	2694.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006789	150.0	15.0	2250.0	2690.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006794	150.0	15.0	2250.0	2651.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006795	150.0	15.0	2250.0	2663.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006796	150.0	15.0	2250.0	2650.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006797	150.0	15.0	2250.0	2656.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006798	150.0	15.0	2250.0	2664.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006800	150.0	15.0	2250.0	2666.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006801	150.0	15.0	2250.0	2668.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006803	150.0	15.0	2250.0	2663.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006804	150.0	15.0	2250.0	2662.0
							========	
							33750.0	
CV-CG 50	50B	EA					15.0	750.0
							========	
							15.0	

ORDER TOTALS..... 40796.0

TOTAL ITEMS..... 16

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GCL

DATE OF ARRIVAL: 11/07/12

DATE OF INVENTORY: 11/07/12

MATERIAL MANUFACTURER: CETCO

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	201245CV	6766	150	15		Y	N	
2	201245CV	6768	150	15		Y	N	
3	201245CV	6769	150	15		Y	N	
4	201245CV	6770	150	15		Y	N	
5	201245CV	6771	150	15		Y	N	
6	201245CV	6772	150	15		Y	N	
7	201245CV	6773	150	15		Y	N	
8	201245CV	6775	150	15		Y	N	
9	201245CV	6777	150	15		Y	N	
10	201245CV	6779	150	15		Y	N	
11	201245CV	6782	150	15		Y	N	
12	201245CV	6784	150	15		Y	N	
13	201245CV	6785	150	15		Y	N	
14	201245CV	6793	150	15		Y	N	
15	201245CV	6809	150	15		Y	N	
16	201245CV	6748	150	15		Y	Y	In-Plant Conformance Sampling
17	201245CV	6749	150	15		Y	N	
18	201245CV	6752	150	15		Y	N	
19	201245CV	6755	150	15		Y	N	
20	201245CV	6756	150	15		Y	N	
21	201245CV	6757	150	15		Y	N	
22	201245CV	6758	150	15		Y	N	
23	201245CV	6762	150	15		Y	N	
24	201245CV	6764	150	15		Y	N	
25	201245CV	6765	150	15		Y	N	
26	201245CV	6774	150	15		Y	N	
27	201245CV	6778	150	15		Y	N	
TOTAL LENGTH (ft)		4050						
TOTAL AREA (ft)		60750						

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

Brantley Engineering, LLC

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GCL

DATE OF ARRIVAL: 11/07/12

DATE OF INVENTORY: 11/07/12

MATERIAL MANUFACTURER: CETCO

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	201245CV	6780	150	15		Y	N	
2	201245CV	6783	150	15		Y	N	
3	201245CV	6791	150	15		Y	N	
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
TOTAL LENGTH (ft)		450						
TOTAL AREA (ft)		6750						

PACKING LIST

ECH LLC
IL 60192

3099
RVICES
MNI WAY

ST. CLOUD FL 34773

ORDER NO:.. 028849004
ORDER DATE: 10/22/2012
SHIP DATE:. 11/05/2012

SHIP FROM:. CETCO CARTERSVILLE
FRT TERMS:. PREPAID & ADD
SHIP VIA:.. AMERICO LOGISTICS

SHIP TO: 01
JED LANDFILL CELL 7
WASTE SERVICES
1501 OMNI WAY
SEE DIRECTIONS ATTACHED FOLLOW
ST. CLOUD FL 34773

PO: JED LEACHATE

PRODUCT	SIZE	U/M	LOT #	ROLL#	LNGTH	WIDTH	SHIP QTY	WEIGHT
CV-BENTOMAT ST		SFT	SF 201245CV	00006766	150.0	15.0	2250.0	2655.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006768	150.0	15.0	2250.0	2644.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006769	150.0	15.0	2250.0	2650.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006770	150.0	15.0	2250.0	2653.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006771	150.0	15.0	2250.0	2665.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006772	150.0	15.0	2250.0	2670.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006773	150.0	15.0	2250.0	2667.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006775	150.0	15.0	2250.0	2760.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006777	150.0	15.0	2250.0	2662.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006779	150.0	15.0	2250.0	2648.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006782	150.0	15.0	2250.0	2670.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006784	150.0	15.0	2250.0	2701.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006785	150.0	15.0	2250.0	2695.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006793	150.0	15.0	2250.0	2660.0
CV-BENTOMAT ST		SFT	SF 201245CV	00006809	150.0	15.0	2250.0	2635.0
							========	
							33750.0	
CV-CG 50	50B	EA					15.0	750.0
							========	
							15.0	

ORDER TOTALS..... ========
40785.0

TOTAL ITEMS..... 16

P A C K I N G L I S T

L TECH LLC
IL 60192

O: 5099
E SERVICES
501 OMNI WAY

ST. CLOUD FL 34773

ORDER NO:.. 028849003
ORDER DATE: 10/22/2012
SHIP DATE:. 11/05/2012

SHIP FROM:. CETCO CARTERSVILLE
FRT TERMS:. PREPAID & ADD
SHIP VIA:.. AMERICO LOGISTICS

SHIP TO: 01
JED LANDFILL CELL 7
WASTE SERVICES
1501 OMNI WAY
SEE DIRECTIONS ATTACHED FOLLOW
ST. CLOUD FL 34773

PO: JED LEACHATE

PRODUCT	SIZE	U/M	LOT #	ROLL#	LNGTH	WIDTH	SHIP QTY	WEIGHT
CV-BENTOMAT ST		SFT	SF	201245CV	00006748	150.0	15.0	2250.0	2723.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006749	150.0	15.0	2250.0	2687.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006752	150.0	15.0	2250.0	2660.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006755	150.0	15.0	2250.0	2666.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006756	150.0	15.0	2250.0	2664.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006757	150.0	15.0	2250.0	2653.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006758	150.0	15.0	2250.0	2653.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006762	150.0	15.0	2250.0	2661.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006764	150.0	15.0	2250.0	2671.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006765	150.0	15.0	2250.0	2674.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006774	150.0	15.0	2250.0	2669.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006778	150.0	15.0	2250.0	2660.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006780	150.0	15.0	2250.0	2646.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006783	150.0	15.0	2250.0	2676.0
CV-BENTOMAT ST		SFT	SF	201245CV	00006791	150.0	15.0	2250.0	2659.0
								========	
								33750.0	
CV-CG 50	50B	EA						15.0	750.0
								========	
								15.0	

ORDER TOTALS..... ========
40772.0

TOTAL ITEMS..... 16

Section 2
HDPE Geomembrane

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GEOMEMBRANE

DATE OF ARRIVAL: 11/09/12

DATE OF INVENTORY: 11/09/12

MATERIAL MANUFACTURER: Agru

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	H7120980	443446-12	500	23	60 mil	Y	N	
2	H7120980	443448-12	500	23	60 mil	Y	N	
3	H7120980	443455-12	500	23	60 mil	Y	N	
4	H7120980	443457-12	500	23	60 mil	Y	N	
5	H7120980	443558-12	500	23	60 mil	Y	N	
6	H7120980	443559-12	500	23	60 mil	Y	N	
7	H8221187	443562-12	500	23	60 mil	Y	N	
8	H8221187	443563-12	500	23	60 mil	Y	N	
9	H8221187	443674-12	500	23	60 mil	Y	N	
10	H8221187	443676-12	500	23	60 mil	Y	N	
11	H8221187	443677-12	500	23	60 mil	Y	N	
12	H8221158	443339-12	500	23	60 mil	Y	Y	In-Plant Conformance Sampling
13	H8221187	443564-12	500	23	60 mil	Y	Y	In-Plant Conformance Sampling
14	H8221187	443565-12	500	23	60 mil	Y	N	
15	H8221187	443566-12	500	23	60 mil	Y	N	
16	H8221187	443569-12	500	23	60 mil	Y	N	
17	H8221187	443570-12	500	23	60 mil	Y	N	
18	H8221187	443571-12	500	23	60 mil	Y	N	
19	H8221187	443672-12	500	23	60 mil	Y	N	
20	H8221187	443673-12	500	23	60 mil	Y	Y	In-Plant Conformance Sampling
21	H8221187	443675-12	500	23	60 mil	Y	N	
22	H8221187	443678-12	500	23	60 mil	Y	N	
23								
24								
25								
26								
27								
TOTAL LENGTH (ft)		11000						
TOTAL AREA (ft)		253000						

TRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

AME OF CARRIER	CARRIER'S NO.	DATE	B/L NO.
BEST WAY FRT		11/7/2012	035266

:CEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of issue of this Bill of Lading,
e property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said carrier (the word carrier be
derstood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to delive
ther carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or an
d property, that every service to be performed hereunder, shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the
teof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
hipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditi
e hereby agreed to by the shipper and accepted for himself and his assigns.

:ROM:
SHIPPER
(ORIGIN)

AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

EMERGENCY RESPONSE PHONE NO.

TO:
CONSIGNEE JED LEACHATE STORAGE FACILITY
PROGRESSIVE WASTE SOLUTIONS CO
ST. CLOUD, FL USA
STREET MIKE KAISER (904) 673-0446

DESTINATION ZIP

ELIVERING ARRIER | ROUTE | VEHICLE NUMBER

NO. PACKAGES	+ HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	✓	CHARGES (FOR CARRIER USE ONL
127,765 440		HD DBL MICRO 60MIL 23FT WELD ROD MFG BLACK HDPE 5MM				

Item Key	Lot Number	Quantity
L-HD-MSDS-60-23	443446-12	11,615
L-HD-MSDS-60-23	443448-12	11,615
L-HD-MSDS-60-23	443455-12	11,615
L-HD-MSDS-60-23	443457-12	11,615
L-HD-MSDS-60-23	443558-12	11,615
L-HD-MSDS-60-23	443559-12	11,615
L-HD-MSDS-60-23	443562-12	11,615
L-HD-MSDS-60-23	443563-12	11,615
L-HD-MSDS-60-23	443674-12	11,615
L-HD-MSDS-60-23	443676-12	11,615
L-HD-MSDS-60-23	443677-12	11,615

Total Weight: ~~42,603 LB~~
Total Packages: 1~~28,205~~
Order No.: 20510 Order Date: 10/15/12 Request Date: 11/05/12
Location: GTOWN P.O. No.: JED

11 Rolls @ 42446
20 Spools @ 446 LBS
494,500 42,886 LBS

MIT C.O.D. TO:
AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

C.O.D. Amt $

C.O.D. FEE
☒ Prepaid
☐ Collect $

the shipment moves between two ports by a carrier by er, the law requires that the bill of lading shall state ether it is "carrier's or shipper's weight".

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

TOTAL CHARGES $

Freight charges are PREPAID unless marked collect. ☐

hipper's imprint in lieu of stamp; not a part of bill of lading roved by the Interstate Commerce Commission.

s is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the

Shipper, Per VEsuder Agent, Per

ment post office address of shipper

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL
n transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT E
mmunication Standard (HM-126C). Provide emergency response phone number in case of incident or accident.

TRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

AME OF CARRIER	CARRIER'S NO.	DATE	B/L NO.
BEST WAY FRT Mike Allen		11/7/2012	035265

CEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of issue of this Bill of Lading, roperty described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said carrier (the word carrier be erstood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to delive ther carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or an id property, that every service to be performed hereunder, shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the d reof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
ipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditi e hereby agreed to by the shipper and accepted for himself and his assigns.

ROM:
SHIPPER
(ORIGIN)

AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

EMERGENCY RESPONSE PHONE NO.

TO:
CONSIGNEE JED LEACHATE STORAGE FACILITY
PROGRESSIVE WASTE SOLUTIONS CO
ST. CLOUD, FL USA
STREET MIKE KAISER (904) 673-0446

DESTINATION ZIP

ELIVERING ARRIER | ROUTE | VEHICLE NUMBER

NO. PACKAGES	+ HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	✓	CHARGES (FOR CARRIER USE ONL
127,765		HD DBL MICRO 60MIL 23FT				
242		WELD ROD MFG BLACK HDPE 5MM				
198		WELD ROD MFG BLACK HDPE 5MM				

Item Key	Lot Number	Quantity
L-HD-MSDS-60-23	443339-12	11,615
L-HD-MSDS-60-23	443564-12	11,615
L-HD-MSDS-60-23	443565-12	11,615
L-HD-MSDS-60-23	443566-12	11,615
L-HD-MSDS-60-23	443569-12	11,615
L-HD-MSDS-60-23	443570-12	11,615
L-HD-MSDS-60-23	443571-12	11,615
L-HD-MSDS-60-23	443672-12	11,615
L-HD-MSDS-60-23	443673-12	11,615
L-HD-MSDS-60-23	443675-12	11,615
L-HD-MSDS-60-23	443678-12	11,615

Total Weight: ~~42,003 LB~~
Total Packages: 1~~28,205~~
Order No.: 20510 Order Date: 10/15/12 Request Date: 11/05/12
Location: GTOWN P.O. No.: JED

11 Rolls @ 42,483 LBS
220 spools @ 440
42,923 LBS

EMIT C.O.D. TO:
AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

C.O.D. Amt $

C.O.D. FEE
☒ Prepaid
☐ Collect $

The shipment moves between two ports by a carrier by ter, the law requires that the bill of lading shall state ether it is "carrier's or shipper's weight".

Shipper's imprint in lieu of stamp; not a part of bill of lading proved by the Interstate Commerce Commission

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

TOTAL CHARGES $

Freight charges are PREPAID unless marked collect.

☐ Check box if charges are Colle

his is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportati

Shipper, Per Agent, Per Mike Allen

Page 1 of 1

manent post office address of shipper

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS.

hen transporting hazardous materials, include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Response nmunication Standard (HM-126C). Provide emergency response phone number in case of incident or accident.

1

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GEOMEMBRANE

DATE OF ARRIVAL: 11/12/12

DATE OF INVENTORY: 11/12/12

MATERIAL MANUFACTURER: Agru

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Trackhoe

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	H7120980	443447-12	500	23	60 mil	Y	Y	In-Plant Conformance Sampling
2	H7120980	443449-12	500	23	60 mil	Y	N	
3	H7120980	443450-12	500	23	60 mil	Y	N	
4	H7120980	443451-12	500	23	60 mil	Y	N	
5	H7120980	443452-12	500	23	60 mil	Y	N	
6	H7120980	443453-12	500	23	60 mil	Y	N	
7	H7120980	443454-12	500	23	60 mil	Y	N	
8	H7120980	443456-12	500	23	60 mil	Y	Y	In-Plant Conformance Sampling
9	H7120980	443560-12	500	23	60 mil	Y	N	
10	H7120980	443561-12	500	23	60 mil	Y	N	
11	H8221158	443340-12	500	23	60 mil	Y	N	
12	H8221158	443341-12	500	23	60 mil	Y	N	
13	H8221158	443342-12	500	23	60 mil	Y	N	
14	H8221158	443343-12	500	23	60 mil	Y	N	
15	H8221158	443444-12	500	23	60 mil	Y	N	
16	H8221158	443445-12	500	23	60 mil	Y	N	
17	H8221187	443567-12	500	23	60 mil	Y	N	
18	H8221187	443568-12	500	23	60 mil	Y	N	
19	H8221187	443679-12	500	23	60 mil	Y	N	
20	H8221187	443680-12	500	23	60 mil	Y	N	
21	H8221187	443681-12	500	23	60 mil	Y	N	
22								
23								
24								
25								
26								
27								
TOTAL LENGTH (ft)		10500						
TOTAL AREA (ft)		241500						

TRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

AME OF CARRIER	CARRIER'S NO.	DATE	B/L NO.
TRUCK		11/8/2012	035273

:CEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of issue of this Bill of Lading,
e property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said carrier (the word carrier be
derstood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to delive
other carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or an
id property, that every service to be performed hereunder, shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the
reof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
hipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditi
e hereby agreed to by the shipper and accepted for himself and his assigns.

:ROM:
SHIPPER
:ORIGIN)

AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

EMERGENCY RESPONSE PHONE NO.

TO:
CONSIGNEE JED LEACHATE STORAGE FACILITY
PROGRESSIVE WASTE SOLUTIONS CO
ST. CLOUD, FL USA
STREET MIKE KAISER (904) 673-0446
DESTINATION ZIP

ELIVERING ARRIER Eckerds Trucking | ROUTE | VEHICLE NUMBER

NO. PACKAGES	+ HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	✓	CHARGES (FOR CARRIER USE ONL
116,150		HD DBL MICRO 60MIL 23FT				

Item Key	Lot Number	Quantity
L-HD-MSDS-60-23	443447-12	11,615
L-HD-MSDS-60-23	443449-12	11,615
L-HD-MSDS-60-23	443450-12	11,615
L-HD-MSDS-60-23	443451-12	11,615
L-HD-MSDS-60-23	443452-12	11,615
L-HD-MSDS-60-23	443453-12	11,615
L-HD-MSDS-60-23	443454-12	11,615
L-HD-MSDS-60-23	443456-12	11,615
L-HD-MSDS-60-23	443560-12	11,615
L-HD-MSDS-60-23	443561-12	11,615

Total Weight: ~~38,330 LB~~ 38,940 LB
Total Packages: ~~116,150~~ 10 Rolls
Order No.: 20510 Order Date: 10/15/12 Request Date: 11/05/12
Location: GTOWN P.O. No.: JED

MIT C.O.D. TO:
AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

C.O.D. Amt $

C.O.D. FEE
☒ Prepaid
☐ Collect $

the shipment moves between two ports by a carrier by
er, the law requires that the bill of lading shall state
ther it is "carrier's or shipper's weight".

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

TOTAL CHARGES $

Freight charges are PREPAID unless marked collect.
☐ Check box if charges are Colle

hipper's imprint in lieu of stamp; not a part of bill of lading
roved by the Interstate Commerce Commission.

s is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportatio

Shipper, Per Agent, Per

manent post office address of shipper

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS.
an transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Response
unication Standard (HM-126C). Provide emergency response phone number in case of incident or accident.

TRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

AME OF CARRIER	CARRIER'S NO.	DATE	B/L NO.
TRUCK		11/8/2012	035282

CEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of issue of this Bill of Lading, operty described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said carrier (the word carrier be stood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to delive er carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or an property, that every service to be performed hereunder, shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Uniform Freight Classifications in effect on the d ect, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
ipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditi hereby agreed to by the shipper and accepted for himself and his assigns.

ROM:
HIPPER
(ORIGIN)

AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

agru America

EMERGENCY RESPONSE PHONE NO.

TO:
CONSIGNEE JED LEACHATE STORAGE FACILITY
PROGRESSIVE WASTE SOLUTIONS CO
ST. CLOUD, FL USA
STREET MIKE KAISER (904) 673-0446

DESTINATION ZIP

LIVERING ARRIER McKenzie Logistics | ROUTE | VEHICLE NUMBER

NO. PACKAGES	+ HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (SUBJECT TO CORR.)	CLASS OR RATE	✓	CHARGES (FOR CARRIER USE ONL
127,765		HD DBL MICRO 60MIL 23FT				

Item Key	Lot Number	Quantity
L-HD-MSDS-60-23	443340-12	11,615
L-HD-MSDS-60-23	443341-12	11,615
L-HD-MSDS-60-23	443342-12	11,615
L-HD-MSDS-60-23	443343-12	11,615
L-HD-MSDS-60-23	443444-12	11,615
L-HD-MSDS-60-23	443445-12	11,615
L-HD-MSDS-60-23	443567-12	11,615
L-HD-MSDS-60-23	443568-12	11,615
L-HD-MSDS-60-23	443679-12	11,615
L-HD-MSDS-60-23	443680-12	11,615
L-HD-MSDS-60-23	443681-12	11,615

Total Weight: ~~42,163 LB~~ 42,471 LB
Total Packages: ~~127,765~~ 11 PLB
Order No.: 20510 Order Date: 10/15/12 Request Date: 11/05/12
Location: GTOWN P.O. No.: JED

MIT C.O.D. TO:
AGRU/AMERICA, INC.
500 GARRISON ROAD
GEORGETOWN, SOUTH CAROLINA 29440
(843) 546-0600

C.O.D. Amt $

C.O.D. FEE
☒ Prepaid
☐ Collect $

he shipment moves between two ports by a carrier by r, the law requires that the bill of lading shall state ther it is "carrier's or shipper's weight".

ipper's imprint in lieu of stamp; not a part of bill of lading oved by the Interstate Commerce Commission.

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding
$ per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
(Signature of Consignor)

TOTAL CHARGES $

Freight charges are PREPAID unless marked collect. ☐ Check box if charges are Collec

is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportatior

Shipper, Per Agent, Per

nent post office address of shipper

+ MARK WITH "X" TO DESIGNATE HAZARDOUS MATERIAL AS DEFINED IN TITLE 49 OF FEDERAL REGULATIONS.
n transporting hazardous materials include the technical or chemical name for n.o.s. (not otherwise specified) or generic description of material with appropriate UN or NA number as defined in US DOT Emergency Response munication Standard (HM-126C). Provide emergency response phone number in case of incident or accident.

1

Section 3
Drainage Geocomposite

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

Brantley Engineering, LLC

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GEOCOMPOSITE

DATE OF ARRIVAL: 11/9/12

DATE OF INVENTORY: 11/9/12

MATERIAL MANUFACTURER: Skaps

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Skid Steer

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	FPAX 980083	51381010001	164	15	dbl/sided	Y	Y	In- Plant Conformance Sampling
2	FPAX 980083	51381010002	164	15	dbl/sided	Y	N	
3	FPAX 980083	51381010003	164	15	dbl/sided	Y	N	
4	FPAX 980083	51381010004	164	15	dbl/sided	Y	N	
5	FPAX 980083	51381010005	164	15	dbl/sided	Y	N	
6	FPAX 980083	51381010006	164	15	dbl/sided	Y	N	
7	FPAX 980083	51381010007	164	15	dbl/sided	Y	N	
8	FPAX 980083	51381010008	164	15	dbl/sided	Y	N	
9	FPAX 980083	51381010009	164	15	dbl/sided	Y	N	
10	FPAX 980083	51381010010	164	15	dbl/sided	Y	N	
11	FPAX 980083	51381010011	164	15	dbl/sided	Y	N	
12	FPAX 980083	51381010012	164	15	dbl/sided	Y	N	
13	FPAX 980083	51381010013	164	15	dbl/sided	Y	N	
14	FPAX 980083	51381010014	164	15	dbl/sided	Y	N	
15	FPAX 980083	51381010015	164	15	dbl/sided	Y	N	
16	FPAX 980083	51381010016	164	15	dbl/sided	Y	N	
17	FPAX 980083	51381010017	164	15	dbl/sided	Y	N	
18	FPAX 980083	51381010018	164	15	dbl/sided	Y	N	
19	FPAX 980083	51381010019	164	15	dbl/sided	Y	N	
20	FPAX 980083	51381010020	164	15	dbl/sided	Y	N	
21	FPAX 980083	51381010021	164	15	dbl/sided	Y	N	
22	FPAX 980083	51381010022	164	15	dbl/sided	Y'	N	
23	FPAX 980083	51381010023	97	15	dbl/sided	Y	N	
24	FPAX 980083	51381010024	164	15	dbl/sided	Y	N	
25	FPAX 980083	51381010025	164	15	dbl/sided	Y	N	
26	FPAX 980083	51381010026	164	15	dbl/sided	Y	N	
27								
TOTAL LENGTH (ft)		4197						
TOTAL AREA (ft)		62,955						

STRAIGHT BILL OF LADING ORIGINAL-NOT NEGOTIABLE

SKAPS Industries

571 Industrial Parkway
Commerce, GA 30529
Ph: 706-336-7000 Fax: 706-336-7007

Bill of Lading #: C00002204
Ship Date: 11/9/12
Sales Order #: C000644
Customer Name: IESI / Progressive Waste Solutions
Cust. P.O. #: JED Leachate Storage
Ship Via: Flatbed
Delivery Terms: Plant / PPA
Container #:
Seal #:

SHIP-TO:
Project: JED Leachate Storage Relocation, FL
Address: 1501 Omni Way
City, State, Zip: St Cloud, FL, 34773
Contact: Mike Kaiser
Phone: 904-673-0446

SIGN HERE FOR SHIPPER:
SHIPPER ADDRESS: 571 INDUSTRIAL PKWY. COMMERCE, GA 30529

ATTN RECEIVER: Please sign below if you have received the items mentioned on the BOL and any discrepencies must be reported to SKAPS Industries within 7 days of receipt of goods.

Receiver Print Name	Receiver's Signature
Receive Date	Receiver's Company Name

Product Code: TN330-2-8

No	Roll #	Sq. Ft.
1	0051381010001	2,465.00
2	0051381010002	2,465.00
3	0051381010003	2,465.00
4	0051381010004	2,465.00
5	0051381010005	2,465.00
6	0051381010006	2,465.00
7	0051381010007	2,465.00
8	0051381010008	2,465.00
9	0051381010009	2,465.00
10	0051381010010	2,465.00
11	0051381010011	2,465.00
12	0051381010012	2,465.00
13	0051381010013	2,465.00
14	0051381010014	2,465.00
15	0051381010015	2,465.00
16	0051381010016	2,465.00
17	0051381010017	2,465.00
18	0051381010018	2,465.00
19	0051381010019	2,465.00
20	0051381010020	2,465.00
21	0051381010021	2,465.00
22	0051381010022	2,465.00
23	0051381010023	1,450.00
24	0051381010024	2,465.00
25	0051381010025	2,465.00
26	0051381010026	2,465.00
	Total Rolls:	26
	Total Sq Feet:	63,075.00
	Total Weight (lbs):	28,573.00

Bags of Ties: 2

Driver sign below if you have received above mentioned items :

Driver's Sign:

Driver Requirements:
1) For Monday delivery driver must call on Friday.
2) Driver must call 706-336-7000 when unloaded.
3) Driver must call and advise of any delay in transit.
4) A copy of this bill-of-lading must accompany freight invoice, failure to do this will result in delayed payments.

Delivery Timings: Mon – Fri 8:00 am to 4:00 pm
Driver's Name: Josh Sexton
Driver's Sign:
Driver's Cell Phone #: 912-572-2577
Trucking Co.: Thomas Transport
Trucking Co. Phone #: 912-449-7297
Broker: Load Pro
Date: 11/9/12
Truck Departure Time:

Comments:
Please see and follow the attached directions
Driver please call 24 hours prior to delivery
Instructions and directions for the drivers :
Access to the site for staging or parking outside of these hours will not be permitted!!
Freight view shipper # : 1885402

CARRIER MUST COLLECT THE FREIGHT FROM THE BROKER ONLY

Received at Commerce, GA from SKAPS Industries the property described above, in apparent good order except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated above, which said Carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service performed here under shall be subject to either: (a) if the shipper noted herein is SKAPS Industries as indicated by the designation of the "Shipper" to be SKAPS Industries, then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation executed between the parties or (b) if the Shipper noted herein is not SKAPS Industries then SKAPS Industries is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be perform here under between the Shipper and the Carrier shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, SKAPS Industries accepts no liability for loss of cargo, damage to containers, or any other consequences occurring during transportation. Carrier having agreed that the transportation arrangements initiated by the Shipper and not by SKAPS Industries Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns

COMShippingDefinitive.rpt

Section 4
Geotextile

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GEOTEXTILE

DATE OF ARRIVAL: 11/12/12

DATE OF INVENTORY: 11/12/12

MATERIAL MANUFACTURER: Skaps

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Skid Steer

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	27631	1	690	15	8 oz		N	
2	27631	2	690	15	8 oz		N	
3	27631	3	690	15	8 oz		N	
4	27631	4	690	15	8 oz		N	
5	27631	5	690	15	8 oz		N	
6	27631	6	690	15	8 oz		N	
7	27631	7	690	15	8 oz		N	
8	27631	8	690	15	8 oz		N	
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
TOTAL LENGTH (ft)		5520						
TOTAL AREA (ft)		82,800						

Packing List

Customer:	1349	**Order Number:**	027631
Customer PO:	JED Leachate Storage	**Due Date:**	
Customer Name:	IESI / Progressive Waste Solutions	**Site Location:**	Pendergrass Warehouse 01
Ship To :	JED LF Leachate Storage Relocation 1501 Omni Way St Cloud,FL 34773		

Item Number	Product # Rolls	Product Qty in SY	Label
GE180-180 x 690			
27631-01	1	1,150 Y2	0001
27631-02	1	1,150 Y2	0001
27631-03	1	1,150 Y2	0001
27631-04	1	1,150 Y2	0001
27631-05	1	1,150 Y2	0001
27631-06	1	1,150 Y2	0001
27631-07	1	1,150 Y2	0001
27631-08	1	1,150 Y2	0001

9200 yd²

82800
51750
134550

Brantley Engineering, LLC

BRANTLEY ENGINEERING, LLC.
Geosynthetic Inventory Control Log

PROJECT NAME: J.E.D. Leachate Storage Facility Relocation

OWNER: Waste Services Inc.

MATERIAL TYPE: GEOTEXTILE

DATE OF ARRIVAL: 12/10/12

DATE OF INVENTORY: 12/10/12

MATERIAL MANUFACTURER: Skaps

QA MONITOR: CSJ

TRUCK TYPE: Flatbed

CONDITION IN TRUCK: Good

UNLOADING METHOD: Skid Steer

#	RESIN LOT #	ROLL NUMBER	MATERIAL DIMENSIONS			QC CERT Y/N	CONF SAMPLE Y/N	REMARKS
			LENGTH (Ft)	WIDTH (Ft)	THICKNESS OR WEIGHT			
1	27631	700000286	690	15	8 oz	Y	N	
2	27631	700000293	690	15	8 oz	Y	N	
3	27631	700000301	690	15	8 oz	Y	N	
4	27631	700000303	690	15	8 oz	Y	N	
5	27631	700000308	597	15	8 oz	Y	N	
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

TOTAL LENGTH (ft)	3357
TOTAL AREA (ft)	50,355

Roll List (Customer Copy)

SKAPS Industries
335 Athena Drive - Warehouse A001
Athens, GA 30601

Phone: 706-354-3700
Fax: 706-354-3737

Bill of Lading #:	33721
Sales Order #:	28250
Customer PO #:	12512
Date:	12/7/12

Sold To:
WSI / Progressive Waste Solutions
1099 Miller Drive
Altamonte Springs, FL. 32701
UNITED STATES

Ship To:
JED Landfill
1501 Omni Way
St Cloud, FL 34773
UNITED STATES
Attn: Mike Kieser
Tel: 407-891-3720

Trailer # N/A | Seal # N/A | Carrier Cheeta

Roll Number	Product	Weight (LBS)	Length (FT)	Square Yards
700000286	GE180-180	602	690	1,150.00
700000293	GE180-180	600	690	1,150.00
700000301	GE180-180	600	690	1,150.00
700000303	GE180-180	600	690	1,150.00
700000308	GE180-180	597	690	1,150.00

Product Total	5	Net Weight:	2,999	5,750.00
Total Rolls	5	Gross Weight:	2,999	5,750.00

- CUSTOMER COPY -

APPENDIX E

Manufacturer's Quality Control Certificates

Section 1
GCL

CETCO®

GRI GEI GII GSI GAI GCI
GAI-LAP accredited

Date: 11/14/2012
Purchase Order: JED LEACHATE
ORDER NUMBERS: 028849001, 028849002, 028849003, 028849004

Waste Services

St. Cloud, FL 34773
mkaiser@wastesservicesinc.com

To Whom it May Concern:

Please find enclosed the MQA/MQC test data package for Geosynthetic Clay Liner shipments to Waste Services.

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: Jed LF Leachate Ponds
CUSTOMER P.O.: JED LEACHATE
ORDER NUMBERS: 028849001, 028849002, 028849003, 028849004
PREPARED FOR: Waste Services

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

CETCO

PRODUCT CERTIFICATIONS

PROJECT NAME: Jed LF Leachate Ponds
CUSTOMER P.O.: JED LEACHATE
ORDER NUMBERS: 028849001, 028849002, 028849003, 028849004
PREPARED FOR: Waste Services

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 ft2	Standard	Standard
ASTM D4632*	Grab Strength*modified with 4-inch grips	45,000 ft2	Standard	Standard
ASTM D 4643	GCL Moisture	40,000 ft2	35%	Standard
ASTM D4632*	Peel Strength*modified with 4-inch grips	45,000 ft2	Standard	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 028849001

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 #
028849003	201245CV	6748	150	15	2723	2250	6748	201244CV	00003007	00003005	2022389694	1097914A
028849003	201245CV	6749	150	15	2687	2250	6748	201244CV	00003007	00003005	2022389694	1097914A
028849003	201245CV	6752	150	15	2660	2250	6748	201243CV	00002972	00002970	2022389694	1097914A
028849003	201245CV	6755	150	15	2666	2250	6748	201243CV	00002972	00002970	2022389694	1097914A
028849003	201245CV	6756	150	15	2664	2250	6748	201243CV	00002972	00002970	2022389694	1097914A
028849003	201245CV	6757	150	15	2653	2250	6748	201243CV	00002972	00002970	2022389694	1097914A
028849003	201245CV	6758	150	15	2653	2250	6748	201243CV	00002972	00002970	2022389694	1097914A
028849003	201245CV	6762	150	15	2661	2250	6748	201236CV	00002642	00002638	2022389694	1097914A
028849002	201245CV	6763	150	15	2667	2250	6763	201236CV	00002642	00002638	2022389694	1097914A
028849003	201245CV	6764	150	15	2671	2250	6763	201236CV	00002642	00002638	2022532710	1097914A
028849003	201245CV	6765	150	15	2674	2250	6763	201236CV	00002642	00002638	2022532710	1097914A
028849004	201245CV	6766	150	15	2655	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849002	201245CV	6767	150	15	2664	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6768	150	15	2644	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6769	150	15	2650	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6770	150	15	2653	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6771	150	15	2665	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6772	150	15	2670	2250	6763	201245CV	00003023	00003023	2022532710	1097914A
028849004	201245CV	6773	150	15	2667	2250	6763	201245CV	00003024	00003023	2022532710	1097914A
028849003	201245CV	6774	150	15	2669	2250	6763	201245CV	00003024	00003023	2022532710	1097914A
028849004	201245CV	6775	150	15	2760	2250	6763	201245CV	00003024	00003023	2022532710	1097914A
028849001	201245CV	6776	150	15	2661	2250	6763	201245CV	00003024	00003023	2022532710	1097914A
028849004	201245CV	6777	150	15	2662	2250	6763	201245CV	00003024	00003023	2022532710	1097914A
028849003	201245CV	6778	150	15	2660	2250	6778	201245CV	00003024	00003023	2022532710	1097914A
028849004	201245CV	6779	150	15	2648	2250	6778	201245CV	00003024	00003023	2022532710	1097914A
028849003	201245CV	6780	150	15	2646	2250	6778	2022564826			2022532710	1097914A
028849001	201245CV	6781	150	15	2676	2250	6778	2022564826			2022532710	1097914A
028849004	201245CV	6782	150	15	2670	2250	6778	2022564826			2022533420	1097914A
028849003	201245CV	6783	150	15	2676	2250	6778	2022564826			2022533420	1097914A
028849004	201245CV	6784	150	15	2701	2250	6778	2022564826			2022533420	1097914A
028849004	201245CV	6785	150	15	2695	2250	6778	2022564826			2022533420	1097914A
Order	GCL Lot #	GCL Roll #	Length	Width	weight	sq ft	Roll # Tested	Cap Lot #	Cap Roll #	Roll # Tested	Base Roll #	Clay Lot #
028849002	201245CV	6786	150	15	2701	2250	6778	2022564826			2022533420	1097914A
028849002	201245CV	6787	150	15	2687	2250	6778	2022564826			2022533420	1097914A
028849002	201245CV	6788	150	15	2694	2250	6778	2022564826			2022533420	1097914A
028849002	201245CV	6789	150	15	2690	2250	6778	2022564826			2022533420	1097914A
028849001	201245CV	6790	150	15	2672	2250	6778	2022564826			2022533420	1097914A
028849003	201245CV	6791	150	15	2659	2250	6778	2022564826			2022533420	1097914A
028849001	201245CV	6792	150	15	2695	2250	6792	2022564826			2022533420	1097914A
028849004	201245CV	6793	150	15	2660	2250	6792	2022564826			2022533420	1097914A
028849002	201245CV	6794	150	15	2651	2250	6792	2022564826			2022533420	1097914A
028849002	201245CV	6795	150	15	2663	2250	6792	2022564822			2022533420	1097914A
028849002	201245CV	6796	150	15	2650	2250	6792	2022564822			2022533420	1097914A
028849002	201245CV	6797	150	15	2656	2250	6792	2022564822			2022533420	1097914A
028849002	201245CV	6798	150	15	2664	2250	6792	2022564822			2022533420	1097914A
028849001	201245CV	6799	150	15	2649	2250	6792	2022564822			2022533420	1097914A
028849002	201245CV	6800	150	15	2666	2250	6792	2022564822			2022533420	1097914A
028849002	201245CV	6801	150	15	2668	2250	6792	2022564822			2022533420	1097914A

028849001	201245CV	6802	150	15	2678	2250	6792	2022564825	2022533420	1097914A
028849002	201245CV	6803	150	15	2663	2250	6792	2022564825	2022533420	1097914A
028849002	201245CV	6804	150	15	2662	2250	6792	2022564825	2022533420	1097914A
028849001	201245CV	6805	150	15	2634	2250	6792	2022564825	2022533420	1097914A
028849001	201245CV	6806	150	15	2639	2250	6792	2022564825	2022533420	1097914A
028849001	201245CV	6807	150	15	2645	2250	6807	2022564825	2022533420	1097914A
028849001	201245CV	6808	150	15	2642	2250	6807	2022564825	2022533420	1097914A
028849004	201245CV	6809	150	15	2635	2250	6807	2022564830	2022533420	1097914A
028849001	201245CV	6810	150	15	2651	2250	6807	2022564830	2022533420	1097914A
028849001	201245CV	6811	150	15	2651	2250	6807	2022564830	2022532716	1097914A
028849001	201245CV	6812	150	15	2653	2250	6807	2022564830	2022532716	1097914A
028849001	201245CV	6813	150	15	2653	2250	6807	2022564830	2022532716	1097914A
028849001	201245CV	6814	150	15	2666	2250	6807	2022564830	2022532716	1097914A
					Total sq ft:	**135000**			Total Number of Rolls Certified: **60**	

CETCO

GCL MANUFACTURING QUALITY CONTROL TEST DATA

The following rolls in GCL certification package number 028849001 have been tested in our production facility lab.

Product	Lot # Tested	Roll # Tested	Mass Area	Grab Strength	Peel Strength 6496	Grab 4632 Modified	Moisture	Peel 4632 Modified
		ASTM Test Method:	D 5993	D 6768	D 6496	D4632*	D 4643	D4632*
		Required Value:	0.75 lb /sq ft Min	30 lbs/in MARV	3.5 lbs/in Min		35%	
CV-BENTOMAT ST	201245CV	6748	0.85	69.5	9.4	277.9	27.9	44.5
CV-BENTOMAT ST	201245CV	6763	0.90	69.4	8.8	277.4	27.5	41.9
CV-BENTOMAT ST	201245CV	6778	0.90	68.0	6.5	269.2	26.4	32.2
CV-BENTOMAT ST	201245CV	6792	0.91	42.0	6.6	167.8	25.2	35.1
CV-BENTOMAT ST	201245CV	6807	0.95	59.9	6.3	239.7	23.9	33.7

modified ASTM D 4632 using 4 inch grips.

BENTONITE CLAY CERTIFICATION

The Bentonite Clay used to produce package 028849001

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
1097914A	8.90	25.00	17.00

CETCO

GEOTEXTILE TEST RESULTS FROM MATERIAL SUPPLIERS

The GCL in certification package number 028849001 was manufactured with geotextiles which were tested with the following results.

BASE GEOTEXTILE			
Material	Roll Number	Mass Area oz/yd2	Grab Strength lbs
82 Tex	2022389694	3.2	175.4
PPX 82Tex	2022532710	3.5	138.4
PPX 82Tex	2022532716	3.4	174.1
PPX 82Tex	2022533420	3.4	167.1

COVER GEOTEXTILE			
Material	Roll Number	Mass Area oz/yd2	Grab Strength lbs
PPX 650	2022564822	7.5	120.1
PPX 650	2022564825	7.5	120.1
PPX 650	2022564826	7.5	120.1
PPX 650	2022564830	6.8	114.4
CV-NON-WOVEN	00002638	6.4	37.7
CV-NON-WOVEN	00002970	7.0	39.6
CV-NON-WOVEN	00003005	6.7	44.5
CV-NON-WOVEN	00003023	6.5	36.5

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.

Section 2
HDPE Geomembrane

cust: IESI

PO#: JED JED Leachate Stor Fac

Dest: St Cloud, FL

doc 20510

43 rolls 60 HD micro (505)

English Dimensions

100k/lot (3ft x wid) to Precis, 2nd day Brantley's UPS 71Y048 ref: JED LEACH

roll #	wid	len	area	check weld rod qty (if ordered)				wgt		resin lot #
443339 .12	23	505	11,615.0	60HD	micro	43tot	1	3822	3ft conf	H8221158
443340 .12	23	505	11,615.0	60HD	micro	43tot	2	3821		H8221158
443341 .12	23	505	11,615.0	60HD	micro	43tot	3	3817		H8221158
443342 .12	23	505	11,615.0	60HD	micro	43tot	4	3818		H8221158
443343 .12	23	505	11,615.0	60HD	micro	43tot	5	3809		H8221158
443444 .12	23	505	11,615.0	60HD	micro	43tot	6	3887		H8221158
443445 .12	23	505	11,615.0	60HD	micro	43tot	7	3885		H8221158
443446 .12	23	505	11,615.0	60HD	micro	43tot	8	3877		H7120980
443447 .12	23	505	11,615.0	60HD	micro	43tot	9	3876	3ft conf	H7120980
443448 .12	23	505	11,615.0	60HD	micro	43tot	10	3881		H7120980
443449 .12	23	505	11,615.0	60HD	micro	43tot	11	3888		H7120980
443450 .12	23	505	11,615.0	60HD	micro	43tot	12	3894		H7120980
443451 .12	23	505	11,615.0	60HD	micro	43tot	13	3892		H7120980
443452 .12	23	505	11,615.0	60HD	micro	43tot	14	3891		H7120980
443453 .12	23	505	11,615.0	60HD	micro	43tot	15	3883		H7120980
443454 .12	23	505	11,615.0	60HD	micro	43tot	16	3892		H7120980
443455 .12	23	505	11,615.0	60HD	micro	43tot	17	3897		H7120980
443456 .12	23	505	11,615.0	60HD	micro	43tot	18	3889	3ft conf	H7120980
443457 .12	23	505	11,615.0	60HD	micro	43tot	19	3849		H7120980
443558 .12	23	505	11,615.0	60HD	micro	43tot	20	3815		H7120980
443559 .12	23	505	11,615.0	60HD	micro	43tot	21	3818		H7120980
443560 .12	23	505	11,615.0	60HD	micro	43tot	22	3829		H7120980
443561 .12	23	505	11,615.0	60HD	micro	43tot	23	3875		H7120980
443562 .12	23	505	11,615.0	60HD	micro	43tot	24	3869		H8221187
443563 .12	23	505	11,615.0	60HD	micro	43tot	25	3864		H8221187
443564 .12	23	505	11,615.0	60HD	micro	43tot	26	3864	3ft conf	H8221187
443565 .12	23	505	11,615.0	60HD	micro	43tot	27	3859		H8221187
443566 .12	23	505	11,615.0	60HD	micro	43tot	28	3864		H8221187
443567 .12	23	505	11,615.0	60HD	micro	43tot	29	3858		H8221187
443568 .12	23	505	11,615.0	60HD	micro	43tot	30	3866		H8221187
443569 .12	23	505	11,615.0	60HD	micro	43tot	31	3862		H8221187
443570 .12	23	505	11,615.0	60HD	micro	43tot	32	3868		H8221187
443571 .12	23	505	11,615.0	60HD	micro	43tot	33	3870		H8221187
443672 .12	23	505	11,615.0	60HD	micro	43tot	34	3873		H8221187
443673 .12	23	505	11,615.0	60HD	micro	43tot	35	3871	3ft conf	H8221187
443674 .12	23	505	11,615.0	60HD	micro	43tot	36	3865		H8221187
443675 .12	23	505	11,615.0	60HD	micro	43tot	37	3864		H8221187
443676 .12	23	505	11,615.0	60HD	micro	43tot	38	3856		H8221187
443677 .12	23	505	11,615.0	60HD	micro	43tot	39	3855		H8221187
443678 .12	23	505	11,615.0	60HD	micro	43tot	40	3866		H8221187
443679 .12	23	505	11,615.0	60HD	micro	43tot	41	3865		H8221187
443680 .12	23	505	11,615.0	60HD	micro	43tot	42	3860		H8221187
443681 .12	23	505	11,615.0	60HD	micro	43tot	43	3861		H8221187

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ROLL # **443339-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.42	mm	56	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.67	mm	66	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 27/34 mil TOP / BOTTOM	AVE:	1.53	mm	60	mil	OIT(Standard) ASTM D3895 minutes 185		

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.28
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)	161 ppi	2,671	psi
	Average Strength @ Break	36 N/mm (kN/m)	206 ppi	3,422	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.35	
Lo = 2.0" Break	Average Elongation @ Break	%		539.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.32	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	235.2 N		52.886	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	427.6 N		96.140	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	578.8 N		130.13	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: **10/24/2012**
Signature: H. Holmes
Quality Control Department

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ROLL # **443340-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.47	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.58	mm	62	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 29/34 mil TOP / BOTTOM	AVE:	1.53	mm	60	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **185**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.28
Carbon Black Content ASTM D4218	Range	%			2.25
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29 N/mm (kN/m)	165 ppi	2,747	psi
	Average Strength @ Break	35 N/mm (kN/m)	202 ppi	3,353	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.77	
Lo = 2.0" Break	Average Elongation @ Break	%		516.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.32	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8 N		56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1 N		94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4 N		138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date:..... **10/24/2012**

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ROLL # **443341-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.44	mm	57	mil
	MAX:	1.63	mm	64	mil
Asperity ASTM D7466: 26/36 mil TOP / BOTTOM	AVE:	1.54	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	185	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.944	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.28	
Carbon Black Content ASTM D4218	Range	%				2.20	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29	N/mm (kN/m)	167	ppi	2,747	psi
	Average Strength @ Break	36	N/mm (kN/m)	203	ppi	3,353	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.77	
Lo = 2.0" Break	Average Elongation @ Break	%				516.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.32	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

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Destination **St Cloud, FL**

Date: 10/24/2012

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ROLL # **443342-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH			
	MIN:	1.40	mm	55	mil	Thickness.....	1.5 mm / 60 mil
	MAX:	1.68	mm	66	mil	Length.....	153.926 m / 505.0 feet
Asperity ASTM D7466: 25/36 mil TOP / BOTTOM	AVE:	1.53	mm	60	mil	Width.....	7.01 m; / 23.0 feet

OIT(Standard) ASTM D3895 minutes **185**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.28
Carbon Black Content ASTM D4218	Range	%			2.20
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29 N/mm (kN/m)	165 ppi	2,747	psi
	Average Strength @ Break	35 N/mm (kN/m)	202 ppi	3,353	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.77	
Lo = 2.0" Break	Average Elongation @ Break	%		516.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.32	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8 N		56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1 N		94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4 N		138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
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Destination **St Cloud, FL**

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ROLL # **443343-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.42	mm	56	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.65	mm	65	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.53	mm	60	mil	OIT(Standard) ASTM D3895 minutes	185	

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.28
Carbon Black Content ASTM D4218	Range	%				2.28
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29	N/mm (kN/m)	165	ppi	2,747 psi
	Average Strength @ Break	35	N/mm (kN/m)	202	ppi	3,353 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.77
Lo = 2.0" Break	Average Elongation @ Break	%				516.3
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.32
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443444-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.51	mm	59	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.67	mm	66	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 27/36 mil TOP / BOTTOM	AVE:	1.58	mm	62	mil	OIT(Standard) ASTM D3895 minutes	185	

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.28
Carbon Black Content ASTM D4218	Range	%				2.28
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	30	N/mm (kN/m)	171	ppi	2,747 psi
	Average Strength @ Break	37	N/mm (kN/m)	209	ppi	3,353 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.77
Lo = 2.0" Break	Average Elongation @ Break	%				516.3
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.32
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443445-12** Lot #: **H8221158** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.53	mm	60	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.67	mm	66	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 25/35 mil TOP / BOTTOM	AVE:	1.58	mm	62	mil	OIT(Standard) ASTM D3895 minutes	185	

						TEST RESULTS
Specific Gravity ASTM D792	Density		g/cc			.944
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.28
Carbon Black Content ASTM D4218	Range		%			2.35
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm (kN/m)	179	ppi	2,882 psi
	Average Strength @ Break	39	N/mm (kN/m)	221	ppi	3,560 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			16.94
Lo = 2.0" Break	Average Elongation @ Break		%			544.0
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.32
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443446-12** Lot #: **H7120980** **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: 27/36 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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.24	
Carbon Black Content ASTM D4218	Range		%			2.35	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm (kN/m)	178	ppi	2,882	psi
	Average Strength @ Break	39	N/mm (kN/m)	220	ppi	3,560	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			16.94	
Lo = 2.0" Break	Average Elongation @ Break		%			544.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: 10/25/2012
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ROLL # **443447-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.44	mm	57	mil
	MAX:	1.67	mm	66	mil
Asperity ASTM D7466: 26/36 mil TOP / BOTTOM	AVE:	1.54	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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24	
Carbon Black Content ASTM D4218	Range	%				2.35	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm (kN/m)	175	ppi	2,882	psi
	Average Strength @ Break	38	N/mm (kN/m)	216	ppi	3,560	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.94	
Lo = 2.0" Break	Average Elongation @ Break	%				544.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: 10/25/2012

Signature: H Holmes
Quality Control Department

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ROLL # **443448-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.43	mm	56	mil
	MAX:	1.65	mm	65	mil
Asperity ASTM D7466: 27/33 mil TOP / BOTTOM	AVE:	1.56	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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24	
Carbon Black Content ASTM D4218	Range	%				2.35	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm (kN/m)	177	ppi	2,882	psi
	Average Strength @ Break	38	N/mm (kN/m)	219	ppi	3,560	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.94	
Lo = 2.0" Break	Average Elongation @ Break	%				544.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8	N			56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1	N			94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4	N			138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
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ROLL # **443449-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.46	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: 27/33 mil TOP / BOTTOM	AVE:	1.55	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.946
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g	g/10 min			.24
Carbon Black Content ASTM D4218	Range	%			2.35
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm (kN/m)	176 ppi	2,882	psi
	Average Strength @ Break	38 N/mm (kN/m)	217 ppi	3,560	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.94	
Lo = 2.0" Break	Average Elongation @ Break	%		544.0	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	249.8 N		56.167	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	422.1 N		94.890	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	616.4 N		138.57	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
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Destination **St Cloud, FL**

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ROLL # **443450-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.49	mm	59	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.65	mm	65	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 23/33 mil TOP / BOTTOM	AVE:	1.58	mm	62	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.946
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24
Carbon Black Content ASTM D4218	Range	%			2.25
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29 N/mm (kN/m)	167 ppi	2,689	psi
	Average Strength @ Break	38 N/mm (kN/m)	219 ppi	3,515	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.78	
Lo = 2.0" Break	Average Elongation @ Break	%		545.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7 N		54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4 N		95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2 N		138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

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ROLL # **443451-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.44	mm	57	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.66	mm	65	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 28/32 mil TOP / BOTTOM	AVE:	1.55	mm	61	mil	OIT(Standard) ASTM D3895 minutes	191	

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.24	
Carbon Black Content ASTM D4218	Range		%			2.25	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29	N/mm (kN/m)	164	ppi	2,689	psi
	Average Strength @ Break	38	N/mm (kN/m)	214	ppi	3,515	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			16.78	
Lo = 2.0" Break	Average Elongation @ Break		%			545.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

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ROLL # **443452-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.53	mm	60	mil
	MAX:	1.69	mm	67	mil
Asperity ASTM D7466: 27/34 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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24	
Carbon Black Content ASTM D4218	Range	%				2.25	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	29	N/mm (kN/m)	168	ppi	2,689	psi
	Average Strength @ Break	39	N/mm (kN/m)	220	ppi	3,515	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.78	
Lo = 2.0" Break	Average Elongation @ Break	%				545.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

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ROLL # **443453-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.46	mm	57	mil
	MAX:	1.68	mm	66	mil
Asperity ASTM D7466: 27/33 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	191		

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24	
Carbon Black Content ASTM D4218	Range	%			2.18	
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	2,689	psi
	Average Strength @ Break	38	N/mm (kN/m)	219 ppi	3,515	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.78	
Lo = 2.0" Break	Average Elongation @ Break	%			545.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N		54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N		95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N		138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			ONGOING	

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ROLL # **443454-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.43	mm	56	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.63	mm	64	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 25/34 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.946
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24
Carbon Black Content ASTM D4218	Range	%			2.18
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	2,689	psi
	Average Strength @ Break	38 N/mm (kN/m)	216 ppi	3,515	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.78	
Lo = 2.0" Break	Average Elongation @ Break	%		545.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7 N		54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4 N		95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2 N		138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

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ROLL # **443455-12** Lot #: **H7120980** **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: 25/36 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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24	
Carbon Black Content ASTM D4218	Range	%				2.35	
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	2,634	psi
	Average Strength @ Break	40	N/mm (kN/m)	226	ppi	3,618	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.13	
Lo = 2.0" Break	Average Elongation @ Break	%				563.8	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
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ROLL # **443456-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.50	mm	59	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.67	mm	66	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.59	mm	63	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.946
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24
Carbon Black Content ASTM D4218	Range	%				2.35
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	2,634 psi
	Average Strength @ Break	40	N/mm (kN/m)	226	ppi	3,618 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.13
Lo = 2.0" Break	Average Elongation @ Break	%				563.8
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING

Customer: **IESI**
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ROLL # **443457-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.48	mm	58	mil
	MAX:	1.65	mm	65	mil
Asperity ASTM D7466: 26/36 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	191		

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.24	
Carbon Black Content ASTM D4218	Range		%			2.35	
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	2,634	psi
	Average Strength @ Break	39	N/mm (kN/m)	224	ppi	3,618	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			16.13	
Lo = 2.0" Break	Average Elongation @ Break		%			563.8	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
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ROLL # **443558-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.48	mm	58	mil
	MAX:	1.63	mm	64	mil
Asperity ASTM D7466: 25/36 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	191		

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24	
Carbon Black Content ASTM D4218	Range	%			2.34	
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		2,634	psi
	Average Strength @ Break	39 N/mm (kN/m)	221 ppi		3,618	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.13	
Lo = 2.0" Break	Average Elongation @ Break	%			563.8	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7 N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4 N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2 N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			ONGOING	

Customer: **IESI**
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ROLL # **443559-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.46	mm	57	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.61	mm	63	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/38 mil TOP / BOTTOM	AVE:	1.54	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.24	
Carbon Black Content ASTM D4218	Range	%				2.34	
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)	160	ppi	2,634	psi
	Average Strength @ Break	38	N/mm (kN/m)	219	ppi	3,618	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.13	
Lo = 2.0" Break	Average Elongation @ Break	%				563.8	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	242.7	N			54.566	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	423.4	N			95.181	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	618.2	N			138.98	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
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ROLL # **443560-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.44	mm	57	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.57	mm	62	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 27/36 mil TOP / BOTTOM	AVE:	1.52	mm	60	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **191**

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.946	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.24	
Carbon Black Content ASTM D4218	Range		%			2.34	
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)	172	ppi	2,873	psi
	Average Strength @ Break	39	N/mm (kN/m)	220	ppi	3,675	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			16.58	
Lo = 2.0" Break	Average Elongation @ Break		%			548.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
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ROLL # **443561-12** Lot #: **H7120980** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.47	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.66	mm	65	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/37 mil TOP / BOTTOM	AVE:	1.57	mm	62	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes 191

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.946
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.24
Carbon Black Content ASTM D4218	Range	%			2.34
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm (kN/m)	178 ppi	2,873	psi
	Average Strength @ Break	40 N/mm (kN/m)	227 ppi	3,675	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.58	
Lo = 2.0" Break	Average Elongation @ Break	%		548.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.77	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0 N		56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4 N		103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8 N		142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

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ROLL # **443562-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.48	mm	58	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.70	mm	67	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.60	mm	63	mil	OIT(Standard) ASTM D3895 minutes	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
Carbon Black Content ASTM D4218	Range	%				2.34	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	32	N/mm (kN/m)	181	ppi	2,873	psi
	Average Strength @ Break	41	N/mm (kN/m)	231	ppi	3,675	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.58	
Lo = 2.0" Break	Average Elongation @ Break	%				548.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

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ROLL # **443563-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.47	mm	58	mil
	MAX:	1.66	mm	65	mil
Asperity ASTM D7466: 25/34 mil TOP / BOTTOM	AVE:	1.56	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	178	

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.26	
Carbon Black Content ASTM D4218	Range	%			2.41	
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31 N/mm (kN/m)	176 ppi		2,873	psi
	Average Strength @ Break	40 N/mm (kN/m)	226 ppi		3,675	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.58	
Lo = 2.0" Break	Average Elongation @ Break	%			548.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0 N			56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4 N			103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8 N			142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			ONGOING	

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ROLL # **443564-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.48	mm	58	mil
	MAX:	1.66	mm	65	mil
Asperity ASTM D7466: 25/32 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 **178**

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
Carbon Black Content ASTM D4218	Range	%				2.41	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	31	N/mm (kN/m)	178	ppi	2,873	psi
	Average Strength @ Break	40	N/mm (kN/m)	227	ppi	3,675	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.58	
Lo = 2.0" Break	Average Elongation @ Break	%				548.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

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ROLL # **443565-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.52	mm	60	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.61	mm	63	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26
Carbon Black Content ASTM D4218	Range	%				2.51
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)	159	ppi	2,589 psi
	Average Strength @ Break	36	N/mm (kN/m)	203	ppi	3,313 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.18
Lo = 2.0" Break	Average Elongation @ Break	%				525.7
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

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ROLL # **443566-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.50	mm	59	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.70	mm	67	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/34 mil TOP / BOTTOM	AVE:	1.58	mm	62	mil	Width.....	7.01 m;	23.0 feet
						OIT(Standard) ASTM D3895 minutes	178	

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26
Carbon Black Content ASTM D4218	Range	%				2.51
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	2,589 psi
	Average Strength @ Break	36	N/mm (kN/m)	206	ppi	3,313 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.18
Lo = 2.0" Break	Average Elongation @ Break	%				525.7
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING

Customer: **IESI**
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ROLL # **443567-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.49	mm	59	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.70	mm	67	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/33 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26
Carbon Black Content ASTM D4218	Range	%				2.51
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)	159	ppi	2,589 psi
	Average Strength @ Break	36	N/mm (kN/m)	203	ppi	3,313 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.18
Lo = 2.0" Break	Average Elongation @ Break	%				525.7
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
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ROLL # **443568-12** Lot #: **H8221187** **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: 25/31 mil TOP / BOTTOM	AVE:	1.56	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	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
Carbon Black Content ASTM D4218	Range	%				2.36	
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)	159	ppi	2,589	psi
	Average Strength @ Break	36	N/mm (kN/m)	203	ppi	3,313	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.18	
Lo = 2.0" Break	Average Elongation @ Break	%				525.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0	N			56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4	N			103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8	N			142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
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ROLL # **443569-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.48	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.67	mm	66	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.57	mm	62	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.26
Carbon Black Content ASTM D4218	Range	%			2.36
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)	160 ppi	2,589	psi
	Average Strength @ Break	36 N/mm (kN/m)	205 ppi	3,313	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		16.18	
Lo = 2.0" Break	Average Elongation @ Break	%		525.7	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	251.0 N		56.422	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	460.4 N		103.51	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	635.8 N		142.93	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
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ROLL # **443570-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.48	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.63	mm	64	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/37 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190ºC /2160 g	g/10 min				.26
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	31	N/mm (kN/m)	176	ppi	2,860 psi
	Average Strength @ Break	38	N/mm (kN/m)	219	ppi	3,565 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				17.51
Lo = 2.0" Break	Average Elongation @ Break	%				536.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
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ROLL # **443571-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.47	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.64	mm	65	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 27/36 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190ºC /2160 g	g/10 min				.26
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	31	N/mm (kN/m)	176	ppi	2,860 psi
	Average Strength @ Break	38	N/mm (kN/m)	219	ppi	3,565 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				17.51
Lo = 2.0" Break	Average Elongation @ Break	%				536.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: **10/26/2012**

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ROLL # **443672-12** Lot #: **H8221187** **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

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	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
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	31	N/mm (kN/m)	177	ppi	2,860	psi
	Average Strength @ Break	39	N/mm (kN/m)	220	ppi	3,565	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				17.51	
Lo = 2.0" Break	Average Elongation @ Break	%				536.2	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date:..... 10/27/2012

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ROLL # **443673-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.43	mm	56	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.67	mm	66	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.54	mm	61	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26
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	30	N/mm (kN/m)	173	ppi	2,860 psi
	Average Strength @ Break	38	N/mm (kN/m)	216	ppi	3,565 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				17.51
Lo = 2.0" Break	Average Elongation @ Break	%				536.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443674-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH			
	MIN:	1.45	mm	57	mil	Thickness.....	1.5 mm / 60 mil
	MAX:	1.69	mm	67	mil	Length.....	153.926 m / 505.0 feet
Asperity ASTM D7466: 26/36 mil TOP / BOTTOM	AVE:	1.56	mm	61	mil	Width.....	7.01 m; / 23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

				TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc		.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min		.26
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	31 N/mm (kN/m)	176 ppi	2,860 psi
	Average Strength @ Break	38 N/mm (kN/m)	219 ppi	3,565 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.51
Lo = 2.0" Break	Average Elongation @ Break	%		536.2
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5 N		58.351 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1 N		99.174 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7 N		149.65 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443675-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH		Thickness.....	1.5 mm	60 mil
	MIN:	1.51	mm	59	mil	Length.....	153.926 m	505.0 feet
	MAX:	1.66	mm	65	mil	Width.....	7.01 m;	23.0 feet
Asperity ASTM D7466: 26/35 mil TOP / BOTTOM	AVE:	1.57	mm	62	mil	OIT(Standard) ASTM D3895 minutes	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
Carbon Black Content ASTM D4218	Range	%				2.30	
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	28	N/mm (kN/m)	160	ppi	2,591	psi
	Average Strength @ Break	38	N/mm (kN/m)	217	ppi	3,512	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.86	
Lo = 2.0" Break	Average Elongation @ Break	%				552.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

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ROLL # **443676-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.48	mm	58	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.72	mm	68	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 24/31 mil TOP / BOTTOM	AVE:	1.59	mm	63	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

						TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc				.947
MFI ASTM D1238 COND. E GRADE: **K307**	Melt Flow Index 190°C /2160 g	g/10 min				.26
Carbon Black Content ASTM D4218	Range	%				2.30
Carbon Black Dispersion ASTM D5596	Category					10 In Cat 1
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	28	N/mm (kN/m)	162	ppi	2,591 psi
	Average Strength @ Break	39	N/mm (kN/m)	220	ppi	3,512 psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.86
Lo = 2.0" Break	Average Elongation @ Break	%				552.4
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351 lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174 lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65 lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs				CERTIFIED
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs				ONGOING

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: **10/27/2012**

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ROLL # **443677-12** Lot #: **H8221187** **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: 25/29 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	178		

					TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.26	
Carbon Black Content ASTM D4218	Range	%			2.30	
Carbon Black Dispersion ASTM D5596	Category				10 In Cat 1	
Tensile Strength ASTM D6693 ASTM D638 (Modified) (2 inches / minute)	Average Strength @ Yield	28 N/mm (kN/m)	160 ppi		2,591	psi
	Average Strength @ Break	38 N/mm (kN/m)	217 ppi		3,512	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%			16.86	
Lo = 2.0" Break	Average Elongation @ Break	%			552.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%			-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5 N			58.351	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1 N			99.174	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7 N			149.65	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: 10/27/2012
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ROLL # **443678-12** Lot #: **H8221187** **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: 24/31 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	178		

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
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	2,591	psi
	Average Strength @ Break	38	N/mm (kN/m)	218	ppi	3,512	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.86	
Lo = 2.0" Break	Average Elongation @ Break	%				552.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: 10/27/2012
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ROLL # **443679-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.48	mm	58	mil
	MAX:	1.78	mm	70	mil
Asperity ASTM D7466: 27/34 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	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density	g/cc				.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min				.26	
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)	163	ppi	2,591	psi
	Average Strength @ Break	39	N/mm (kN/m)	221	ppi	3,512	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%				16.86	
Lo = 2.0" Break	Average Elongation @ Break	%				552.4	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%				-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	259.5	N			58.351	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	441.1	N			99.174	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	665.7	N			149.65	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date: 10/27/2012

Signature: H Holmes
Quality Control Department

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ROLL # **443680-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH				
	MIN:	1.46	mm	57	mil	Thickness.....	1.5 mm	60 mil
	MAX:	1.69	mm	67	mil	Length.....	153.926 m	505.0 feet
Asperity ASTM D7466: 23/34 mil TOP / BOTTOM	AVE:	1.58	mm	62	mil	Width.....	7.01 m;	23.0 feet

OIT(Standard) ASTM D3895 minutes **178**

					TEST RESULTS
Specific Gravity ASTM D792	Density	g/cc			.947
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g	g/10 min			.26
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	28 N/mm (kN/m)	161 ppi	2,588	psi
	Average Strength @ Break	33 N/mm (kN/m)	191 ppi	3,070	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield	%		17.88	
Lo = 2.0" Break	Average Elongation @ Break	%		511.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change	%		-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	260.9 N		58.649	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	403.7 N		90.769	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	595.1 N		133.79	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500 hrs		CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300 hrs		ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date:..... 10/27/2012
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ROLL # **443681-12** Lot #: **H8221187** **Liner Type: Microspike™ HDPE**

Measurement ASTM D5994 (Modified)		METRIC		ENGLISH	
	MIN:	1.51	mm	59	mil
	MAX:	1.64	mm	65	mil
Asperity ASTM D7466: 23/31 mil TOP / BOTTOM	AVE:	1.56	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	178	

						TEST RESULTS	
Specific Gravity ASTM D792	Density		g/cc			.947	
MFI ASTM D1238 COND. E GRADE: K307	Melt Flow Index 190°C /2160 g		g/10 min			.26	
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	28	N/mm (kN/m)	159	ppi	2,588	psi
	Average Strength @ Break	33	N/mm (kN/m)	189	ppi	3,070	psi
Elongation ASTM D6693 ASTM D638 (Modified) (2 inches / minute) Lo = 1.3" Yield	Average Elongation @ Yield		%			17.88	
Lo = 2.0" Break	Average Elongation @ Break		%			511.3	
Dimensional Stability ASTM D1204 (Modified)	Average Dimensional change		%			-.55	
Tear Resistance ASTM D1004 (Modified)	Average Tear Resistance	260.9	N			58.649	lbs
Puncture Resistance FTMS 101 Method 2065 (Modified)	Average Peak Load	403.7	N			90.769	lbs
Puncture Resistance ASTM D4833 (Modified)	Average Peak Load	595.1	N			133.79	lbs
ESCR ASTM D1693	Minimum Hrs w/o Failures	1500	hrs			CERTIFIED	
Notched Constant Tensile Load ASTM D5397	pass / fail @ 30%	300	hrs			ONGOING	

Customer: **IESI**
PO: **JED** **JED Leachate Stor Fac**
Destination **St Cloud, FL**

Date:..... 10/27/2012
Signature.....
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CoA Date: 09/28/2012

Certificate of Analysis

Shipped To: AGRU AMERICA INC:GEORGETOWN
500 GARRISON RD
GEORGETOWN SC 29440
USA

Recipient: PALMER
Fax:

Delivery #: 88530242
PO #: 6891
Weight: 186600 LB
Ship Date: 09/28/2012
Package: BULK
Mode: Hopper Car
Car #: SHPX463811
Seal No: 297678

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: H8221158

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.28	g/10mi
HLMI Flow Rate	ASTM D1238	23	g/10mi
Density	D1505 or D4883	0.937	g/cm3
Pellet Count	P02.08.03	28	pel/g
Production Date		09/25/2012	

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
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4806

CoA Date: 07/14/2012

Certificate of Analysis

Shipped To: AGRU AMERICA INC
500 GARRISON RD
GEORGETOWN SC 29440
USA

Recipient: PALMER
Fax:

Delivery #: 88490287
PO #: 6780
Weight: 193900 LB
Ship Date: 07/14/2012
Package: BULK
Mode: Hopper Car
Car #: PSPX008163
Seal No: 297317

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: H7120980

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.24	g/10mi
HLMI Flow Rate	ASTM D1238	21	g/10mi
Density	D1505 or D4883	0.937	g/cm3
Pellet Count	P02.08.03	24	pel/g
Production Date		07/11/2012	

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
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4806

CoA Date: 10/08/2012

Certificate of Analysis

Shipped To: AGRU AMERICA INC:GEORGETOWN
500 GARRISON RD
GEORGETOWN SC 29440
USA

Recipient: PALMER
Fax:

Delivery #: 88534687
PO #: 6946
Weight: 185500 LB
Ship Date: 10/08/2012
Package: BULK
Mode: Hopper Car
Car #: CPCX805077
Seal No: 299507

Product:
MARLEX POLYETHYLENE K307 BULK

Lot Number: H8221187

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.26	g/10mi
HLMI Flow Rate	ASTM D1238	21	g/10mi
Density	D1505 or D4883	0.937	g/cm3
Pellet Count	P02.08.03	28	pel/g
Production Date		10/03/2012	

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
Quality Systems Coordinator

For CoA questions contact Customer Service Representative at +1-832-813-4806

Chevron Phillips Chemical Company LP

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, Ph.D.
Geomembrane Technical Service & Applications Development

Section 3
Drainage Geocomposite

SKAPS

October 30, 2012
IESI / Progressive Waste Solutions
1099 Miller Drive
Altamonte Springs, FL 32701

Ref. : JED Leachate Storage Relocation, FL
Customer P.O. # JED Leachate Storage
Product : TN 330-2-8

We certify that the TN 330-2-8 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	0.300	Minimum
Thickness	ASTM D 5199	mil	330 +/- 30	Range
Carbon Black	ASTM D 4218	%	2.0 - 3.0	Range
Tensile Strength	ASTM D 5035	lbs/in	90	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]	ASTM D 4716	m^2/sec	1.5×10^{-3}	MARV
Transmissivity[2]	ASTM D 4716	m^2/sec	1.0×10^{-3}	MARV
Geotextile[4 & 5]				
Fabric Weight	ASTM D 5261	oz/yd^2	8.0	MARV
Grab Strength	ASTM D 4632	lbs	200	MARV
Tear Strength	ASTM D 4533	lbs	75	MARV
Puncture Resistance	ASTM D 4833	lbs	90	MARV
CBR Puncture	ASTM D 6241	lbs	500	MARV
Permittivity	ASTM D 4491	sec^{-1}	0.50	MARV
AOS	ASTM D 4751	US Sieve	80	MARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

Notes:

1 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.02 and a confining pressure of 500 psf between soil and textured liner after 24 hours.

2 Transmissivity measured using water at 21 ± 2 °C (70 ± 4 °F) with a gradient of 0.02 and a confining pressure of 15,000 psf between soil and textured liner after 100 hours.

3 Condition 190/2.16

4 Geotextile and Geonet properties are prior to lamination.

5 Geotextile data is provided by the supplier.

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

Sincerely,

Nilay Patel

Nilay Patel
QA Manager

APPROVED 5 QA

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

SKAPS

Product : **TN 330-2-8**
Project : **JED Leachate Storage Relocation, 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	51381010001	51381010001 - N	5138.001	5138.003	1.32	2.60	
2	51381010002	51381010002 - N	5138.001	5138.003			
3	51381010003	51381010003 - N	5138.001	5138.003			
4	51381010004	51381010004 - N	5138.001	5138.003			
5	51381010005	51381010005 - N	5138.001	5138.003			
6	51381010006	51381010006 - N	5138.001	5138.003			
7	51381010007	51381010007 - N	5138.008	5138.002			
8	51381010008	51381010008 - N	5138.008	5138.002			
9	51381010009	51381010009 - N	5138.008	5138.002			
10	51381010010	51381010010 - N	5138.008	5138.002			
11	51381010011	51381010011 - N	5138.008	5138.002			
12	51381010012	51381010012 - N	5138.008	5138.002			
13	51381010013	51381010013 - N	5138.004	5138.009			
14	51381010014	51381010014 - N	5138.004	5138.009			
15	51381010015	51381010015 - N	5138.004	5138.009	1.40	2.75	
16	51381010016	51381010016 - N	5138.004	5138.009			
17	51381010017	51381010017 - N	5138.004	5138.009			
18	51381010018	51381010018 - N	5138.004	5138.009			
19	51381010019	51381010019 - N	5138.007	5138.005			
20	51381010020	51381010020 - N	5138.007	5138.005			
21	51381010021	51381010021 - N	5138.007	5138.005			
22	51381010022	51381010022 - N	5138.007	5138.005			
23	51381010023	51381010023 - N	5138.007	5138.005			
24	51381010024	51381010024 - N	5138.007	5138.005			
25	51381010025	51381010025 - N	5138.010	5138.006			
26	51381010026	51381010026 - N	5138.010	5138.006			
27	51381010027	51381010027 - N	5138.010	5138.006			

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

SKAPS

Product : TN 330-2-8
Project : JED Leachate Storage Relocation, FL

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

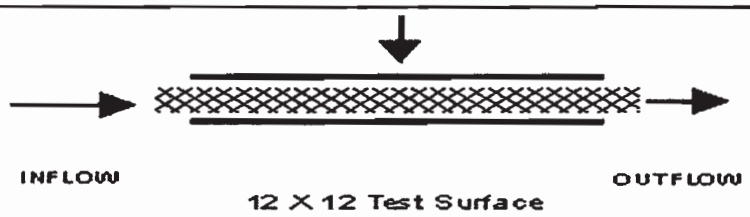
Geonet Roll Number	Resin Lot Number	Geonet Density (gm/cc)	Mass Per Unit Area (lb/ft^2)	Thickness (mils)	Carbon Black (%)	Tensile Strength (MD) (lb/in)	Transmissivity (m^2/sec)
51381010001 - N	FPAX 980083	0.9558	0.360	314	2.41	111	
51381010002 - N	FPAX 980083	0.9558					
51381010003 - N	FPAX 980083	0.9558					
51381010004 - N	FPAX 980083	0.9558					
51381010005 - N	FPAX 980083	0.9558					
51381010006 - N	FPAX 980083	0.9558					
51381010007 - N	FPAX 980083	0.9558					
51381010008 - N	FPAX 980083	0.9558					
51381010009 - N	FPAX 980083	0.9558					
51381010010 - N	FPAX 980083	0.9558					
51381010011 - N	FPAX 980083	0.9558					
51381010012 - N	FPAX 980083	0.9558					
51381010013 - N	FPAX 980083	0.9558					
51381010014 - N	FPAX 980083	0.9558					
51381010015 - N	FPAX 980083	0.9558	0.358	310	2.54	109	
51381010016 - N	FPAX 980083	0.9558					
51381010017 - N	FPAX 980083	0.9558					
51381010018 - N	FPAX 980083	0.9558					
51381010019 - N	FPAX 980083	0.9558					
51381010020 - N	FPAX 980083	0.9558					
51381010021 - N	FPAX 980083	0.9558					
51381010022 - N	FPAX 980083	0.9558					
51381010023 - N	FPAX 980083	0.9558					
51381010024 - N	FPAX 980083	0.9558					
51381010025 - N	FPAX 980083	0.9558					
51381010026 - N	FPAX 980083	0.9558					
51381010027 - N	FPAX 980083	0.9558					

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

ASTM D 4716

Client:	IESI / Progressive Waste Solutions	**Job #**	5138
Project:	JED Leachate Storage Relocation, FL		
Product:	TN 330-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Soil Geocomposite Textured Liner	**Normal Load:**	500
		Gradient:	0.02
		Seating Time:	24 hours
		Flow Direction:	MD

Test Results:

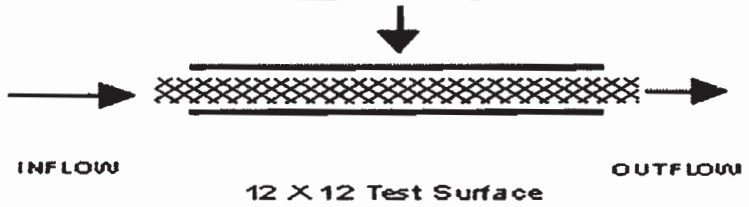
Roll No.	Pressure, psf	Gradient	Transmissivity, m^2/sec
			24 hours
51381010001	500	0.02	2.05×10^{-3}

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

ASTM D 4716

Client:	IESI / Progressive Waste Solutions	**Job #**	5138
Project:	JED Leachate Storage Relocation, FL		
Product:	TN 330-2-8		

Test Configuration:



Test Information:

Boundary Conditions:	Soil Geocomposite Textured Liner	**Normal Load:**	15000
		Gradient:	0.02
		Seating Time:	100 hours
		Flow Direction:	MD

Test Results:

Roll No.	Pressure, psf	Gradient	Transmissivity, m^2/sec 100 hours
51381010001	15000	0.02	1.25×10^{-3}

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

POLYETHYLENE RESIN CERTIFICATION

Customer Name : IESI / Progressive Waste Solutions
Project Name : JED Leachate Storage Relocation, FL
Geocomposite Manufacturer : SKAPS Industries
Geocomposite Production Plant : Commerce, GA
Geocomposite Brand Name : TN 330-2-8

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	FPAX 980083	Density	ASTM D1505	gm / cc	0.952	0.951
				Melt flow Index	ASTM D1238[(a)]	gm / 10 min	0.13	0.16

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

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

SKAPS

Product : **TN 330-2-8**
Project : **JED Leachate Storage Relocation, FL**

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

GEOCOMP ROLL#	FABRIC ROLL#	WEIGHT oz/sq yd	MD TENSILE lbs.	XMD TENSILE lbs.	MD TRAP lbs.	XMD TRAP lbs.	PUNCTURE lbs.	CBR PUNCTURE lbs.	AOS us sieve	PERM-ITY sec^{-1}
51381010001	5138.001	8.60	231	233	103	116	134	653	80	1.37
	5138.003	8.60	231	233	103	116	134	653	80	1.37

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

Section 4
Geotextile

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

November 15, 2012
WSI / Progressive Waste Solutions
1099 Miller Drive
Altamonte Springs, FL 32701
PO : JED Leachate Storage
BOL : 33356

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
27631.01	8.54	124	233	72	243	82	102	119	136	434	80	101	0.43	1.35
27631.02	8.54	124	233	72	243	82	102	119	136	434	80	101	0.43	1.35
27631.03	8.54	124	233	72	243	82	102	119	136	434	80	101	0.43	1.35
27631.04	8.54	124	233	72	243	82	102	119	136	434	80	101	0.43	1.35
27631.05	8.32	122	229	68	236	78	102	119	136	434	80	101	0.43	1.35
27631.06	8.32	122	229	68	236	78	102	119	136	434	80	101	0.43	1.35
27631.07	8.32	122	229	68	236	78	102	119	136	434	80	101	0.43	1.35
27631.08	8.32	122	229	68	236	78	102	119	136	434	80	101	0.43	1.35

*All Values are MARV.

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

January 15, 2013
WSI / Progressive Waste Solutions
1099 Miller Drive
Altamonte Springs, FL 32701
PO : 12512
BOL : 33721

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
700000286	8.17	123	227	66	233	77	97	104	133	428	80	100	0.42	1.34
700000293	8.55	120	233	71	243	82	103	119	139	434	80	100	0.42	1.34
700000301	8.25	125	229	69	237	75	95	113	135	431	80	103	0.43	1.37
700000303	8.25	125	229	69	237	75	95	113	135	431	80	103	0.43	1.37
700000308	8.47	122	235	74	241	85	95	113	135	431	80	103	0.43	1.37

*All Values are MARV.

Section 5

#4 Stone

CONRAD YELVINGTON
DISTRIBUTORS, INC.

RE: #4 (1 ½") Alabama River Gravel Material Specifications

This letter is to certify, the materials Conrad Yelvington Distributors proposes to supply to the above referenced job has been tested with the applicable ASTM standards and found to have the typical results listed below:

Sieve Size	% Passing
2"	100
1 1/2"	98
1"	49
3/4"	11
3/8"	3

Physical Properties Test	Typical Test Result
LA Abrasion (ASTM C-535)	30
SSD Gravity (ASTM C-127)	2.587
Absorption (ASTM C-127)	0.9
Sulfate Soundness (ASTM C-88)	0.4
Unit Weight (ASTM C-127)	161 pcf

***Average of tests performed at the quarry/terminal, and may not be indicative of any one test. In place material may vary from submittal due to degradation and segregation caused by handling, spreading and compaction.**

Should you have any questions or need any additional information, please contact me at your earliest convenience.

Regards,

Donald Reilly
Technical Services Manager

Section 6
Limerock

Florida Department of Transportation

RICK SCOTT
GOVERNOR

5007 NE 39th Avenue
Gainesville, FL 32609

ANANTH PRASAD
SECRETARY

July 24th, 2012

James L. Craggs
Buck Hammock Mining Company, LLC
4101 Northeast 35th St.
Ocala, Florida, 34479

Dear Mr. Craggs,

Subject: Approval of Buck Hammock Mining Company, LLC, FDOT Source 92757 of FDOT Material Code B02, Bank Run Shell Base

This is to inform you that the above subject aggregate source and stockpile #1 of Bank Run Shell Base Material is approved in accordance with the Department of Transportation Rule 14-103.0071. Your source may certify the above referenced material using the Conditional QC Certification System. This is to ensure a source can maintain consistent production of aggregate meeting Department specifications within the limits set forth in Section 2.3 of the Construction Aggregates Manual.

You may use the Conditional QC Certification System for a period not exceeding 180 days beginning on the original approval date to establish the quality and reliability of the product. Within this time frame, please submit a written request to the Director, Office of Materials, to employ the Full QC Certification System, provided you satisfy the requirements of Rule 14-103.0071(1)(a)-(k). Otherwise, the new source shall be subject to suspension pursuant to Rule 14-103.009.

While using the Conditional QC Certification System, the mine is subject to all the requirements of Rule 14-103.071(2), Section 2.2 of the Construction Aggregates Manual and appropriate material specifications.

For the purpose of identification, Florida Department of Transportation mine number 92757 will be used to identify this source and should be used by you in all correspondence regarding the mine.

QC data must be submitted to establish the quality and reliability of the material being shipped from your mine. In addition, please keep the Department informed of any conditions resulting in changes in the shipment, handling, or storage facilities, used for FDOT materials that might deviate from the approved Quality Control Program or affect the QC data submitted.

Terms of approval are as follows:

1. You are approved to distribute FDOT Material Code B02, Bank Run Shell Base, Certified to FDOT projects.

2. Your initial sampling and testing frequencies are as follows: LBR, LLPI, Gradation – 2 per week.

3. A suitable sign identifying stockpiles shall state the following: FDOT, B02.

4. The following information must appear on each certification document (ticket or bill of lading): FDOT mine number, date, quantity, aggregate description, corresponding department material code, producer ticket number, and the certification statement Specified in your Quality Control Program.

5. All test data must be transmitted to the Department and available to Department personnel at the source as per Section 1.3, Table 9 of the Construction Aggregates Manual.

6. Prior to shipment of certified material, you are required to contact the District Aggregate Control Unit. This is to allow adequate time to make the necessary Quality Assurance arrangements.

If you have any questions or comments please contact, Mike McNally, District 5 Aggregate Coordinator at (386) 740-3581 or Nicole Robey, State Materials Office at: (352) 955-2930.

Sincerely,

David J. Horhota

David J. Horhota, PhD, P.E.
State Geotechnical Materials Engineer

DJH: nr
cc: M. McNally
File

Craggs Construction Company
4101 Northeast 35th Street
Ocala, Florida 34479

Telephone: (352) 622-7175 **Fax: (352) 622-3345** **Estimating Fax: (352) 732-6624**

July 20, 2012

Timothy J. Ruelke, P.E.
Director, Office of Materials
Florida Department of Transportation
State Materials Office
5007 NE 39th Avenue
Gainesville, FL 32609 | (352) 955-6600

RE: Request for Initial Source Approval; Buck Hammock Mining Company, LLC. (FDOT Type 1 Mine # 92757)

Dear Mr. Ruelke,

In accordance with the Florida Department of Transportation State Materials Office requirements, our Quality Control Program submitted on June 27, 2012, and previously submitted testing data to support this Request for Initial Source Approval, please accept this letter as Buck Hammock Mining Company, LLC.'s official **Request for Initial Source Approval** on this 20th day of July, 2012.

We believe that we have demonstrated to the Department that we have met all the established guidelines and requirements set forth by the FDOT State Materials Office for such designation.

Please review our request and if you concur, provide us with your Initial Source Approval designation at your earliest convenience.

Thank you,
James L. Craggs
Buck Hammock Mining Company, LLC

Section 7
Asphaltic Concrete

ORLANDO PAVING COMPANY

STATEMENT OF SOURCE OF MATERIALS AND JOB MIX FORMULA FOR BITUMINOUS CONCRETE

Project No. _____ CTQP Qualified Mix Designer: Carl Moorefield

Proj. Name: Various Projects Address: 8150 Apopka Blvd., Apopka Fl. 32703

Phone No.: 407-293-4340 Fax No.: 407-290-5068 E-mail: carl.moorefield@hubbard.com

Submitted By: Orlando Paving Company Type Mix: Type S-1 Recycle Design No.: QA # 12-S1402A

TYPE MATERIAL	F.D.O.T. CODE	PRODUCER	PIT NO.	DATE SAMPLED
1. Crushed RAP	A0531	Orlando Paving Company		12 / 03 / 2012
2. S1A Stone	C44	Martin Marietta Materials	NS315	12 / 03 / 2012
3. S1B Stone	C54	Martin Marietta Materials	NS315	12 / 03 / 2012
4. Screening	F20	Hubbard Materials Company	70693	12 / 03 / 2012
5. Local Sand		Tarmac Center Sand		12 / 03 / 2012
6. Recycling Agent or PG 52-28	916-PG			

PERCENTAGE BY WEIGHT TOTAL AGGREGATE PASSING SIEVES

	Blend Number	40% 1	16% 2	12% 3	22% 4	10% 5	6	JOB MIX FORMULA	Specification Range	
SIEVE SIZE										
	3/4"	100	100	100	100	100		100	100	
	1/2"	100	90	100	100	100		98	88 - 98	
	3/8"	96	70	94	100	100		93	75 - 93	
	No. 4	73	15	39	94	100		67	47 - 75	
	No. 10	52	4	8	51	100		44	31 - 53	
	No. 40	34	3	3	18	91		28	19 - 35	
	No. 80	19	2	2	12	15		12	7 - 21	
	No. 200	10.0	0.5	0.5	6.5	0.5		5.6	2 - 6	
	G_{SB}	2.602	2.627	2.625	2.558	2.630		2.602		

TESTS PERFORMED IN ACCORDANCE WITH AASHTO TEST METHODS: T209, T245 AND FDOT ASPHALT DESIGN PROCEDURES

WILLIAM F. WALDROP LICENSE No 14948 12-12-12 STATE OF FLORIDA PROFESSIONAL ENGINEER

William Waldrop

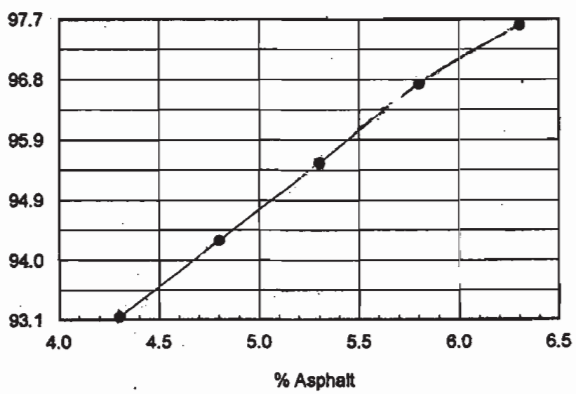
14948 Registration No.

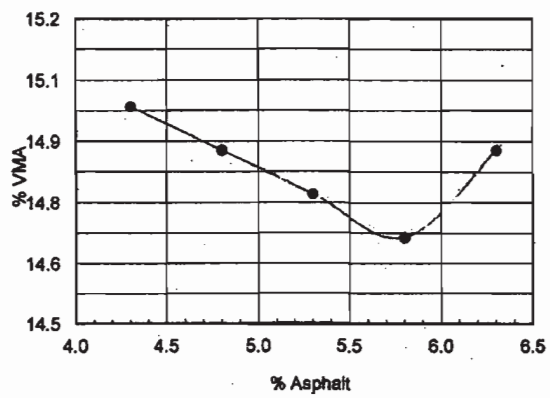
12/12/2012 Effective Date

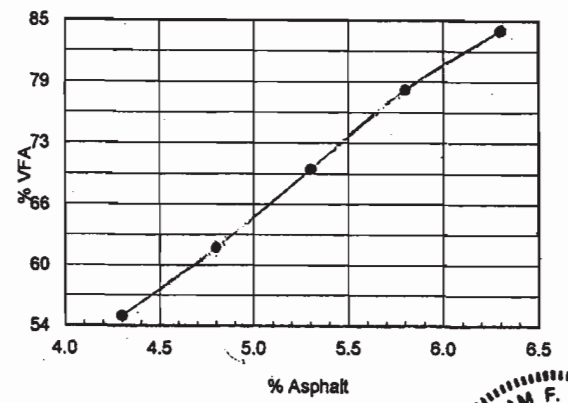
HOT MIX DESIGN DATA SHEET

Design No. QA 12-S1402A S1 Recycle

P_b	G_{mb} @ N_{des}	G_{mm}	V_a	VMA	VFA	P_{be}	$P_{0.075}$ / P_{be}	Stability	Flow
4.3	2.312	2.482	6.8	15.0	55	3.6	1.6	3630	10.0
4.8	2.327	2.467	5.7	14.9	62	4.1	1.4	3710	11.0
5.3	**2.342**	**2.452**	**4.5**	**14.8**	**70**	**4.5**	**1.2**	**3750**	**12.0**
5.8	2.357	2.437	3.3	14.7	78	5.0	1.1	3770	13.0
6.3	2.364	2.422	2.4	14.9	84	5.4	1.0	3710	14.0







Optimum Asphalt 5.3 %

Air Voids 4.5 %

Mixing Temperature 310 °F 154 °C

Lab Density 146.1 Lbs/Ft^3

VMA 14.8

Compaction Temperature 310 154

Stability 3750 lb.

NCAT Oven Calibration Factor -0.10 %
(+To Be Added)/(-To Be Subtracted)

Additives Anti-Strip 0.5 % _____ %

Optimum Asphalt Content = 5.30%
Asphalt using 40% RAP @ 5.4% = 2.20%
Recycling Agent to be determined by the current RAP stockpile viscosity value = 3.10%

WILLIAM F. WALDROP
LICENSE
No 14848
12-12-12
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

APPENDIX F
Conformance Test Results

Section 1
GCL

Precision Geosynthetic Laboratories International
A Texas Research International Company

November 6, 2012

GAI-LAP
Initial: CVZ #:0.13
DATE: 11/06/2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of one (1) Bentomat ST GCL sample.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **November 6, 2012**

REFERENCE PGLI JOB NO.: G121209

DATE RECEIVED: November 1, 2012

SAMPLED BY: PGLI at CETCO, GA

SAMPLE IDENTIFICATIONS:

SAMPLE ID	***PGLI CONTROL NUMBER***
1. R#6748 L#201245CV	87923

TESTS REQUIRED / PERFORMED:

TEST METHOD	***DESCRIPTION***
1. ASTM D5084	Hydraulic Conductivity
2. ASTM D5887	Index Flux

TEST RESULTS: The test results are summarized in the attached Table 1.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

2 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **11/1/2012**
Date Reported: **11/6/2012**
Client Sample ID: **R#6748 L#201245CV**
Material Description: **Bentomat ST GCL**

QC'd By: Maria Espitia
PGL Job No.: **G121209**
PGL Control No.: **87923**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Maximum
ASTM D5084	Hydraulic Conductivity (cm./ sec.)															
	Initial Specimen Size: 4" dia Initial Moisture Content of the GCL: 19.7 %															
	Effective Consolidation Stress: 5 psi, Final Moisure Content: 111.1 %															
		2.1E-09										**2.1E-09**	**N/A**	**N/A**	**N/A**	**5.00E-09**
ASTM D5887	Index Flux ($m.^3/ m.^2/sec.$)															
	Confining Pressure: 5 psi															
		2.7E-09										**2.7E-09**	N/A	N/A	N/A	-

(End of Table 1)

(Sheet 1 of 1)

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Espitia

Material: Bentomat ST GCL

SAMPLING FREQUENCY: 1/200,000 sq.ft.

Manufacturer: CETCO

Location: GA

No.	Roll #	Lot #	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
1	6748	201245CV	150	15	2250	N/A	PGLI	10/30/2012	11/1/2012	G121209 C#87923
2	6749	201245CV	150	15	2250	N/A				
3	6750	201245CV	150	15	2250	N/A				
4	6751	201245CV	150	15	2250	N/A				
5	6752	201245CV	150	15	2250	N/A				
6	6753	201245CV	150	15	2250	N/A				
7	6754	201245CV	150	15	2250	N/A				
8	6755	201245CV	150	15	2250	N/A				
9	6756	201245CV	150	15	2250	N/A				
10	6757	201245CV	150	15	2250	N/A				
11	6758	201245CV	150	15	2250	N/A				
12	6759	201245CV	150	15	2250	N/A				
13	6760	201245CV	150	15	2250	N/A				
14	6761	201245CV	150	15	2250	N/A				
15	6762	201245CV	150	15	2250	N/A				
16	6763	201245CV	150	15	2250	N/A				
17	6764	201245CV	150	15	2250	N/A				
18	6765	201245CV	150	15	2250	N/A				
19	6766	201245CV	150	15	2250	N/A				
20	6767	201245CV	150	15	2250	N/A				
21	6768	201245CV	150	15	2250	N/A				
22	6769	201245CV	150	15	2250	N/A				
23	6770	201245CV	150	15	2250	N/A				
24	6771	201245CV	150	15	2250	N/A				
25	6772	201245CV	150	15	2250	N/A				
26	6773	201245CV	150	15	2250	N/A				
27	6774	201245CV	150	15	2250	N/A				
28	6775	201245CV	150	15	2250	N/A				

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Cepitis

Material: Bentomat ST GCL

SAMPLING FREQUENCY: 1/200,000 sq.ft.

Manufacturer: CETCO

Location: GA

No.	Roll #	Lot #	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
29	6776	201245CV	150	15	2250	N/A				
30	6777	201245CV	150	15	2250	N/A				
31	6778	201245CV	150	15	2250	N/A				
32	6779	201245CV	150	15	2250	N/A				
33	6780	201245CV	150	15	2250	N/A				
34	6781	201245CV	150	15	2250	N/A				
35	6782	201245CV	150	15	2250	N/A				
36	6783	201245CV	150	15	2250	N/A				
37	6784	201245CV	150	15	2250	N/A				
38	6785	201245CV	150	15	2250	N/A				
39	6786	201245CV	150	15	2250	N/A				
40	6787	201245CV	150	15	2250	N/A				
41	6788	201245CV	150	15	2250	N/A				
42	6789	201245CV	150	15	2250	N/A				
43	6790	201245CV	150	15	2250	N/A				
44	6791	201245CV	150	15	2250	N/A				
45	6792	201245CV	150	15	2250	N/A				
46	6793	201245CV	150	15	2250	N/A				
47	6794	201245CV	150	15	2250	N/A				
48	6795	201245CV	150	15	2250	N/A				
49	6796	201245CV	150	15	2250	N/A				
50	6797	201245CV	150	15	2250	N/A				
51	6798	201245CV	150	15	2250	N/A				
52	6799	201245CV	150	15	2250	N/A				
53	6800	201245CV	150	15	2250	N/A				
54	6801	201245CV	150	15	2250	N/A				
55	6802	201245CV	150	15	2250	N/A				
56	6803	201245CV	150	15	2250	N/A				

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Espitia

Material: Bentomat ST GCL

SAMPLING FREQUENCY: 1/200,000 sq.ft.

Manufacturer: CETCO

Location: GA

No.	Roll #	Lot #	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
57	6804	201245CV	150	15	2250	N/A				
58	6805	201245CV	150	15	2250	N/A				
59	6806	201245CV	150	15	2250	N/A				
60	6807	201245CV	150	15	2250	N/A				
61	6808	201245CV	150	15	2250	N/A				
62	6809	201245CV	150	15	2250	N/A				
63	6810	201245CV	150	15	2250	N/A				
64	6811	201245CV	150	15	2250	N/A				
65	6812	201245CV	150	15	2250	N/A				
66	6813	201245CV	150	15	2250	N/A				
67	6814	201245CV	150	15	2250	N/A				
68	6815	201245CV	90	15	1350	N/A				
				TOTAL ft^2 =	152,100					

Section 2
HDPE Geomembrane

Precision Geosynthetic Laboratories International
A Texas Research International Company

GAI-LAP
Initial: GVZ #:0.13
DATE: 11/01/2012

November 1, 2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of one (1) 60mil HDPE Microspike Geomembrane sample.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **November 1, 2012**

REFERENCE PGLI JOB NO.: G121202

DATE RECEIVED: October 30, 2012

SAMPLED BY: PGLI at AGRU, SC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. R#443456.12 L#H7120980	87891

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D5994	Thickness
2. ASTM D1505	Density
3. ASTM D6693	Tensile Properties
4. ASTM D1603	Carbon Black Content
5. ASTM D5596	Carbon Black Dispersion

TEST RESULTS: The test results are summarized in the attached Table 1.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the sample tested is believed to be true representative of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

2 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/30/2012**
Date Reported: **11/1/2012**
Client Sample ID: **R#443456.12 L#H7120980**
Material Description: **60mil HDPE Microspike Geomembrane**

QC'd By: Maria Espitia
PGL Job No.: **G121202**
PGL Control No.: **87891**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)															
	Loading Time: 5 sec Specimen Size: 4" x 4"															60 nominal
		63	64	65	65	62	64	63	62	61	61	63	1	61	65	54 minimum
ASTM D1505	Density (grams/ cm.^{3})															
		0.9484	0.9484	0.9484								0.9484	0.0000	0.9484	0.9484	0.94
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	188	182	189	186	194						187	4	182	194	126 min.
	TD	204	205	199	193	200						200	5	193	205	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	247	231	243	267	240						246	13	231	267	90 min.
	TD	251	256	216	235	207						233	22	207	256	
	Elongation at Yield (percent, %)															
	MD	22	22	20	22	23						22	1	20	23	12 min.
	TD	18	18	19	18	18						18	0	18	19	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	MD	513	475	437	498	442						473	34	437	513	100 min.
	TD	639	639	542	568	517						581	56	517	639	
ASTM D1603	Carbon Black Content (percent, %)															
		2.27	2.25									2.26	0.02	2.25	2.27	2-3
ASTM D5596	Carbon Black Dispersion (category rating per reference chart PCN: 12-455960-38)															9 of 10 in Category 1 or 2
		1	1	1	1	1	1	1	1	1	1	10 out of 10 in Category 1				all in Category 1,2, or 3

(End of Table 1)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

Precision Geosynthetic Laboratories International
A Texas Research International Company

GAI-LAP
Initial: CVZ #:0.13
DATE: 10/31/2012

October 31, 2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of two (2) 60mil HDPE Microspike Geomembrane samples.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **October 31, 2012**

REFERENCE PGLI JOB NO.: G121198

DATE RECEIVED: October 29, 2012

SAMPLED BY: PGLI at AGRU, SC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. R#443339.12 L#H8221158	87869
2. R#443447.12 L#H7120980	87870

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D5994	Thickness
2. ASTM D1505	Density
3. ASTM D6693	Tensile Properties
4. ASTM D1603	Carbon Black Content
5. ASTM D5596	Carbon Black Dispersion

TEST RESULTS: The test results are summarized in the attached Tables 1 to 2.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the sample tested is believed to be true representative of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

3 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/29/2012**
Date Reported: **10/31/2012**
Client Sample ID: **R#443339.12 L#H8221158**
Material Description: **60mil HDPE Microspike Geomembrane**

QC'd By: Maria Espitia
PGL Job No.: **G121198**
PGL Control No.: **87869**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)															
	Loading Time: 5 sec Specimen Size: 4" x 4"															60 nominal
		63	64	63	62	64	63	62	64	65	66	64	1	62	66	54 minimum
ASTM D1505	Density (grams/ cm.^{3})															
		0.9479	0.9479	0.9479								0.9479	0.0000	0.9479	0.9479	0.94
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	170	180	187	189	181						181	7	170	189	126 min.
	TD	204	197	196	192	193						196	5	192	204	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	252	239	218	246	238						239	13	218	252	90 min.
	TD	246	240	245	207	239						235	16	207	246	
	Elongation at Yield (percent, %)															
	MD	22	21	21	22	23						22	1	21	23	12 min.
	TD	17	17	17	16	17						17	0	16	17	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	MD	466	508	440	449	443						461	28	440	508	100 min.
	TD	627	619	615	535	606						600	37	535	627	
ASTM D1603	Carbon Black Content (percent, %)															
		2.25	2.29									2.27	0.03	2.25	2.29	2-3
ASTM D5596	Carbon Black Dispersion (category rating per reference chart PCN: 12-455960-38)															9 of 10 in Category 1 or 2
		1	1	1	1	1	1	1	1	1	1	10 out of 10 in Category 1				all in Category 1,2, or 3

(End of Table 1)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

TABLE 2.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/29/2012**
Date Reported: **10/31/2012**
Client Sample ID: **R#443447.12 L#H7120980**
Material Description: **60mil HDPE Microspike Geomembrane**

QC'd By: Maria Espitia
PGL Job No.: **G121198**
PGL Control No.: **87870**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)															
	Loading Time: 5 sec Specimen Size: 4" x 4"															
		62	61	62	63	62	64	64	66	63	64	63	1	61	66	60 nominal 54 minimum
ASTM D1505	Density (grams/ cm.^{3})															
		0.9481	0.9481	0.9481								0.9481	0.0000	0.9481	0.9481	0.94
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	180	181	173	172	169						175	5	169	181	126 min.
	TD	188	189	197	183	190						189	5	183	197	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	205	244	205	246	221						224	20	205	246	90 min.
	TD	202	187	227	202	196						203	15	187	227	
	Elongation at Yield (percent, %)															
	MD	21	22	22	21	22						21	1	21	22	12 min.
	TD	17	16	17	18	18						17	1	16	18	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	MD	459	429	459	441	463						450	15	429	463	100 min.
	TD	548	470	615	547	500						536	55	470	615	
ASTM D1603	Carbon Black Content (percent, %)															
		2.23	2.23									2.23	0.00	2.23	2.23	2-3
ASTM D5596	Carbon Black Dispersion (category rating per reference chart PCN: 12-455960-38)															9 of 10 in Category 1 or 2
		1	1	1	1	1	1	1	1	1	1	10 out of 10 in Category 1				all in Category 1,2, or 3

(End of Table 2)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

Precision Geosynthetic Laboratories International
A Texas Research International Company

November 2, 2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

GAI-LAP
Initial: CVZ #:0.13
DATE: 11/02/2012

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of two (2) 60mil HDPE Microspike Geomembrane samples.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **November 2, 2012**

REFERENCE PGLI JOB NO.: G121204

DATE RECEIVED: October 31, 2012

SAMPLED BY: PGLI at AGRU, SC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. R#443564.12 L#H8221187	87900
2. R#443673.12 l#H8221187	87901

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D5994	Thickness
2. ASTM D1505	Density
3. ASTM D6693	Tensile Properties
4. ASTM D1603	Carbon Black Content
5. ASTM D5596	Carbon Black Dispersion

TEST RESULTS: The test results are summarized in the attached Tables 1 to 2.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

3 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/31/2012**
Date Reported: **11/2/2012**
Client Sample ID: **R#443564.12 L#H8221187**
Material Description: **60mil HDPE Microspike Geomembrane**

QC'd By: Maria Espitia
PGL Job No.: **G121204**
PGL Control No.: **87900**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)															
	Loading Time: 5 sec Specimen Size: 4" x 4"															60 nominal
		62	64	63	62	61	63	62	62	62	62	62	1	61	64	54 minimum
ASTM D1505	Density (grams/ cm.^{3})															
		0.9476	0.9476	0.9476								0.9476	0.0000	0.9476	0.9476	0.94
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	167	175	183	175	160						172	9	160	183	126 min.
	TD	189	190	194	174	180						185	8	174	194	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	207	216	232	233	237						225	13	207	237	90 min.
	TD	202	229	245	199	196						214	22	196	245	
	Elongation at Yield (percent, %)															
	MD	22	22	21	23	22						22	1	21	23	12 min.
	TD	18	18	18	19	17						18	0	17	19	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	MD	450	451	416	415	481						443	28	415	481	100 min.
	TD	523	601	634	568	533						572	46	523	634	
ASTM D1603	Carbon Black Content (percent, %)															
		2.27	2.23									2.25	0.03	2.23	2.27	2-3
ASTM D5596	Carbon Black Dispersion (category rating per reference chart PCN: 12-455960-38)															9 of 10 in Category 1 or 2
		1	1	1	1	1	1	1	1	1	1	10 out of 10 in Category 1				all in Category 1,2, or 3

(End of Table 1)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

TABLE 2.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/31/2012**
Date Reported: **11/2/2012**
Client Sample ID: **R#443673.12 L#H8221187**
Material Description: **60mil HDPE Microspike Geomembrane**

QC'd By: Maria Capitia
PGL Job No.: **G121204**
PGL Control No.: **87901**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs.
ASTM D5994	Thickness (mils)															
	Apparatus: Dead-weight dial micrometer with gauge points tapered at an angle of 60° +/- 2° to the horizontal with the tip rounded to a radius of 0.8+/-0.1 mm(0.031+/-0.004 in), with a specified force of 0.56+/-0.05 N (2+/-0.2 oz)															
	Loading Time: 5 sec Specimen Size: 4" x 4"															
		64	63	62	64	63	64	62	63	62	61	63	1	61	64	60 nominal 54 minimum
ASTM D1505	Density (grams/ cm.^{3})															
		0.9481	0.9481	0.9481								0.9481	0.0000	0.9481	0.9481	0.94
ASTM D6693 Type IV	Tensile Properties:															
	Test Specimens: Type IV, Width of narrow section:0.25in, Length of narrow section:1.3in, Width Overall:0.75in, Length Overall: 4.5in Conditioning: Conducted test in standard laboratory atmosphere of 23+/-2° C (73.4+/-3.6° F), and 50+/-5% relative humidity. Rate of Separation: 2"/min															
	Tensile Strength at Yield (lbs/ in.-width)															
	MD	166	173	163	161	169						167	5	161	173	126 min.
	TD	194	174	181	193	172						183	10	172	194	
	Tensile Strength at Break (lbs/ in.- width)															
	MD	200	200	219	219	217						211	10	200	219	90 min.
	TD	210	209	209	234	204						213	12	204	234	
	Elongation at Yield (percent, %)															
	MD	22	21	23	22	21						22	1	21	23	12 min.
	TD	18	18	18	16	18						18	1	16	18	
	Elongation at Break (percent, %) *Gauge Length = 2.0 in.*															
	MD	482	453	480	478	412						461	30	412	482	100 min.
	TD	556	605	565	642	589						591	34	556	642	
ASTM D1603	Carbon Black Content (percent, %)															
		2.21	2.25									2.23	0.03	2.21	2.25	2-3
ASTM D5596	Carbon Black Dispersion (category rating per reference chart PCN: 12-455960-38)															
		1	1	1	1	1	1	1	1	1	1	10 out of 10 in Category 1				9 of 10 in Category 1 or 2 all in Category 1,2, or 3

(End of Table 2)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Espitia

Material: 60mil HDPE Microspike Geomembrane

SAMPLING FREQUENCY: 1/100,000 sq.ft. or at least 1/lot

Manufacturer: AGRU

Location: SC

No.	Roll #	Lot #	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
1	443339.12	H8221158	505	23	11615	N/A	PGLI	10/25/2012	10/29/2012	G121198 C#87869
2	443340.12	H8221158	505	23	11615	N/A				
3	443341.12	H8221158	505	23	11615	N/A				
4	443342.12	H8221158	505	23	11615	N/A				
5	443343.12	H8221158	505	23	11615	N/A				
6	443444.12	H8221158	505	23	11615	N/A				
7	443445.12	H8221158	505	23	11615	N/A				
				Sub Total ft^2 =	**81305**					
8	443446.12	H7120980	505	23	11615	N/A				
9	443447.12	H7120980	505	23	11615	N/A	PGLI	10/25/2012	10/29/2012	G121198 C#87870
10	443448.12	H7120980	505	23	11615	N/A				
11	443449.12	H7120980	505	23	11615	N/A				
12	443450.12	H7120980	505	23	11615	N/A				
13	443451.12	H7120980	505	23	11615	N/A				
14	443452.12	H7120980	505	23	11615	N/A				
15	443453.12	H7120980	505	23	11615	N/A				
16	443454.12	H7120980	505	23	11615	N/A				
17	443455.12	H7120980	505	23	11615	N/A				
18	443456.12	H7120980	505	23	11615	N/A	PGLI	1026/2012	10/30/2012	G121202 C#87891
19	443457.12	H7120980	505	23	11615	N/A				
20	443558.12	H7120980	505	23	11615	N/A				
21	443559.12	H7120980	505	23	11615	N/A				
22	443560.12	H7120980	505	23	11615	N/A				
23	443561.12	H7120980	505	23	11615	N/A				
				Sub Total ft^2 =	**185840**					

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Espitia

Material: 60mil HDPE Microspike Geomembrane

SAMPLING FREQUENCY: 1/100,000 sq.ft. or at least 1/lot

Manufacturer: AGRU

Location: SC

No.	Roll #	Lot #	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
24	443562.12	H8221187	505	23	11615	N/A				
25	443563.12	H8221187	505	23	11615	N/A				
26	443564.12	H8221187	505	23	11615	N/A	PGLI	10/29/2012	10/31/2012	G121204 C#87900
27	443565.12	H8221187	505	23	11615	N/A				
28	443566.12	H8221187	505	23	11615	N/A				
29	443567.12	H8221187	505	23	11615	N/A				
30	443568.12	H8221187	505	23	11615	N/A				
31	443569.12	H8221187	505	23	11615	N/A				
32	443570.12	H8221187	505	23	11615	N/A				
33	443571.12	H8221187	505	23	11615	N/A				
34	443672.12	H8221187	505	23	11615	N/A				
35	443673.12	H8221187	505	23	11615	N/A	PGLI	10/29/2012	10/31/2012	G121204 C#87901
36	443674.12	H8221187	505	23	11615	N/A				
37	443675.12	H8221187	505	23	11615	N/A				
38	443676.12	H8221187	505	23	11615	N/A				
39	443677.12	H8221187	505	23	11615	N/A				
40	443678.12	H8221187	505	23	11615	N/A				
41	443679.12	H8221187	505	23	11615	N/A				
42	443680.12	H8221187	505	23	11615	N/A				
43	443681.12	H8221187	505	23	11615	N/A				
				Sub Total ft^2 =	**232300**					
				TOTAL ft^2 =	**499,445**					

Section 3
Drainage Geocomposite

Precision Geosynthetic Laboratories International
A Texas Research International Company

November 6, 2012

GAI-LAP
Initial: CVZ #:0.13
DATE: 11/06/2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of one (1) 330mil Double-Sided Geocomposite sample.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **November 6, 2012**

REFERENCE PGLI JOB NO.: G121195

DATE RECEIVED: October 25, 2012

SAMPLED BY: PGLI at SKAPS, GA

SAMPLE IDENTIFICATIONS:

SAMPLE ID	***PGLI CONTROL NUMBER***
R#51381010001	
1. Double-Sided Geocomposite	87856
2. Non-woven Geotextile (Top)	87857
3. Non-Woven Geotextile (Bottom)	87858

TESTS REQUIRED / PERFORMED:

TEST METHOD	***DESCRIPTION***
Geotextile Component	
1. ASTM D5261	Mass Per Unit Area
2. ASTM D4632	Grab Tensile
3. ASTM D4533	Trapezoidal Tear Resistance
4. ASTM D4751	Apparent Opening Size
5. ASTM D4491	Permittivity
Geocomposite	
6. ASTM D4716	Transmissivity
7. ASTM D7005	Ply Adhesion

TEST RESULTS: The test results are summarized in the attached Tables 1, 1A and 1B.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

4 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received : **10/25/2012**
Date Reported: **11/6/2012**
Client Sample ID : **R#51381010001**
Material Description: **330mil Double-Sided Geocomposite**

QC'd by: Maria Capitia
PGLI Job No.: **G121195**
PGLI Control No.: **87856**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Minimum
ASTM D7005	Ply Bond Adhesion (lbs/ in.- width)															
	Instron Tensile Testing Machine is set for 305mm(12 in./min.) constant rate of extension with initial gauge length of 50mm.															
	Full scale force range used for testing: 100 lbs.															
	Side A of Composite															
	MD	5.5	5.9	4.2	6.8	5.3						5.5	0.9	4.2	6.8	1.0
	Side B of Composite															
	MD	5.4	3.8	5.2	6.5	5.8						5.3	1.0	3.8	6.5	1.0
ASTM D4716	Transmissivity *Tested at Normal Pressure : 500 psf, Gradient: 0.02 , Seating Time: 24 hrs*															
	Temperature of Test Water: 20.3° C Specimen Size: 12" x 14"															
	Transmissivity (m.²/ sec.)															
	MD	7.2E-03										7.2E-03	N/A	N/A	N/A	6.1×10^{-4}
	Flow Rate (gal/min)															
	MD	0.70										0.70	N/A	N/A	N/A	
	Transmissivity (gal/min/ft)															
	MD	34.89										34.89	N/A	N/A	N/A	
ASTM D4716	Transmissivity *Tested at Normal Pressure : 15,000 psf, Gradient: 0.02 , Seating Time: 100 hrs*															
	Temperature of Test Water: 20.2° C Specimen Size: 12" x 14"															
	Transmissivity (m.²/ sec.)															
	MD	4.7E-03										4.7E-03	N/A	N/A	N/A	1.0×10^{-4}
	Flow Rate (gal/min)															
	MD	0.46										0.46	N/A	N/A	N/A	
	Transmissivity (gal/min/ft)															
	MD	22.77										22.77	N/A	N/A	N/A	

Test Set Up:

Plate	_____
60mil HDPE Microspike	oooooooo
Geocomposite	XXXXXX
60mil HDPE Microspike	=========
Plate	_____

(End of Table 1)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION

Precision Geosynthetic Laboratories International

TABLE 1A.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/25/2012**
Date Reported: **11/2/2012**
Client Sample ID: **R#51381010001**
Material Description: **Non-Woven Geotextile Component of Double-Sided Geocomposite (Top)**

QC'd By: Maria Epitia
PGLI Job No.: **G121195**
PGLI Control No.: **87857**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Minimum
ASTM D5261	Mass per Unit Area (oz/ yd.^{2})															
	Test Specimen Size: 4" x 8"															
		8.5	8.6	8.6	8.5	8.5						8.5	0.0	8.5	8.6	8.0
ASTM D4632	Grab Tensile															
	Test was performed as directed in D4632, dry condition. Instron Tensile Testing Machine with hydraulic action grips and 1 in x 2 in rubber faces was used. Maximum load used for testing: 1500 lbs															
	Grab Breaking Load (lbs)															
	MD	231	234	229	236	241	231	229	234	236	237	234	4	229	241	200
	TD	287	290	259	267	288	300	270	250	261	259	273	17	250	300	
	Apparent Breaking Elongation (percent)															
	MD	77	76	80	74	75	77	76	75	77	75	76	2	74	80	
	TD	94	104	99	93	98	106	94	97	90	96	97	5	90	106	
ASTM D4533	Trapezoid Tear Strength (lbs)															
	Specimens were tested as directed in Test Method D4533, dry condition.															
	MD	107	109	110	103	110	108	106	102	110	106	107	3	102	110	75
	TD	132	129	131	132	109	112	110	111	112	129	121	10	109	132	
ASTM D4491	Permittivity (sec.$^{-1}$)															
Constant Head	*Four specimens were tested by holding the head constant at 50 mm. The corresponding water volume passing through the specimen was collected at the discharge side and the amount and time recorded. Five readings were taken for each specimen. BT Technology permittivity testing apparatus compliant to ASTM D4491 requirements was used.*															
		1.77	1.74	1.71	1.71							1.73	0.03	1.71	1.77	0.5
	Permeability (cm./ sec.)															
		0.35	0.36	0.35	0.35							0.35	0.00	0.35	0.36	
	Flow Rate (gpm/ ft.^{2})															
		132	130	128	128							129	2	128	132	
ASTM D4751	Apparent Opening Size (U.S. standard sieve size)															
	Specimens were tested as directed in Test Method D4751. Type of sieve shaker used is W.S. Tyler Rotap.															
		70-100	70-100	70-100	70-100	70-100						70-100	N/A	N/A	N/A	
ASTM D4751	Apparent Opening Size (mm)															
	Specimens were tested as directed in Test Method D4751. Type of sieve shaker used is W.S. Tyler Rotap.															
		0.208	0.204	0.207	0.208	0.206						0.207	0.002	0.204	0.208	≤ 0.21 max.

(End of Table 1A)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

TABLE 1B.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/25/2012**
Date Reported: **11/2/2012**
Client Sample ID: **R#51381010001**
Material Description: **Non-Woven Geotextile Component of Double-Sided Geocomposite (Bottom)**

QC'd By: Maria Espitia
PGLI Job No.: **G121195**
PGLI Control No.: **87858**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Minimum
ASTM D5261	Mass per Unit Area (oz/ yd.^{2})															
	Test Specimen Size: 4" x 8"															
		8.4	8.4	8.5	8.3	8.5						8.4	0.1	8.3	8.5	8.0
ASTM D4632	Grab Tensile															
	Test was performed as directed in D4632, dry condition. Instron Tensile Testing Machine with hydraulic action grips and 1 in x 2 in rubber faces was used. Maximum load used for testing: 1500 lbs															
	Grab Breaking Load (lbs)															
	MD	229	230	236	231	229	232	231	234	237	235	232	3	229	237	200
	TD	240	250	261	270	261	281	290	270	261	259	264	14	240	290	
	Apparent Breaking Elongation (percent)															
	MD	77	76	80	76	77	76	75	79	76	78	77	2	75	80	
	TD	90	94	99	90	92	106	101	97	94	90	95	5	90	106	
ASTM D4533	Trapezoid Tear Strength (lbs)															
	Specimens were tested as directed in Test Method D4533, dry condition.															
	MD	101	102	111	109	117	107	107	106	111	117	109	5	101	117	75
	TD	120	127	131	120	131	119	115	119	120	121	122	5	115	131	
ASTM D4491	Permittivity (sec.$^{-1}$)															
Constant Head	*Four specimens were tested by holding the head constant at 50 mm. The corresponding water volume passing through the specimen was collected at the discharge side and the amount and time recorded. Five readings were taken for each specimen. BT Technology permittivity testing apparatus compliant to ASTM D4491 requirements was used.*															
		1.68	1.73	1.70	1.68							1.70	0.02	1.68	1.73	0.5
	Permeability (cm./ sec.)															
		0.35	0.35	0.35	0.36							0.35	0.01	0.35	0.36	
	Flow Rate (gpm/ ft.^{2})															
		126	129	127	125							127	2	125	129	
ASTM D4751	Apparent Opening Size (U.S. standard sieve size)															
	Specimens were tested as directed in Test Method D4751. Type of sieve shaker used is W.S. Tyler Rotap.															
		70-100	70-100	70-100	70-100	70-100						70-100	N/A	N/A	N/A	
ASTM D4751	Apparent Opening Size (mm)															
	Specimens were tested as directed in Test Method D4751. Type of sieve shaker used is W.S. Tyler Rotap.															
		0.207	0.208	0.205	0.206	0.206						0.206	0.001	0.205	0.208	≤ 0.21 max.

(End of Table 1B)

(Sheet 1 of 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility) **TYPE OF MQA:** LEVEL (2) **QA by:** Maria Cipitia

Material: 300mil Double-Sided Geocomposite **SAMPLING FREQUENCY:** 1/200,000 sq.ft.

Manufacturer: SKAPS

Location: GA

No.	Roll #	Product	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
1	51381010001	TN330-2-8	2520	N/A	PGLI	10/24/2012	10/25/2012	G121195 C#87856
2	51381010002	TN330-2-8	2520	N/A				
3	51381010003	TN330-2-8	2520	N/A				
4	51381010004	TN330-2-8	2520	N/A				
5	51381010005	TN330-2-8	2520	N/A				
6	51381010006	TN330-2-8	2520	N/A				
7	51381010007	TN330-2-8	2520	N/A				
8	51381010008	TN330-2-8	2520	N/A				
9	51381010009	TN330-2-8	2520	N/A				
10	51381010010	TN330-2-8	2520	N/A				
11	51381010011	TN330-2-8	2520	N/A				
12	51381010012	TN330-2-8	2520	N/A				
13	51381010013	TN330-2-8	2520	N/A				
14	51381010014	TN330-2-8	2520	N/A				
15	51381010015	TN330-2-8	2520	N/A				
16	51381010016	TN330-2-8	2520	N/A				
17	51381010017	TN330-2-8	2520	N/A				
18	51381010018	TN330-2-8	2520	N/A				
19	51381010019	TN330-2-8	2520	N/A				
20	51381010020	TN330-2-8	2520	N/A				
21	51381010021	TN330-2-8	2520	N/A				
22	51381010022	TN330-2-8	2520	N/A				
23	51381010023	TN330-2-8	2520	N/A				
24	51381010024	TN330-2-8	2520	N/A				
25	51381010025	TN330-2-8	2520	N/A				
		TOTAL ft^2 =	63,000					

Section 4
Geotextile

Precision Geosynthetic Laboratories International
A Texas Research International Company

October 31, 2012

GAI-LAP
Initial: CVZ #:0.13
DATE: 10/31/2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Conformance testing of one (1) 8oz Non-Woven Geotextile sample.

PROJECT NAME: Omniwaste of Osceola County (JED Leachate Storage Facility) DATE REPORTED: **October 31, 2012**

REFERENCE PGLI JOB NO.: G121190

DATE RECEIVED: October 25, 2012

SAMPLED BY: PGLI at SKAPS, GA

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
R#27631.01	87828

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D5261	Mass Per Unit Area
2. ASTM D4632	Grab Tensile
3. ASTM D4533	Trapezoidal Tear Resistance
4. ASTM D4833	Puncture Resistance
5. ASTM D6241	Static Puncture Resistance
6. ASTM D4491	Permittivity
7. ASTM D4751	Apparent Opening Size

TEST RESULTS: The test results are summarized in the attached Table 1.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the sample tested is believed to be true representative of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Retained conformance samples are disposed of after one (1) month.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

3 Pages Total

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/25/2012**
Date Reported: **10/31/2012**
Client Sample ID: **R#27631.01**
Material Description: **8oz Non-Woven Geotextile**

QC'd By: Maria Espitia
PGL Job No.: **G121190**
PGL Control No.: **87828**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Min.
ASTM D5261	Mass per Unit Area (oz/ yd.^{2})															
	Test Specimen Size: 4" x 8"															
		8.8	8.7	8.6	8.3	8.5						8.6	0.2	8.3	8.8	8.0
ASTM D4632	Grab Tensile															
	Test was performed as directed in D4632, dry condition. Instron Tensile Testing Machine with hydraulic action grips and 1 in x 2 in rubber faces was used. Maximum load used for testing: 1500 lbs															
	Grab Breaking Load (lbs)															
	MD	238	240	242	240	245	238	250	242	238	239	241	4	238	250	200
	TD	240	258	268	270	278	260	259	260	259	267	262	10	240	278	
	Apparent Breaking Elongation (percent)															
	MD	77	80	76	79	76	80	76	77	73	77	77	2	73	80	
	TD	94	99	101	101	104	94	97	101	90	94	97	4	90	104	
ASTM D4833	Puncture Resistance (lbs)															
	Specimens were tested as directed in Test Method D4833. They were clamped without tension between circular plates of a ring clamp attachment secured in the tensile machine. Test specimens were extended to or beyond the outer edges of the clamping plates.															
		138	140	158	157	159	160	159	162	160	160	151	11	130	162	90
		155	157	136	130	139										
ASTM D4533	Trapezoid Tear Strength (lbs)															
	Specimens were tested as directed in Test Method D4533, dry condition.															
	MD	101	106	107	120	119	122	120	126	130	127	118	10	101	130	75
	TD	132	140	150	150	144	129	136	138	150	147	142	8	129	150	

(Continued on next page)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

TABLE 1.

MATERIAL PROPERTIES

CLIENT: Brantley Engineering, LLC

PROJECT: Omniwaste of Osceola County (JED Leachate Storage Facility)

Date Received: **10/25/2012**
Date Reported: **10/31/2012**
Client Sample ID: **R#27631.01**
Material Description: **8oz Non-Woven Geotextile**

QC'd By: Maria Espitia
PGL Job No.: **G121190**
PGL Control No.: **87828**

METHOD	DESCRIPTION	SPECIMENS 1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min	Max	Proj. Specs. Min.
ASTM D4491	Permittivity (sec.$^{-1}$)															
Constant Head	*Four specimens were tested by holding the head constant at 50 mm. The corresponding water volume passing through the specimen was collected at the discharge side and the amount and time recorded. Five readings were taken for each specimen. BT Technology permittivity testing apparatus compliant to ASTM D4491 requirements was used.*															
		1.78	1.74	1.71	1.68							1.73	0.04	1.68	1.78	0.5
	Permeability (cm./ sec.)															
		0.34	0.37	0.35	0.35							0.35	0.01	0.34	0.37	
	Flow Rate (gpm/ ft.^{2})															
		133	130	128	126							129	3	126	133	
ASTM D4751	Apparent Opening Size (U.S. standard sieve size)															
	Specimens were tested as directed in Test Method D4751.Type of sieve shaker used is W.S. Tyler Rotap.															
		70-100	70-100	70-100	70-100	70-100						70-100	N/A	N/A	N/A	
ASTM D4751	Apparent Opening Size (mm)															
	Specimens were tested as directed in Test Method D4751.Type of sieve shaker used is W.S. Tyler Rotap.															
		0.207	0.208	0.205	0.205	0.207						0.206	0.001	0.205	0.208	≤ 0.21
ASTM D6241	Static Puncture Strength (lbs)															
	The specimens were tested in accordance with ASTM D6241. Specimens were conditioned for 1 hr in the laboratory at 21+/-5° C (75+/-3.6oF) and at 60%+/-10 Relative Humidity. Specimens were secured between the holding plates ensuring that they extended to or beyond the outer edges of the clamping plates.															
		723	741	761	698	720	741	681	746	761	780	735	30	681	780	500
	Deflection @ Maximum Force (in)															
		2.4	2.6	2.6	2.3	2.6	2.6	2.3	2.6	2.6	2.6	2.5	0.1	2.3	2.6	

(End of Table 1)

LEGENDS:
MD - MACHINE DIRECTION
TD - TRANSVERSE DIRECTION

Precision Geosynthetic Laboratories International

MANUFACTURING QA IN-PLANT SAMPLING/INSPECTION REPORT

Project Name: Omniwaste of Osceola County (JED Leachate Storage Facility)

TYPE OF MQA: LEVEL (2)

QA by: Maria Espitia

Material: 8oz Non-Woven Geotextile

SAMPLING FREQUENCY: 1/100,000 sq.ft.

Manufacturer: SKAPS

Location: GA

No.	Roll #	Product	Length (ft.)	Width (ft.)	Area (ft^2)	Date Manufactured	Sampled by	Date Sampled	Date Received	Reference Job No/ Control No
1	27631.01	GE180	690	15	10350	N/A	PGLI	10/23/2012	10/25/2012	G121190 C#87828
2	27631.02	GE180	690	15	10350	N/A				
3	27631.03	GE180	690	15	10350	N/A				
4	27631.04	GE180	690	15	10350	N/A				
5	27631.05	GE180	690	15	10350	N/A				
6	27631.06	GE180	690	15	10350	N/A				
7	27631.07	GE180	690	15	10350	N/A				
8	27631.08	GE180	690	15	10350	N/A				
				TOTAL ft^2 =	82,800					

APPENDIX G

Subgrade Acceptance Certificates (Ponds A, B and C)

BRANTLEY ENGINEERING, LLC.

Brantley
Engineering, LLC

SUBGRADE ACCEPTANCE

PROJECT NAME: JED Landfill Leachate Storage Facility Relocation

PROJECT NUMBER: 2012-102

OWNER: Omni Waste of Osceola County, LLC

LOCATION: JED Landfill St. Cloud, FL

I, undersigned, a duly appointed representative of Brantley Engineering, LLC, have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install ✓ Geosynthetic Clay Liner(GCL) ✓ Geocomposite _____ Geotextile ✓ HDPE.

The certification is based on subterranean inspections and tests performed by Brantley Engineering and visual observations of the subgrade only. Brantley makes no representations or warranties regarding conditions which may exist below the prepared surface of the subgrade. The subgrade conforms to the project specifications for installation of geosynthetics. The synthetics installer accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:
HDPE Panels P-1 THRU P-29
SECONDARY LAYER

CQA REPRESENTATIVE:

Date: 11-30-12

Signature: [signature]

Name: SALMAN NEJAD, PE

Title: VICE President Brantley Engineering

SYNTHETICS INSTALLER REP:

Date: 11-30-12

Signature: [signature]

Name: Arnulfo Martinez

Title: SUP.

OWNERS REPRESENTATIVE:

Date: 11-30-12

Signature: [signature]

Name: Mike Kaiser

Title: Engineer

BRANTLEY ENGINEERING, LLC.

Brantley
Engineering, LLC

SUBGRADE ACCEPTANCE

PROJECT NAME: JED Landfill Leachate Storage Facility Relocation

PROJECT NUMBER: 2012-102

OWNER: Omni Waste of Osceola County, LLC

LOCATION: JED Landfill St. Cloud, FL

I, undersigned, a duly appointed representative of Brantley Engineering, LLC, have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install ✓ Geosynthetic Clay Liner(GCL) _____ Geocomposite _____ Geotextile ✓ HDPE.

The certification is based on subterranean inspections and tests performed by Brantley Engineering and visual observations of the subgrade only. Brantley makes no representations or warranties regarding conditions which may exist below the prepared surface of the subgrade. The subgrade conforms to the project specifications for installation of geosynthetics. The synthetics installer accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:
HDPE Panels P-30 THRU P-62
SECONDARY LAYER

CQA REPRESENTATIVE:

Date: 12-1-12

Signature:

Name: SALMAN NEUAD, PE

Title: Vice President

SYNTHETICS INSTALLER REP:

Date: 12-1-12

Signature:

Name: Arnulfo Martinez

Title: SUP.

OWNERS REPRESENTATIVE:

Date: 12-1-12

Signature:

Name: Mike Kaiser

Title: Engineer

BRANTLEY ENGINEERING, LLC.

Brantley
Engineering, LLC

SUBGRADE ACCEPTANCE

PROJECT NAME: JED Landfill Leachate Storage Facility Relocation

PROJECT NUMBER: 2012-102

OWNER: Omni Waste of Osceola County, LLC

LOCATION: JED Landfill St. Cloud, FL

I, undersigned, a duly appointed representative of Brantley Engineering, LLC, have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install ✓ Geosynthetic Clay Liner(GCL) _____ Geocomposite _____ Geotextile ✓ HDPE.

The certification is based on subterranean inspections and tests performed by Brantley Engineering and visual observations of the subgrade only. Brantley makes no representations or warranties regarding conditions which may exist below the prepared surface of the subgrade. The subgrade conforms to the project specifications for installation of geosynthetics. The synthetics installer accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted:
HDPE Panels P-63 THRU P-78
Secondary Layer

CQA REPRESENTATIVE:

Date: 12-3-12

Signature: [signature]

Name: SALMAN NEJAD, PE

Title: Vice President

SYNTHETICS INSTALLER REP:

Date: 12-3-12

Signature: [signature]

Name: Arnulfo Martinez

Title: Supr.

OWNERS REPRESENTATIVE:

Date: 12-3-12

Signature: [signature]

Name: Mike Kaiser

Title: Engineer

APPENDIX H

Geomembrane Installation

(Secondary Layer for Ponds A, B, and C)

Section 1
Geomembrane Panel Deployment Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER

11/30/12

11-30-12

Page # 1

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
P1	443342-12	75	166	22.5	3735	60	CSJ	
P2	443342	75	165	22.5	3712.5	60	CSJ	
P3	443342	76	165	22.5	3712.5	61	CSJ	
P4	443568	76	164	22.5	3690	60	CSJ	
P5	3568	75	162	22.5	3645	60	CSJ	
P6	3568	75	163	22.5	3667.5	61	CSJ	
P7	3560	75	162	22.5	3645	60	CSJ	
P8	3560	75	163	22.5	3667.5	60	CSJ	
P9	3560	75	161	22.5	3622.5	61	CSJ	
P10	3340	74	25	22.5	562.5	60	CSJ	Trapezoid
P11	3340	74	10	9	90	60	CSJ	
P12	3340	74	24	22.5	540	61	CSJ	Trapezoid

PAGE APPROX. TOTAL (SQ FT): 34,290 Ft2

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 11-30-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

11/30/12

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER

11-30-12

page #2

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
P13	3340	74	38	22.5	855	61	CSJ	
P14	3340	74	38	22.5	855	60	CSJ	
P15	3340	73	41	22.5	922.5	60	CSJ	
P16	3340	73	41	22.5	922.5	61	CSJ	
P17	3340	73	28	22.5	630	60	CSJ	Trapezoid
P18	3340	73	50	22.5	1125	60	CSJ	Trapezoid
P15	3340	73	15	22.5	337.5	60	CSJ	
P20	3340	73	25	22.5	562.5	61	CSJ	Trapezoid
21	3340	73	40	22.5	900	60	CSJ	
22	3340	73	40	22.5	900	60	CSJ	
23	3567	73	40	22.5	900	61	CSJ	
24	3567	73	40	22.5	900	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 9810 Ft2

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 11-30-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER_____

11/30/12

11-30-12

Page #3

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
P25	3567	73	28	22.5	630	60	CSJ	Trapezoid
P26	3567	73	14	5	70	61	CSJ	Triangle
P27	3567	73	14	5	70	60	CSJ	Triangle
P28	3567	73	28	22.5	630	60	CSJ	Trapezoid
P29	3567	73	164	22.5	3690	61	CSJ	

PAGE APPROX. TOTAL (SQ FT): 5,090 Ft^2

DAILY TOTAL (SQ FT): 49,190 Ft^2

ACCUMULATED TOTAL (SQ FT): 49,190 Ft^2

REVIEWED BY : S. NEJAD

DATE: 11-30-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-1-12 page # 4

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
30	3567	77	165	22.5	3712.5	60	CSJ	
31	3341	77	164	22.5	3690	61	CSJ	
32	3341	77	165	22.5	3712.5	60	CSJ	
33	3341	77	165	22.5	3712.5	60	CSJ	
34	3680	77	165	22.5	3712.5	60	CSJ	
35	3680	77	165	22.5	3712.5	61	CSJ	
36	3680	77	165	22.5	3712.5	60	CSJ	
37	3447	77	165	22.5	3712.5	60	CSJ	
38	3447	77	28	22.5	630	60	CSJ	
39	3447	77	17	6	102	60	CSJ	
40	3447	77	17	6	102	60	CSJ	
41	3447	77	32	22.5	720	61	CSJ	

PAGE APPROX. TOTAL (SQ FT): 31,231.5

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12/1/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER_____

12/1/12

Page # 5

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
42	3447	77	38	22.5	855	60	CSJ	
43	3447	77	38	22.5	855	60	CSJ	
44	3447	77	38	22.5	855	60	CSJ	
45	3447	77	38	22.5	855	60	CSJ	
46	3447	77	22	22.5	495	60	CSJ	
47	3447	77	18	6	108	61	CSJ	
48	3447	77	32	22.5	720	60	CSJ	
49	3445	77	28	22.5	630	60	CSJ	
50	3445	77	10	15	150	60	CSJ	
51	3445	77	20	15	300	60	CSJ	
52	3445	77	28	22.5	630	61	CSJ	
53	3445	77	55	22.5	1237.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 7690.5 Ft²

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12/1/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY (SECONDARY) OTHER_____

12 - 1 - 12

Page # 6

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
54	3445	77	78	22.5	1755	60	CSS	
55	3445	77	78	22.5	1755	60	CSS	
56	3445	77	78	22.5	1755	61	CSS	
57	3681	77	78	22.5	1755	60	CSS	
58	3681	77	46	22.5	1035	60	CSS	
59	3681	77	30	22.5	675	60	CSS	
60	3681	77	14	10	140	60	CSS	
61	3681	77	14	10	140	61	CSS	
62	3681	77	30	22.5	675	60	CSS	

PAGE APPROX. TOTAL (SQ FT): 9685 Ft

DAILY TOTAL (SQ FT): 48607 Ft²

ACCUMULATED TOTAL (SQ FT): 97797 Ft²

REVIEWED BY : S. NEJAD

DATE: 12/1/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY (SECONDARY) OTHER_____

12/3/12

12-3-12

Page # 7

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
63	3481	70	163	22.5	3667.5	60	CSS	
64	3456	71	163	22.5	3667.5	60	CSS	
65	3456	71	163	22.5	3667.5	60	CSS	
66	3456	72	163	22.5	3667.5	61	CSS	
67	3451	73	163	22.5	3667.5	60	CSS	
68	3451	73	24	22.5	540	60	CSS	
69	3451	74	2	5	35	60	CSS	
70	3451	74	13	5	65	60	CSS	
71	3451	74	26	22.5	585	60	CSS	
72	3451	74	39	22.5	877.5	60	CSS	
73	3451	74	39	22.5	877.5	61	CSS	
74	3451	74	39	22.5	877.5	60	CSS	

PAGE APPROX. TOTAL (SQ FT): 22195 Ft2

DAILY TOTAL (SQ FT): –

ACCUMULATED TOTAL (SQ FT): –

REVIEWED BY : S. NEJAD

DATE: 12-3-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY (SECONDARY) OTHER_____

12-3-12

Page # 8

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
75	3451	75	39	22.5	877.5	60	CSJ	
76	3451	75	24	22.5	540	60	CSJ	
77	3451	75	10	9	90	61	CSJ	
78	3451	75	28	22.5	630	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 2137.5 Ft^2

DAILY TOTAL (SQ FT): 24332.5 Ft^2

ACCUMULATED TOTAL (SQ FT): 122129.5 Ft^2

REVIEWED BY : S. NEJAD

DATE: 12-3-12

Section 2
Geomembrane Trial Seam Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

SEcondary

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 11-30-12 **PAGE#** 1

					FUSION WELD		EXTRUSION WELD														
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET	PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.
TF-1	1400	~~76~~ 78	95	SM	18	840	–	–	INSIDE	102	94	99	103	101	135	140	131	145	143	P	SMN
									OUTSIDE	105	103	105	98	102							
TF-2	1405	78	75	JP	13	850	–	–	INSIDE	102	103	121	114	112	140	140	131	145	143	P	SMN
									OUTSIDE	102	109	93	107	97							
TF-3	1600	78	16	JP	10	850	–	–	INSIDE	105	108	105	106	95	142	141	135	145	144	P	SMN
									OUTSIDE	108	111	110	115	104							
									INSIDE												
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 11-30-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

SECondary

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-1-12
PAGE# 2

					FUSION WELD		EXTRUSION WELD															
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET	PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.	
TF-1	0740	59	95	SM	14	850	—	—	INSIDE	109	98	91	111	121	165	163	159	166	146	P	SMN	S/T
									OUTSIDE	117	126	130	111	129								
TF-2	0745	59	16	JP	8	850	—	—	INSIDE	101	111	106	109	108	162	166	156	148	164	P	SMN	S/T
									OUTSIDE	115	126	138	135	127								
TF-3	0750	59	95	SM	15	850	—	—	INSIDE	94	112	104	120	103	164	170	165	145	168	P	SMN	S/S
									OUTSIDE	103	128	120	100	93								
TF-4	1140	78	16	JP	10	850	—	—	INSIDE	108	112	101	96	95	150	141	146	144	144	P	SMN	S/S
									OUTSIDE	114	116	112	104	93								
TF-5	1150	78	95	SM	15	850	—	—	INSIDE	107	103	94	122	95	144	144	149	129	143	P	SMN	S/S
									OUTSIDE	92	93	110	107	99								
									INSIDE													
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 12-1-12

Secondary

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-3-12
PAGE# 3

	TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	FUSION WELD		EXTRUSION WELD		PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.	
						SPEED	WEDGE SET	PRE HEAT	BARREL SET														
	TF-1	10:00	70	95	SM	16	850	–	–	INSIDE	109	98	97	99	94	141	148	147	151	138	P	SMN	
										OUTSIDE	99	98	103	100	97								
	TF-2	10:00	70	16	JP	10	850	–	–	INSIDE	134	108	105	111	102	141	158	139	150	144	P	SMN	S/S
										OUTSIDE	109	118	104	113	113								
	TF3	10:00	70	16	JP	8	850	–	–	INSIDE	124	120	121	113	110	143	145	149	145	134	P	SMN	S/S
										OUTSIDE	115	114	102	110	129								
	TF-4	1240	78	16	JP	8	850	–	–	INSIDE	124	122	136	123	119	142	139	141	146	141	P	SMN	T/T
										OUTSIDE	135	125	134	134	125								
Extrusion	TX-1	1340	78	71	BV	–	–	480	440	INSIDE	130	127	120	130	126	144	136	149	135	134	P	SMN	
										OUTSIDE	–	–	–	–	–								
										INSIDE													
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Passing Peel Fusion (91 lb/in): _______ Passing Peel Extrusion (78 lb/in): _______ Passing Shear Fusion (120 lb/in): _______ Passing Shear Extrusion (120 lb/in): _______

REVIEWED BY : S. NEJAD
DATE : 12-3-12

BRANTLEY [illegible]GINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

SECondary

Brantley Engineering, LLC

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-4-12
PAGE# 4

EXTrusion

					FUSION WELD		EXTRUSION WELD															
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET	PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.
TX-1	8:00	70	19	SH	–	–	480	440	INSIDE	120	113	116	100	114	185	173	181	171	164	P	SMN
									OUTSIDE	–	–	–	–	–							
TX-2	8:00	70	71	BV	–	–	530	500	INSIDE	128	134	128	119	128	164	172	163	166	167	P	SMN
									OUTSIDE	–	–	–	–	–							
TX-3	12:50	80	71	BV	–	–	520	480	INSIDE	116	122	114	120	120	134	124	136	136	144	P	SMN
									OUTSIDE	–	–	–	–	–							
									INSIDE												
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NECIAD
DATE : 12-4-12

Section 3
Geomembrane Fusion Seaming Log

BRANTLEY ENGINEERING, LLC

Secondary

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 11-30-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	14:00	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (Ø)

MACHINE # A 95

PAGE NUMBER: 1

SEAM NUMBER	* SEAM SECTION START POINT * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
1/2	NEOS * SEOS	1400	76	SM	18	840	845	165	120/45	DS-1	SMN		12-3	SMN
2/3	NEOS * SEOS	1417	76	SM	18	840	842	165	210	–	SMN		12-3	SMN
6/7	NEOS * SEOS	14:34	75	SM	18	840	840	161	371	–	SMN		12-3	SMN
8/9	NEOS * SEOS	14:56	75	SM	18	840	844	161	490/42	DS-3	SMN		12-3	SMN
12/13	WEOS * EEOS	1525	74	SM	18	840	842	38	80	–	SMN		12-3	SMN
13/14	WEOS * EEOS	1530	74	SM	18	840	845	38	118	–	SMN		12-3	SMN
14/15	WEOS * EEOS	1540	73	SM	18	840	842	38	156	–	SMN		12-3	SMN
15/16	WEOS * EEOS	1550	73	SM	18	840	839	40	196	–	SMN		12-3	SMN
20/21	EEOS * WEOS	1600	73	SM	18	840	842	40	236	–	SMN		12-3	SMN
21/22	EEOS * WEOS	1608	73	SM	18	840	844	40	276	–	SMN		12-3	SMN
22/23	EEOS * WEOS	1616	72	SM	18	840	845	40	316	–	SMN		12-3	SMN
23/24	EEOS * WEOS	1624	72	SM	18	840	843	40	356	–	SMN		12-3	SMN
24/25	EEOS * WEOS	1630	72	SM	18	840	840	40	396	–	SMN		12-3	SMN
25/26	EEOS * WEOS	1638	72	SM	18	840	843	14	410	–	SMN		12-3	SMN
27/28	NEOS * SEOS	1643	72	SM	18	840	840	14	424	–	SMN		12-3	SMN

PAGE TOTAL: 1034

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 424

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12/4/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 11/30/12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	1405	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (—) —

MACHINE # 75

PAGE NUMBER: 2

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
3 / 4	WEOS *	SEOS	1410	76	JP	13	850	850	163	80/83	DS-2	CSJ		12-3	SMN
5 / 6	WEOS *	SEOS	1430	75	JP	13	850	850	161	244	—	CSJ		12-3	SMN
7 / 8	WEOS *	SEOS	1455	75	JP	13	850	850	161	405	—	CSJ		12-3	SMN
5 / 10	WEOS *	SEOS	1520	74	JP	13	850	850	41	446	—	CSJ		12-3	SMN
10 / 11	WEOS *	SEOS	1530	74	JP	13	850	851	8	454	—	CSJ		12-3	SMN
10 / 12	EEOS *	WEOS	1535	73	JP	13	850	850	30	484	—	CSJ		12-3	SMN
11 / 12	EEOS *	WEOS	1541	73	JP	13	850	850	6	490	—	CSJ		12-3	SMN
16 / 17	EEOS *	WEOS	1545	73	JP	13	850	850	37	495/32	DS-4	CSJ		12-3	SMN
/	*														
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/	*														
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 607

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 32

DAILY TOTAL WELDED (FT): 607

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 32

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12/4/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 11/30/12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-3	16:00	J.P.

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (—) —

MACHINE # 16

PAGE NUMBER: 3

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
17/19	EEOS	WEOS	1610	73	JP	10	850	849	14	14	—	CSJ		12-3	SMN
18/19	EEOS	SEOS	1617	73	JP	10	850	851	22	36	—	CSJ		12-3	SMN
17/18	EEOS	WEOS	1622	73	JP	10	850	850	30	66	—	CSJ		12-3	SMN
19/20	WEOS	EEOS	1630	73	JP	10	850	850	11	77	—	CSJ		12-3	SMN
18/20	WEOS	EEOS	1633	73	JP	10	850	849	31	108	—	CSJ		12-3	SMN
4/29	WEOS	SEOS	1650	73	JP	10	850	850	162	115/155	PS-5	CSJ		12-3	SMN
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PAGE TOTAL: 270

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 155

DAILY TOTAL WELDED (FT): 270

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 155

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12/4/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 11-30-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	14:00	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (1) 424

MACHINE # 95

PAGE NUMBER: 4

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
25 / 28	EEOS	WEOS	1648	72	SM	18	840	840	31	455	–	SMN		12-3	SMN
26 / 27	EEOS	WEOS	1651	72	SM	18	840	842	18	473	–	SMN		12-3	SMN
1 / 28	NEOS	SEOS	1700	72	SM	18	840	844	35	490/18	DS-6	SMN		12-3	SMN
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 84

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 18

DAILY TOTAL WELDED (FT): 1118

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 18

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12/4/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-1-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	0740	SM
TF-3	0750	SM
TF-5	1150	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (4) 18

MACHINE # 95

PAGE NUMBER: 5

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
5 / 16	NEOS	SEOS	0748	59	SM	14	850	848	22	40	–	SMN		12-3	SMN
5 / 15	NEOS	SEOS	0751	59	SM	14	850	846	23	63	–	SMN		12-3	SMN
5 / 14	NEOS	SEOS	0754	59	SM	14	850	844	22	85	–	SMN		12-3	SMN
5 / 13	NEOS	SEOS	0757	59	SM	14	850	845	23	108	–	SMN		12-3	SMN
29 / 30	NEOS	SEOS	1040	77	SM	15	850	844	165	273	–	SMN		12-3	SMN
32 / 33	SEOS	NEOS	1100	77	SM	15	850	846	165	438	–	SMN		12-3	SMN
33 / 34	SEOS	NEOS	112	77	SM	15	850	847	165	490/113	DS-8	SMN		12-3	SMN
34 / 35	SEOS	NEOS	1128	77	SM	15	850	845	165	278	–	SMN		12-3	SMN
35 / 36	SEOS	NEOS	1145	77	SM	15	850	848	165	443	–	SMN		12-3	SMN
45 / 46	WEOS	EEOS	1207	78	SM	15	850	850	33	476	–	SMN		12-4	SMN
47 / 48	SEOS	NEOS	1215	78	SM	15	850	840	14	490	–	SMN		12-4	SMN
45 / 48	WEOS	EEOS	1219	78	SM	15	850	840	11	495/6	DS-9	SMN		12-4	SMN
46 / 48	WEOS	EEOS	1221	78	SM	15	850	848	20	26	–	SMN		12-4	SMN
46 / 47	WEOS	EEOS	1223	78	SM	15	850	849	15	41	–	SMN		12-4	SMN
44 / 45	EEOS	WEEOS	1230	78	SM	15	850	848	42	83	–	SMN		12-4	SMN

PAGE TOTAL: 1050

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 83

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-1-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	0740	SM
TF-3	0750	SM
TF-5	1150	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (5) 83

MACHINE # 95

PAGE NUMBER: 6

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
43/44	EEOS	WEOS	1238	78	SM	15	850	848	42	125	–	SMN		12-4	SMN
52/53	SEOS	NEOS	1300	78	SM	15	850	846	30	155	–	SMN		12-3	SMN
51/52	SEOS	NEOS	1307	78	SM	15	850	848	16	171	–	SMN		12-3	SMN
50/51	SEOS	NEOS	1310	78	SM	15	850	850	15	186	–	SMN		12-3	SMN
51/53	EEOS	WEOS	1313	78	SM	15	850	849	20	206	–	SMN		12-3	SMN
50/53	EEOS	WEOS	1315	78	SM	15	850	846	7	213	–	SMN		12-3	SMN
53/54	EEOS	WEOS	1315	78	SM	15	850	850	77	290	–	SMN		12-3	SMN
54/55	WEOS	EEOS	1322	78	SM	15	850	852	78	368	–	SMN		12-3	SMN
55/56	WEOS	EEOS	1337	78	SM	15	850	850	78	446	–	SMN		12-3	SMN
9/59	NEOS	SEOS	1345	78	SM	15	850	848	36	482	–	SMN		12-3	SMN
57/58	WEOS	EEOS	1350	78	SM	15	850	846	72	490/64	DS-11	SMN		12-3	SMN
56/57	WEOS	EEOS	1356	78	SM	15	850	850	78	142	–	SMN		12-3	SMN
61/62	NEOS	SEOS	1404	78	SM	15	850	842	14	156	–	SMN		12-3	SMN
58/61	SEOS	NEOS	1405	78	SM	15	850	848	12	168	–	SMN		12-3	SMN
58/62	SEOS	NEOS	1407	78	SM	15	850	846	14	182	–	SMN		12-3	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 589

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 182

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. MEJAD

DATE : 12/4/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

SEcondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-1-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	0740	SM
TF-3	0750	SM
TF-5	1150	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (6) 182

MACHINE # 95

PAGE NUMBER: 7

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
57/62	WEOS *	EEOS	1409	78	SM	15	850	848	7	189	–	SMN		12-3	SMN
59/60	SEOS *	NEOS	1411	78	SM	15	850	846	13	202	–	SMN		12-3	SMN
58/60	EEOS *	WEOS	1416	78	SM	15	850	848	12	214	–	SMN		12-3	SMN
58/59	EEOS *	WEOS	1418	78	SM	15	850	846	24	238	–	SMN		12-3	SMN
57/59	EEOS *	WEOS	1422	78	SM	15	850	845	6	244	–	SMN	Covered	3W -	—
/	*														
/	*														
/	*														
/	*														
/	*														
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/	*														
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PAGE TOTAL: 62

PAGE DESTRUCTIVE LENGTH CARRY-OVER 244

DAILY TOTAL WELDED (FT) 1701

DAILY DESTRUCTIVE LENGTH CARRY-OVER 244

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12/1/12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	0745	JP
TF-4	1140	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (3) 155

MACHINE # 16

PAGE NUMBER: 8

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
1/24	NEOS *	SEOS	0745	58	JP	8	850	850	22	177	—	CSJ		12-3	SMN
1/23	NEOS *	SEOS	0747	58	JP	8	850	849	22	199	—	CSJ		12-3	SMN
1/22	NEOS *	SEOS	0749	58	JP	8	850	850	23	222	—	CSJ		12-3	SMN
1/21	NEOS *	SEOS	0751	58	JP	8	850	851	22	244	—	CSJ		12-3	SMN
1/18	NEOS *	SEOS	0751	58	JP	8	850	850	36	280	—	CSJ		12-3	SMN
5/18	NEOS *	SEOS	0754	58	JP	8	850	850	31	311	—	CSJ		12-3	SMN
4/8	EEOS *	WEOS	0810	60	JP	8	850	850	22	333	—	CSJ		12-3	SMN
3/7	EEOS *	WEOS	0812	60	JP	8	850	848	23	356	—	CSJ		12-3	SMN
2/6	EEOS *	WEOS	0814	60	JP	8	850	850	22	378	—	CSJ		12-3	SMN
1/5	EEOS *	WEOS	0816	61	JP	8	850	850	23	401	—	CSJ		12-3	SMN
30/31	NEOS *	SEOS	1050	77	JP	10	850	850	162	490/73	DS-7	CSJ		12-3	SMN
31/32	SEOS *	NEOS	1110	77	JP	10	850	850	164	237	—	CSJ		12-3	SMN
36/37	SEOS *	NEOS	1140	77	JP	10	850	850	167	400	—	CSJ		12-3	SMN
42/43	WEOS *	EEOS	1210	77	JP	10	850	850	36	436	—	CSJ		12-4	SMN
41/42	WEOS *	EEOS	12	77	JP	10	850	848	31	467	—	CSJ		12-4	SMN

PAGE TOTAL: 802

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 467

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12/1/12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	0745	JP
TF-4	1150	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (8) 467

MACHINE # 16

PAGE NUMBER: 9

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
40/41	EEOS	* WEOS	1224	77	JP	10	850	850	16	483	—	CSJ		12-4	SMN
38/39	SEOS	* NEOS	1228	77	JP	10	850	850	17	490/10	DD-10	CSJ		12-4	SMN
38/41	SEOS	* NEOS	1245	77	JP	10	850	850	28	38	—	CSJ		12-4	SMN
39/40	SEOS	* NEOS	1250	77	JP	10	850	850	12	50	—	CSJ		12-4	SMN
37/48	SEOS	* NEOS	1310	77	JP	10	850	849	40	90	—	CSJ		12-4	SMN
37/45	SEOS	* NEOS	1315	77	JP	10	850	850	14	104	—	CSJ		12-4	SMN
37/44	SEOS	* NEOS	1317	77	JP	10	850	850	22	126	—	CSJ		12-4	SMN
37/43	SEOS	* NEOS	1319	77	JP	10	850	850	23	149	—	CSJ		12-4	SMN
37/42	SEOS	* NEOS	1321	77	JP	10	850	850	22	171	—	CSJ		12-4	SMN
37/41	SEOS	* NEOS	1323	77	JP	10	850	849	4	175	—	CSJ	Covered	BY 2	T
37/38	SEOS	* NEOS	1324	77	JP	10	850	851	36	211	—	CSJ		12-4	SMN
9/57	SEOS	* NEOS	1347	77	JP	10	850	850	20	231	—	CSJ		12-3	SMN
9/56	SEOS	* NEOS	1349	77	JP	10	850	850	22	253	—	CSJ		12-3	SMN
9/55	SEOS	* NEOS	1351	77	JP	10	850	850	23	276	—	CSJ		12-3	SMN
9/54	SEOS	* NEOS	1353	77	JP	10	850	852	22	298	—	CSJ		12-3	SMN

PAGE TOTAL: 321

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 298

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

SEcondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12/1/12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	0745	JP
TF-4	1140	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (9) 298

MACHINE # 16

PAGE NUMBER: 10

SEAM NUMBER	SEAM SECTION START POINT *	FINISH POINT *	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
9 / 49	SEOS *	NEOS	1403	77	JP	10	850	850	36	334	—	CJJ		12-3	SMN
49 / 50	SEOS *	NEOS	1408	77	JP	10	850	850	14	348	—	CJJ		12-3	SMN
49 / 53	SEOS *	NEOS	1412	77	JP	10	850	850	30	378	—	CJJ		12-3	SMN
33 / 52	EEOS *	WEOS	1420	77	JP	10	850	850	5	383	—	CJJ		12-3	SMN
32 / 52	EEOS *	WEOS	1421	77	JP	10	850	850	16	390/9	DS-12	CJJ		12-3	SMN
32 / 51	EEOS *	WEOS	1423	77	JP	10	850	850	6	15	—	CJJ		12-3	SMN
31 / 51	EEOS *	WEOS	1425	77	JP	10	850	850	14	29	—	CJJ		12-3	SMN
31 / 50	EEOS *	WEOS	1426	77	JP	10	850	850	8	37	—	CJJ		12-3	SMN
30 / 49	EEOS *	WEOS	1428	77	JP	10	850	850	22	59	—	CJJ		12-3	SMN
9 / 29	EEOS *	WEOS	1430	77	JP	10	850	850	23	82	—	CJJ		12-3	SMN
/	*														
/	*														
/	*														
/	*														
/	*														

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 174

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 82

DAILY TOTAL WELDED (FT): 1297

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 82

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

SECondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	10:00	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (7) 244

MACHINE # 95

PAGE NUMBER: 11

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
63/64	SEOS	NEOS	1018	72	SM	16	850	848	162	406	–	SMN		12-3	SMN
64/65	SEOS	NEOS	1034	72	SM	16	850	852	163	490/79	DS-13	SMN		12-3	SMN
65/66	SEOS	NEOS	1050	72	SM	16	850	846	163	242	–	SMN		12-3	SMN
71/72	WEOS	EEOS	1100	72	SM	16	850	848	37	279	–	SMN		12-3	SMN
72/73	WEOS	EEOS	1104	72	SM	16	850	849	37	316	–	SMN		12-3	SMN
73/74	WEOS	EEOS	1108	72	SM	16	850	850	37	353	–	SMN		12-3	SMN
74/75	WEOS	EEOS	1112	72	SM	16	850	848	37	390	–	SMN		12-3	SMN
75/76	EEOS	WEOS	1116	72	SM	16	850	850	37	427	–	SMN		12-3	SMN
67/78	SEOS	NEOS	1121	72	SM	16	850	848	28	440/15	DS-14	SMN		12-3	SMN
67/68	SEOS	NEOS	1142	72	SM	16	850	846	34	49	–	SMN		12-3	SMN
70/71	WEOS	EEOS	1146	73	SM	16	850	848	15	64	–	SMN		12-3	SMN
68/69	SEOS	NEOS	1152	73	SM	16	850	846	8	72	–	SMN		12-3	SMN
69/70	WEOS	EEOS	1315	78	SM	16	850	848	10	82	–	SMN		12-3	SMN
68/70	WEOS	EEOS	1320	78	SM	16	850	849	4	86	–	SMN	Covered By 5J		
68/71	WEOS	EEOS	1325	78	SM	16	850	850	20	106	–	SMN		12-3	SMN

PAGE TOTAL: 792

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 106

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG SEcondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	10:00	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (11) 106

MACHINE # 95

PAGE NUMBER: 12

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
67 / 71	SEOS *	NEOS	1330	78	SM	16	850	848	4	110	–	SMN	Covered	By 6	N
/	*														
/	*														
/	*														
/	*														
/	*														
/	*														
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 4

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 110

DAILY TOTAL WELDED (FT): 796

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 110

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	10:00	JP
TF-3	10:00	JP
TF-4	1240	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (10) 82

MACHINE # 16

PAGE NUMBER: 13

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
52/63	NEOS *	SEOS	1038	72	JP	8	850	848	38	120	—	CJJ		12-3	SMN
54/63	NEOS *	SEOS	1042	72	JP	8	850	850	22	142	—	CJJ		12-3	SMN
55/63	NEOS *	SEOS	1044	72	JP	8	850	851	22	164	—	CJJ		12-3	SMN
56/63	NEOS *	SEOS	1046	73	JP	8	850	850	23	187	—	CJJ		12-3	SMN
57/63	NEOS *	SEOS	1048	73	JP	8	850	850	20	207	—	CJJ		12-3	SMN
62/63	NEOS *	SEOS	1050	73	JP	8	850	850	38	245	—	CJJ		12-3	SMN
66/67	SEOS *	NEOS	1130	73	JP	8	850	850	162	407	—	CJJ		12-3	SMN
72/67	SEOS *	NEOS	1132	74	JP	8	850	851	22	429	—	CJJ		12-3	SMN
73/67	SEOS *	NEOS	1134	75	JP	8	850	850	23	452	—	CJJ		12-3	SMN
74/67	SEOS *	NEOS	1136	75	JP	8	850	848	22	474	—	CJJ		12-3	SMN
75/67	SEOS *	NEOS	1138	75	JP	8	850	850	23	490/7	DS-15	CJJ		12-3	SMN
76/78	NEOS *	SEOS	1140	75	JP	8	850	850	30	37	—	CJJ		12-3	SMN
47/78	EEOS *	WEOS	1150	76	JP	8	850	850	4	41	—	CJJ	Covered	BY 5	G
48/78	EEOS *	WEOS	1151	76	JP	8	850	850	17	58	—	CJJ		12-3	SMN
48/67	EEOS *	WEOS	1153	76	JP	8	850	850	4	62	—	CJJ	Covered	BY 5	F

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 470

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 62

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG SEcondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	10:00	JP
TF-3	10:00	JP
TF-4	12:40	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (13) 62

MACHINE # 16

PAGE NUMBER: 14

SEAM NUMBER	SEAM SECTION START POINT *	FINISH POINT *	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
37/67	EEOS *	WEOS	1154	76	JP	8	850	850	18	80	—	CSJ		12-3	SMN
37/66	EEOS *	WEOS	1156	76	JP	8	850	850	4	84	—	CSJ	Covered	BY	5D
36/66	EEOS *	WEOS	1157	76	JP	8	850	850	18	102	—	CSJ		12-3	SMN
36/65	EEOS *	WEOS	1159	76	JP	8	850	850	4	106	—	CSJ	Covered	BY	5C
35/65	EEOS *	WEOS	1306	81	JP	8	850	850	18	124	—	CSJ		12-3	SMN
35/64	EEOS *	WEOS	1308	81	JP	8	850	850	6	130	—	CSJ	Covered	BY	5B
34/64	EEOS *	WEOS	1310	81	JP	8	850	850	17	147	—	CSJ		12-3	SMN
34/63	EEOS *	WEOS	1312	81	JP	8	850	850	5	152	—	CSJ	Covered	BY	4Y
33/63	EEOS *	WEOS	1314	81	JP	8	850	850	18	170	—	CSJ		12-3	SMN
77/78	SEOS *	WEOS	1320	81	JP	8	850	850	12	182	—	CSJ		12-3	SMN
77/76	EEOS *	WEOS	1322	81	JP	8	850	850	10	192	—	CSJ		12-3	SMN
47/77	SG *	EEOS	1324	81	JP	8	850	850	10	202	—	CSJ		12-3	SMN
/	*														
/	*														
/	*														

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 140

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 202

DAILY TOTAL WELDED (FT): 610

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 202

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-4-12

Section 4
Geomembrane Extrusion Seaming Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

SECondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-4-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-2	8:00	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) —

MACHINE # 71

PAGE NUMBER: 1

EXTRUSION SEAMING										VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
60/61	SEOS *	NEOS	11:00	76	BV	6	6	—	SMN	12-4	BV	P	CSJ	
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL:	6
PAGE DESTRUCTIVE LENGTH CARRY-OVER	6
DAILY TOTAL WELDED (FT)	6
DAILY DESTRUCTIVE LENGTH CARRY-OVER	6

REVIEWED BY : S. NEJAD

DATE : 12-4-12

Section 5
Geomembrane Defect, Repair, and Vacuum Test Log

Secondary

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 1

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	1/2	46' S. OF NEOS	Cut	11/30		12-3	P	6x2	21	BU	CJJ	12-4	MG	P	CJJ
B	1/2	120' S. OF NEOS	DS-1	11/30		12-3	P	6x2	21	BU	CJJ	12-4	MG	P	CJJ
C	3/4	80'S of NEOS	DS-2	11/30		12-3	P	6x2	21	BU	CJJ	12-4	MG	P	CJJ
D	P5	58'N / 7'E	CR	CR		12-3	P	1x1	21	BU	CJJ	12-4	MG	P	CJJ
F	P5	57'N / 13'E	CR	11/30		12-3	P	1x1	21	BU	CJJ	12-4	MG	P	CJJ
G	P5	77'N / 13'E	CR	11/30		12-3	P	1x1	21	BU	CJJ	12-4	MG	P	CJJ
H	8/9	42'N of SEOS	DS-3	11/30		12-4	P	4x1	21	BU	CJJ	12-4	MG	P	CJJ
J	16/17	5'W of EEOS	DS-4	11/30		12-3	P	2x5	21	BU	CJJ	12-4	MG	P	CJJ
K	16/17	2' E of WEOS	BO	11/30		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
M	15/16	WEOS	BO	11/30		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
N	27/28	NEOS	BO	11/30		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
P	19/20	5'E of WEOS	FM	11/30		12-3	P	2x3	21	BU	CJJ	12-4	MG	P	CJJ
Q	4/29	7'S of NEOS	DS-5	11/30		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
R	1/28	18'N of SEOS	DS-6	11/30		12-3	P	2x5	21	BU	CJJ	12-4	MG	P	CJJ
S	1/28	NEOS	BO	11/30		12-3	P	2x6	21	BU	CJJ	12-4	MG	P	CJJ
T	5/10/12/13	Intersection	T	12/1		12-3	P	6x3	22	BU	CJJ	12-4	MG	P	CJJ
W	5/13/14	Intersection	T	12/1		12-3	P	4x4	21	BU	CJJ	12-4	MG	P	CJJ
X	5/14/15	Intersection	T	12/1		12-3	P	3x3	21	BU	CJJ	12-4	MG	P	CJJ
Y	5/15/16	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

SEcondary

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 2

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	10/11/12	intersection	T	12-1-12		12-3	P	5x5	71	BV	CJJ	12-4	MG	P	CJJ
B	P-31	5' N / 12 W	D	12-1		12-4	P	3x3	21	BV	CJJ	12-4	MG	P	CJJ
C	P-31	12' N / 12 W	D	12-1		12-4	P	2x4	71	BV	CJJ	12-5	MG	P	CJJ
D	33/34	52' N. OF SEOS	DS-8	12-1		12-4	P	2x4	19	SM	CJJ	12-4	MG	P	CJJ
F	33/34	6' N. OF SEOS	BO	12-1		12-4	P	2x3	71	BV	CJJ	12-5	MG	P	CJJ
G	34/35	SEOS TO 6' N.	BO	12-1		12-4	P	2x6	71	BV	CJJ	12-5	MG	P	CJJ
H	45/48	5' E OF WEOS	DS-9	12-1		12-4	P	2x6	19	SM	CJJ	12-4	MG	P	CJJ
J	44/45	FROM EEOS TO 20' W	FS	12-1		12-4	P	2x20	19	SM	CJJ	12-4	MG	P	CJJ
K	37/45/48	Int.	T	12-1		12-4	P	2x2	19	SM	CJJ	12-4	MG	P	CJJ
M	45/46/48	Int	T	12-1	Covered by 2K	—	—	—	—	—	—	—	—	—	—
N	46/47/48	Int	T	12-1		12-4	P	2x2	19	SM	CJJ	12-4	MG	P	CJJ
P	37/44/45	Int	T	12-1		12-4	P	2x2	19	SM	CJJ	12-4	MG	P	CJJ
Q	37/43/44	Int	T	12-1		12-4	P	2x2	19	SM	CJJ	12-4	MG	P	CJJ
R	37/42/43	Int	T	12-1		12-4	P	2x2	19	SM	CJJ	12-4	MG	P	CJJ
S	37/41/42	Int	T	12-1	Covered by 2T	—	—	—	—	—	—	—	—	—	—
T	37/38/41	Int	T	12-1		12-4	P	2x6	19	SM	CJJ	12-4	MG	P	CJJ
W	38/39/40/41	Int	T	12-1		12-4	P	2x6	19	SM	CJJ	12-4	MG	P	CJJ
X	55/56	39' WOS EEOS	FM	12-1		12-4	P	2x4	71	BV	CJJ	12-5	MG	P	CJJ
Y	57/58	8' E OF WEOS	DS-11	12-1		12-4	P	2x4	71	BV	CJJ	12-4	MG	P	CJJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 3

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	5/16/17/18	Intersection	T	12/1		12-3	P	6x6	21	BU	CJJ	12-4	MG	P	CJJ
B	17/18/19	Intersection	T	12/1		12-3	P	3x3	21	BU	CJJ	12-4	MG	P	CJJ
C	18/19/20	Intersection	T	12/1	Covered by 18	—	—	—	—	—	—	—	—	—	—
D	1/18/20/21	Intersection	T	12/1		12-3	P	4x3	21	BU	CJJ	12-4	MG	P	CJJ
F	1/21/22	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
G	1/22/23	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
H	1/23/24	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
J	1/24/25/28	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
K	25/26/27/28	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
M	4/8/9/29	Intersection	T	12/1		12-3	P	3x3	21	BU	CJJ	12-4	MG	P	CJJ
N	3/4/7/8	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
P	2/3/6/7	Intersection	T	12/1		12-3	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
Q	1/2/5/6	Intersection	T	12/1		12-3	P	5x3	21	BU	CJJ	12-4	MG	P	CJJ
R	1/5/18	Intersection	T	12/1		12-3	P	4x4	21	BU	CJJ	12-4	MG	P	CJJ
S	30/31	NEOS	BO	12/1		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
T	30/31	89'S of NEOS	DX-7	12/1		12-3	P	2x4	21	BU	CJJ	12-4	MG	P	CJJ
W	9/57/58/59	Int.	T	12/1		12-4	P	3x6	21	BU	CJJ	12-4	MG	P	CJJ
X	9/56/57	Int.	T	12/1		12-4	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ
Y	9/56	9'N of SEOS	BO	12/1		12-4	P	2x2	21	BU	CJJ	12-4	MG	P	CJJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
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EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEDAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

Secondary

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 4

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	9/55/56	Int	T	12-1		12-4	P	2x2	71	BU	CSJ	12-4	PMG	P	CSJ
B	9/54/55	Int	T	12-1		12-4	P	2x2	71	BU	CSJ	12-4	PMG	P	CSJ
C	9/49/53/54	Int	T	12-1		12-4	P	6x2	71	BU	CSJ	12-4	PMG	P	CSJ
D	57/58	25'E of WEOS	FM	12-1	Covered by 6P	—	—	—	—	—	—	—	—	—	—
F	57/58	35'E of WEOS	BO	12-1	Covered by 6P	—	—	—	—	—	—	—	—	—	—
G	58/59/60	Int.	T	12-1		12-4	P	2x2	71	BU	CSJ	12-4	PMG	P	CSJ
H	58/60/61	Int.	T	12-1		12-4	P	6x4	71	BU	CSJ	12-4	PMG	P	CSJ
J	58/61/62	Int	T	12-1		12-4	P	1x1	71	BU	CSJ	12-4	PMG	P	CSJ
K	57/58/62	Int	T	12-1		12-4	P	1x2	71	BU	CSJ	12-4	PMG	P	CSJ
M	9/29/30/49	Int	T	12-1		12-4	P	3x3	71	BU	CSJ	12-4	PMG	P	CSJ
N	30/31/49/50	Int	T	12-1		12-4	P	3x3	71	BU	CSJ	12-4	PMG	P	CSJ
P	31/50/51	Int	T	12-1		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
Q	31/32/51	Int.	T	12-1		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
R	32/51/52	Int.	T	12-1		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
S	32/33/52	Int.	T	12-1	Covered By 6R	—	—	—	—	—	—	—	—	—	—
T	32/52	9' W of EEOS	DS-12	12-1		12-4	P	2x4	71	BU	CSJ	12-5	MG	P	CSJ
W	38/39	7' S of NEOS	DS-10	12-1		12-4	P	2x4	19	BM	CSJ	12-4	PMG	P	CSJ
X	67/75	7' S of NEOS	DS-15	12-3		12-4	P	2x4	71	BU	CSJ	12-5	MG	P	CSJ
Y	34/63/64	Int.	T	12-3		12-4	P	3x5	71	BU	CSJ	12-5	MG	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

Secondary

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 5

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	34	15'E 1'N of SEC	D	12-3		12-4	P	1x1	71	BU	CSJ	12-5	MG	P	CSJ
B	35/64/65	Int	T	12-3		12-4	P	2x5	71	BU	CSJ	12-5	MG	P	CSJ
C	36/65/66	Int	T	12-3		12-4	P	2x5	71	BU	CSJ	12-5	MG	P	CSJ
D	37/66/67	Int	T	12-3		12-4	P	2x5	71	BU	CSJ	12-4	MG	P	CSJ
F	37/67/78	Int	T	12-3		12-4	P	2x4	19	SM	CSJ	12-5	MG	P	CSJ
G	47/77/78	Int	T	12-3		12-4	P	2x5	19	SM	CSJ	12-5	MG	P	CSJ
H	37	12'E 1'N of SWC	D	12-3		12-4	P	1x1	71	BU	CSJ	12-5	MG	P	CSJ
J	68/70/71	Int	T	12-4		12-4	P	2x6	71	BU	CSJ	12-5	MG	P	CSJ
K	67/72/73	Int	T	12-4		12-4	P	2x[illegible]	71	BU	CSJ	12-5	MG	P	CSJ
M	67/73/74	Int	T	12-4		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
N	67/74/75	Int	T	12-4		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
P	75/76/78	Int	T	12-4		12-4	P	4x10	71	BU	CSJ	12-5	MG	P	CSJ
Q	76/77/78	Int	T	12-4		12-4	P	4x4	71	BU	CSJ	12-5	MG	P	CSJ
R	7	12'E, 6's of NWC	D	12-4		12-3	P	1x1	71	BU	CSJ	12-4	MG	P	CSJ
S	7	16'E, 6's of NWC	D	12-4		12-3	P	3x2	71	BU	CSJ	12-4	MG	P	CSJ
T	49/50/53	Int	T	12-4		12-4	P	3x2	71	BU	CSJ	12-4	MG	P	CSJ
W	50/51/53	Int	T	12-4		12-4	P	2x2	71	BU	CSJ	12-4	MG	P	CSJ
X	9	6's, 2'W of NEC	D	12-4		12-4	P	2x2	71	BU	CSJ	12-4	MG	P	CSJ
Y	1/2	43's of PEAS	D	12-4	Cap	12-4	P	43x2	19	SM	CSJ	12-4	MG	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

SEConDary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 6

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	64/65	84' N. OF SEOS	DS-13	12-3		12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
B	65/66	125' N. OF SEOS	BO	12-3		12-4	P	2x2	71	BU	CJJ	12-5	MG	P	CJJ
C	65/66	2' N. OF SEOS	BO	12-3		12-4	P	2x4	71	BU	CJJ	12-4	MG	P	CJJ
D	65/66	112 N. OF SEOS	IO	12-3		12-4	P	2x3	71	BU	CJJ	12-5	MG	P	CJJ
F	65/66	22' S. OF NEOS	D	12-3		12-4	P	2x2	71	BU	CJJ	12-4	MG	P	CJJ
G	67/78	15' S. OF NEOS	DS-14	12-3		12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
H	67/68	2' N. OF SEOS	BO	12-3		12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
J	66/67	3' N. OF SEOS	BO	12-3		12-4	P	3x5	71	BU	CJJ	12-5	MG	P	CJJ
K	70/71	3' W. OF EEOS	BO	12-3		12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
M	68/69	2' N. OF SEOS	BO	12-3		12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
N	67/71	2' N. OF SEOS	Cut	12-3		12-4	P	3x6	71	BU	CJJ	12-5	MG	P	CJJ
P	57/58	22 E. OF WEOS	BO	12-3		12-4	P	2x12	71	BU	CJJ	12-5	MG	P	CJJ
Q	57/58	32 E. OF WEOS	BO	12-3	Covered by 6P	—	—	—	—	—	—	—	—	—	—
R	52/63/33	Int.	T	12-3		12-4	P	8x4	71	BU	CJJ	12-5	MG	P	CJJ
S	32/33/52	Int.	T	12-3	Covered By 6R	—	—	—	—	—	—	—	—	—	—
T	30	12's, 3'W of NEC	D	12-4		12-3	P	2x2	71	BU	CJJ	12-5	MG	P	CJJ
W	30	17's 3'W of NEC	D	12-4		12-3	P	2x2	71	BU	CJJ	12-4	MG	P	CJJ
X	31	6'N, 8'W of SEC	Cut	12-4	Pipe	12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ
Y	52	35, 8'W of NEC	Cut	12-4	Pipe	12-4	P	2x4	71	BU	CJJ	12-5	MG	P	CJJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
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IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Secondary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 7

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	49	5'E, 5'S of NWC	Cut	12-4	Pipe	12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
B	53/54/63	Int	T	12-4		12-4	P	5x5	71	BU	CSJ	12-4	MG	P	CSJ
C	54/55/63	Int	T	12-4		12-4	P	2x2	71	BU	CSJ	12-4	MG	P	CSJ
D	55/56/63	Int	T	12-4		12-4	P	1x1	71	BU	CSJ	12-4	MG	P	CSJ
F	56/57/63	Int	T	12-4		12-4	P	1x1	71	BU	CSJ	12-4	MG	P	CSJ
G	57/62/63	Int	T	12-4		12-4	P	1x1	71	BU	CSJ	12-4	MG	P	CSJ
H	51/52/53	Int	T	12-4		12-4	P	2x2	71	BU	CSJ	12-5	MG	P	CSJ
J	57/6P	6P	DXS-1	12-4		12-4	P	2x8	71	BU	CSJ	12-5	MG	P	CSJ
K	46/47	EEOS	EXT	12-4		12-4	P	2x5	19	SM	CSJ	12-4	MG	P	CSJ
M	34	15'N, 15E of SWC	D	12-4		12-4	P	2x3	71	BU	CSJ	12-5	MG	P	CSJ
N	37	7'N, 15E of SWC	D	12-4		12-4	P	1x2	71	BU	CSJ	12-5	MG	P	CSJ
P															
Q															
R															
S															
T															
W															
X															
Y															

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-5-12

Section 6

Geomembrane Non-Destructive Pressure Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 1

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO	YES	QA MONITOR	REMARKS
19/20	WEOS	EEOS	1	CO	1152	1157	30	30	P	/	✓	SMN	
18/19	NEOS	SEOS	2	CO	1153	1158	30	30	P	/	✓	SMN	
18/20	WEOS	EEOS	3	CO	1154	1159	30	29	P	/	✓	SMN	
1/18	NEOS	SEOS	4	CO	1250	1255	30	30	P	/	✓	SMN	
1/21	NEOS	SEOS	5	CO	1255	1300	30	30	P	/	✓	SMN	
1/22	NEOS	SEOS	6	CO	1256	1301	30	30	P	/	✓	SMN	
1/23	NEOS	SEOS	7	CO	1257	1302	30	29	P	/	✓	SMN	
1/24	NEOS	SEOS	1	CO	1304	1309	30	30	P	/	✓	SMN	
1/25	—	—	—	—	—	—	—	—	—	— /	—	—	Covered By 3J
25/28	EEOS	WEOS	2	CO	1305	1310	30	30	P	/	✓	SMN	
25/26	EEOS	WEOS	3	CO	1307	1312	30	30	P	/	✓	SMN	
26/27	EEOS	WEOS	4	CO	1307	1312	30	30	P	/	✓	SMN	
24/25	EEOS	WEOS	5	CO	1308	1313	30	29	P	/	✓	SMN	
23/24	EEOS	WEOS	7	CO	1303	1308	30	29	P	/	✓	SMN	
22/23	EEOS	WEOS	6	CO	1257	1302	30	29	P	/	✓	SMN	
21/22	EEOS	WEOS	8	CO	1256	1301	30	28	P	/	✓	SMN	
20/21	EEOS	WEOS	9	CO	1255	1300	30	28	P	/	✓	SMN	
17/19	EEOS	WEOS	1	CO	1320	1325	30	29	P	/	✓	SMN	
5/6	NEOS	SEOS	2	CO	1348	1353	30	30	P	/	✓	SMN	
1/2	SEOS	SY	3	CO	1352	1357	30	30	P	/	✓	SMN	SY To NEOS Capped

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 2

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO	YES	QA MONITOR	REMARKS
6/7	NEOS	SEOS	4	CO	1349	1354	30	30	P	/	✓	SMN	
2/3	NEOS	SEOS	5	CO	1349	1354	30	30	P	/	✓	SMN	
3/4	NEOS	SEOS	6	CO	1355	1400	30	30	P	/	✓	SMN	
7/8	NEOS	SEOS	7	CO	1355	1400	30	30	P	/	✓	SMN	
4/129	NEOS	SEOS	8	CO	1400	1405	30	30	P	/	✓	SMN	
8/9	NEOS	SEOS	9	CO	1400	1405	30	30	P	/	✓	SMN	
9/149	NEOS	SEOS	1	CO	1405	1410	30	30	P	/	✓	SMN	
29/30	NEOS	SEOS	2	CO	1405	1410	30	30	P	/	✓	SMN	
1/5	NEOS	SEOS	3	CO	1348	1353	30	30	P	/	✓	SMN	
2/6	EEOS	WEOS	4	CO	1349	1354	30	30	P	/	✓	SMN	
3/7	EEOS	WEOS	6	CO	1355	1400	30	30	P	/	✓	SMN	
4/8	EEOS	WEOS	5	CO	1400	1405	30	30	P	/	✓	SMN	
9/129	EEOS	WEOS	7	CO	1405	1410	30	30	P	/	✓	SMN	
49/150	NEOS	SEOS	9	CO	1408	1413	30	30	P	/	✓	SMN	
30/31	NEOS	SEOS	8	CO	1408	1413	30	29	P	/	✓	SMN	
49/153	SEOS	NEOS	10	CO	1410	1415	30	30	P	/	✓	SMN	
50/153	EEOS	WEOS	11	CO	1410	1415	30	30	P	/	✓	SMN	
16/17	EEOS	WEOS	12	CO	1324	1329	30	30	P	/	✓	SMN	
17/18	EEOS	WEOS	13	CO	1324	1329	30	30	P	/	✓	SMN	
17/19	EEOS	WEOS	14	CO	1320	1325	30	29	P	/	✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 3

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
5/16	NEOS	•	SEOS	2	CO	1334	•	1339	30	•	30	P		/	✓	SMN	
5/15	NEOS	•	SEOS	1	CO	1334	•	1339	30	•	30	P		/	✓	SMN	
15/16	EEOS	•	WEOS	4	CO	1334	•	1339	30	•	30	P		/	✓	SMN	
14/15	EEOS	•	WEOS	5	CO	1335	•	1340	30	•	28	P		/	✓	SMN	
5/14	NEOS	•	SEOS	3	CO	1335	•	1340	30	•	30	P		/	✓	SMN	
13/14	EEOS	•	WEOS	6	CO	1337	•	1342	30	•	30	P		/	✓	SMN	
5/13	NEOS	•	SEOS	8	CO	1337	•	1342	30	•	28	P		/	✓	SMN	
12/13	EEOS	•	WEOS	7	CO	1338	•	1343	30	•	30	P		/	✓	SMN	
10/12	EEOS	•	WEOS	11	CO	1338	•	1343	30	•	28	P		/	✓	SMN	
5/10	NEOS	•	SEOS	10	CO	1342	•	1347	30	•	30	P		/	✓	SMN	
11/12	EEOS	•	WEOS	9	CO	1343	•	1348	30	•	30	P		/	✓	SMN	
10/11	NEOS	•	SEOS	8	CO	1343	•	1348	30	•	30	P		/	✓	SMN	
9/54	SEOS	•	NEOS	12	CO	1417	•	1422	30	•	30	P		/		SMN	
9/55	SEOS	•	NEOS	14	CO	1417	•	1422	30	•	30	P		/		SMN	
9/56	NEOS	•	3Y	13	CO	1420	•	1425	30	•	30	P	✓	/		SMN	
9/56	3Y	•	SEOS	15	CO	1420	•	1425	30	•	30	P		/	✓	SMN	
58/60	EEOS	•	WEOS	2	CO	1430	•	1435	30	•	30	P		/		SMN	
58/59	EEOS	•	WEOS	1	CO	1430	•	1435	30	•	30	P		/		SMN	
9/59	NEOS	•	SEOS	3	CO	1432	•	1437	30	•	30	P		/		SMN	
9/57	NEOS	•	SEOS	5	CO	1431	•	1436	30	•	30	P		/		SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG SEcondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12 PAGE# 4

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO	YES	QA MONITOR	REMARKS
57/59	–	–	–	–	–	–	–	–	–	–	–	–	Capped by 3W
58/61	SEOS	NEOS	4	CO	1445	1450	30	30	P		✓	SMN	
61/62	NEOS	SEOS	6	CO	1445	1450	30	30	P		✓	SMN	
58/62	SEOS	NEOS	8	CO	1446	1451	30	29	P		✓	SMN	
57/58	EEOS	6Q	9	CO	1446	1451	30	30	P	✓		SMN	
57/58	6Q	WEOS	7	CO	1455	1500	30	30	P		✓	SMN	
57/62	WEOS	EEOS	11	CO	1455	1500	30	29	P		✓	SMN	
55/56	WEOS	EEOS	8	CO	1501	1506	30	30	P		✓	SMN	
62/63	NEOS	SEOS	9	CO	1454	1459	30	29	P		✓	SMN	
57/63	NEOS	SEOS	10	CO	1457	1502	30	30	P		✓	SMN	
56/57	NEOS	SEOS	13	CO	1457	1502	30	30	P		✓	SMN	
56/63	NEOS	SEOS	12	CO	1459	1504	30	30	P		✓	SMN	
55/63	NEOS	SEOS	15	CO	1500	1505	30	30	P		✓	SMN	
53/54	WEOS	EEOS	11	CO	1501	1506	30	30	P		✓	SMN	
54/55	EEOS	WEOS	2	CO	1500	1505	30	30	P		✓	SMN	
52/53	NEOS	SEOS	1	CO	1502	1507	30	30	P		✓	SMN	
51/53	EEOS	WEOS	3	CO	1506	1511	30	30	P		✓	SMN	
51/52	SEOS	NEOS	5	CO	1507	1512	30	28	P		✓	SMN	
54/63	NEOS	SEOS	4	CO	1507	1512	30	30	P		✓	SMN	
31/50	EEOS	WEOS	6	CO	1509	1514	30	30	P		✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY: S. NEJAD

DATE: 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 5

SEAM NUMBER	SEAM SECTION* START POINT	* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	* FINISH	PRESSURE (PSI) INITIAL	* FINAL	PASS/ FAIL	SEAM COMPLETE NO	/ YES	QA MONITOR	REMARKS
31 151	EEOS	WEOS	8	CO	1509	1514	30	30	P		✓	SMN	
50 151	NEOS	SEOS	10	CO	1509	1514	30	30	P		✓	SMN	
30 149	EEOS	WEOS	9	CO	1408	1413	30	30	P		✓	SMN	
31 132	NEOS	SEOS	11	CO	1522	1527	30	30	P		✓	SMN	
32 151	EEOS	WEOS	14	CO	1522	1527	30	30	P		✓	SMN	
32 152	EEOS	WEOS	13	CO	1524	1529	30	30	P		✓	SMN	
32 133	NEOS	SEOS	12	CO	1524	1529	30	30	P		✓	SMN	
33 152	—	—	—	—	—	—	—	—	—	—	✓	—	Covered By 6R
52 163	NEOS	SEOS	15	CO	1525	1530	30	30	P		✓	SMN	
33 163	EEOS	WEOS	2	CO	1529	1534	30	30	P		✓	SMN	
33 134	SEOS	2F	3	CO	1530	1535	30	30	P	✓		SMN	
33 134	2F	NEOS	1	CO	1530	1535	30	30	P		✓	SMN	
63 164	NEOS	SEOS	5	CO	1530	1536	30	29	P		✓	SMN	
34 164	EEOS	WEOS	7	CO	1531	1536	30	30	P		✓	SMN	
34 135	2G	NEOS	6	CO	1533	1538	30	30	P		✓	SMN	2G To SEOS Capped
64 165	NEOS	SEOS	8	CO	1534	1539	30	30	P		✓	SMN	
35 136	NEOS	SEOS	10	CO	1542	1547	30	30	P		✓	SMN	
65 166	NEOS	6D	11	CO	1544	1549	30	30	P	✓		SMN	
65 166	6D	SEOS	13	CO	1544	1549	30	30	P		✓	SMN	
36 166	EEOS	WEOS	12	CO	1600	1605	30	30	P		✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

SEcondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 6

SEAM NUMBER	SEAM SECTION* START POINT	* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	* FINISH	PRESSURE (PSI) INITIAL	* FINAL	PASS/ FAIL	SEAM COMPLETE NO / YES	QA MONITOR	REMARKS
36137	NEOS	SEOS	15	CO	1600	1605	30	30	P	/ ✓	SMN	
66167	NEOS	SEOS	14	CO	1601	1606	30	30	P	/ ✓	SMN	
37167	EEOS	WEOS	2	CO	1601	1606	30	30	P	/ ✓	SMN	
67178	NEOS	SEOS	1	CO	1610	1615	30	30	P	/ ✓	SMN	
48178	EEOS	WEOS	3	CO	1610	1615	30	30	P	/ ✓	SMN	
77178	SEOS	NEOS	4	CO	1618	1623	30	30	P	/ ✓	SMN	
47177	SG	EEOS	6	CO	1618	1623	30	30	P	/ ✓	SMN	
76177	EEOS	WEOS	7	CO	1619	1624	30	30	P	/ ✓	SMN	
76178	NEOS	SEOS	9	CO	1625	1630	30	30	P	/ ✓	SMN	
75176	EEOS	WEOS	10	CO	1625	1630	30	30	P	/ ✓	SMN	
67175	NEOS	SEOS	14	CO	1630	1635	30	30	P	/ ✓	SMN	
74175	WEOS	EEOS	11	CO	1628	1633	30	30	P	/ ✓	SMN	
73174	WEOS	EEOS	13	CO	1639	1644	30	30	P	/ ✓	SMN	
67174	SEOS	NEOS	12	CO	1639	1644	30	30	P	/ ✓	SMN	
67173	SEOS	NEOS	15	CO	1640	1645	30	30	P	/ ✓	SMN	
72173	EEOS	WEOS	2	CO	1640	1645	30	30	P	/ ✓	SMN	
67172	SEOS	NEOS	4	CO	1644	1649	30	29	P	/ ✓	SMN	
71172	EEOS	WEOS	3	CO	1644	1649	30	30	P	/ ✓	SMN	
67168	SEOS	NEOS	1	CO	1651	1656	30	30	P	/ ✓	SMN	
68171	WEOS	EEOS	5	CO	1651	1656	30	30	P	/ ✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY: S. NEJAD

DATE: 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-3-12

PAGE# 7

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO / YES	QA MONITOR	REMARKS
✓ 68 / 69	SEOS	NEOS	7	CO	30	30	1653	1658	P	/ ✓	SMN	
✓ 69 / 70	WEOS	EEOS	6	CO	30	30	1653	1658	P	/ ✓	SMN	
✓ 70 / 71	WEOS	EEOS	12	CO	30	30	1654	1659	P	/ ✓	SMN	
✓ 27 / 28	NEOS	SEOS	15	CO	30	30	1307	1312	P	/ ✓	SMN	
✓ 1 / 28	NEOS	SEOS	18	CO	30	30	1307	1312	P	/ ✓	SMN	
✓ 5 / 18	NEOS	SEOS	11	CO	30	30	1319	1324	P	/ ✓	SMN	
✓ 59 / 60	SEOS	NEOS	14	CO	30	30	1443	1448	P	/ ✓	SMN	
✓ 35 / 65	EEOS	WEOS	1	CO	30	30	1542	1547	P	/ ✓	SMN	
/										/		
/										/		
/										/		
/										/		
/										/		
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*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Secondary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-4-12

PAGE# 8

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO	YES	QA MONITOR	REMARKS
47148	SEOS	NEOS	2	CO	0743	0748	30	30	P	/	✓	SMN	
46147	WEOS	EEOS	1	CO	0743	0748	30	30	P	/	✓	SMN	
46148	WEOS	EEOS	4	CO	0746	0751	30	30	P	/	✓	SMN	
45146	WEOS	EEOS	3	CO	0746	0751	30	30	P	/	✓	SMN	
45148	WEOS	EEOS	6	CO	0746	0751	30	30	P	/	✓	SMN	
37148	SEOS	NEOS	7	CO	0755	0800	30	28	P	/	✓	SMN	
44145	EEOS	WEOS	5	CO	0759	0804	30	30	P	/	✓	SMN	
37145	NEOS	SEOS	9	CO	0759	0804	30	30	P	/	✓	SMN	
37144	NEOS	SEOS	11	CO	0759	0804	30	30	P	/	✓	SMN	
43144	EEOS	WEOS	10	CO	0801	0806	30	36	P	/	✓	SMN	
37143	NEOS	SEOS	8	CO	0803	0808	30	30	P	/	✓	SMN	
42143	EEOS	WEOS	2	CO	0805	0810	30	30	P	/	✓	SMN	
37142	NEOS	SEOS	1	CO	0805	0810	30	30	P	/	✓	SMN	
41142	EEOS	WEOS	3	CO	0806	0811	30	30	P	/	✓	SMN	
38141	SEOS	NEOS	5	CO	0807	0812	30	30	P	/	✓	SMN	
37138	SEOS	NEOS	4	CO	0807	0812	30	30	P	/	✓	SMN	
40141	EEOS	WEOS	7	CO	0808	0813	30	30	P	/	✓	SMN	
39140	SEOS	NEOS	6	CO	0809	0814	30	30	P	/	✓	SMN	
38139	SEOS	NEOS	8	CO	0809	0814	30	30	P	/	✓	SMN	
/										/			

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-4-12

Section 7
Geomembrane Destructive Samples Laboratory Results

Precision Geosynthetic Laboratories International
A Texas Research International Company

January 14, 2013

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/14/2013

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: REVISED LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of sixteen (16) 60mil HDPE Seam samples.

PROJECT NAME: JED Leachate Storage Facility Relocation

DATE REPORTED: **December 5, 2012- 1st** reported
January 14, 2013 - DSX-1 sample ID correction

REFERENCE PGLI JOB NO.: G121286

DATE RECEIVED: December 5, 2012

SAMPLES SENT BY: Brantley Engineering, LLC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. DS-1 P1/2	88432
2. DS-2 P3/4	88433
3. DS-3 P8/9	88434
4. DS-4 P17/16	88435
5. DS-5 P4/29	88436
6. DS-6 P28/1	88437
7. DS-7 P30/31	88438
8. DS-8 P34/33	88439
9. DS-9 P48/45	88440
10. DS-10 P39/38	88441
11. DS-11 P58/57	88442
12. DS-12 P32/52	88443
13. DS-13 P65/64	88444
14. DS-14 P78/67	88445
15. DS-15 P75/67	88446
16. DSX-1 P52/6P	88447

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in Tables 1 to 8.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

9 Pages Total

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS- 1	88432	178	> 50%	BRK		1 Outside	123	0	SE1	
P1/2		175	> 50%	BRK		2 Outside	127	0	SE1	
		180	> 50%	BRK		3 Outside	130	0	SE1	
		176	> 50%	BRK		4 Outside	131	0	SE1	
		178	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**3**			
						1 Inside	131	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	125	0	SE1	
						4 Inside	130	0	SE1	
						5 Inside	124	0	SE1	
	AVG.	**177**			120	**AVG:**	**127**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DS- 2	88433	180	> 50%	BRK		1 Outside	124	0	SE1	
P3/4		181	> 50%	BRK		2 Outside	123	0	SE1	
		177	> 50%	BRK		3 Outside	131	0	SE1	
		175	> 50%	BRK		4 Outside	129	0	SE1	
		176	> 50%	BRK		5 Outside	131	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**4**			
						1 Inside	124	0	SE1	
						2 Inside	131	0	SE1	
						3 Inside	129	0	SE1	
						4 Inside	130	0	SE1	
						5 Inside	127	0	SE1	
	AVG:	**178**			120	**AVG:**	**128**			91
	STD. DEV.	**3**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Cepitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-3	**88434**	176	> 50%	BRK		1 Outside	121	0	SE1	
P8/9		178	> 50%	BRK		2 Outside	120	0	SE1	
		175	> 50%	BRK		3 Outside	127	0	SE1	
		175	> 50%	BRK		4 Outside	132	0	SE1	
		180	> 50%	BRK		5 Outside	129	0	SE1	
						AVG:	**126**			91
						STD. DEV.	**5**			
						1 Inside	131	0	SE1	
						2 Inside	124	0	SE1	
						3 Inside	126	0	SE1	
						4 Inside	126	0	SE1	
						5 Inside	122	0	SE1	
	AVG.	**177**			120	**AVG:**	**126**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DS-4	**88435**	178	> 50%	BRK		1 Outside	127	0	SE1	
P17/16		175	> 50%	BRK		2 Outside	120	0	SE1	
		174	> 50%	BRK		3 Outside	122	0	SE1	
		174	> 50%	BRK		4 Outside	124	0	SE1	
		180	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**3**			
						1 Inside	121	0	SE1	
						2 Inside	126	0	SE1	
						3 Inside	120	0	SE1	
						4 Inside	124	0	SE1	
						5 Inside	120	0	SE1	
	AVG:	**176**			120	**AVG:**	**122**			91
	STD. DEV.	**3**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-5	**88436**	172	> 50%	BRK		1 Outside	126	0	SE1	
P4/29		175	> 50%	BRK		2 Outside	120	0	SE1	
		175	> 50%	BRK		3 Outside	127	0	SE1	
		174	> 50%	BRK		4 Outside	124	0	SE1	
		170	> 50%	BRK		5 Outside	125	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**3**			
						1 Inside	135	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	134	0	SE1	
						4 Inside	137	0	SE1	
						5 Inside	131	0	SE1	
	AVG.	**173**			120	**AVG:**	**133**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DS-6	**88437**	175	> 50%	BRK		1 Outside	122	0	SE1	
P28/1		178	> 50%	BRK		2 Outside	131	0	SE1	
		177	> 50%	BRK		3 Outside	129	0	SE1	
		174	> 50%	BRK		4 Outside	132	0	SE1	
		174	> 50%	BRK		5 Outside	131	0	SE1	
						AVG:	**129**			91
						STD. DEV.	**4**			
						1 Inside	123	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	120	0	SE1	
						4 Inside	124	0	SE1	
						5 Inside	131	0	SE1	
	AVG:	**176**			120	**AVG:**	**125**			91
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-7	**88438**	182	> 50%	BRK		1 Outside	124	0	SE1	
P30/31		181	> 50%	BRK		2 Outside	130	0	SE1	
		177	> 50%	BRK		3 Outside	127	0	SE1	
		175	> 50%	BRK		4 Outside	131	0	SE1	
		179	> 50%	BRK		5 Outside	135	0	SE1	
						AVG:	**129**			91
						STD. DEV.	**4**			
						1 Inside	122	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	127	0	SE1	
						4 Inside	130	0	SE1	
						5 Inside	127	0	SE1	
	AVG.	**179**			120	**AVG:**	**127**			91
	STD. DEV.	**3**				STD. DEV.	**3**			
DS-8	**88439**	184	> 50%	BRK		1 Outside	127	0	SE1	
P34/33		181	> 50%	BRK		2 Outside	124	0	SE1	
		177	> 50%	BRK		3 Outside	128	0	SE1	
		176	> 50%	BRK		4 Outside	131	0	SE1	
		180	> 50%	BRK		5 Outside	132	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**3**			
						1 Inside	131	0	SE1	
						2 Inside	121	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	125	0	SE1	
						5 Inside	131	0	SE1	
	AVG:	**180**			120	**AVG:**	**126**			91
	STD. DEV.	**3**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

TABLE 5.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Epitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-9	**88440**	173	> 50%	BRK		1 Outside	143	0	SE1	
P48/45		174	> 50%	BRK		2 Outside	141	0	SE1	
		175	> 50%	BRK		3 Outside	150	0	SE1	
		175	> 50%	BRK		4 Outside	147	0	SE1	
		177	> 50%	BRK		5 Outside	142	0	SE1	
						AVG:	**145**			91
						STD. DEV.	**4**			
						1 Inside	150	0	SE1	
						2 Inside	147	0	SE1	
						3 Inside	151	0	SE1	
						4 Inside	147	0	SE1	
						5 Inside	145	0	SE1	
	AVG.	**175**			120	**AVG:**	**148**			91
	STD. DEV.	**1**				STD. DEV.	**2**			
DS-10	**88441**	181	> 50%	BRK		1 Outside	128	0	SE1	
P39/38		177	> 50%	BRK		2 Outside	127	0	SE1	
		182	> 50%	BRK		3 Outside	131	0	SE1	
		175	> 50%	BRK		4 Outside	124	0	SE1	
		178	> 50%	BRK		5 Outside	120	0	SE1	
						AVG:	**126**			91
						STD. DEV.	**4**			
						1 Inside	129	0	SE1	
						2 Inside	125	0	SE1	
						3 Inside	130	0	SE1	
						4 Inside	136	0	SE1	
						5 Inside	127	0	SE1	
	AVG:	**179**			120	**AVG:**	**129**			91
	STD. DEV.	**3**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 5)

TABLE 6.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-11	**88442**	176	> 50%	BRK		1 Outside	125	0	SE1	
P58/57		178	> 50%	BRK		2 Outside	127	0	SE1	
		176	> 50%	BRK		3 Outside	120	0	SE1	
		174	> 50%	BRK		4 Outside	124	0	SE1	
		174	> 50%	BRK		5 Outside	125	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**3**			
						1 Inside	126	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	127	0	SE1	
						4 Inside	125	0	SE1	
						5 Inside	127	0	SE1	
	AVG.	**176**			120	**AVG:**	**127**			91
	STD. DEV.	**2**				STD. DEV.	**2**			
DS-12	**88443**	173	> 50%	BRK		1 Outside	155	0	SE1	
P32/52		174	> 50%	BRK		2 Outside	157	0	SE1	
		175	> 50%	BRK		3 Outside	147	0	SE1	
		175	> 50%	BRK		4 Outside	142	0	SE1	
		174	> 50%	BRK		5 Outside	145	0	SE1	
						AVG:	**149**			91
						STD. DEV.	**6**			
						1 Inside	158	0	SE1	
						2 Inside	152	0	SE1	
						3 Inside	154	0	SE1	
						4 Inside	151	0	SE1	
						5 Inside	147	0	SE1	
	AVG:	**174**			120	**AVG:**	**152**			91
	STD. DEV.	**1**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 6)

TABLE 7.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Epitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-13	**88444**	180	> 50%	BRK		1 Outside	120	0	SE1	
P65/64		181	> 50%	BRK		2 Outside	119	0	SE1	
		177	> 50%	BRK		3 Outside	125	0	SE1	
		175	> 50%	BRK		4 Outside	120	0	SE1	
		177	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**122**			91
						STD. DEV.	**4**			
						1 Inside	124	0	SE1	
						2 Inside	125	0	SE1	
						3 Inside	125	0	SE1	
						4 Inside	127	0	SE1	
						5 Inside	128	0	SE1	
	AVG.	**178**			120	**AVG:**	**126**			91
	STD. DEV.	**2**				STD. DEV.	**2**			
DS-14	**88445**	176	> 50%	BRK		1 Outside	125	0	SE1	
P78/67		175	> 50%	BRK		2 Outside	120	0	SE1	
		174	> 50%	BRK		3 Outside	121	0	SE1	
		174	> 50%	BRK		4 Outside	124	0	SE1	
		180	> 50%	BRK		5 Outside	120	0	SE1	
						AVG:	**122**			91
						STD. DEV.	**2**			
						1 Inside	119	0	SE1	
						2 Inside	118	0	SE1	
						3 Inside	122	0	SE1	
						4 Inside	127	0	SE1	
						5 Inside	125	0	SE1	
	AVG:	**176**			120	**AVG:**	**122**			91
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 7)

TABLE 8.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **5-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121286**

QC'd By: Maria Epitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DS-15	**88446**	175	> 50%	BRK		1 Outside	155	0	SE1	
P75/67		170	> 50%	BRK		2 Outside	151	0	SE1	
		174	> 50%	BRK		3 Outside	148	0	SE1	
Fusion		174	> 50%	BRK		4 Outside	145	0	SE1	
		177	> 50%	BRK		5 Outside	149	0	SE1	
						AVG:	**150**			91
						STD. DEV.	**4**			
						1 Inside	146	0	SE1	
						2 Inside	150	0	SE1	
						3 Inside	142	0	SE1	
						4 Inside	149	0	SE1	
						5 Inside	152	0	SE1	
	AVG.	**174**			120	**AVG:**	**148**			91
	STD. DEV.	**3**				STD. DEV.	**4**			
DSX-1	**88447**	177	> 50%	BRK		1 Outside	130	0	SE3	
P52/ 6P		180	> 50%	BRK		2 Outside	132	0	SE3	
		174	> 50%	BRK		3 Outside	129	0	SE3	
Extrusion		174	> 50%	BRK		4 Outside	134	0	SE3	
		177	> 50%	BRK		5 Outside	137	0	SE3	
						AVG:	**132**			78
						STD. DEV.	**3**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG:	**176**			120	**AVG:**				
	STD. DEV.	**3**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 8)

APPENDIX I

Geomembrane Installation

(Primary Layer for Ponds A, B, and C)

Section 1
Geomembrane Panel Deployment Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

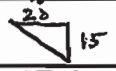
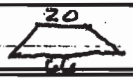
OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Bottom Layer

12-19-12 Page 1

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
1	3566	55	100	22.5	2250	60	CSJ	
2	3566	55	25	22.5	562.5	60	CSJ	
3	3566	55	15	6	90	60	CSJ	
4	3566	55	15	10	150	60	CSJ	
5	3564	55	27	22.5	607.5	60	CSJ	
6	3564	55	39	22.5	877.5	61	CSJ	
7	3564	55	39	22.5	877.5	60	CSJ	
8	3564	55	40	22.5	900	60	CSJ	
9	3564	55	40	22.5	900	60	CSJ	
10	3566	56	25	22.5	562.5	61	CSJ	
11	3564	56	20	12	240	60	CSJ	
12	3566	56	43	22.5	967.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 8985

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Btm. Layer

12-19-12 Page 2

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
13	3566	56	24	22.5	540	60	CSJ	36 12
14	3677	56	36	22.5	810	60	CSJ	
15	3677	56	36	22.5	810	60	CSJ	
16	3677	56	36	22.5	810	61	CSJ	
17	3677	56	36	22.5	810	60	CSJ	
18	3677	57	27	22.5	607.5	60	CSJ	36 18
19	3677	57	16	9	144	60	CSJ	18 16
20	3677	57	10	5	50	60	CSJ	10 10
21	3677	57	21	22.5	472.5	60	CSJ	32 10
22	3676	57	226	22.5	5085	60	CSJ	
23	3455	58	41	22.5	922.5	60	CSJ	
24	3677	59	284	22.5	6390	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 17451.5

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): ✓

REVIEWED BY : S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER Btm. layer

12-19-12 Page 3

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
25	3455	60	325	225	7312.5	60	CSJ	
26	3455	60	126	22.5	2835	60	CSJ	
27	3562	62	201	22.5	4522.5	60	CSJ	
28	3562	63	222	22.5	4995	61	CSJ	
29	3457	64	97	22.5	2182.5	61	CSJ	
30	3457	66	192	22.5	4320	60	CSJ	
31	3457	67	162	22.5	3645	60	CSJ	
32	3559	69	185	22.5	4162.5	60	CSJ	
33	3559	73	225	22.5	5062.5	60	CSJ	
34	3674	74	98	22.5	2205	60	CSJ	
35	3562	74	15	8	120	60	CSJ	25 1.4
36	3457	75	15	10	150	60	CSJ	25

PAGE APPROX. TOTAL (SQ FT): 41512

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Btm. Layer

12-19-12 Page 4

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
37	3457	76	12	6	72	60	CSJ	12 12
38	3562	77	64	22.5	1440	60	CSJ	
39	3559	77	77	22.5	1732.5	60	CSJ	
40	3674	78	340	22.5	7650	60	CSJ	
41	3558	78	256	22.5	5760	61	CSJ	
42	3674	79	84	22.5	1890	60	CSJ	
43	3558	79	266	22.5	5985	60	CSJ	
44	3564	79	64	22.5	1440	61	CSJ	
45	3564	79	330	22.5	7425	60	CSJ	
46	3457	80	34	22.5	765	61	CSJ	
47	3564	80	19	20	380	60	CSJ	
48	3564	80	35	22.5	787.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 35327

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER BTM LAYER

12-19-12 Page 5

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
49	3564	80	45	22.5	1012.5	60	CSJ	
50	3563	80	46	22.5	1012.5	60	CSJ	
51	3563	80	46	22.5	1035	60	CSJ	
52	3563	80	46	22.5	1035	60	CSJ	
53	3563	80	16	22.5	360	60	CSJ	22.5 30
54	3563	80	34	22.5	765	60	CSJ	32 30
55	3563	80	60	22.5	1350	60	CSJ	
56	3563	80	33	22.5	742.5	60	CSJ	
57	3563	80	44	22.5	990	60	CSJ	
58	3563	80	44	22.5	990	60	CSJ	
59	3563	80	44	22.5	990	60	CSJ	
60	3563	80	44	22.5	990	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 11272.5

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Btm Layer

12-19-12 Page 6

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
61	3678	80	25	11	275	60	CSJ	21 22
62	3678	80	17	6	102	60	CSJ	12 17
63	3678	80	27	22.5	607.5	60	CSJ	32 17
64	3678	81	74	22.5	1665	60	CSJ	
65	3678	81	74	22.5	1665	61	CSJ	
66	3678	81	74	22.5	1665	60	CSJ	
67	3678	81	39	14	546	60	CSJ	34 39 14 54
68	3678	81	22	22.5	495	60	CSJ	34 10
69	3678	80	15	22.5	337.5	61	CSJ	
70	3678	80	26	22.5	585	60	CSJ	37 15

PAGE APPROX. TOTAL (SQ FT): 7943 Ft^2

DAILY TOTAL (SQ FT): 122491 Ft^2

ACCUMULATED TOTAL (SQ FT): 122491 Ft^2

REVIEWED BY : S. NEJAD

DATE: 12-21-12

Section 2
Geomembrane Trial Seam Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

BOTTOM LAYER

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PAGE# 1

TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	FUSION WELD SPEED	FUSION WELD WEDGE SET	EXTRUSION WELD PRE HEAT	EXTRUSION WELD BARREL SET		PEEL VALUE lbs/inch					SHEER VALUE lbs/inch					P/F	QA MON.	
TF-1	0730	55	16	BV	10	850	–	–	INSIDE	122	129	112	127	110	190	187	186	173	166	P	SMN	S/S
									OUTSIDE	120	117	118	118	119								
TF-2	0730	55	95	SM	15	800	–	–	INSIDE	124	115	120	105	112	186	186	181	176	157	P	SMN	S/S
									OUTSIDE	114	109	108	103	100								
TF-3	0730	55	16	BV	8	850	–	–	INSIDE	128	124	131	120	122	188	182	173	175	170	P	SMN	S/T
									OUTSIDE	125	131	112	122	118								
TF-4	1240	78	95	SM	15	800	–	–	INSIDE	96	96	94	95	94	142	134	139	151	139	P	SMN	S/S
									OUTSIDE	105	95	96	92	104								
TF-5	1240	78	16	BV	12	850	–	–	INSIDE	102	96	119	109	101	140	134	131	140	139	P	SMN	S/T
									OUTSIDE	107	96	107	99	94								
TF-6	1240	78	16	BV	9	850	–	–	INSIDE	125	111	114	114	107	152	149	150	147	142	P	SMN	S/T
									OUTSIDE	120	121	105	107	100								
TF-7	1240	78	95	SM	14	800	–	–	INSIDE	118	119	119	132	113	135	138	139	137	143	P	SMN	T/T
									OUTSIDE	121	133	128	133	114								
TF-8	1630	80	16	BV	12	850	–	–	INSIDE	101	113	121	118	106	141	143	140	145	147	P	SMN	S/S
									OUTSIDE	106	118	120	116	102								
TF-9	1630	80	16	BV	9	850	–	–	INSIDE	107	115	112	120	111	138	143	145	140	143	P	SMN	T/T
									OUTSIDE	108	110	116	116	114								
TF-10	1630	80	95	SM	14	800	–	–	INSIDE	100	113	112	118	110	143	145	142	147	142	P	SMN	S/T
									OUTSIDE	106	112	115	124	111								
TF-11	1630	80	95	SM	15	800	–	–	INSIDE	106	103	101	112	98	143	140	145	142	146	P	SMN	S/S
									OUTSIDE	108	108	114	106	106								
									INSIDE													
									OUTSIDE													
									INSIDE													
									OUTSIDE													

Passing Peel Fusion (91 lb/in): _____ Passing Peel Extrusion (78 lb/in): _____ Passing Shear Fusion (120 lb/in): _____ Passing Shear Extrusion (120 lb/in): _____

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

BOTTOM LAYER

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco

PROJECT LOCATION : St. Cloud, Fl.

DATE: 12-20-12 PAGE# 2

TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	FUSION WELD		EXTRUSION WELD		PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.
					SPEED	WEDGE SET	PRE HEAT	BARREL SET													
TX-1	0830	65	24	JP	–	–	490	470	INSIDE	139	127	140	133	110	166	167	172	172	149	P	SMN
									OUTSIDE	–	–	–	–	–							
TX-2	0900	65	71	SM	–	–	480	460	INSIDE	154	139	140	152	146	147	151	158	170	155	P	SMN
									OUTSIDE	–	–	–	–	–							
TX-3	1300	78	71	SM	–	–	480	460	INSIDE	135	129	132	120	122	135	129	132	120	122	P	SMN
									OUTSIDE	–	–	–	–	–							
TX-4	1300	78	24	JP	–	–	480	455	INSIDE	133	134	129	128	115	121	131	129	131	123	P	SMN
									OUTSIDE	–	–	–	–	–							
									INSIDE												
									OUTSIDE												
									INSIDE												
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									OUTSIDE												
									INSIDE												
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 12-21-12

BRANTLEY [illegible]NEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

BOTTOM LAYER

Brantley Engineering, LLC

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation
PROJECT LOCATION : St. Cloud, Fl.

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-21-12 **PAGE#** 3

					FUSION WELD		EXTRUSION WELD														
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET		PEEL VALUE lbs/inch					SHEER VALUE lbs/inch					P/F	QA MON.
TX-1	0800	41	71	SM	–	–	480	460	INSIDE	123	119	130	122	125	175	163	159	167	163	P	SMN
									OUTSIDE	–	–	–	–	–							
									INSIDE												
									OUTSIDE												
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									INSIDE												
									OUTSIDE												

Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 12/21/12

Section 3
Geomembrane Fusion Seaming Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	730	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (—) Ø

MACHINE # 95

PAGE NUMBER: 1

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
5 / 6	WEOS	* EEOS	07:31	55	SM	15	800	802	38	38	—	SMN		12-20	SMN
6 / 7	WEOS	* EEOS	0743	56	SM	15	800	800	39	77	—	SMN		12-20	SMN
7 / 8	WEOS	* EEOS	0755	57	SM	15	800	804	39	116	—	SMN		12-20	SMN
8 / 9	EEOS	* WEOS	0810	57	SM	15	800	802	39	155	—	SMN		12-20	SMN
9 / 10	EEOS	* WEOS	0815	57	SM	15	800	800	39	194	—	SMN		12-20	SMN
13 / 14	EEOS	* WEOS	0824	58	SM	15	800	802	39	233	—	SMN		12-20	SMN
14 / 15	EEOS	* WEOS	0830	58	SM	15	800	800	39	272	—	SMN		12-20	SMN
15 / 16	EEOS	* WEOS	0835	58	SM	15	800	798	39	311	—	SMN		12-20	SMN
16 / 17	EEOS	* WEOS	0852	60	SM	15	800	800	39	350	—	SMN		12-20	SMN
17 / 18	EEOS	* WEOS	0857	60	SM	15	800	798	38	388	—	SMN		12-20	SMN
23 / 24	EEOS	* WEOS	0907	60	SM	15	800	796	22	410	—	SMN		12-20	SMN
22 / 23	NEOS	* SEOS	0914	62	SM	15	800	800	40	450	—	SMN		12-20	SMN
22 / 24	NEOS	* SEOS	0920	62	SM	15	800	798	184	480/154	DB-1	SMN		12-20	SMN
1 / 24	NEOS	* SEOS	0931	62	SM	15	800	799	100	254	—	SMN		12-20	SMN
23 / 25	NEOS	* SEOS	0950	63	SM	15	800	800	40	294	—	SM		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 774

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 294

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	730	BU
TF-3	730	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 16

PAGE NUMBER: 2

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
4 / 5	WEOS	* EEOS	750	56	BU	10	850	852	18	18	—	CJJ		12-20	SMN
2 / 3	NEOS	* SEOS	759	56	BU	10	850	850	14	32	—	CJJ		12-20	SMN
2 / 5	EEOS	* WEOS	805	56	BU	10	850	851	24	56	—	CJJ		12-20	SMN
2 / 4	EEOS	* WEOS	809	56	BU	10	850	850	5	61	—	CJJ	Covered	By 2	B →
3 / 4	EEOS	* WEOS	810	57	BU	10	850	850	17	78	—	CJJ		12-20	SMN
1 / 22	WEOS	* EEOS	823	58	BU	16	850	851	22	100	—	CJJ		12-20	SMN
9 / 22	NEOS	* SEOS	832	58	BU	8	850	850	23	123	—	CJJ		12-20	SMN
8 / 22	NEOS	* SEOS	836	58	BU	8	850	852	10	133	—	CJJ		12-20	SMN
1 / 8	NEOS	* SEOS	837	59	BU	8	850	850	12	145	—	CJJ		12-20	SMN
1 / 7	NEOS	* SEOS	839	58	BU	8	850	850	23	168	—	CJJ		12-20	SMN
1 / 6	NEOS	* SEOS	841	59	BU	8	850	851	22	190	—	CJJ		12-20	SMN
1 / 5	NEOS	* SEOS	845	59	BU	8	850	850	7	197	—	CJJ		12-20	SMN
1 / 2	NEOS	* SEOS	846	59	BU	8	850	850	23	220	—	CJJ		12-20	SMN
10 / 12	EEOS	* WEOS	905	60	BU	8	850	850	28	248	—	CJJ		12-20	SMN
10 / 11	EEOS	* WEOS	910	60	BU	8	850	851	9	257	—	CJJ		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 257

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 257

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	730	BV
TF-3	730	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (2) 257

MACHINE # 16

PAGE NUMBER: 3

SEAM NUMBER	SEAM SECTION START POINT *	SEAM SECTION FINISH POINT *	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	MACHINE SETTINGS DIGITAL SET WEDGE	MACHINE SETTINGS INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	** PASSING - NON DESTRUCTIVE TESTING QA MON.
11 / 13	WEOS	* EEOS	916	61	BU	8	850	850	10	267	—	CSJ		12-20	SMN
12 / 13	EEOS	* WEOS	925	62	BU	8	850	851	31	298	—	CSJ		12-20	SMN
11 / 12	NEOS	* SEOS	939	62	BV	8	850	850	20	318	—	CSJ		12-20	SMN
18 / 19	EEOS	* WEOS	941	63	BU	10	850	851	18	336	—	CSJ		12-20	SMN
20 / 21	WEOS	* SEOS	945	63	BV	10	850	850	10	346	—	CSJ		12-20	SMN
18 / 21	EEOS	* WEOS	950	64	BV	8	850	850	24	370	—	CSJ		12-20	SMN
19 / 21	EEOS	* WEOS	952	65	BU	8	850	850	8	378	—	CSJ		12-20	SMN
19 / 20	EEOS	* WEOS	954	65	BU	8	850	851	12	390	—	CSJ		12-20	SMN
21 / 22	NEOS	* SEOS	1000	65	BV	10	850	850	32	422	—	CSJ		12-20	SMN
18 / 22	NEOS	* SEOS	1004	65	BU	10	850	850	8	430	—	CSJ		12-20	SMN
17 / 22	NEOS	* SEOS	1005	66	BV	10	850	849	22	452	—	CSJ		12-20	SMN
16 / 22	NEOS	* SEOS	1007	66	BV	10	850	850	23	475	—	CSJ		12-20	SMN
15 / 22	NEOS	* SEOS	1009	66	BU	10	850	850	22	480/17	DB-3	CSJ		12-20	SMN
14 / 22	NEOS	* SEOS	1011	66	BV	10	850	851	23	40	—	CSJ		12-20	SMN
12 / 22	NEOS	* SEOS	1015	66	BV	10	850	850	66	106	—	CSJ		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 329

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 106

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	730	SM
TF-4	1240	SM
TF-7	1240	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (1) 294

MACHINE # 95

PAGE NUMBER: 4

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
24/25	NEOS	SEOS	0956	64	SM	15	800	802	288	490/92	DB-2	SMN		12-20	SMN
28/29	EEOS	WEOS	1028	65	SM	15	800	798	22	114	–	SMN		12-20	SMN
27/29	NEOS	SEOS	1032	65	SM	15	800	800	97	211	–	SMN		12-20	SMN
27/28	NEOS	SEOS	1044	65	SM	15	800	796	103	314	–	SMN		12-20	SMN
26/28	NEOS	SEOS	1052	66	SM	15	800	800	126	440	–	SMN		12-20	SMN
29/30	NEOS	SEOS	1114	68	SM	15	800	802	97	490/47	DB-4	SMN		12-20	SMN
28/30	NEOS	SEOS	1123	68	SM	15	800	800	103	150	–	SMN		12-20	SMN
31/32	SEOS	NEOS	1134	68	SM	15	800	798	160	310	–	SMN		12-20	SMN
33/34	EEOS	WEOS	1300	76	SM	15	800	796	22	332	–	SMN		12-20	SMN
32/33	SEOS	NEOS	1304	76	SM	15	800	800	97	429	–	SMN		12-20	SMN
32/34	SEOS	NEOS	1312	77	SM	15	800	798	97	480/46	DB-6	SMN		12-20	SMN
33/40	SEOS	NEOS	1332	78	SM	15	800	796	243	289	–	SMN		12-20	SMN
34/40	SEOS	NEOS	1350	79	SM	15	800	800	97	386	–	SMN		12-20	SMN
41/43	SEOS	NEOS	1407	79	SM	15	800	798	242	490/138	DB-8	SMN		12-20	SMN
42/43	EEOS	WEOS	1430	79	SM	15	800	800	20	158	–	SMN		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 1818

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 158

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	730	BV
TF-3	730	BV
TF-5	1240	BV
TF-6	1240	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (3) 106

MACHINE # 16

PAGE NUMBER: 5

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH. SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
25 / 27	NEOS *	SEOS	1030	67	BV	10	850	850	200	306	—	CJJ		12-20	SMN
26 / 27	EEOS *	WEOS	1054	68	BV	8	850	851	22	328	—	CJJ		12-20	SMN
25 / 26	NEOS *	SEOS	1105	69	BV	10	850	850	124	452	—	CJJ		12-20	SMN
30 / 31	NEOS *	SEOS	1135	20	BV	10	850	850	160	490/122	DB-5	CJJ		12-20	SMN
31 / 37	EEOS *	WEOS	1155	71	BV	10	850	850	12	134	—	CJJ		12-20	SMN
30 / 37	SEOS *	NEOS	1249	76	BV	12	850	849	12	146	—	SMN		12-20	SMN
35 / 36	NEOS *	SEOS	1303	76	BV	12	850	850	14	160	—	SMN		12-20	SMN
35 / 38	EEOS *	WEOS	1305	76	BV	12	850	848	14	174	—	SMN		12-20	SMN
36 / 38	EEOS *	WEOS	1306	76	BV	12	850	846	16	190	—	SMN		12-20	SMN
36 / 37	EEOS *	WEOS	1316	77	BV	12	850	848	14	204	—	SMN		12-20	SMN
30 / 36	EEOS *	WEOS	1318	77	BV	12	850	850	3	207	—	SMN	Covered	BY	ST
30 / 38	EEOS *	WEOS	1319	77	BV	12	850	850	20	227	—	SMN		12-20	SMN
38 / 39	WEOS *	EEOS	1323	77	BV	12	850	848	75	302	—	SMN		12-20	SMN
32 / 38	EEOS *	WEOS	1336	78	BV	12	850	850	18	320	—	SMN		12-20	SMN
32 / 35	EEOS *	WEOS	1338	78	BV	12	850	848	15	335	—	SMN		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 719

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 335

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
~~TF-4~~	~~1240~~	~~SM~~
~~TF-7~~	~~1240~~	~~SM~~
TF-10	1630	SM
TF-11	1630	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (4) 158

MACHINE # 95

PAGE NUMBER: 6

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
42/44	SEOS	NEOS	1432	80	SM	15	800	798	64	222	–	SMN		12-20	SMN
43/45	SEOS	NEOS	1452	80	SM	15	800	800	262	484	–	SMN		12-20	SMN
44/45	SEOS	NEOS	1515	81	SM	15	800	802	64	490/58	DB-9	SMN		12-20	SMN
56/57	WEOS	EEOS	1535	81	SM	15	800	800	43	101	–	SMN		12-20	SMN
57/58	WEOS	EEOS	1538	81	SM	15	800	802	43	144	–	SMN		12-20	SMN
58/59	WEOS	EEOS	1543	81	SM	15	800	804	43	187	–	SMN		12-20	SMN
59/60	WEOS	EEOS	1547	81	SM	15	800	798	43	230	–	SMN		12-20	SMN
60/61	WEOS	EEOS	1552	81	SM	15	800	800	25	255	–	SMN		12-20	SMN
62/63	SEOS	NEOS	1556	80	SM	15	800	802	19	274	–	SMN		12-20	SMN
39/64	WEOS	EEOS	1605	80	SM	15	800	800	74	348	–	SMN		12-20	SMN
64/65	WEOS	EEOS	1616	80	SM	15	800	798	74	422	–	SMN		12-20	SMN
65/66	WEOS	EEOS	1623	79	SM	15	800	800	74	485/11	DB-11	SMN		12-20	SMN
66/67	WEOS	EEOS	1634	79	SM	15	800	796	54	65	–	SMN		12-20	SMN
69/70	SEOS	NEOS	1643	76	SM	15	800	798	15	80	–	SMN		12-20	SMN
66/70	WEOS	EEOS	1700	76	SM	15	800	800	12	92	–	SMN		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 909

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 92

DAILY TOTAL WELDED (FT): –

DAILY DESTRUCTIVE LENGTH CARRY-OVER: –

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY: S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-5	1240	BU
TF-6	1240	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (5) 335

MACHINE # 16

PAGE NUMBER: 7

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
40/41	SEOS	NEOS	1345	78	BV	12	850	848	242	480/97	DB-7	SMN		12-20	SMN
40/42	SEOS	NEOS	1416	79	BV	12	850	850	84	181	—	SMN		12-20	SMN
41/42	EEOS	WEOS	1430	80	BV	12	850	848	22	203	—	SMN		12-20	SMN
43/44	EEOS	WEOS	1435	80	BV	12	850	850	22	225	—	SMN		12-20	SMN
47/48	EEOS	WEOS	1443	80	BU	12	850	850	20	245	—	CSS		12-20	SMN
46/47	SEOS	WEOS	1446	80	BU	12	850	850	19	264	—	CSS		12-20	SMN
46/48	WEOS	EEOS	1452	80	BV	9	850	850	30	294	—	CSS		12-20	SMN
48/49	EEOS	WEOS	1500	80	BU	12	850	849	45	339	—	CSS		12-20	SMN
49/50	EEOS	WEOS	1507	80	BU	12	850	850	45	384	—	CSS		12-20	SMN
50/51	EEOS	WEOS	1516	80	BU	12	850	850	45	429	—	CSS		12-20	SMN
51/52	WEOS	EEOS	1527	80	BU	12	850	850	45	474	—	CSS		12-20	SMN
52/53	WEOS	EEOS	1535	80	BU	12	850	848	29	490/13	DB-10	CSS		12-20	SMN
54/55	SEOS	NEOS	1544	80	BU	12	850	850	38	51	—	CSS		12-20	SMN
53/55	WEOS	EEOS	1558	81	BV	12	850	850	15	66	—	CSS		12-20	SMN
53/54	WEOS	EEOS	1600	81	BU	12	850	850	22	88	—	CSS		12-20	SMN

PAGE TOTAL: 723

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 88

DAILY TOTAL WELDED (FT): -

DAILY DESTRUCTIVE LENGTH CARRY-OVER: -

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY: S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-5	1240	BU
TF-6	1240	BU
TF-8	1630	BU
TF-9	1630	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (7) 88

MACHINE # 16

PAGE NUMBER: 8

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
54/56	EEOS	* WEOS	1611	81	BU	12	850	850	20	108	—	CSS		12-20	SMN
55/56	WEOS	* EEOS	1615	80	BU	9	850	849	25	133	—	CSS		12-20	SMN
60/63	WEOS	* EEOS	1628	80	BU	9	850	850	20	153	—	CSS		12-20	SMN
61/63	WEOS	* EEOS	1630	80	BU	9	850	850	11	164	—	CSS		12-20	SMN
61/62	WEOS	* EEOS	1631	80	BU	9	850	850	23	187	—	CSS		12-20	SMN
45/63	SEOS	* NEOS	1637	80	BU	12	850	851	37	224	—	CSS		12-20	SMN
45/60	SEOS	* NEOS	1642	79	BU	12	850	850	9	233	—	CSS		12-20	SMN
45/59	SEOS	* NEOS	1644	79	BU	12	850	850	22	255	—	CSS		12-20	SMN
45/58	SEOS	* NEOS	1646	79	BU	12	850	850	23	278	—	CSS		12-20	SMN
45/57	SEOS	* NEOS	1649	79	BU	12	850	850	22	300	—	CSS		12-20	SMN
45/56	SEOS	* NEOS	1652	79	BU	12	850	850	10	310	—	CSS		12-20	SMN
45/55	SEOS	* NEOS	1654	79	BU	12	850	850	62	372	—	CSS		12-20	SMN
45/52	SEOS	* NEOS	1700	78	BU	12	850	848	22	394	—	CSS		12-20	SMN
45/51	SEOS	* NEOS	1704	78	BU	12	850	851	23	417	—	CSS		12-20	SMN
45/50	SEOS	* NEOS	1707	77	BU	12	850	850	22	439	—	CSS		12-20	SMN

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 351

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 439

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY: S. NEJAD

DATE: 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-8	1630	BU
TF-9	1630	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (8) 439

MACHINE # 16

PAGE NUMBER: 9

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
45/49	SEOS	NEOS	1710	77	BU	12	850	850	22	461	—	CSS		12-20	SMN
45/46	SEOS	NEOS	1714	77	BU	12	850	851	36	490/7	DB-12	CSS		12-20	SMN
33/38	NEOS	SEOS	1736	75	BU	12	850	850	7	14	—	CSS	Corrected	BY	BS
33/39	NEOS	SEOS	1737	74	BU	12	850	850	23	37	—	CSS		12-20	SMN
33/64	NEOS	SEOS	1739	74	BU	12	850	850	22	59	—	CSS		12-20	SMN
33/65	NEOS	SEOS	1742	74	BU	12	850	848	23	82	—	CSS		12-20	SMN
33/66	NEOS	SEOS	1746	73	BU	12	850	850	22	90/14	DB-14	CSS		12-20	SMN
52/55	WEOS	EEOS	1755	73	BU	12	850	850	10	24	—	CSS		12-20	SMN
/	*														
/	*														
/	*														
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 165

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 24

DAILY TOTAL WELDED (FT): 2544

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 24

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

BOTTOM Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-19-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-10	1630	SM
TF-11	1630	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (6) 92

MACHINE # 95

PAGE NUMBER: 10

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
67/70	WEOS	EEOS	1701	75	SM	15	800	798	20	112	–	SMN		12-20	SMN
67/69	WEOS	EEOS	1703	75	SM	15	800	798	22	134	–	SMN		12-20	SMN
28/70	SEOS	NEOS	1712	75	SM	15	800	800	37	171	–	SMN		12-20	SMN
28/66	SEOS	NEOS	1715	75	SM	15	800	796	15	186	–	SMN		12-20	SMN
28/65	SEOS	NEOS	1719	74	SM	15	800	798	22	208	–	SMN		12-20	SMN
28/64	SEOS	NEOS	1721	74	SM	15	800	800	23	231	–	SMN		12-20	SMN
28/139	SEOS	NEOS	1723	74	SM	15	800	802	22	253	–	SMN		12-20	SMN
28/138	SEOS	NEOS	1725	74	SM	15	800	800	4	257	–	SMN	covered	By 4C & 5B	
67/68	WEOS	EEOS	1730	70	SM	15	800	796	24	281	–	SMN		12-20	SMN
33/68	NEOS	SEOS	1736	68	SM	15	800	800	34	305/10	DB-13	SMN		12-20	SMN
/	*														
/	*														
/	*														
/	*														
/	*														

PAGE TOTAL: 223

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 10

DAILY TOTAL WELDED (FT): 3720

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 10

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-21-12

Section 4
Geomembrane Extrusion Seaming Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-20-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-2	0900	SM
TX-3	1300	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 71

PAGE NUMBER: 1

EXTRUSION SEAMING									VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
68/69	NEOS *	SEOS	1401	75	SM	14	14	—	CSJ	12-20	MS	P	CSJ	
/	*													
/	*													
/	*													
/	*													
/	*													
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL:	14
PAGE DESTRUCTIVE LENGTH CARRY-OVER	14
DAILY TOTAL WELDED (FT)	14
DAILY DESTRUCTIVE LENGTH CARRY-OVER	14

REVIEWED BY : S. NEJAD

DATE : 12-21-12

Section 5
Geomembrane Defect, Repair, and Vacuum Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 1

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	6/7	WEOS To 6' E.	Cut	12-19		12-20	P	2x6	71	SM	CSJ	12-20	MS	P	CSJ
B	6/7	12' E. OF WEOS	BO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
C	7/8	WEOS To 6' E	Cut	12-19		12-20	P	2x6	71	SM	CSJ	12-20	MS	P	CSJ
D	15/16	EEOS To 6' W	BO	12-19	covered by 24	—	—	—	—	—	—	—	—	—	—
F	22/23	NEOS To 5' S.	BO	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
G	22/24	30' S. OF NEOS	DB-1	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MS	P	CSJ
H	22/24	28' S. OF NEOS	D	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
J	22/24	125' S. OF NEOS	IO	12-19		12-20	P	2x4	71	SM	CSJ	12-20	MS	P	CSJ
K	22/24	14' N. OF SEOS	IO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
M	1/22/24	intersection	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
N	22/23/24	intersection	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
P	23/24/25	intersection	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
Q	24/25	152' S. OF NEOS	D	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
R	24/25	174' S. OF NEOS	IO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
S	24/25	92' N. OF SEOS	DB-2	12-19		12-20	P	2x6	71	SM	CSJ	12-20	MS	P	CSJ
T	27/29	NEOS To 6' S.	BO	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
W	27/29	35' S. OF NEOS	BO	12-19		12-20	P	2x4	24	JP	CSJ	12-20	MS	P	CSJ
X	29/30	NEOS To 10' S.	BO	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
Y	29/30	50' S. OF NEOS	DB-4	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

BOTTOM Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 2

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	2/3/4	Int	T	12-19		12-20	P	3x5	71	SM	CSJ	12-20	MG	P	CSJ
B	2/4/5	Int	T	12-19	Covered by 2A	—	—	—	—	—	—	—	—	—	—
C	1/2/5	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
D	9/10/22	Int	T	12-19		12-20	P	3x4	71	SM	CSJ	12-20	MG	P	CSJ
F	8/9/22	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
G	1/8/22	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
H	1/7/8	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
J	1/6/7	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
K	1/5/6	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
M	11/12/13	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
N	23	10'N, 11'E of SWC	Cut	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
P	13/14/22	Int	T	12-19		12-20	P	2x3	24	JP	CSJ	12-20	MG	P	CSJ
Q	19/20/21	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
R	18/19/21	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
S	18/21/22	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
T	22/18/22	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
W	16/17/22	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
X	15/16/22	Int	T	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MG	P	CSJ
Y	15/22	17' N of SEOS	DB-3	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MG	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE # 5

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON
A	32/33	27' N. OF SEOS	Cut	12-19		12-20	P	10x20	71	SM	CSJ	12-21	MS	P	CSJ
B	32/33	17' N. OF SEOS	BO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
C	32/34	51' N. OF SEOS	DB-6	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
D	32/34	65 N. OF SEOS	BO	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
F	33/40	SEOS TO 5' N.	BO	12-19		12-21	P	2x2	71	SM	CSJ	12-21	MS	P	CSJ
G	34/40	135' N. OF SEOS	BO	12-19		12-20	P	2x3	24	JP	CSJ	12-20	MS	P	CSJ
H	40/41	SEOS TO 5' N.	BO	12-19		12-20	P	2x6	71	SM	CSJ	12-20	MS	P	CSJ
J	40/41	145' N. OF SEOS	DB-7	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MS	P	CSJ
K	41/43	104' N. OF SEOS	DB-8	12-19		12-20	P	2x6	71	SM	CSJ	12-20	MS	P	CSJ
M	42/44	33' N. OF SEOS	BO	12-19		12-20	P	1x2	24	JP	CSJ	12-20	MS	P	CSJ
N	42/44	6' S. OF NEOS	BO	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
P	43/45	158' N. OF SEOS	BO	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
Q	43/45	52' N. OF SEOS	IO	12-19		12-20	P	2x3	71	SM	CSJ	12-20	MS	P	CSJ
R	43/45	41' N. OF SEOS	BO	12-19		12-20	P	2x5	71	SM	CSJ	12-20	MS	P	CSJ
S	43/45	62' N OF SEOS	IO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
T	44/45	6' N. OF SEOS	DB-9	12-19		12-20	P	2x8	24	JP	CSJ	12-20	MS	P	CSJ
W	62/63	6' N. TO SEOS	BO	12-19		12-20	P	2x7	71	SM	CSJ	12-20	MS	P	CSJ
X	39/164	33 E. OF WEOS	BO	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
Y	65/66	11' W. OF EEOS	DB-11	12-19		12-20	P	2x5	71	SM	CSJ	12-20	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

BOTTOM Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 4

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH.	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	14/15/22	Int.	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
B	27/28/29	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
C	28/29/30	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
D	25/26/27	Int	T	12-19		12-20	P	2x3	71	SM	CSJ	12-20	MG	P	CSJ
F	26/27/28	Int	T	12-19		12-20	P	2x3	71	SM	CSJ	12-20	MG	P	CSJ
G	30/31	38' S of NEOS	DB-5	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MG	P	CSJ
H	52/53	13' W of EEOS	DB-10	12-19		12-20	P	2x6	24	JP	CSJ	12-20	MG	P	CSJ
J	61/62/63	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
K	60/61/63	Int	T	12-19		12-20	P	3x3	71	SM	CSJ	12-20	MG	P	CSJ
M	45/60/63	Int.	T	12-19		12-20	P	2x3	71	SM	CSJ	12-20	MG	P	CSJ
N	45/59/60	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
P	45/58/59	Int	T	12-19		12-20	P	2x4	71	SM	CSJ	12-20	MG	P	CSJ
Q	45/57/58	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
R	45/56/57	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
S	45/55/56	Int	T	12-19		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
T	45/52/55	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
W	45/51/52	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
X	45/50/51	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
Y	45/49/50	Int	T	12-19		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
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DX - EXTRUSION DESTRUCTIVE
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FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY: S. NEJAD

DATE: 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

BOTTOM LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 5

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	69/70	SEOS To 5' N	BO	12-19		12-20	P	2X6	71	SM	CSJ	12-20	MS	P	CSJ
B	28/70	SEOS To 4' N.	BO	12-19		12-20	P	2X6	71	SM	CSJ	12-20	MS	P	CSJ
C	45/46	7' S. OF NEOS	DB-12	12-19		12-20	P	2X6	24	JP	CSJ	12-20	MS	P	CSJ
D	33/68	SEOS To 5' N.	BO	12-19	Covered by 5E	—	—	—	—	—	—	—	—	—	—
F	33/68	10' N. OF SEOS	DB-13	12-19		12-20	P	2X18	71	SM	CSJ	12-20	MS	P	CSJ
G	33/66	14' N. OF SEOS	DB-14	12-19		12-20	P	2X8	71	SM	CSJ	12-20	MS	P	CSJ
H	28	8'S, 10W	Cut	12-19		12-20	P	2X2	24	JP	CSJ	12-20	MS	P	CSJ
J	22	108'S, 10'W	D	12-19		12-20	P	1X1	24	JP	CSJ	12-20	MS	P	CSJ
K	22	98'S, 2'E	D	12-19		12-20	P	1X1	24	JP	CSJ	12-20	MS	P	CSJ
M	10/11/12	Int	T	12-19		12-20	P	2X2	71	SM	CSJ	12-20	MS	P	CSJ
N	28/30	44' N. of SEOS	Cut	12-19		12-21	P	2X2	71	SM	CSJ	12-21	MS	P	CSJ
P	1	8'S, 12'E	D	12-19		12-20	P	2X2	71	SM	CSJ	12-20	MS	P	CSJ
Q	23	18'N, 11'E	D	12-19		12-20	P	2X2	24	JP	CSJ	12-20	MS	P	CSJ
R	23	6'N, 3'E	D	12-19		12-20	P	2X2	24	JP	CSJ	12-20	MS	P	CSJ
S	28/38/39	Int	T	12-19		12-20	P	2X10	71	SM	CSJ	12-20	MS	P	CSJ
T	30/36/37	Int	T	12-19		12-20	P	2X6	71	SM	CSJ	12-20	MS	P	CSJ
W	28/39/64	Int	T	12-19		12-20	P	2X3	71	SM	CSJ	12-20	MS	P	CSJ
X	28/64/65	Int	T	12-19		12-20	P	2X2	71	SM	CSJ	12-20	MS	P	CSJ
Y	28/65/66	Int	T	12-19		12-20	P	2X2	71	SM	CSJ	12-20	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
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DF - FUSION DESTRUCTIVE
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EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY: S. NEJAD

DATE: 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 6

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	24	100'S, 10'E	D	12-19		12-20	P	2x3	24	JP	CSJ	12-20	MG	P	CSJ
B	25/27	5'S of NEOS	BO	12-19		12-20	P	2x5	24	JP	CSJ	12-20	MG	P	CSJ
C	34/35	3'E	DX-S	12-20		12-20	P	2x5	24	JP	CSJ	12-20	MG	P	CSJ
D	34	10'N, 5'E	D	12-20		12-20	P	1x1	24	JP	CSJ	12-20	MG	P	CSJ
F	34	7'N, 12'E	D	12-20		12-20	P	1x1	24	JP	CSJ	12-20	MG	P	CSJ
G	34	2'N, 5'E	D	12-20		12-20	P	1x1	24	JP	CSJ	12-20	MG	P	CSJ
H	32/33/34	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
J	33/34/40	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
K	30	55'N, 7'E	D	12-20		12-20	P	2x3	24	JP	CSJ	12-20	MG	P	CSJ
M	30/31/37	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
N	32/35/38	Int	T	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
P	35/36/38	Int	T	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
Q	38	18'N, 18'W	D	12-20		12-20	P	2x6	71	SM	CSJ	12-20	MG	P	CSJ
R	39	15'N, 21'W	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
S	33/38/39	Int	T	12-20		12-20	P	2x6	71	SM	CSJ	12-20	MG	P	CSJ
T	33/35/64	Int	T	12-20		12-20	P	2x3	71	SM	CSJ	12-20	MG	P	CSJ
W	33/64/65	Int	T	12-20		12-20	P	2x3	71	SM	CSJ	12-20	MG	P	CSJ
X	66/67/69	Int	T	12-20		12-20	P	4x6	71	SM	CSJ	12-20	MG	P	CSJ
Y	67/68/69	Int	T	12-20		12-20	P	3x3	71	SM	CSJ	12-20	MG	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
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DF - FUSION DESTRUCTIVE
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ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Bottom Liner

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 7

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	65/67/70	Int	T	12-20		12-20	P	3x3	71	SM	CSJ	12-20	MS	P	CSJ
B	66/67/70	Int	T	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
C	28/66/70	Int	T	12-20		12-20	P	3x3	71	SM	CSJ	12-20	MS	P	CSJ
D	64	10'N, 10'E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
F	64	16'N, 12'E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
G	40/41/42	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
H	41/42/43	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
J	42/43/44	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
K	45/46/48	Int	T	12-20		12-20	P	2x6	24	JP	CSJ	12-20	MS	P	CSJ
M	46/47/48	Int	T	12-20		12-20	P	2x3	24	JP	CSJ	12-20	MS	P	CSJ
N	50/51	23'W of EEOS	BO	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
P	52/53/55	Int	T	12-20		12-20	P	2x3	24	JP	CSJ	12-20	MS	P	CSJ
Q	53/54/55	Int	T	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MS	P	CSJ
R	38	4'N, 36'W	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
S	38	4'N, 4'E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
T	43	5'N, 9'E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
W	43	24'N, 7'W	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MS	P	CSJ
X	54/55/56	Int	T	12-20		12-21	P	2x2	71	SM	CSJ	12-21	MS	P	CSJ
Y	54	6'N, 12'W	D	12-20		12-21	P	2x2	71	SM	CSJ	12-21	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
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T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY: S. NEJAD

DATE: 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Bottom Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 8

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	56	3'S, 18'N	Cut	12-20		12-21	P	2x6	71	SM	CSJ	12-21	MG	P	CSJ
B	26/28	5'N of SEOS	BO	12-20		12-20	P	2x6	71	SM	CSJ	12-20	MG	P	CSJ
C	33	26'N, 7'E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
D	43	88'N, 11'E	D	12-20		12-20	P	2x4	71	SM	CSJ	12-20	MG	P	CSJ
F	43	92'N, 11 E	D	12-20		12-20	P	2x2	71	SM	CSJ	12-20	MG	P	CSJ
G	33	160'S, 3'E	F	12-20		12-20	P	2x2	24	JP	CSJ	12-20	MG	P	CSJ
H	31/32/35	Int	T	12-20		12-20	P	4x10	24	JP	CSJ	12-20	MG	P	CSJ
J	40	165'N, 5'W	D	12-20		12-21	P	2x2	71	SM	CSJ	12-21	MG	P	CSJ
K	41	160'N, 5'W	D	12-20		12-21	P	2x2	71	SM	CSJ	12-21	MG	P	CSJ
M															
N															
P															
Q															
R															
S															
T															
W															
X															
Y															

DEFECTS TYPES

BO - BURNOUT
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WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-3-13

Section 6

Geomembrane Non-Destructive Pressure Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM Layer

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12/20/12

PAGE# 1

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO / YES	QA MONITOR	REMARKS
14/15	EEOS	*	WEOS	1	CO	0758	*	0803	30	*	28	P	/ ✓	SMN	
14/22	NEOS	*	SEOS	2	CO	0758	*	0803	30	*	30	P	/ ✓	SMN	
15/22	NEOS	*	SEOS	3	CO	0758	*	0803	30	*	30	P	/ ✓	SMN	
15/16	EEOS	*	WEOS	4	CO	0759	*	0804	30	*	30	P	/ ✓	SMN	
16/17	EEOS	*	WEOS	5	CO	0803	*	0808	30	*	30	P	/ ✓	SMN	
16/22	NEOS	*	SEOS	6	CO	0803	*	0808	30	*	28	P	/ ✓	SMN	
17/22	NEOS	*	SEOS	7	CO	0803	*	0808	30	*	30	P	/ ✓	SMN	
17/18	EEOS	*	WEOS	8	CO	0804	*	0809	30	*	30	P	/ ✓	SMN	
21/22	NEOS	*	SEOS	9	CO	0805	*	0810	30	*	30	P	/ ✓	SMN	
18/22	NEOS	*	SEOS	1	CO	0815	*	0820	30	*	28	P	/ ✓	SMN	
18/21	EEOS	*	WEOS	2	CO	0825	*	0830	30	*	30	P	/ ✓	SMN	
20/21	NEOS	*	SEOS	3	CO	0828	*	0833	30	*	30	P	/ ✓	SMN	
19/20	EEOS	*	WEOS	4	CO	0828	*	0833	30	*	30	P	/ ✓	SMN	
18/19	EEOS	*	WEOS	5	CO	0829	*	0834	30	*	30	P	/ ✓	SMN	
19/21	EEOS	*	WEOS	6	CO	0829	*	0834	30	*	30	P	/ ✓	SMN	
13/14	EEOS	*	WEOS	7	CO	0833	*	0838	30	*	30	P	/ ✓	SMN	
12/13	EEOS	*	WEOS	8	CO	0833	*	0838	30	*	28	P	/ ✓	SMN	
12/22	NEOS	*	SEOS	9	CO	0839	*	0844	30	*	30	P	/ ✓	SMN	
11/13	EEOS	*	WEOS	1	CO	0839	*	0844	30	*	30	P	/ ✓	SMN	
11/12	NEOS	*	SEOS	2	CO	0839	*	0844	30	*	30	P	/ ✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12/21/12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM Layer

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-20-12

PAGE# 2

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
10 / 11	EEOS	*	WEOS	3	Co	0843	*	0848	30	*	30	P		/	✓	SMN	
10 / 12	EEOS	*	WEOS	4	CO	0848	*	0853	30	*	30	P		/	✓	SMN	
9 / 10	EEOS	*	WEOS	5	CO	0848	*	0853	30	*	30	P		/	✓	SMN	
9 / 22	NEOS	*	SEOS	6	CO	0852	*	0857	30	*	30	P		/	✓	SMN	
8 / 9	EEOS	*	WEOS	7	CO	0852	*	0857	30	*	30	P		/	✓	SMN	
8 / 22	NEOS	*	SEOS	8	CO	0852	*	0857	30	*	30	P		/	✓	SMN	
1 / 22	EEOS	*	WEOS	9	CO	0852	*	0857	30	*	30	P		/	✓	SMN	
1 / 8	NEOS	*	SEOS	10	CO	0852	*	0857	30	*	30	P		/	✓	SMN	
7 / 8	EEOS	*	WEOS	1	CO	0853	*	0858	30	*	30	P		/	✓	SMN	
1 / 7	NEOS	*	SEOS	2	CO	0853	*	0858	30	*	30	P		/	✓	SMN	
6 / 7	EEOS	*	WEOS	3	CO	0854	*	0859	30	*	30	P		/	✓	SMN	
1 / 6	NEOS	*	SEOS	4	CO	0854	*	0859	30	*	30	P		/	✓	SMN	
5 / 6	EEOS	*	WEOS	5	CO	0859	*	0904	30	*	28	P		/	✓	SMN	
1 / 5	NEOS	*	SEOS	6	CO	0859	*	0904	30	*	30	P		/	✓	SMN	
2 / 5	EEOS	*	WEOS	7	CO	0900	*	0905	30	*	30	P		/	✓	SMN	
1 / 2	NEOS	*	SEOS	8	CO	0900	*	0905	30	*	30	P		/	✓	SMN	
2 / 3	NEOS	*	SEOS	9	CO	0905	*	0910	30	*	29	P		/	✓	SMN	
3 / 4	EEOS	*	WEOS	10	CO	0905	*	0910	30	*	30	P		/	✓	SMN	
4 / 5	EEOS	*	WEOS	1	CO	0907	*	0912	30	*	30	P		/	✓	SMN	
1 / 24	NEOS	*	SEOS	2	CO	0908	*	0913	30	*	30	P		/	✓	SMN	

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REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM LAYER

PROJECT # : 2012-102

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PAGE# 3

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
22 / 124	SEOS	*	1 K	5	CO	0908	*	0913	30	*	30	P	✓	/		SMN	
22 / 124	1K	*	NEOS	3	CO	0911	*	0916	30	*	30	P		/	✓	SMN	
22 / 123	NEOS	*	SEOS	7	CO	0911	*	0916	30	*	30	P		/	✓	SMN	
23 / 124	EEOS	*	WEOS	4	CO	0914	*	0919	30	*	30	P		/	✓	SMN	
23 / 125	NEOS	*	SEOS	6	CO	0914	*	0919	30	*	30	P		/	✓	SMN	
24 / 125	NEOS	*	SEOS	10	CO	0920	*	0925	30	*	30	P		/	✓	SMN	
25 / 127	NEOS	*	SEOS	8	CO	0926	*	0931	30	*	30	P		/	✓	SMN	
26 / 127	EEOS	*	WEOS	9	CO	0926	*	0931	30	*	30	P		/	✓	SMN	
27 / 128	NEOS	*	SEOS	1	CO	0926	*	0931	30	*	30	P		/	✓	SMN	
26 / 128	NEOS	*	SEOS	2	CO	0926	*	0931	30	*	30	P		/	✓	SMN	
27 / 129	NEOS	*	SEOS	3	CO	0938	*	0943	30	*	30	P		/	✓	SMN	
28 / 129	EEOS	*	WEOS	4	CO	0938	*	0943	30	*	30	P		/	✓	SMN	
29 / 130	NEOS	*	SEOS	5	CO	0940	*	945	30	*	30	P		/	✓	SMN	
28 / 130	NEOS	*	5N	6	CO	0940	*	0945	30	*	30	P	✓	/		SMN	
30 / 131	NEOS	*	SEOS	7	CO	0944	*	0949	30	*	30	P		/	✓	SMN	
30 / 137	EEOS	*	WEOS	8	CO	0944	*	0949	30	*	30	P		/	✓	SMN	
31 / 137	NEOS	*	SEOS	9	CO	0944	*	0949	30	*	30	P		/	✓	SMN	
31 / 132	NEOS	*	SEOS	10	CO	0945	*	0950	30	*	30	P		/	✓	SMN	
36 / 137	EEOS	*	WEOS	1	CO	0948	*	0953	30	*	30	P		/	✓	SMN	
28 / 130	5N	*	SEOS	2	CO	0950	*	0955	30	*	30	P		/	✓	SMN	

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BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM LAYER

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

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PAGE# 4

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO / YES	QA MONITOR	REMARKS
30 / 138	EEOS	*	WEOS	3	CO	0950	*	0955	30	*	28	P	/ ✓	SMN	
28 / 139	NEOS	*	SEOS	4	CO	0952	*	0957	30	*	29	P	/ ✓	SMN	
28 / 164	NEOS	*	SEOS	5	CO	0952	*	0957	30	*	30	P	/ ✓	SMN	
28 / 165	NEOS	*	SEOS	6	CO	0953	*	0958	30	*	30	P	/ ✓	SMN	
28 / 166	NEOS	*	SEOS	7	CO	1003	*	1008	30	*	30	P	/ ✓	SMN	
28 / 170	NEOS	*	SEOS	8	CO	1004	*	1009	30	*	30	P	/ ✓	SMN	
66 / 170	EEOS	*	WEOS	9	CO	1010	*	1015	30	*	30	P	/ ✓	SMN	
67 / 170	EEOS	*	WEOS	10	CO	1010	*	1015	30	*	30	P	/ ✓	SMN	
69 / 170	NEOS	*	SEOS	1	CO	1012	*	1017	30	*	30	P	/ ✓	SMN	
67 / 169	EEOS	*	WEOS	2	CO	1013	*	1018	30	*	30	P	/ ✓	SMN	
66 / 167	EEOS	*	WEOS	3	CO	1027	*	1032	30	*	30	P	/ ✓	SMN	
67 / 168	EEOS	*	WEOS	4	CO	1027	*	1032	30	*	30	P	/ ✓	SMN	
33 / 166	NEOS	*	SEOS	5	CO	1028	*	1033	30	*	30	P	/ ✓	SMN	
65 / 166	EEOS	*	WEOS	6	CO	1028	*	1033	30	*	30	P	/ ✓	SMN	
33 / 168	NEOS	*	SEOS	9	CO	1033	*	1038	30	*	30	P	/ ✓	SMN	
64 / 165	EEOS	*	WEOS	7	CO	1034	*	1039	30	*	30	P	/ ✓	SMN	
33 / 165	NEOS	*	SEOS	8	CO	1034	*	1039	30	*	30	P	/ ✓	SMN	
39 / 164	EEOS	*	WEOS	1	CO	1036	*	1041	30	*	30	P	/ ✓	SMN	
33 / 164	NEOS	*	SEOS	2	CO	1036	*	1041	30	*	30	P	/ ✓	SMN	
38 / 139	EEOS	*	WEOS	3	CO	1048	*	1053	30	*	30	P	/ ✓	SMN	

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REVIEWED BY : S. NEJAD

DATE : 12-21-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM LAYER

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-20-12

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SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
33 / 139	NEOS	*	SEOS	4	CO	1048	*	1053	30	*	30	P		/	✓	SMN	
25 / 126	NEOS	*	SEOS	8	CO	0926	*	0931	30	*	30	P		/	✓	SMN	
32 / 138	EEOS	*	WEOS	5	CO	1049	*	1054	30	*	30	P		/	✓	SMN	
32 / 133	SEOS	*	3A	6	CO	1049	*	1054	30	*	30	P	✓	/		SMN	
32 / 135	EEOS	*	WEOS	7	CO	1052	*	1057	30	*	30	P		/	✓	SMN	
35 / 138	EEOS	*	WEOS	8	CO	1052	*	1057	30	*	30	P		/	✓	SMN	
35 / 136	NEOS	*	SEOS	1	CO	1053	*	1058	30	*	30	P		/	✓	SMN	
32 / 133	3A	*	NEOS	2	CO	1108	*	1113	30	*	29	P		/	✓	SMN	
32 / 134	NEOS	*	SEOS	10	CO	1108	*	1113	30	*	30	P		/	✓	SMN	
33 / 134	EEOS	*	WEOS	3	CO	1108	*	1113	30	*	30	P		/	✓	SMN	
33 / 140	NEOS	*	3G	4	CO	1111	*	1116	30	*	30	P		/	✓	SMN	
34 / 140	SEOS	*	3G	5	CO	1110	*	1115	30	*	30	P	✓	/		SMN	
34 / 140	3G	*	NEOS	6	CO	1110	*	1115	30	*	29	P		/	✓	SMN	
40 / 142	NEOS	*	SEOS	7	CO	1112	*	1117	30	*	30	P		/	✓	SMN	
40 / 141	NEOS	*	SEOS	8	CO	1112	*	1117	30	*	30	P		/	✓	SMN	
41 / 142	EEOS	*	WEOS	9	CO	1113	*	1118	30	*	29	P		/	✓	SMN	
41 / 143	NEOS	*	SEOS	1	CO	1133	*	1138	30	*	30	P		/	✓	SMN	
42 / 143	NEOS	*	SEOS	2	CO	1134	*	1139	30	*	30	P		/	✓	SMN	
42 / 144	SEOS	*	3M	3	CO	1134	*	1139	30	*	30	P	✓	/		SMN	
43 / 144	EEOS	*	WEOS	4	CO	1134	*	1139	30	*	30	P		/	✓	SMN	

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BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

BOTTOM LAYER

PROJECT # : 2012-102

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PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-20-12

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SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
42 / 144	3M	•	NEOS	5	CO	1135	•	1140	30	•	29	P		/	✓	SMN	
44 / 145	NEOS	•	SEOS	6	CO	1136	•	1141	30	•	30	P		/	✓	SMN	
43 / 145	NEOS	•	3P	7	CO	1138	•	1143	30	•	30	P	✓	/		SMN	
43 / 145	3P	•	SEOS	8	CO	1138	•	1143	30	•	30	P		/	✓	SMN	
45 / 146	NEOS	•	SEOS	9	CO	1151	•	1156	30	•	30	P		/	✓	SMN	
46 / 148	EEOS	•	WEOS	10	CO	1151	•	1156	30	•	30	P		/	✓	SMN	
48 / 149	EEOS	•	WEOS	1	CO	1152	•	1157	30	•	30	P		/	✓	SMN	
45 / 149	NEOS	•	SEOS	2	CO	1152	•	1157	30	•	30	P		/	✓	SMN	
46 / 147	NEOS	•	SEOS	3	CO	1153	•	1158	30	•	30	P		/	✓	SMN	
47 / 148	EEOS	•	WEOS	4	CO	1153	•	1158	30	•	30	P		/	✓	SMN	
49 / 150	EEOS	•	WEOS	5	CO	1154	•	1159	30	•	30	P		/	✓	SMN	
45 / 150	NEOS	•	SEOS	6	CO	1154	•	1159	30	•	30	P		/	✓	SMN	
50 / 151	EEOS	•	WEOS	7	CO	1155	•	1200	30	•	30	P		/	✓	SMN	
45 / 151	NEOS	•	SEOS	8	CO	1155	•	1200	30	•	30	P		/	✓	SMN	
51 / 152	EEOS	•	WEOS	9	CO	1156	•	1201	30	•	30	P		/	✓	SMN	
52 / 153	EEOS	•	WEOS	10	CO	1157	•	1202	30	•	30	P		/	✓	SMN	
52 / 155	EEOS	•	WEOS	1	CO	1254	•	1259	30	•	30	P		/	✓	SMN	
45 / 155	NEOS	•	SEOS	2	CO	1254	•	1259	30	•	30	P		/	✓	SMN	
45 / 152	NEOS	•	SEOS	3	CO	1254	•	1259	30	•	30	P		/	✓	SMN	
53 / 155	EEOS	•	WEOS	4	CO	1254	•	1259	30	•	30	P		/	✓	SMN	

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SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO / YES	QA MONITOR	REMARKS
53 / 154	EEOS	WEOS	5	CO	1256	1301	30	30	P	/ ✓	SMN	
54 / 155	NEOS	SEOS	6	CO	1256	1301	30	30	P	/ ✓	SMN	
54 / 156	EEOS	WEOS	7	CO	1257	1302	30	30	P	/ ✓	SMN	
55 / 156	EEOS	WEOS	8	CO	1258	1303	30	30	P	/ ✓	SMN	
45 / 156	NEOS	SEOS	9	CO	1258	1303	30	36	P	/ ✓	SMN	
56 / 157	EEOS	WEOS	10	CO	1259	1304	30	29	P	/ ✓	SMN	
45 / 157	NEOS	SEOS	1	CO	1259	1304	30	30	P	/ ✓	SMN	
57 / 158	EEOS	WEOS	2	CO	1301	1306	30	30	P	/ ✓	SMN	
45 / 158	NEOS	SEOS	3	CO	1301	1306	30	30	P	/ ✓	SMN	
58 / 159	EEOS	WEOS	4	CO	1315	1320	30	30	P	/ ✓	SMN	
45 / 159	NEOS	SEOS	5	CO	1315	1320	30	30	P	/ ✓	SMN	
59 / 160	EEOS	WEOS	6	CO	1320	1325	30	30	P	/ ✓	SMN	
45 / 160	NEOS	SEOS	7	CO	1320	1325	30	30	P	/ ✓	SMN	
60 / 163	EEOS	WEOS	8	CO	1320	1325	30	30	P	/ ✓	SMN	
45 / 163	NEOS	SEOS	9	CO	1320	1325	30	30	P	/ ✓	SMN	
60 / 161	EEOS	WEOS	10	CO	1322	1327	30	30	P	/ ✓	SMN	
61 / 163	EEOS	WEOS	1	CO	1322	1327	30	30	P	/ ✓	SMN	
61 / 162	EEOS	WEOS	2	CO	1328	1333	30	30	P	/ ✓	SMN	
62 / 163	NEOS	SEOS	3	CO	1328	1333	30	30	P	/ ✓	SMN	
36 / 138	EEOS	WEOS	14	CO	0958	0958	30	30	P	/ ✓	SMN	

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REVIEWED BY : S. NEJAD

DATE : 12/21/12

Section 7

Geomembrane Destructive Samples Laboratory Results

Precision Geosynthetic Laboratories International
A Texas Research International Company

GAI-LAP
Initial: CVZ #:0.13
DATE: 12/10/2012

December 10, 2012

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: FINAL LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of seven (7) 60mil HDPE Seam samples.

PROJECT NAME: JED Leachate Storage Facility Relocation DATE REPORTED: **December 10, 2012**

REFERENCE PGLI JOB NO.: G121299

DATE RECEIVED: December 10, 2012

SAMPLES SENT BY: Brantley Engineering, LLC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. DPX-1 5C/ P65	88508
2. DP-1 P13/ 14	88509
3. DP-2 P12/ 10	88510
4. DP-3 P16/ 17	88511
5. DP-4 P23/ 22	88512
6. DP-5 P20/ 19	88513
7. DP-6 P35/ 24	88514

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in Tables 1 to 4.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

5 Pages Total

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **10-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121299**

QC'd By: Maria Cipitia
TEST METHOD: ASTM D6392
DATE REPORT: 10-Dec-12

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DPX-1	**88508**	164	> 50%	BRK		1 Outside	149	0	SE3	
5C/ P65		168	> 50%	BRK		2 Outside	141	0	SE3	
		165	> 50%	BRK		3 Outside	140	0	SE3	
Extrusion		166	> 50%	BRK		4 Outside	147	0	SE3	
		167	> 50%	BRK		5 Outside	144	0	SE3	
						AVG:	**144**			78
						STD. DEV.	**4**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG.	**166**			120	**AVG:**				
	STD. DEV.	**2**				STD. DEV.				
DP-1	**88509**	172	> 50%	BRK		1 Outside	129	0	SE1	
P13/ 14		170	> 50%	BRK		2 Outside	130	0	SE1	
		169	> 50%	BRK		3 Outside	127	0	SE1	
Fusion		173	> 50%	BRK		4 Outside	121	0	SE1	
		172	> 50%	BRK		5 Outside	122	0	SE1	
						AVG:	**126**			91
						STD. DEV.	**4**			
						1 Inside	122	0	SE1	
						2 Inside	122	0	SE1	
						3 Inside	127	0	SE1	
						4 Inside	131	0	SE1	
						5 Inside	127	0	SE1	
	AVG:	**171**			120	**AVG:**	**126**			91
	STD. DEV.	**2**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **10-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121299**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 10-Dec-12

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-2	**88510**	172	> 50%	BRK		1 Outside	147	0	SE1	
P12/ 10		170	> 50%	BRK		2 Outside	138	0	SE1	
		173	> 50%	BRK		3 Outside	140	0	SE1	
		174	> 50%	BRK		4 Outside	142	0	SE1	
		170	> 50%	BRK		5 Outside	137	0	SE1	
						AVG:	**141**			91
						STD. DEV.	**4**			
						1 Inside	143	0	SE1	
						2 Inside	142	0	SE1	
						3 Inside	147	0	SE1	
						4 Inside	141	0	SE1	
						5 Inside	140	0	SE1	
	AVG.	**172**			120	**AVG:**	**143**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DP-3	**88511**	172	> 50%	BRK		1 Outside	121	0	SE1	
P16/ 17		170	> 50%	BRK		2 Outside	120	0	SE1	
		173	> 50%	BRK		3 Outside	127	0	SE1	
		170	> 50%	BRK		4 Outside	131	0	SE1	
		170	> 50%	BRK		5 Outside	121	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**5**			
						1 Inside	131	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	120	0	SE1	
						4 Inside	121	0	SE1	
						5 Inside	123	0	SE1	
	AVG:	**171**			120	**AVG:**	**124**			91
	STD. DEV.	**1**				STD. DEV.	**5**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **10-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121299**

QC'd By: Maria Cipitia
TEST METHOD: ASTM D6392
DATE REPORT: 10-Dec-12

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-4	**88512**	171	> 50%	BRK		1 Outside	122	0	SE1	
P23/ 22		171	> 50%	BRK		2 Outside	123	0	SE1	
		172	> 50%	BRK		3 Outside	129	0	SE1	
		173	> 50%	BRK		4 Outside	127	0	SE1	
		170	> 50%	BRK		5 Outside	121	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**3**			
						1 Inside	130	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	131	0	SE1	
						4 Inside	127	0	SE1	
						5 Inside	131	0	SE1	
	AVG.	**171**			120	**AVG:**	**129**			91
	STD. DEV.	**1**				STD. DEV.	**2**			
DP-5	**88513**	174	> 50%	BRK		1 Outside	121	0	SE1	
P20/ 19		170	> 50%	BRK		2 Outside	120	0	SE1	
		176	> 50%	BRK		3 Outside	127	0	SE1	
		171	> 50%	BRK		4 Outside	121	0	SE1	
		174	> 50%	BRK		5 Outside	122	0	SE1	
						AVG:	**122**			91
						STD. DEV.	**3**			
						1 Inside	130	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	122	0	SE1	
						4 Inside	124	0	SE1	
						5 Inside	125	0	SE1	
	AVG:	**173**			120	**AVG:**	**126**			91
	STD. DEV.	**2**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **10-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121299**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 10-Dec-12

Crosshead Speed: 2 in/min						Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-6	**88514**	171	> 50%	BRK		1 Outside	129	0	SE1	
P35/ 24		172	> 50%	BRK		2 Outside	131	0	SE1	
		174	> 50%	BRK		3 Outside	122	0	SE1	
		170	> 50%	BRK		4 Outside	127	0	SE1	
		171	> 50%	BRK		5 Outside	130	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**4**			
						1 Inside	127	0	SE1	
						2 Inside	124	0	SE1	
						3 Inside	130	0	SE1	
						4 Inside	127	0	SE1	
						5 Inside	132	0	SE1	
	AVG.	**172**			120	**AVG:**	**128**			91
	STD. DEV.	**2**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

Precision Geosynthetic Laboratories International
A Texas Research International Company

January 14, 2013

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/14/2013

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: REVISED LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of eight (8) 60mil HDPE Seam samples.

PROJECT NAME: JED Leachate Storage Facility Relocation

REFERENCE PGLI JOB NO.: G121298

DATE RECEIVED: December 8, 2012

SAMPLES SENT BY: Brantley Engineering, LLC

DATE REPORTED: **December 8. 2012-** 1st reported
January 14, 2013 - DP-7 and DP-8 sample ID correction

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. DP-7 P39/45	88500
2. DP-8 P46/47	88501
3. DP-9 P55/54	88502
4. DP-10 P59/58	88503
5. DP-11 P65/64	88504
6. DP-12 P35/66	88505
7. DP-13 P69/70	88506
8. DP-14 P1/45	88507

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in Tables 1 to 4.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

5 Pages Total

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **8-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121298**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min						Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-7	**88500**	173	> 50%	BRK		1 Outside	149	0	SE1	
P39/P45		176	> 50%	BRK		2 Outside	136	0	SE1	
		180	> 50%	BRK		3 Outside	135	0	SE1	
		179	> 50%	BRK		4 Outside	131	0	SE1	
		176	> 50%	BRK		5 Outside	136	0	SE1	
						AVG:	**137**			91
						STD. DEV.	**7**			
						1 Inside	124	0	SE1	
						2 Inside	121	0	SE1	
						3 Inside	125	0	SE1	
						4 Inside	123	0	SE1	
						5 Inside	124	0	SE1	
	AVG.	**177**			120	**AVG:**	**123**			91
	STD. DEV.	**3**				STD. DEV.	**2**			
DP-8	**88501**	179	> 50%	BRK		1 Outside	121	0	SE1	
P46/P47		181	> 50%	BRK		2 Outside	120	0	SE1	
		176	> 50%	BRK		3 Outside	122	0	SE1	
		177	> 50%	BRK		4 Outside	119	0	SE1	
		179	> 50%	BRK		5 Outside	119	0	SE1	
						AVG:	**120**			91
						STD. DEV.	**1**			
						1 Inside	130	0	SE1	
						2 Inside	128	0	SE1	
						3 Inside	126	0	SE1	
						4 Inside	128	0	SE1	
						5 Inside	126	0	SE1	
	AVG:	**178**			120	**AVG:**	**128**			91
	STD. DEV.	**2**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

Precision Geosynthetic Laboratories International

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **8-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121298**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-9	**88502**	182	> 50%	BRK		1 Outside	126	0	SE1	
P55/P54		176	> 50%	BRK		2 Outside	125	0	SE1	
		179	> 50%	BRK		3 Outside	125	0	SE1	
		175	> 50%	BRK		4 Outside	120	0	SE1	
		177	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**125**			91
						STD. DEV.	**3**			
						1 Inside	130	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	133	0	SE1	
						4 Inside	128	0	SE1	
						5 Inside	126	0	SE1	
	AVG.	**178**			120	**AVG:**	**129**			91
	STD. DEV.	**3**				STD. DEV.	**2**			
DP-10	**88503**	181	> 50%	BRK		1 Outside	146	0	SE1	
P59/P58		180	> 50%	BRK		2 Outside	140	0	SE1	
		176	> 50%	BRK		3 Outside	137	0	SE1	
		180	> 50%	BRK		4 Outside	137	0	SE1	
		178	> 50%	BRK		5 Outside	140	0	SE1	
						AVG:	**140**			91
						STD. DEV.	**4**			
						1 Inside	127	0	SE1	
						2 Inside	128	0	SE1	
						3 Inside	130	0	SE1	
						4 Inside	128	0	SE1	
						5 Inside	126	0	SE1	
	AVG:	**179**			120	**AVG:**	**128**			91
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

Precision Geosynthetic Laboratories International

TABLE 3.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **8-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121298**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-11	**88504**	176	> 50%	BRK		1 Outside	119	0	SE1	
P65/P64		173	> 50%	BRK		2 Outside	120	0	SE1	
		171	> 50%	BRK		3 Outside	124	0	SE1	
		174	> 50%	BRK		4 Outside	126	0	SE1	
		176	> 50%	BRK		5 Outside	125	0	SE1	
						AVG:	**123**			91
						STD. DEV.	**3**			
						1 Inside	119	0	SE1	
						2 Inside	120	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	126	0	SE1	
						5 Inside	125	0	SE1	
	AVG.	**174**			120	**AVG:**	**123**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DP-12	**88505**	182	> 50%	BRK		1 Outside	136	0	SE1	
P35/P66		176	> 50%	BRK		2 Outside	135	0	SE1	
		174	> 50%	BRK		3 Outside	140	0	SE1	
		176	> 50%	BRK		4 Outside	139	0	SE1	
		175	> 50%	BRK		5 Outside	136	0	SE1	
						AVG:	**137**			91
						STD. DEV.	**2**			
						1 Inside	135	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	129	0	SE1	
						4 Inside	128	0	SE1	
						5 Inside	126	0	SE1	
	AVG:	**177**			120	**AVG:**	**129**			91
	STD. DEV.	**3**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 3)

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **8-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121298**

QC'd By: Maria Expitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DP-13	**88506**	180	> 50%	BRK		1 Outside	121	0	SE1	
P69/P70		181	> 50%	BRK		2 Outside	124	0	SE1	
		175	> 50%	BRK		3 Outside	128	0	SE1	
		176	> 50%	BRK		4 Outside	123	0	SE1	
		175	> 50%	BRK		5 Outside	120	0	SE1	
						AVG:	**123**			91
						STD. DEV.	**3**			
						1 Inside	126	0	SE1	
						2 Inside	127	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	126	0	SE1	
						5 Inside	128	0	SE1	
	AVG.	**177**			120	**AVG:**	**126**			91
	STD. DEV.	**3**				STD. DEV.	**2**			
DP-14	**88507**	187	> 50%	BRK		1 Outside	136	0	SE1	
P1/P45		184	> 50%	BRK		2 Outside	134	0	SE1	
		180	> 50%	BRK		3 Outside	135	0	SE1	
		183	> 50%	BRK		4 Outside	131	0	SE1	
		183	> 50%	BRK		5 Outside	128	0	SE1	
						AVG:	**133**			91
						STD. DEV.	**3**			
						1 Inside	134	0	SE1	
						2 Inside	130	0	SE1	
						3 Inside	129	0	SE1	
						4 Inside	127	0	SE1	
						5 Inside	126	0	SE1	
	AVG:	**183**			120	**AVG:**	**129**			91
	STD. DEV.	**2**				STD. DEV.	**3**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

(Sheet 1 of 1)

APPENDIX J

Geomembrane Installation

(Bottom Layer for Ponds A, B, and C)

Section 1
Geomembrane Panel Deployment Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-5-12

Page 1

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
P-1	3444	74	165	22.5	3712.5	60	CJJ	
P-2	3444	74	24	22.5	600	60	CJJ	35' 13'
P-3	3444	74	7	22.5	157.5	60	CJJ	
P-4	3444	74	7	22.5	157.5	60	CJJ	
P-5	3444	74	26	22.5	650	61	CJJ	35' 17'
P-6	3444	74	40	22.5	900	60	CJJ	
P-7	3444	74	40	22.5	900	61	CJJ	
P-8	3444	74	40	22.5	900	60	CJJ	
P-9	3444	74	40	22.5	900	60	CJJ	
P-10	3444	74	27	22.5	607.5	60	CJJ	39' 15
P-11	3445	74	16	22.5	360	60	CJJ	
P-12	3444	74	45	22.5	1012.5	61	CJJ	64' 36'

PAGE APPROX. TOTAL (SQ FT): 10857.5 Ft²

DAILY TOTAL (SQ FT): –

ACCUMULATED TOTAL (SQ FT): –

REVIEWED BY : S. NEJAD

DATE: 12-7-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-5-12

Page 2

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
13	3679	74	165	22.5	3712.5	60	CSJ	
14	3679	75	165	22.5	3712.5	61	CSJ	
15	3679	75	165	22.5	3712.5	60	CSJ	
16	3449	75	165	22.5	3712.5	60	CSJ	
17	3449	75	165	22.5	3712.5	60	CSJ	
18	3449	75	165	22.5	3712.5	60	CSJ	
19	3343	74	165	22.5	3712.5	60	CSJ	
20	3343	74	165	22.5	3712.5	60	CSJ	
21	3343	74	165	22.5	3712.5	61	CSJ	
22	3454	74	165	22.5	3712.5	60	CSJ	
23	3454	74	165	22.5	3712.5	61	CSJ	
24	3454	74	165	22.5	3712.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 44550 FT^2

DAILY TOTAL (SQ FT): _____

ACCUMULATED TOTAL (SQ FT): _____

REVIEWED BY : S. NEUAD

DATE: 12-7-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-5-12 Page 3

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
25	3453	73	28.5	22.5	652.5	60	CSS	18 34
26	3453	73	6	18	108	60	CSS	12 18
27	3453	73	7	20	140	60	CSS	14 20
28	3453	73	30	22.5	675	60	CSS	20 40
29	3453	73	40	22.5	900	60	CSS	
30	3453	73	40	22.5	900	60	CSS	
31	3453	73	40	22.5	900	60	CSS	
32	3453	73	40	22.5	900	60	CSS	
33	3453	73	17	22.5	382.5	60	CSS	10.5 34
34	3453	73	9	19	171	60	CSS	19 18
35	3453	73	66	22.5	1485	61	CSS	33 22
36	3453	73	9	21	189	60	CSS	18 21

PAGE APPROX. TOTAL (SQ FT): 7403 Ft^2

DAILY TOTAL (SQ FT): 62810.5 Ft^2

ACCUMULATED TOTAL (SQ FT): 62810.5 Ft^2

REVIEWED BY : S. NEJAD

DATE: 12-7-12

BRANTLE[illegible]GINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-6-12 Page 4

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
37	3453	64	34	22.5	765	60	CSJ	40 28
38	3453	64	40	22.5	900	60	CSJ	
39	3453	64	40	22.5	900	60	CSJ	
40	3452	64	40	22.5	900	60	CSJ	
41	3452	64	40	22.5	900	61	CSJ	
42	3452	64	27	22.5	607.5	60	CSJ	14 40
43	3452	64	13	14	182	61	CSJ	
44	3452	65	27	22.5	607.5	60	CSJ	40 14
45	3452	65	163	22.5	3667.5	60	CSJ	
46	3452	65	163	22.5	3667.5	60	CSJ	
47	3448	65	163	22.5	3667.5	60	CSJ	
48	3448	65	163	22.5	3667.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 20,432

DAILY TOTAL (SQ FT): _____

ACCUMULATED TOTAL (SQ FT): _____

REVIEWED BY : S. NEJAD

DATE: 12-7-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

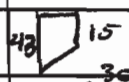
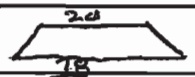
OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-6-12 Page 5

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
49	3448	66	163	22.5	3667.5	60	CSJ	
50	3450	70	29	22.5	652.5	60	CSJ	
51	3450	71	15	30	450	60	CSJ	
52	3450	71	29	22.5	652.5	60	CSJ	
53	3450	71	54	22.5	1215	61	CSJ	
54	3450	71	78	22.5	1755	60	CSJ	
55	3450	72	78	22.5	1755	60	CSJ	
56	3450	72	78	22.5	1755	60	CSJ	
57	3450	72	78	22.5	1755	60	CSJ	
58	3561	72	49	22.5	1102	60	CSJ	
59	3561	72	28	22.5	630	60	CSJ	
60	3561	72	28	10	280	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 15,669.5

DAILY TOTAL (SQ FT): _____

ACCUMULATED TOTAL (SQ FT): _____

REVIEWED BY : S. NEJAD

DATE: 12-7-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-6-12 Page 6

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
61	3561	72	28	22.5	630	60	CSJ	40 16
62	3561	72	163	22.5	3667.5	60	CSJ	
63	3561	72	163	22.5	3667.5	60	CSJ	
64	3446	72	163	22.5	3667.5	60	CSJ	
65	3446	72	163	22.5	3667.5	60	CSJ	
66	3446	72	163	22.5	3667.5	61	CSJ	
67	3676	73	18	22.5	405	60	CSJ	20 36
68	3676	73	8	12	96	60	CSJ	
69	3676	74	15	22.5	337.5	61	CSJ	30 12
70	3676	74	38	22.5	855	60	CSJ	
71	3676	74	38	22.5	855	60	CSJ	
72	3676	74	38	22.5	855	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 22,371

DAILY TOTAL (SQ FT): –

ACCUMULATED TOTAL (SQ FT): –

REVIEWED BY : S. NEJAD

DATE: 12-7-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: PRIMARY SECONDARY OTHER_____

12-6-12 Page 7

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
73	3676	74	38	22.5	855	60	CSJ	
74	3676	74	29	22.5	652.5	60	CSJ	40 18
75	3676	74	18	18	324	60	CSJ	18 18

PAGE APPROX. TOTAL (SQ FT): 1,831.5

DAILY TOTAL (SQ FT): 60,304

ACCUMULATED TOTAL (SQ FT): 123,114.5

REVIEWED BY : S. NEJAD

DATE: 12-7-12

Section 2
Geomembrane Trial Seam Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

Primary

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-5-12
PAGE# 1

					FUSION WELD		EXTRUSION WELD		PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET													
TF-1	1240	73	95	SM	18	850	–	–	INSIDE	109	102	103	97	101	140	135	131	137	158	P	SMN
									OUTSIDE	98	106	136	134	98							
TF-2	1250	73	16	BV	10	850	–	–	INSIDE	94	112	108	99	114	142	150	141	135	139	P	SMN
									OUTSIDE	105	109	101	105	100							
TF-3	1250	73	16	BV	8	850	–	–	INSIDE	129	109	109	132	101	154	148	144	130	139	P	SMN
									OUTSIDE	141	105	103	127	102							
TF-4	1250	73	16	BV	8	850	–	–	INSIDE	134	132	129	126	118	144	134	139	140	141	P	SMN
									OUTSIDE	125	127	130	137	122							
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
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									OUTSIDE												
									INSIDE												
									OUTSIDE												

Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 12-5-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

Primary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 2

TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	FUSION WELD SPEED	FUSION WELD WEDGE SET	EXTRUSION WELD PRE HEAT	EXTRUSION WELD BARREL SET		PEEL VALUE lbs/inch					SHEER VALUE lbs/inch					P/F	QA MON.
TF-1	800	70	95	SM	18	850	—	—	INSIDE	109	102	103	100	95	166	151	154	156	145	P	CSJ
									OUTSIDE	96	92	123	135	109							
TF-2	800	70	16	BU	9	850	—	—	INSIDE	106	103	111	99	97	176	157	147	163	165	P	CSJ
									OUTSIDE	118	120	98	101	116							
TF-3	800	70	16	BU	9	850	—	—	INSIDE	138	140	126	125	114	169	172	166	171	167	P	CSJ
									OUTSIDE	116	131	132	134	127							
TF-4	800	70	16	BU	11	850	—	—	INSIDE	105	105	107	111	113	168	162	158	158	143	P	CSJ
									OUTSIDE	114	108	106	105	96							
TF-5	1240	80	16	BU	9	850	—	—	INSIDE	127	125	106	112	106	158	146	136	155	135	P	CSJ
									OUTSIDE	114	117	127	109	98							
TF-6	1240	80	16	BU	9	850	—	—	INSIDE	134	131	123	143	132	158	146	147	157	147	P	CSJ
									OUTSIDE	132	125	131	132	127							
TF-7	1240	80	16	BU	11	850	—	—	INSIDE	117	120	102	112	110	140	136	141	141	130	P	CSJ
									OUTSIDE	112	118	108	105	113							
TX-1	1300	80	19	JP	—	—	475	445	INSIDE	118	136	118	112	115	159	156	146	157	149	P	CSJ
									OUTSIDE	—	—	—	—	—							
TX-2	1300	80	71	SM	—	—	480	440	INSIDE	112	136	129	130	138	162	143	182	175	153	P	CSJ
									OUTSIDE	—	—	—	—	—							
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												

Passing Peel Fusion (91 lb/in): _____ Passing Peel Extrusion (78 lb/in): _____ Passing Shear Fusion (120 lb/in): _____ Passing Shear Extrusion (120 lb/in): _____

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLE GINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

Primary

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 12-7-12
PAGE# 3

					FUSION WELD		EXTRUSION WELD															
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET	PEEL VALUE lbs/inch						SHEER VALUE lbs/inch					P/F	QA MON.
Tx-1	800	65	19	JP	—	—	485	460	INSIDE	138	121	123	116	122	173	173	161	167	165	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-2	800	65	71	JSM	—	—	480	440	INSIDE	115	125	110	117	108	174	153	156	157	166	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-3	1240	72	19	JP	—	—	485	460	INSIDE	110	115	113	118	109	154	150	153	155	149	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-4	1240	72	21	SM	—	—	480	440	INSIDE	163	112	109	118	121	148	151	157	152	155	P	CSJ
									OUTSIDE	—	—	—	—	—							
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												
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									OUTSIDE												
									INSIDE												
									OUTSIDE												
									INSIDE												
									OUTSIDE												

Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY: S. NEJAD
DATE: 12-11-12

Section 3
Geomembrane Fusion Seaming Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-5-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	1240	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (—) Ø

MACHINE # 95

PAGE NUMBER: 1

	SEAM NUMBER	* SEAM SECTION START POINT * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	6/7	EEOS * WEOS	1300	74	SM	18	850	848	40	40	—	SMN		12-6	CSJ
✓	7/8	EEOS * WEOS	1304	74	SM	18	850	850	40	80	—	SMN		12-6	CSJ
✓	8/9	EEOS * WEOS	1308	74	SM	18	850	846	40	120	—	SMN		12-6	CSJ
✓	9/10	EEOS * WEOS	1314	74	SM	18	850	848	40	160	—	SMN		12-6	CSJ
✓	10/11	WEOS * EEOS	1320	74	SM	18	850	846	15	175	—	SMN		12-6	CSJ
✓	1/12	NEOS * SEOS	1323	75	SM	18	850	847	34	209	—	SMN		12-6	CSJ
✓	1/13	NEOS * SEOS	1331	75	SM	18	850	848	165	374	—	SMN		12-6	CSJ
✓	13/14	NEOS * SEOS	1347	75	SM	18	850	846	165	385/154	DP-1	SMN		12-6	CSJ
✓	14/15	NEOS * SEOS	1403	75	SM	18	850	848	164	318	—	SMN		12-6	CSJ
✓	15/16	NEOS * SEOS	1417	76	SM	18	850	846	164	482	—	SMN		12-6	CSJ
✓	16/17	NEOS * SEOS	1434	75	SM	18	850	845	164	490/156	DP-3	SMN		12-6	CSJ
✓	20/21	SEOS * NEOS	1457	74	SM	18	850	848	164	320	—	SMN		12-6	CSJ
✓	21/22	SEOS * NEOS	1508	74	SM	18	850	846	164	484	—	SMN		12-6	CSJ
✓	22/23	SEOS * NEOS	1525	73	SM	18	850	848	164	495/153	DP-4	SMN		12-6	CSJ
✓	23/24	SEOS * NEOS	1540	73	SM	18	850	846	164	317	—	SMN		12-6	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 1687

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 317

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-5-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	1250	BV
TF-3	1250	BV
TF-4	1250	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (—) Ø

MACHINE # 16

PAGE NUMBER: 2

SEAM NUMBER	* SEAM SECTION START POINT * FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
5/6	EEOS * WEOS	1312	74	BV	10	850	848	40	40	—	SMN		12-6	CSJ
4/5	EEOS * WEOS	1320	74	BV	10	850	849	16	56	—	CSJ		12-6	CSJ
2/3	WEOS * SEOS	1325	75	BV	10	850	850	14	70	—	CSJ		12-6	CSJ
2/5	WEOS * EEOS	1341	75	BV	10	850	850	31	101	—	CSJ		12-6	CSJ
3/4	WEOS * EEOS	1345	75	BV	10	850	850	18	119	—	CSJ		12-6	CSJ
1/2	NEOS * SEOS	1355	75	BV	10	850	851	33	152	—	CSJ		12-6	CSJ
1/6	NEOS * SEOS	1400	75	BV	10	850	850	22	174	—	CSJ		12-6	CSJ
1/7	NEOS * SEOS	1403	75	BV	10	850	849	23	197	—	CSJ		12-6	CSJ
1/8	NEOS * SEOS	1406	75	BV	10	850	850	22	219	—	CSJ		12-6	CSJ
1/9	NEOS * SEOS	1409	75	BV	10	850	850	23	242	—	CSJ		12-6	CSJ
11/12	NEOS * SEOS	1417	74	BV	10	850	850	22	264	—	CSJ		12-6	CSJ
10/12	WEOS * EEOS	1423	74	BV	10	850	851	27	290/21	DP-2	CSJ		12-6	CSJ
17/18	NEOS * SEOS	1432	74	BV	10	850	850	164	185	—	CSJ		12-6	CSJ
18/19	SEOS * NEOS	1457	74	BV	10	850	848	164	349	—	CSJ		12-6	CSJ
19/20	SEOS * NEOS	1522	73	BV	10	850	849	164	490/23	DP-5	CSJ		12-6	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 783

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 23

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-5-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	1240	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (1) 317

MACHINE # 95

PAGE NUMBER: 3

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓ 32 / 33	WEOS *	EEOS	1555	73	SM	18	850	848	34	351	–	SMN		12-6	CSJ
✓ 31 / 32	WEOS *	EEOS	1600	73	SM	18	850	850	42	393	–	SMN		12-6	CSJ
✓ 30 / 31	EEOS *	WEOS	1610	73	SM	18	850	846	42	435	–	SMN		12-6	CSJ
✓ 29 / 30	EEOS *	WEOS	1615	72	SM	18	850	850	42	477	–	SMN		12-6	CSJ
✓ 24 / 35	SEOS *	NEOS	1630	72	SM	18	850	846	37	490/24	DP-6	SMN		12-6	CSJ
/	*														
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 197

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 24

DAILY TOTAL WELDED (FT): 1884

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 24

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

Primary

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-5-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	1250	BV
TF-3	1250	BV
TF-4	1250	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (4) 339

MACHINE # 16

PAGE NUMBER: 5

	SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	24/28	SEOS *	NEOS	1655	72	BV	10	850	850	5	344	—	CSJ		12-6	CSJ
✓	24/25	SEOS *	NEOS	1656	72	BV	10	850	849	33	377	—	CSJ		12-6	CSJ
	/	*														
	/	*														
	/	*														
	/	*														
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	/	*														
	/	*														

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 38

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 377

DAILY TOTAL WELDED (FT): 1137

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 377

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	800	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (3) 24

MACHINE # 95

PAGE NUMBER: 6

	SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	37/38	EEOS	WEOS	0800	64	SM	18	850	848	40	64	–	SMN		12-6	CSJ
✓	38/39	WEOS	EEOS	0805	64	SM	18	850	846	38	102	–	SMN		12-6	CSJ
✓	39/40	WEOS	EEOS	0810	64	SM	18	850	849	38	140	–	SMN		12-6	CSJ
✓	40/41	WEOS	EEOS	0817	65	SM	18	850	848	40	180	–	SMN		12-6	CSJ
✓	41/42	WEOS	EEOS	0825	65	SM	18	850	850	40	220	–	SMN		12-6	CSJ
✓	45/46	NEOS	SEOS	0837	65	SM	18	850	848	162	382	–	SMN		12-6	CSJ
✓	44/45	NEOS	SEOS	0828	65	SM	18	850	850	40	422	–	SMN		12-6	CSJ
✓	46/47	NEOS	SEOS	0855	67	SM	18	850	850	162	490/94	DP-8	SMN		12-6	CSJ
✓	47/48	NEOS	SEOS	0913	69	SM	18	850	846	162	256	–	SMN		12-6	CSJ
✓	56/57	WEOS	EEOS	0930	72	SM	18	850	848	78	334	–	SMN		12-6	CSJ
✓	55/56	WEOS	EEOS	0936	72	SM	18	850	850	78	412	–	SMN		12-6	CSJ
✓	~~54/55~~	~~WEOS~~	~~EEOS~~	~~0941~~	~~72~~	~~SM~~	~~18~~	~~850~~	~~846~~	~~78~~	~~480/10~~	~~DP-9~~	~~SMN~~		~~12-6~~	~~CSJ~~
✓	53/54	WEOS	EEOS	0947	72	SM	18	850	848	78	88	–	SMN		12-6	CSJ
✓	62/63	SEOS	NEOS	1005	72	SM	18	850	846	162	250	–	SMN		12-6	CSJ
✓	63/64	SEOS	NEOS	1043	72	SM	18	850	849	162	412	–	SMN		12-6	CSJ

PAGE TOTAL: 1358

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 412

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	800	BU
TF-3	800	BU
TF-4	800	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (5) 377

MACHINE # 16

PAGE NUMBER: 7

	SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	11/37	EEOS	WEOS	0815	64	BU	9	850	848	12	399	—	CSJ		12-6	CSJ
✓	12/37	WEOS	EEOS	0820	64	BU	9	850	848	28	427	—	CSJ		12-6	CSJ
✓	12/45	NEOS	SEOS	0826	65	BU	9	850	850	28	455	—	CSJ		12-6	CSJ
✓	38/45	NEOS	SEOS	0836	65	BU	9	850	850	22	477	—	CSJ		12-6	CSJ
✓	39/45	NEOS	SEOS	0839	65	BU	9	850	850	23	490/10	DP-7	CSJ		12-6	CSJ
✓	40/45	NEOS	SEOS	0842	65	BU	9	850	851	22	32	—	CSJ		12-6	CSJ
✓	41/45	NEOS	SEOS	0844	65	BU	9	850	850	23	55	—	CSJ		12-6	CSJ
✓	42/43	WEOS	EEOS	0855	66	BU	9	850	850	14	69	—	CSJ		12-6	CSJ
✓	43/44	NEOS	SEOS	0857	67	BU	9	850	851	13	82	—	CSJ		12-6	CSJ
✓	42/44	WEOS	EEOS	0904	68	BU	9	850	850	31	113	—	CSJ		12-6	CSJ
✓	48/49	NEOS	SEOS	0916	70	BU	9	850	850	162	225	—	CSJ		12-6	CSJ
✓	50/51	SEOS	NEOS	0939	72	BU	9	850	851	15	290	—	CSJ		12-6	CSJ
✓	51/52	NEOS	SEOS	0945	72	BU	9	850	850	15	305	—	CSJ		12-6	CSJ
✓	51/53	EEOS	WEOS	0950	72	BU	9	850	849	30	335	—	CSJ		12-6	CSJ
✓	50/53	WEOS	EEOS	1004	72	BU	9	850	850	32	367	—	CSJ		12-6	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 480

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 367

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	800	BU
TF-3	800	BU
TF-4	800	BU
TF-7	1240	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (7) 367

MACHINE # 16

PAGE NUMBER: 8

	SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	57/58	WEOS	EEOS	1013	72	BU	11	850	850	28	445	—	CSJ		12-6	CSJ
✓	58/60	WEOS	EEOS	1024	72	BU	11	850	850	20	465	—	CSJ		12-6	CSJ
✓	59/60	SEOS	NEOS	1030	72	BU	11	850	849	9	474	—	CSJ	Crossed by 23	—	—
✓	58/59	WEOS	EEOS	1038	72	BU	11	850	850	7	481	—	CSJ		12-6	CSJ
✓	58/59	WEOS	EEOS	1039	72	BU	11	850	850	24	490/17	DP-10	CSJ		12-6	CSJ
✓	49/57	SEOS	NEOS	1057	72	BU	11	850	850	18	35	—	CSJ		12-6	CSJ
✓	49/56	SEOS	NEOS	1059	73	BU	11	850	851	23	58	—	CSJ		12-6	CSJ
✓	49/55	SEOS	NEOS	1102	73	BU	11	850	850	22	80	—	CSJ		12-6	CSJ
✓	49/54	SEOS	NEOS	1105	73	BU	11	850	850	23	103	—	CSJ		12-6	CSJ
✓	49/50	SEOS	NEOS	1108	73	BU	11	850	848	40	143	—	CSJ		12-6	CSJ
✓	52/53	EEOS	EEOS	1125	74	BU	11	850	850	32	175	—	CSJ		12-6	CSJ
✓	~~58/61~~	~~WEOS~~	~~EEOS~~	~~1137~~	~~74~~	~~BU~~	~~11~~	~~850~~	~~850~~	~~21~~	~~196~~	~~—~~	~~CSJ~~		~~12-6~~	~~CSJ~~
✓	57/61	WEOS	EEOS	1139	75	BU	11	850	850	10	206	—	CSJ		12-6	CSJ
✓	61/62	SEOS	NEOS	1249	78	BU	11	850	848	38	244	—	SMN		12-6	CSJ
✓	52/62	NEOS	SEOS	1259	78	BU	11	850	846	38	282	—	SMN		12-6	CSJ

PAGE TOTAL: 405

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 282

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	800	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (6) 412

MACHINE # 95

PAGE NUMBER: 9

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
64/65	SEOS *	NEOS	10:52	74	SM	18	850	846	162	490/84	DP-11	SMN		12-6	CJS
49/59	SEOS *	NEOS	10:57	74	SM	18	850	848	40	124	–	SMN		12-6	CJS
65/66	SEOS *	NEOS	11:17	75	SM	18	850	846	162	286	–	SMN		12-6	CJS
73/74	WEOS *	EEOS	11:30	76	SM	18	850	848	38	324	–	SMN		12-7	CJS
72/73	WEOS *	EEOS	1135	76	SM	18	850	850	38	362	–	SMN		12-7	CJS
71/72	WEOS *	EEOS	1140	76	SM	18	850	852	38	400	–	SMN		12-7	CJS
70/71	WEOS *	EEOS	1143	76	SM	18	850	848	38	438	–	SMN		12-7	CJS
69/70	WEOS *	EEOS	1148	76	SM	18	850	846	34	462/10	DP-13	SMN		12-7	CJS
/	*														
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PAGE TOTAL: 550

PAGE DESTRUCTIVE LENGTH CARRY-OVER 10

DAILY TOTAL WELDED (FT) 1908

DAILY DESTRUCTIVE LENGTH CARRY-OVER 10

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-5	1240	BV
TF-6	1240	BV
TF-7	1240	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (8) 282

MACHINE # 16

PAGE NUMBER: 10

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
54/162	NEOS	SEOS	1304	78	BV	11	856	849	22	304	–	SMN		12-6	CSJ
55/162	NEOS	SEOS	1305	78	BV	11	850	848	23	327	–	SMN		12-6	CSJ
56/162	NEOS	SEOS	1309	78	BV	11	850	846	22	349	–	SMN		12-6	CSJ
57/162	NEOS	SEOS	1314	78	BV	11	850	848	21	370	–	SMN		12-6	CSJ
74/175	EEOS	WEOS	1325	78	BV	11	850	850	18	388	–	SMN		12-7	CSJ
35/174	WEOS	EEOS	1333	78	BV	11	850	848	31	419	–	SMN		12-7	CSJ
36/175	WEOS	EEOS	1336	78	BV	11	850	846	23	442	–	SMN		12-7	CSJ
35/66	SEOS	NEOS	1344	78	BV	11	850	848	38	470/10	DP-12	SMN		12-7	CSJ
68/69	WEOS	EEOS	1405	78	BV	11	850	846	10	20	–	SMN		12-7	CSJ
67/68	SEOS	NEOS	1411	78	BV	11	850	848	7	27	–	SMN		12-7	CSJ
67/69	EEOS	WEOS	1413	78	BV	11	850	846	30	57	–	SMN		12-7	CSJ
67/70	EEOS	WEOS	1416	78	BV	11	850	848	7	64	–	SMN		12-7	CSJ
66/67	SEOS	NEOS	1429	80	BV	11	850	850	35	99	–	SMN		12-7	CSJ
66/70	SEOS	NEOS	1434	80	BV	11	850	849	17	116	–	SMN		12-7	CSJ
66/71	SEOS	NEOS	1436	80	BV	11	850	848	22	138	–	SMN		12-7	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 326

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 138

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-5	1240	BU
TF-6	1240	BU
TF-7	1240	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (10) 138

MACHINE # 16

PAGE NUMBER: 11

	SEAM NUMBER	SEAM SECTION START POINT *	SEAM SECTION FINISH POINT *	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	MACHINE SETTINGS DIGITAL SET WEDGE	MACHINE SETTINGS INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	** PASSING - NON DESTRUCTIVE TESTING QA MON.
✓	66/72	SEOS	NEOS	1438	80	BU	11	850	850	23	161	—	CSJ		12-7	CSJ
✓	66/73	SEOS	NEOS	1441	80	BU	11	850	848	22	183	—	CSJ		12-7	CSJ
✓	24/66	EEOS	WEOS	1508	80	BU	11	850	850	18	200	—	CSJ		12-7	CSJ
✓	24/65	EEOS	WEOS	1510	79	BU	11	850	850	5	205	—	CSJ	Covered by 5C	—	—
✓	23/65	EEOS	WEOS	1512	79	BU	11	850	850	18	223	—	CSJ		12-7	CSJ
✓	23/64	EEOS	WEOS	1513	79	BU	11	850	850	5	228	—	CSJ	Covered by 5F	—	—
✓	22/64	EEOS	WEOS	1514	79	BU	11	850	849	17	245	—	CSJ		12-7	CSJ
✓	22/63	EEOS	WEOS	1516	79	BU	11	850	851	5	250	—	CSJ	Covered by 5H	—	—
✓	21/63	EEOS	WEOS	1517	79	BU	11	850	850	18	268	—	CSJ		12-7	CSJ
✓	21/62	EEOS	WEOS	1520	79	BU	11	850	849	5	273	—	CSJ	Covered by 5J	—	—
✓	20/62	EEOS	WEOS	1521	79	BU	11	850	850	17	290	—	CSJ		12-7	CSJ
✓	20/52	EEOS	WEOS	1523	79	BU	11	850	850	5	295	—	CSJ	Covered by 5K	—	—
✓	19/52	EEOS	WEOS	1555	77	BU	11	850	850	18	313	—	CSJ		12-7	CSJ
✓	19/51	EEOS	WEOS	1557	77	BU	11	850	848	5	318	—	CSJ	Covered by 5M	—	—
✓	18/51	EEOS	WEOS	1558	77	BU	11	850	849	17	335	—	CSJ		12-7	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 197

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 335

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE:_____

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-5	1240	BU
TF-6	1240	BU
TF-7	1240	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (11) 335

MACHINE # 16

PAGE NUMBER: 12

	SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓	17 / 50	EEOS	* WEOS	1402	77	BU	11	850	850	22	357	—	CSJ		12-7	CSJ
✓	16 / 49	EEOS	* WEOS	1411	77	BU	11	850	850	23	380	—	CSJ		12-7	CSJ
✓	15 / 48	EEOS	* WEOS	1414	77	BU	11	850	849	22	402	—	CSJ		12-7	CSJ
✓	14 / 47	EEOS	* WEOS	1416	77	BU	11	850	850	23	425	—	CSJ		12-7	CSJ
✓	13 / 46	EEOS	* WEOS	1420	77	BU	11	850	850	22	447	—	CSJ		12-7	CSJ
✓	1 / 45	EEOS	* WEOS	1422	77	BU	11	850	851	23	460/10	DP-14	CSJ		12-7	CSJ
	/		*													
	/		*													
	/		*													
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	/		*													

PAGE TOTAL: 135

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 10

DAILY TOTAL WELDED (FT): 1543

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 10

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

Section 4
Geomembrane Extrusion Seaming Log

Primary

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-5-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	1250	BV
TF-3	1250	BV
TF-4	1250	BV

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (2) 23

MACHINE # 16

PAGE NUMBER: 4

SEAM NUMBER	* SEAM SECTION START POINT	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
✓ 28/29	EEOS	WEOS	1550	73	BV	10	850	850	38	61	—	CSJ		12-6	CSJ
✓ 27/28	EEOS	WEOS	1600	73	BV	10	850	849	19	80	—	CSJ		12-6	CSJ
✓ 25/24	SEOS	NEOS	1603	73	BV	10	850	850	17	97	—	CSJ		12-6	CSJ
✓ 25/28	WEOS	EEOS	1613	73	BV	10	850	850	28	125	—	CSJ	Covered by 3Y	—	—
✓ 26/27	WEOS	EEOS	1618	72	BV	10	850	850	25	150	—	CSJ		12-6	CSJ
✓ 34/36	WEOS	EEOS	1624	72	BV	10	850	850	18	168	—	CSJ		12-6	CSJ
✓ 35/36	SEOS	NEOS	1628	72	BV	10	850	848	21	189	—	CSJ		12-6	CSJ
✓ 34/35	SEOS	NEOS	1630	72	BV	10	850	849	19	208	—	CSJ		12-6	CSJ
✓ 32/35	WEOS	EEOS	1633	72	BV	10	850	850	11	219	—	CSJ		12-6	CSJ
✓ 33/35	WEOS	EEOS	1634	72	BV	10	850	850	19	238	—	CSJ		12-6	CSJ
✓ 33/34	WEOS	EEOS	1634	72	BV	10	850	850	17	255	—	CSJ		12-6	CSJ
✓ 24/32	SEOS	NEOS	1647	72	BV	10	850	850	16	271	—	CSJ		12-6	CSJ
✓ 24/31	SEOS	NEOS	1649	72	BV	10	850	851	23	294	—	CSJ		12-6	CSJ
✓ 24/30	SEOS	NEOS	1651	72	BV	10	850	850	22	316	—	CSJ		12-6	CSJ
✓ 24/29	SEOS	NEOS	1653	72	BV	10	850	850	23	339	—	CSJ		12-6	CSJ

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 316

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 339

DAILY TOTAL WELDED (FT): —

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-7-12

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-2	800	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 21

PAGE NUMBER: 1

EXTRUSION SEAMING										VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
60/61	3Feb *	2Q	09:32	66	SM	9	9	—	CSJ	12-7	MG	P	CSJ	
/	*													
/	*													
/	*													
/	*													
/	*													
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/	*													
/	*													

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL:	9
PAGE DESTRUCTIVE LENGTH CARRY-OVER	9
DAILY TOTAL WELDED (FT)	9
DAILY DESTRUCTIVE LENGTH CARRY-OVER	9

REVIEWED BY : S. NEJAD

DATE : 12-11-12

Section 5
Geomembrane Defect, Repair, and Vacuum Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 1

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	13/14	11' S. OF NEOS	DP-1	12-5		12-6	P	2x4	19	JP	AY	12-7	MG	P	AY
B	13/14	99' S. OF NEOS	IO	12-5		12-6	P	1x3	19	JP	AY	12-7	MG	P	AY
C	17/18	6' S. TO NEOS	Cut	12-5		12-6	P	1x6	19	JP	AY	12-7	MG	P	AY
D	16/17	8' S. OF NEOS	DP-3	12-5		12-6	P	2x4	19	JP	AY	12-7	MG	P	AY
F	16/17	70' N. OF SEOS	BO	12-5		12-6	P	1x2	19	JP	AY	12-7	MG	P	AY
G	16/17	18' N. OF SEOS	BO	12-5		12-6	P	1x2	19	JP	AY	12-7	MG	P	AY
H	P-19	6' N./10 E	D	12-5		12-7	P	1x2	19	JP	AY	12-7	MG	P	AY
J	P-20	14' N./10 E	D	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
K	21/22	85' N. OF SEOS	IO	12-5		12-6	P	1x5	19	JP	AY	12-7	MG	P	AY
M	22/23	11' N. OF SEOS	DP-4	12-5		12-7	P	2x5	19	JP	AY	12-7	MG	P	AY
N	24/35	13' N. OF SEOS	DP-6	12-5		12-7	P	2x5	19	JP	AY	12-7	MG	P	AY
P	28/29	EEOS	BO	12-5		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
Q	38/39	4' E. OF WEOS	BO	12-6		12-6	P	1x6	19	JP	AY	12-7	MG	P	AY
R	40/41	10' W. OF EEOS	BO	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
S	1/13	15' N. OF SEOS	BO	12-6		12-7	P	2x2	19	JP	AY	12-7	MG	P	AY
T	46/47	10' S. OF NEOS	D	12-6		12-6	P	1x6	71	SM	AY	12-7	MG	P	AY
W	46/47	15' S. OF NEOS	D	12-6		12-6	P	1x6	71	SM	AY	12-7	MG	P	AY
X	46/47	68' S. OF NEOS	DP-8	12-6		12-6	P	2x4	71	SM	AY	12-7	MG	P	AY
Y	46/47	110' S. OF NEOS	D	12-6		12-6	P	1x2	71	SM	AY	12-7	MG	P	AY

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 2

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	12/34/37	Int	T	12-6		12-6	P	2x2	71	SM	AY	12-7	MG	P	AY
B	12/37/45	Int	T	12-6		12-6	P	4x4	71	SM	AY	12-7	MG	P	AY
C	38/39/45	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
D	39/40/45	Int	T	12-6		12-6	P	1x6	71	SM	AY	12-7	MG	P	AY
F	40/41/45	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
G	41/42/45	Int	T	12-6		12-6	P	2x4	71	SM	AY	12-7	MG	P	AY
H	39/45	10' N OF SEOS	DP-7	12-6		12-6	P	2x6	71	SM	AY	12-7	MG	P	AY
J	42/43/44	Int	T	12-6		12-6	P	2x2	71	SM	AY	12-7	MG	P	AY
K	50/51/53	Int	T	12-6		12-6	P	1x4	71	SM	AY	12-7	MG	P	AY
M	51/52/53	Int	T	12-6		12-7	P	2x2	71	SM	AY	12-7	MG	P	AY
N	54/55	10' W OF EEOS	DP-9	12-6		12-6	P	2x4	71	SM	AY	12-7	MG	P	AY
P	57/58/61	Int	T	12-6		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
Q	58/60/61	Int	T	12-6		12-6	P	1x6	71	SM	AY	12-7	MG	P	AY
R	58/59	7' E OF WEOS	DP-10	12-6		12-6	P	2x4	71	SM	AY	12-7	MG	P	AY
S	58/59/60	Int	T	12-6		12-6	P	5x5	71	SM	AY	12-7	MG	P	AY
T	57/58/59	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
W	49/57/59	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
X	49/54/57	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
Y	49/55/56	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 3

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	3/4/5/6	Int	T	12-5		12-6	P	2x2	19	JP	AY	12-7	MG	P	AY
B	1/2/5	Int	T	12-5		12-6	P	3x3	19	JP	AY	12-7	MG	P	AY
C	1/6/7	Int	T	12-5		12-6	P	2x2	19	J.P	AY	12-7	MG	P	AY
D	1/7/8	Int	T	12-5		12-6	P	2x2	19	J.P	AY	12-7	MG	P	AY
F	1/8/9	Int	T	12-5		12-6	P	2x2	19	J.P	AY	12-7	MG	P	AY
G	1/9/12	Int	T	12-5		12-6	P	3x3	19	J.P	A,Y	12-7	MG	P	AY
H	10/11/12	Int	T	12-5		12/6	P	2x3	19	J.P	A,Y	12-7	MG	P	AY
J	10/12	6'S OF NEOS	DP-2	12-5		12/6	P	2x5	19	J.P	A,Y	12-7	MG	P	AY
K	19/20	23'S OF NEOS	DP-5	12-5		12/6	P	2x5	19	JP	AY	12-7	MG	P	AY
M	34/35/36	Int.	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
N	33/34/35	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
P	32/33/35	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
Q	24/32/35	Int	T	12-5		12-7	P	1x2	19	JP	AY	12-7	MG	P	AY
R	24/31/32	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
S	24/30/31	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
T	24/29/30	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
W	24/28/29	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
X	24/25/28	Int	T	12-5		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
Y	25/26/27	Int	T	12-5		12-7	P	2x6	19	JP	AY	12-7	MG	P	AY

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 4

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	62/63	4' N. To SEOS	BO	12-6		12-7	P	1x6	71	SM	AY	12-7	MG	P	AY
B	P-64	5' S./10' E	D	12-6		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
C	63/64	42' S. OF NEOS	D	12-6		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
D	64/65	84' S. OF NEOS	DP-11	12-6		12-7	P	2x4	71	SM	AY	12-7	MG	P	AY
F	65/66	4' N To SEOS	BO	12-6		12-7	P	1x6	71	SM	AY	12-7	MG	P	AY
G	P-1	2' N. / 10' E	D	12-6		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
H	61/62	4' N. To SEOS	BO	12-6		12-7	P	1x6	71	SM	AY	12-7	MG	P	AY
J	45/46	22' S. OF NEOS	D	12-6		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
K	45/46	26' S. OF NEOS	D	12-6		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
M	40/45	10' S. OF NEOS	CUT	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
N	49/59	4' N To SEOS	BO	12-6		12-6	P	1x5	71	SM	AY	12-7	MG	P	AY
P	35/66	10' S. OF NEOS	DP-12	12-6		12-7	P	2x5	71	SM	AY	12-7	MG	P	AY
Q	69/70	10' W. OF GEOS	DP-13	12-6		12-7	P	2x5	71	SM	AY	12-7	MG	P	AY
R	1/45	10' E. of WEOS	DP-14	12-6		12-7	P	2x8	19	JP	AY	12-7	MG	P	AY
S	67/68/69	Int	T	12-6		12-7	P	2x2	71	SM	AY	12-7	MG	P	AY
T	18/51	13' E of WEOS	C	12-6		12-7	P	2x6	71	SM	AY	12-7	MG	P	AY
W	14/15	NEOS	BO	12-6		12-6	P	1x5	19	JP	AY	12-7	MG	P	AY
X	1/2	NEOS	BO	12-6		12-6	P	1x5	19	JP	AY	12-7	MG	P	AY
Y	24/35/66	INT	T	12-6		12-6	P	1x4	19	JP	AY	12-7	MG	P	AY

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 5

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	49/54/55	Int	T	12-6		12-6	P	1x1	71	SM	AY	12-7	MG	P	AY
B	49/53/54	Int	T	12-6		12-6	P	1x2	71	SM	AY	12-7	MG	P	AY
C	24/65/66	INT	T	12-6		12-6	P	1x4	19	SM	AY	12-7	MG	P	AY
D	65	5C	DDX-1	12-7		12-6	P	2x6	19	JP	AY	12-7	MG	P	AY
F	23/64/65	INT	T	12-7		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
G	64	11'E, 15'S of NWC	D	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
H	21/62/63	INT	T	12-7		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
J	21/62/63	INT	T	12-7		12-7	P	1x5	19	JP	AY	12-7	MG	P	AY
K	20/19/52	INT	T	12-7		12-7	P	1x6	71	SM	AY	12-7	MG	P	AY
M	18/19/51	INT	T	12-7		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
N	17/18/51	INT	T	12-7		12-7	P	2x2	19	JP	AY	12-7	MG	P	AY
P	16/17/49	INT	T	12-7		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
Q	15/16/48	INT	T	12-7		12-7	P	2x2	19	JP	AY	12-7	MG	P	AY
R	14/15/47	INT	T	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
S	13/14/46	INT	T	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
T	1/13/45	INT	T	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
W	1/12/45	INT	T	12-7		12-7	P	2x2	19	JP	AY	12-7	MG	P	AY
X	47	11'E 3'S of NWC	D	12-7		12-7	P	1x6	19	JP	AY	12-7	MG	P	AY
Y	50	4'E, 2'S of NWC	Cut	12-7	Pipe	12-7	P	1x1	71	SM	AY	12-7	MG	P	AY

DEFECTS TYPES

BO - BURNOUT
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CUT - CUT
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PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Primary

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 6

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	19	11'E, 21' N of SWC	D	12-7		12-7	P	1x2	19	JP	AY	12-7	MG	P	AY
B	52	4'S, 6'W of NEC	Cut	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
C	64	11'E, 17S of NWC	D	12-7		12-7	P	1x1	19	JP	AY	12-7	MG	P	AY
D	67/68/69	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
F	67/69/70	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
G	66/67/70	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
H	66/70/71	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
J	66/71/77	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
K	66/72/73	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
M	66/73/74	INT	T	12-7		12-7	P	1x6	71	SM	AY	12-7	MG	P	AY
N	35/36/75	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
P	52/53/54	INT	T	12-7		12-7	P	2x2	71	SM	AY	12-7	MG	P	AY
Q	54/55/62	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
R	55/56/62	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
S	56/57/62	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
T	57/61/62	INT	T	12-7		12-7	P	1x1	71	SM	AY	12-7	MG	P	AY
W	64/65	SEOS	BO	12-7		12-7	P	1x4	71	SM	AY	12-7	MG	P	AY
X															
Y															

DEFECTS TYPES

BO - BURNOUT
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T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
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OTHER _____
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 12-11-12

Section 6

Geomembrane Non-Destructive Pressure Test Log

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE PRESSURE TEST LOG

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 1

Brantley Engineering, LLC

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
13/14	NEOS	*	SEOS	1	CO	745	*	750	30	*	30	P		/	✓	CSJ	
14/15	NEOS	*	SEOS	2	CO	747	*	752	30	*	30	P		/	✓	CSJ	
15/16	NEOS	*	SEOS	3	CO	748	*	753	30	*	30	P		/	✓	CSJ	
17/18	NEOS	*	SEOS	4	CO	750	*	755	30	*	30	P		/	✓	CSJ	
18/19	NEOS	*	SEOS	5	CO	751	*	756	30	*	30	P		/	✓	CSJ	
19/20	NEOS	*	SEOS	6	CO	752	*	757	30	*	30	P		/	✓	CSJ	
20/21	NEOS	*	SEOS	7	CO	753	*	758	30	*	30	P		/	✓	CSJ	
22/23	NEOS	*	SEOS	1	CO	805	*	810	30	*	30	P		/	✓	CSJ	
23/24	NEOS	*	SEOS	2	CO	806	*	811	30	*	30	P		/	✓	CSJ	
21/22	1K	*	SEOS	3	CO	818	*	823	30	*	30	P	✓	/		CSJ	
21/22	NEOS	*	1K	4	CO	819	*	824	30	*	30	P		/	✓	CSJ	
16/17	NEOS	*	1F	5	CO	826	*	831	30	*	30	P	✓	/		CSJ	
16/17	1F	*	SEOS	6	CO	827	*	832	30	*	30	P		/	✓	CSJ	
1/13	1S	*	SEOS	7	CO	842	*	847	30	*	28	P	✓	/		CSJ	
1/13	1S	*	NEOS	8	CO	842	*	847	30	*	30	P		/	✓	CSJ	
10/11	EEOS	*	WEOS	1	CO	1130	*	1135	30	*	30	P		/	✓	CSJ	
11/12	EEOS	*	WEOS	2	CO	1130	*	1135	30	*	29	P		/	✓	CSJ	
10/12	EEOS	*	WEOS	3	CO	1130	*	1135	30	*	30	P		/	✓	CSJ	
1/12	NEOS	*	SEOS	4	CO	1131	*	1136	30	*	30	P		/	✓	CSJ	
9/10	EEOS	*	WEOS	5	CO	1131	*	1134	30	*	30	P		/	✓	CSJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE PRESSURE TEST LOG

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 2

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
1 / 9	NEOS	*	SEOS	6	CO	1133	*	1138	30	*	30	P		/	✓	CSJ	
8 / 9	EEOS	*	WEOS	7	CO	1133	*	1138	30	*	30	P		/	✓	CSJ	
7 / 8	EEOS	*	WEOS	8	CO	1134	*	1139	30	*	30	P		/	✓	CSJ	
1 / 8	NEOS	*	SEOS	9	CO	1134	*	1139	30	*	29	P		/	✓	CSJ	
6 / 7	EEOS	*	WEOS	1	CO	1142	*	1147	30	*	30	P		/	✓	CSJ	
1 / 7	NEOS	*	SEOS	2	CO	1142	*	1147	30	*	30	P		/	✓	CSJ	
5 / 6	EEOS	*	WEOS	3	CO	1147	*	1152	30	*	30	P		/	✓	CSJ	
1 / 6	NEOS	*	SEOS	4	CO	1147	*	1152	30	*	30	P		/	✓	CSJ	
2 / 5	EEOS	*	WEOS	5	CO	1148	*	1153	30	*	30	P		/	✓	CSJ	
1 / 2	NEOS	*	SEOS	6	CO	1148	*	1153	30	*	29	P		/	✓	CSJ	
2 / 3	NEOS	*	SEOS	7	CO	1148	*	1154	30	*	30	P		/	✓	CSJ	
3 / 4	EEOS	*	WEOS	8	CO	1149	*	1154	30	*	30	P		/	✓	CSJ	
4 / 5	EEOS	*	WEOS	9	CO	1149	*	1154	30	*	30	P		/	✓	CSJ	
11 / 37	EEOS	*	WEOS	1	CO	1304	*	1309	30	*	30	P		/	✓	CSJ	
12 / 37	EEOS	*	WEOS	2	CO	1304	*	1309	30	*	30	P		/	✓	CSJ	
12 / 45	NEOS	*	SEOS	3	CO	1305	*	1310	30	*	30	P		/	✓	CSJ	
37 / 38	EEOS	*	WEOS	4	CO	1306	*	1311	30	*	30	P		/	✓	CSJ	
38 / 45	NEOS	*	SEOS	5	CO	1313	*	1318	30	*	30	P		/	✓	CSJ	
38 / 39	WEOS	*	EEOS	6	CO	1314	*	1319	30	*	28	P		/	✓	CSJ	
39 / 40	WEOS	*	EEOS	1	CO	1323	*	1328	30	*	30	P		/	✓	CSJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE PRESSURE TEST LOG

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 3

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
40/45	WEOS	*	SEOS	2	CO	1325	*	1330	30	*	30	P		/	✓	CSJ	
40/41	WEOS	*	EEOS	3	CO	1325	*	1330	30	*	30	P		/	✓	CSJ	
41/45	WEOS	*	SEOS	4	CO	1325	*	1330	30	*	30	P		/	✓	CSJ	
41/42	WEOS	*	EEOS	5	CO	1327	*	1332	30	*	30	P		/	✓	CSJ	
42/44	WEOS	*	EEOS	6	CO	1327	*	1332	30	*	30	P		/	✓	CSJ	
44/45	WEOS	*	SEOS	7	CO	1327	*	1332	30	*	30	P		/	✓	CSJ	
42/43	WEOS	*	EEOS	8	CO	1328	*	1333	30	*	30	P		/	✓	CSJ	
43/44	WEOS	*	SEOS	9	CO	1328	*	1333	30	*	30	P		/	✓	CSJ	
45/46	WEOS	*	SEOS	1	CO	1339	*	1344	30	*	30	P		/	✓	CSJ	
46/47	WEOS	*	SEOS	2	CO	1340	*	1345	30	*	30	P		/	✓	CSJ	
47/48	WEOS	*	SEOS	3	CO	1341	*	1346	30	*	29	P		/	✓	CSJ	
48/49	WEOS	*	SEOS	4	CO	1342	*	1347	30	*	30	P		/	✓	CSJ	
62/63	WEOS	*	SEOS	1	CO	1357	*	1402	30	*	28	P		/	✓	CSJ	
63/64	WEOS	*	SEOS	2	CO	1358	*	1403	30	*	30	P		/	✓	CSJ	
65/66	WEOS	*	SEOS	3	CO	1400	*	1405	30	*	30	P		/	✓	CSJ	
64/65	WEOS	*	SEOS	4	CO	1405	*	1410	30	*	30	P		/	✓	CSJ	
50/51	WEOS	*	SEOS	6	CO	1415	*	1420	30	*	30	P		/	✓	CSJ	
51/53	EEOS	*	WEOS	7	CO	1415	*	1420	30	*	28	P		/	✓	CSJ	
49/50	WEOS	*	SEOS	8	CO	1423	*	1428	30	*	29	P		/	✓	CSJ	
50/53	EEOS	*	WEOS	9	CO	1423	*	1428	30	*	29	P		/	✓	CSJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Primary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 21

Primary

SEAM NUMBER	SEAM SECTION* START POINT	* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	* FINISH	PRESSURE (PSI) INITIAL	* FINAL	PASS/ FAIL	SEAM COMPLETE NO	/ YES	QA MONITOR	REMARKS
53/54	EEOS	* WEOS	5	CO	1424	* 1429	30	* 30	P	/	✓	CSJ	
49/54	NEOS	* SEOS	1	CO	1425	* 1430	30	* 30	P	/	✓	CSJ	
54/55	EEOS	* WEOS	2	CO	1425	* 1430	30	* 30	P	/	✓	CSJ	
49/55	NEOS	* SEOS	3	CO	1425	* 1430	30	* 30	P	/	✓	CSJ	
55/56	EEOS	* WEOS	6	CO	1432	* 1437	30	* 30	P	/	✓	CSJ	
49/56	NEOS	* SEOS	7	CO	1433	* 1438	30	* 30	P	/	✓	CSJ	
56/57	EEOS	* WEOS	8	CO	1433	* 1438	30	* 30	P	/	✓	CSJ	
49/57	NEOS	* SEOS	9	CO	1433	* 1438	30	* 30	P	/	✓	CSJ	
49/59	NEOS	* SEOS	1	CO	1434	* 1439	30	* 30	P	/	✓	CSJ	
57/59	EEOS	* WEOS	2	CO	1434	* 1439	30	* 30	P	/	✓	CSJ	
58/59	EEOS	* WEOS	3	CO	1435	* 1440	30	* 30	P	/	✓	CSJ	
57/58	EEOS	* WEOS	4	CO	1435	* 1440	30	* 30	P	/	✓	CSJ	
58/60	EEOS	* WEOS	5	CO	1436	* 1441	30	* 29	P	/	✓	CSJ	
58/61	EEOS	* WEOS	6	CO	1450	* 1455	30	* 30	P	/	✓	CSJ	
61/62	NEOS	* SEOS	8	CO	1450	* 1455	30	* 30	P	/	✓	CSJ	
57/62	NEOS	* SEOS	9	CO	1450	* 1455	30	* 30	P	/	✓	CSJ	
56/62	NEOS	* SEOS	1	CO	1453	* 1458	30	* 30	P	/	✓	CSJ	
55/62	NEOS	* SEOS	2	CO	1453	* 1458	30	* 30	P	/	✓	CSJ	
54/62	NEOS	* SEOS	3	CO	1453	* 1458	30	* 30	P	/	✓	CSJ	
57/61	EEOS	* WEOS	7	CO	1454	* 1459	30	* 30	P	/	✓	CSJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Primary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 5

Primary

SEAM NUMBER	SEAM SECTION* START POINT	* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	* FINISH	PRESSURE (PSI) INITIAL	* FINAL	PASS/ FAIL	SEAM COMPLETE NO	/ YES	QA MONITOR	REMARKS
52/53	EEOS	* WEOS	4	CO	1455	* 1500	30	* 30	P	/	✓	CSJ	
52/62	WEOS	* SEOS	5	CO	1459	* 1504	30	* 28	P	/	✓	CSJ	
51/52	WEOS	* SEOS	6	CO	1503	* 1508	30	* 30	P	/	✓	CSJ	
25/26	SEOS	* WEOS	1	CO	1525	* 1530	30	* 30	P	/	✓	CSJ	
26/27	WEOS	* EEOS	2	CO	1525	* 1530	30	* 28	P	/	✓	CSJ	
24/28	SEOS	* WEOS	3	CO	1528	* 1533	30	* 28	P	/	✓	CSJ	
28/29	WEOS	* EEOS	4	CO	1528	* 1533	30	* 30	P	/	✓	CSJ	
24/29	WEOS	* SEOS	5	CO	1528	* 1533	30	* 30	P	/	✓	CSJ	
27/28	WEOS	* EEOS	8	CO	1531	* 1536	30	* 30	P	/	✓	CSJ	
29/30	WEOS	* EEOS	1	CO	1542	* 1547	30	* 30	P	/	✓	CSJ	
24/30	WEOS	* SEOS	2	CO	1542	* 1547	30	* 29	P	/	✓	CSJ	
30/31	WEOS	* EEOS	3	CO	1552	* 1557	30	* 29	P	/	✓	CSJ	
24/31	WEOS	* SEOS	4	CO	1552	* 1557	30	* 30	P	/	✓	CSJ	
31/32	WEOS	* EEOS	5	CO	1553	* 1558	30	* 30	P	/	✓	CSJ	
24/32	WEOS	* SEOS	6	CO	1553	* 1558	30	* 29	P	/	✓	CSJ	
32/33	WEOS	* EEOS	1	CO	1555	* 1600	30	* 30	P	/	✓	CSJ	
~~33/35~~	~~WEOS~~	~~* EEOS~~	~~2~~	~~CO~~	~~1555~~	~~* 1600~~	~~30~~	~~* 30~~	~~P~~	~~/~~	~~✓~~	~~CSJ~~	
32/35	WEOS	* EEOS	3	CO	1555	* 1600	30	* 30	P	/	✓	CSJ	
24/35	WEOS	* SEOS	4	CO	1559	* 1604	30	* 28	P	/	✓	CSJ	
33/34	WEOS	* EEOS	5	CO	1603	* 1608	30	* 30	P	/	✓	CSJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Primary

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-6-12

PAGE# 6

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
34/35	WEOS	*	EEOS	6	CO	1603	*	1608	30	*	30	P		/	✓	CJS	
24/25	SEOS	*	NEOS	1	CO	1529	*	1534	30	*	30	P		/	✓	CJS	
34/36	WEOS	*	EEOS	2	CO	1603	*	1608	30	*	30	P		/	✓	CJS	
39/45	NEOS	*	SEOS	3	CO	1323	*	1328	30	*	30	P		/	✓	CJS	
/		*					*			*				/			
/		*					*			*				/			
/		*					*			*				/			
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/		*					*			*				/			
/		*					*			*				/			

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE PRESSURE TEST LOG

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-7-12

PAGE# 7

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
34 / 35	WEOS	*	EEOS	1	CO	733	*	738	30	*	30	P		/	✓	CJJ	
35 / 36	WEOS	*	SEOS	2	CO	733	*	738	30	*	30	P		/	✓	CJJ	
35 / 36	WEOS	*	SEOS	3	CO	734	*	739	30	*	30	P		/	✓	CJJ	
36 / 75	WEOS	*	EEOS	4	CO	735	*	740	30	*	30	P		/	✓	CJJ	
74 / 75	WEOS	*	EEOS	5	CO	735	*	740	30	*	30	P		/	✓	CJJ	
35 / 74	WEOS	*	EEOS	6	CO	739	*	744	30	*	30	P		/	✓	CJJ	
73 / 74	WEOS	*	EEOS	1	CO	741	*	746	30	*	29	P		/	✓	CJJ	
72 / 73	WEOS	*	EEOS	2	CO	745	*	750	30	*	30	P		/	✓	CJJ	
66 / 73	SEOS	*	WEOS	3	CO	745	*	750	30	*	30	P		/	✓	CJJ	
66 / 72	WEOS	*	SEOS	4	CO	745	*	750	30	*	30	P		/	✓	CJJ	
71 / 72	WEOS	*	EEOS	5	CO	748	*	753	30	*	30	P		/	✓	CJJ	
66 / 70	WEOS	*	SEOS	6	CO	748	*	753	30	*	30	P		/	✓	CJJ	
70 / 71	WEOS	*	EEOS	1	CO	755	*	800	30	*	30	P		/	✓	CJJ	
66 / 71	WEOS	*	SEOS	2	CO	755	*	800	30	*	30	P		/	✓	CJJ	
66 / 67	WEOS	*	SEOS	3	CO	757	*	802	30	*	30	P		/	✓	CJJ	
69 / 70	WEOS	*	EEOS	4	CO	758	*	803	30	*	30	P		/	✓	CJJ	
67 / 70	WEOS	*	EEOS	5	CO	758	*	803	30	*	30	P		/	✓	CJJ	
67 / 69	WEOS	*	EEOS	6	CO	758	*	803	30	*	30	P		/	✓	CJJ	
68 / 69	WEOS	*	EEOS	7	CO	759	*	804	30	*	30	P		/	✓	CJJ	
67 / 68	WEOS	*	SEOS	8	CO	759	*	804	30	*	30	P		/	✓	CJJ	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

Section 7
Geomembrane Destructive Samples Laboratory Results

Precision Geosynthetic Laboratories International
A Texas Research International Company

January 14, 2013

GAI-LAP
Initial: CVZ #:0.13
DATE: 01/14/2013

Allan Brantley
Brantley Engineering, LLC
13933 Tree Loft Road
Milton, GA 30004

Re: REVISED LABORATORY TEST REPORT

Dear Mr. Brantley:

Thank you for consulting Precision Geosynthetic Laboratories International (PGLI) for your material testing needs.

Enclosed is the ***final*** laboratory report for the Seam testing of fifteen (15) 60mil HDPE Seam samples.

PROJECT NAME: JED Leachate Storage Facility Relocation

DATE REPORTED: **December 26, 2012-** 1st reported
January 14, 2013 – DBX-1 sample ID correction

REFERENCE PGLI JOB NO.: G121337

DATE RECEIVED: December 26, 2012

SAMPLES SENT BY: Brantley Engineering, LLC

SAMPLE IDENTIFICATIONS:

SAMPLE ID	*PGLI CONTROL NUMBER*
1. DB-1 P22/24	88721
2. DB-2 P24/25	88722
3. DB-3 P15/22	88723
4. DB-4 P29/30	88724
5. DB-5 P30/31	88725
6. DB-6 P34/32	88726
7. DB-7 P41/40	88727
8. DB-8 P43/41	88728
9. DB-9 P45/44	88729
10. DB-10 P53/52	88730
11. DB-11 P66/65	88731
12. DB-12 P46/45	88732
13. DB-13 P68/33	88733
14. DB-14 P66/33	88734
15. DBX-1 P34/3Q	88735

TESTS REQUIRED / PERFORMED:

TEST METHOD	*DESCRIPTION*
1. ASTM D6392	Shear Bond Strength
2. ASTM D6392	Peel Bond Adhesion

TEST RESULTS: The test results are summarized in Tables 1 to 8.

Respectfully,

PRECISION GEOSYNTHETIC LABORATORIES INTERNATIONAL

Maria Espitia
Quality Assurance

Carmelo V. Zantua
Technical Director

Signatures are on file

It shall be noted that the samples tested are believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. PGLI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. ***Failed seam samples are kept for two (2) years and good seam samples are disposed of after two (2) weeks.*** On the other hand, should you need us to keep them at a longer period, please advise us in writing.

1160 North Gilbert Street, Anaheim, CA 92801 Tel# 714-520-9631 Fax# 714-520-9637, www.precisionlabs.net

BRANTLEY ENGINEERING, LLC

Primary

GEOMEMBRANE PRESSURE TEST LOG

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 12-7-12

PAGE# 8

Primary

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
24 / 66	WEOS	*	EEOS	1	CO	815	*	820	35	*	30	P		/	✓	CSJ	
23 / 65	WEOS	*	EEOS	2	CO	816	*	821	30	*	30	P		/	✓	CSJ	
22 / 64	WEOS	*	EEOS	3	CO	817	*	822	30	*	30	P		/	✓	CSJ	
21 / 63	WEOS	*	EEOS	4	CO	822	*	827	30	*	30	P		/	✓	CSJ	
20 / 62	WEOS	*	EEOS	5	CO	823	*	828	30	*	30	P		/	✓	CSJ	
19 / 52	WEOS	*	EEOS	6	CO	825	*	830	30	*	30	P		/	✓	CSJ	
18 / 51	4T	*	EEOS	1	CO	829	*	834	30	*	30	P	✓	/		CSJ	
18 / 51	4T	*	WEOS	2	CO	829	*	834	30	*	30	P		/	✓	CSJ	
17 / 50	WEOS	*	EEOS	3	CO	830	*	835	30	*	30	P		/	✓	CSJ	
16 / 49	WEOS	*	EEOS	4	CO	834	*	839	30	*	30	P		/	✓	CSJ	
15 / 48	WEOS	*	EEOS	5	CO	835	*	840	30	*	30	P		/	✓	CSJ	
14 / 47	WEOS	*	EEOS	6	CO	835	*	840	30	*	30	P		/	✓	CSJ	
13 / 46	WEOS	*	EEOS	1	CO	836	*	841	30	*	30	P		/	✓	CSJ	
1 / 45	EEOS	*	WEOS	2	CO	836	*	841	30	*	30	P		/	✓	CSJ	
/		*					*			*				/			
/		*					*			*				/			
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/		*					*			*				/			

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 12-11-12

TABLE 1.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min						Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-1	**88721**	177	> 50%	BRK		1 Outside	125	0	SE1	
P22/24		176	> 50%	BRK		2 Outside	123	0	SE1	
		178	> 50%	BRK		3 Outside	122	0	SE1	
		177	> 50%	BRK		4 Outside	120	0	SE1	
		177	> 50%	BRK		5 Outside	120	0	SE1	
						AVG:	**122**			91
						STD. DEV.	**2**			
						1 Inside	120	0	SE1	
						2 Inside	122	0	SE1	
						3 Inside	121	0	SE1	
						4 Inside	123	0	SE1	
						5 Inside	120	0	SE1	
	AVG.	**177**			120	**AVG:**	**121**			91
	STD. DEV.	**1**				STD. DEV.	**1**			
DB-2	**88722**	168	> 50%	BRK		1 Outside	129	0	SE1	
P24/25		169	> 50%	BRK		2 Outside	130	0	SE1	
		177	> 50%	BRK		3 Outside	127	0	SE1	
		166	> 50%	BRK		4 Outside	131	0	SE1	
		170	> 50%	BRK		5 Outside	136	0	SE1	
						AVG:	**131**			91
						STD. DEV.	**3**			
						1 Inside	131	0	SE1	
						2 Inside	126	0	SE1	
						3 Inside	130	0	SE1	
						4 Inside	136	0	SE1	
						5 Inside	131	0	SE1	
	AVG:	**170**			120	**AVG:**	**131**			91
	STD. DEV.	**4**				STD. DEV.	**4**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 1)

TABLE 2.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Capitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-3	**88723**	173	> 50%	BRK		1 Outside	148	0	SE1	
P15/22		180	> 50%	BRK		2 Outside	150	0	SE1	
		179	> 50%	BRK		3 Outside	146	0	SE1	
		176	> 50%	BRK		4 Outside	145	0	SE1	
		179	> 50%	BRK		5 Outside	146	0	SE1	
						AVG:	**147**			91
						STD. DEV.	**2**			
						1 Inside	129	0	SE1	
						2 Inside	131	0	SE1	
						3 Inside	140	0	SE1	
						4 Inside	137	0	SE1	
						5 Inside	135	0	SE1	
	AVG.	**177**			120	**AVG:**	**134**			91
	STD. DEV.	**3**				STD. DEV.	**4**			
DB-4	**88724**	170	> 50%	BRK		1 Outside	120	0	SE1	
P29/30		170	> 50%	BRK		2 Outside	122	0	SE1	
		167	> 50%	BRK		3 Outside	119	0	SE1	
		168	> 50%	BRK		4 Outside	120	0	SE1	
		171	> 50%	BRK		5 Outside	120	0	SE1	
						AVG:	**120**			91
						STD. DEV.	**1**			
						1 Inside	123	0	SE1	
						2 Inside	126	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	123	0	SE1	
						5 Inside	123	0	SE1	
	AVG:	**169**			120	**AVG:**	**124**			91
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 2)

TABLE 4.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-7	**88727**	166	> 50%	BRK		1 Outside	122	0	SE1	
P41/40		168	> 50%	BRK		2 Outside	126	0	SE1	
		170	> 50%	BRK		3 Outside	123	0	SE1	
		166	> 50%	BRK		4 Outside	127	0	SE1	
		167	> 50%	BRK		5 Outside	125	0	SE1	
						AVG:	**124**			91
						STD. DEV.	**2**			
						1 Inside	126	0	SE1	
						2 Inside	120	0	SE1	
						3 Inside	120	0	SE1	
						4 Inside	124	0	SE1	
						5 Inside	124	0	SE1	
	AVG.	**168**			120	**AVG:**	**123**			91
	STD. DEV.	**2**				STD. DEV.	**3**			
DB-8	**88728**	171	> 50%	BRK		1 Outside	119	0	SE1	
P43/41		166	> 50%	BRK		2 Outside	120	0	SE1	
		168	> 50%	BRK		3 Outside	122	0	SE1	
		166	> 50%	BRK		4 Outside	122	0	SE1	
		167	> 50%	BRK		5 Outside	123	0	SE1	
						AVG:	**121**			91
						STD. DEV.	**2**			
						1 Inside	122	0	SE1	
						2 Inside	120	0	SE1	
						3 Inside	118	0	SE1	
						4 Inside	120	0	SE1	
						5 Inside	119	0	SE1	
	AVG:	**168**			120	**AVG:**	**120**			91
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 4)

TABLE 5.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Epitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-9	**88729**	179	> 50%	BRK		1 Outside	129	0	SE1	
P45/44		181	> 50%	BRK		2 Outside	127	0	SE1	
		176	> 50%	BRK		3 Outside	131	0	SE1	
		177	> 50%	BRK		4 Outside	131	0	SE1	
		171	> 50%	BRK		5 Outside	129	0	SE1	
						AVG:	**129**			91
						STD. DEV.	**2**			
						1 Inside	127	0	SE1	
						2 Inside	126	0	SE1	
						3 Inside	127	0	SE1	
						4 Inside	128	0	SE1	
						5 Inside	127	0	SE1	
	AVG.	**177**			120	**AVG:**	**127**			91
	STD. DEV.	**4**				STD. DEV.	**1**			
DB-10	**88730**	176	> 50%	BRK		1 Outside	126	0	SE1	
P53/52		176	> 50%	BRK		2 Outside	128	0	SE1	
		176	> 50%	BRK		3 Outside	130	0	SE1	
		178	> 50%	BRK		4 Outside	126	0	SE1	
		176	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**2**			
						1 Inside	130	0	SE1	
						2 Inside	128	0	SE1	
						3 Inside	127	0	SE1	
						4 Inside	125	0	SE1	
						5 Inside	127	0	SE1	
	AVG:	**177**			120	**AVG:**	**127**			91
	STD. DEV.	**1**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 5)

TABLE 6.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-11	**88731**	176	> 50%	BRK		1 Outside	128	0	SE1	
P66/65		177	> 50%	BRK		2 Outside	128	0	SE1	
		171	> 50%	BRK		3 Outside	126	0	SE1	
		176	> 50%	BRK		4 Outside	129	0	SE1	
		177	> 50%	BRK		5 Outside	126	0	SE1	
						AVG:	**127**			91
						STD. DEV.	**1**			
						1 Inside	126	0	SE1	
						2 Inside	125	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	124	0	SE1	
						5 Inside	126	0	SE1	
	AVG.	**176**			120	**AVG:**	**125**			91
	STD. DEV.	**2**				STD. DEV.	**1**			
DB-12	**88732**	179	> 50%	BRK		1 Outside	121	0	SE1	
P46/45		181	> 50%	BRK		2 Outside	123	0	SE1	
		177	> 50%	BRK		3 Outside	121	0	SE1	
		177	> 50%	BRK		4 Outside	122	0	SE1	
		180	> 50%	BRK		5 Outside	126	0	SE1	
						AVG:	**123**			91
						STD. DEV.	**2**			
						1 Inside	119	0	SE1	
						2 Inside	120	0	SE1	
						3 Inside	119	0	SE1	
						4 Inside	119	0	SE1	
						5 Inside	121	0	SE1	
	AVG:	**179**			120	**AVG:**	**120**			91
	STD. DEV.	**2**				STD. DEV.	**1**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 6)

TABLE 7.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min		SHEAR EVALUATION				Crosshead Speed: 2 in/min	PEEL EVALUATION			
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DB-13	**88733**	176	> 50%	BRK		1 Outside	130	0	SE1	
P68/33		174	> 50%	BRK		2 Outside	128	0	SE1	
		176	> 50%	BRK		3 Outside	127	0	SE1	
		174	> 50%	BRK		4 Outside	126	0	SE1	
		175	> 50%	BRK		5 Outside	127	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**1**			
						1 Inside	126	0	SE1	
						2 Inside	125	0	SE1	
						3 Inside	124	0	SE1	
						4 Inside	126	0	SE1	
						5 Inside	125	0	SE1	
	AVG.	**175**			120	**AVG:**	**125**			91
	STD. DEV.	**1**				STD. DEV.	**1**			
DB-14	**88734**	169	> 50%	BRK		1 Outside	125	0	SE1	
P66/33		172	> 50%	BRK		2 Outside	131	0	SE1	
		169	> 50%	BRK		3 Outside	127	0	SE1	
		168	> 50%	BRK		4 Outside	129	0	SE1	
		169	> 50%	BRK		5 Outside	126	0	SE1	
						AVG:	**128**			91
						STD. DEV.	**2**			
						1 Inside	123	0	SE1	
						2 Inside	120	0	SE1	
						3 Inside	126	0	SE1	
						4 Inside	123	0	SE1	
						5 Inside	123	0	SE1	
	AVG:	**169**			120	**AVG:**	**123**			91
	STD. DEV.	**1**				STD. DEV.	**2**			

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 7)

(Sheet 1 of 1)

TABLE 8.
SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: **Brantley Engineering, LLC**
PROJECT: **JED Leachate Storage Facility Relocation**
DATE REC'D: **26-Dec-12**

MATERIAL: **60mil HDPE SEAM**
SEAM TYPE: **Fusion Weld**
PGLI JOB #: **G121337**

QC'd By: Maria Espitia
TEST METHOD: ASTM D6392
DATE REPORT: 14-Jan-13

Crosshead Speed: 2 in/min						Crosshead Speed: 2 in/min				
		SHEAR EVALUATION				PEEL EVALUATION				
SAMPLE ID	PGLI CONTROL #	MAXIMUM STRENGTH (lb/in width)	% Elongation	Locus of Break	PROJECT SPEC. (lb/in width)	SPECIMEN NUMBER	MAXIMUM STRENGTH (lb/in width)	% INCURSION (%)	LOCUS OF BREAK	PROJECT SPEC. (lb/in width)
DBX-1	**88735**	167	> 50%	BRK		1 Outside	129	0	SE3	
P34/3Q		170	> 50%	BRK		2 Outside	132	0	SE3	
		170	> 50%	BRK		3 Outside	128	0	SE3	
Extrusion		169	> 50%	BRK		4 Outside	126	0	SE3	
		169	> 50%	BRK		5 Outside	130	0	SE3	
						AVG:	**129**			78
						STD. DEV.	**2**			
						1 Inside	N/A			
						2 Inside				
						3 Inside				
						4 Inside				
						5 Inside				
	AVG.	**169**			120	**AVG:**				
	STD. DEV.	**1**				STD. DEV.				

BREAK DESCRIPTION (ASTM D6392 FUSION):

AD	ADHESION FAILURE.
BRK	BREAK IN SHEETING.
SE1	BREAK AT OUTER EDGE OF SEAM.
SE2	BREAK AT INNER EDGE OF SEAM.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
SIP	SEPARATION IN THE PLANE OF THE SHEET.

EXTRUSION:

AD1	ADHESION FAILURE. SPECIMENS DELAMINATED UNDER THE BEAD.
AD2	ADHESION FAILURE.
AD-WLD	BREAK THROUGH THE FILLET.
SE1	BREAK AT BOTTOM EDGE OF SEAM.
SE2	BREAK AT TOP EDGE OF SEAM.
SE3	BREAK AT BOTTOM EDGE OF SEAM (for PEEL only)
BRK1	BREAK IN BOTTOM SHEETING.
BRK2	BREAK IN TOP SHEETING.
AD-BRK	BREAK IN FIRST SEAM AFTER SOME ADHESION FAILURE.
HT	BREAK AT EDGE OF HOT TACK
SIP	SEPARATION IN THE PLANE OF THE SHEET.

(End of Table 8)

APPENDIX K

Geomembrane Installation

(Top Layer Floating Cover for Ponds A and C)

Section 1
Geomembrane Panel Deployment Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Top Liner

1-2-13 Page 1

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
1	3579	70	346	22.5	7785	60	CSS	
2	3579	70	147	22.5	3307.5	60	CSS	
3	3569	71	199	22.5	4477.5	60	CSS	
4	3569	72	295	22.5	6637.5	60	CSS	
5	3673	72	52	22.5	1170	61	CSS	
6	3673	72	348	22.5	7830	60	CSS	
7	3673	73	111	22.5	2497.5	60	CSS	
8	3675	73	237	22.5	5332.5	60	CSS	
9	3565	73	87	5	435	60	CSS	
10	3565	73	86	5	430	60	CSS	
11	3565	74	87	5	435	60	CSS	
12	3565	74	86	5	430	60	CSS	

PAGE APPROX. TOTAL (SQ FT): 40,767.5

DAILY TOTAL (SQ FT): —

ACCUMULATED TOTAL (SQ FT): —

REVIEWED BY : S. NEJAD

DATE: 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Top Liner

1-2-13 Page (2)

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
13	3565	74	346	225	7785	60	045	

PAGE APPROX. TOTAL (SQ FT): 7785

DAILY TOTAL (SQ FT): 48552.5

ACCUMULATED TOTAL (SQ FT): 48552.5

REVIEWED BY : S. NEJAD

DATE: 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PANEL DEPLOYMENT LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

LAYER: _PRIMARY SECONDARY OTHER Top Liner

1-3-13 Page 3

PANEL #	ROLL #	AMB TEMP	LENGTH APPROX.	WIDTH APPROX.	AREA APPROX.	AVG. THICKNESS (mil)	QA MON.	COMMENTS/PANEL LOCATION SPECIAL SHAPE
14	3672	65	167	22.5	3757.5	60	CSJ	
15	3672	65	167	22.5	3757.5	60	CSJ	
16	3672	65	167	22.5	3757.5	60	CSJ	
17	3339	65	167	22.5	3757.5	60	CSJ	
18	3339	66	167	22.5	3757.5	60	CSJ	
19	3681	64	55	9	495	60	CSJ	
20	3681	66	55	5	275	60	CSJ	
21	3681	66	55	5	275	60	CSJ	
22	3339	66	165	22.5	3712.5	60	CSJ	

PAGE APPROX. TOTAL (SQ FT): 23545

DAILY TOTAL (SQ FT): 23545

ACCUMULATED TOTAL (SQ FT): 72097.5 ft^2

REVIEWED BY : S. NEJAD

DATE: 1-3-13

Section 2
Geomembrane Trial Seam Log

BRANTLEY GINEERING, LLC

Top Layer

GEOMEMBRANE TRIAL SEAM LOG

Brantley
Engineering, LLC

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 1-2-13
PAGE# 1

TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	FUSION WELD SPEED	FUSION WELD WEDGE SET	EXTRUSION WELD PRE HEAT	EXTRUSION WELD BARREL SET		PEEL VALUE lbs/inch					SHEER VALUE lbs/inch					P/F	QA MON.	
TF-1	0900	65	96	JP	13	850	—	—	INSIDE	103	117	111	113	107	147	165	160	158	158	P	SMN	s/s
									OUTSIDE	110	114	106	112	102								
TF-2	0900	65	95	SM	17	850	—	—	INSIDE	104	104	101	105	93	166	165	158	160	162	P	SMN	s/s
									OUTSIDE	109	106	109	107	93								
TF-3	0900	65	16	BV	10	850	—	—	INSIDE	121	117	121	121	98	169	160	166	157	156	P	SMN	s/s
									OUTSIDE	110	116	109	107	113								
TF-4	0900	65	95	SM	16	850	—	—	INSIDE	125	125	110	100	118	164	173	165	170	166	P	SMN	T/T
									OUTSIDE	105	110	120	112	126								
TF-5	0900	65	16	BV	8	850	—	—	INSIDE	145	120	132	115	116	174	169	162	168	178	P	SMN	T/T
									OUTSIDE	139	132	132	132	108								
TX-1	1300	72	24	JP	—	—	480	460	INSIDE	142	130	140	141	134	140	147	137	144	139	P	SMN	s/s
									OUTSIDE	—	—	—	—	—								
TF-6	1300	72	16	BV	10	850	—	—	INSIDE	94	108	105	111	94	142	145	137	140	149	P	SMN	s/T
									OUTSIDE	114	92	96	108	103								
TX-2	1300	72	29	SM	~~480~~	—	480	460	INSIDE	129	124	120	141	121	139	145	147	154	142	P	SMN	s/s
									OUTSIDE	—	—	—	—	—								
									INSIDE													
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									OUTSIDE													
									INSIDE													
									OUTSIDE													
									INSIDE													
									OUTSIDE													

Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

Top Layer

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation
PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 1-3-13
PAGE# 2

					FUSION WELD		EXTRUSION WELD			PEEL VALUE lbs/inch					SHEER VALUE lbs/inch						
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET												P/F	QA MON.
TF-1	800	64	95	SM	17	850	—	—	INSIDE	108	121	106	108	100	171	163	165	161	153	P	CSJ
									OUTSIDE	162	104	108	102	101							
TF-2	800	64	95	SM	16	850	—	—	INSIDE	153	141	132	136	132	181	179	172	189	173	P	CSJ
									OUTSIDE	150	122	122	110	115							
Tx-1	900	70	42	BU	—	—	530	500	INSIDE	132	117	137	144	128	165	166	180	158	147	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-2	900	70	71	JP	—	—	520	460	INSIDE	135	121	119	103	130	167	168	151	165	155	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-3	1100	72	29	SM	—	—	480	460	INSIDE	132	147	129	152	132	159	162	144	157	144	P	CSJ
									OUTSIDE	—	—	—	—	—							
Tx-4	1300	76	42	BU	—	—	490	460	INSIDE	119	124	120	125	123	148	154	150	151	152	P	CSJ
									OUTSIDE	—	—	—	—	—							
									INSIDE												
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2012-102
PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 1-4-13
PAGE# 3

					FUSION WELD		EXTRUSION WELD			PEEL VALUE lbs/inch					SHEER VALUE lbs/inch						
TF/TX ID #	Time	AMB TEMP.	MACH. ID #	WELD TECH	SPEED	WEDGE SET	PRE HEAT	BARREL SET												P/F	QA MON.
TX-1	800	60	29	SM	—	—	480	460	INSIDE	113	115	121	118	122	148	153	150	152	157	P	CSS
									OUTSIDE	—	—	—	—	—							
									INSIDE												
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Passing Peel Fusion (91 lb/in): ______ Passing Peel Extrusion (78 lb/in): ______ Passing Shear Fusion (120 lb/in): ______ Passing Shear Extrusion (120 lb/in): ______

REVIEWED BY : S. NEJAD
DATE : 1-6-13

Section 3
Geomembrane Fusion Seaming Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Top Liner

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-3	900	BU
TF-5	900	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 16

PAGE NUMBER: 1

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
1 / 3	WEOS *	EEOS	1042	71	BU	10	850	849	199	199	—	CSS		1-2	SMN
1 / 2	WEOS *	EEOS	1110	72	BU	10	850	850	147	346	—	CSS		1-2	SMN
6 / 8	WEOS *	EEOS	1146	73	BU	10	850	850	237	583	—	CSS		1-2	SMN
8 / 9	WEOS *	EEOS	1320	74	BU	10	850	850	87	670	—	CSS		1-2	SMN
9 / 13	WEOS *	EEOS	1337	74	BU	10	850	848	87	757	—	CSS		1-2	SMN
8 / 10	WEOS *	EEOS	1352	74	BU	10	850	850	86	843	—	CSS		1-2	SMN
10 / 13	WEOS *	EEOS	1410	74	BU	10	850	850	86	929	—	CSS		1-2	SMN
8 / 11	WEOS *	EEOS	1430	75	BU	10	850	850	37	966	—	CSS		1-2	SMN
7 / 11	WEOS *	EEOS	1436	75	BU	10	850	849	50	1016	—	CSS		1-2	SMN
7 / 12	WEOS *	EEOS	1446	75	BU	10	850	850	86	1102	—	CSS		1-2	SMN
12 / 13	WEOS *	EEOS	1456	75	BU	10	850	850	86	1188	—	CSS		1-2	SMN
11 / 13	WEOS *	EEOS	1506	75	BU	10	850	850	87	1275	—	CSS		1-2	SMN
/	*														
/	*														
/	*														

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 1275

PAGE DESTRUCTIVE LENGTH CARRY-OVER 1275

DAILY TOTAL WELDED (FT) 1275

DAILY DESTRUCTIVE LENGTH CARRY-OVER 1275

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEGAD

DATE : 1 - 2 - 13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Top Liner

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-2	900	SM
TF-4	900	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (—) Ø

MACHINE # 95

PAGE NUMBER: 2

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
2 / 3	NEOS	SEOS	1100	71	SM	16	850	848	22	22	—	SMN		1-2	SMN
4 / 5	SEOS	NEOS	1108	71	SM	16	850	850	23	45	—	SMN		1-2	SMN
3 / 5	WEOS	EEOS	1114	71	SM	16	850	848	52	97	—	SMN		1-2	SMN
3 / 4	WEOS	EEOS	1117	72	SM	16	850	850	147	244	—	SMN		1-2	SMN
2 / 4	WEOS	EEOS	1127	72	SMN	16	850	848	147	391	—	SMN		1-2	SMN
7 / 8	NEOS	SEOS	1140	72	SM	16	850	849	23	414	—	SMN		1-2	SMN
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/															
/															

PAGE TOTAL: 414

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 414

DAILY TOTAL WELDED (FT): 414

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 414

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Top Liner

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TF-1	900	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER FROM PAGE # (–) Ø

MACHINE # 96

PAGE NUMBER: 3

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
5/6	WEOS	EEOS	1120	72	JP	13	850	848	52	52	–	SMN		1-2	SMN
4/6	WEOS	EEOS	1123	72	JP	13	850	850	295	347	–	SMN		1-2	SMN
6/7	WEOS	EEOS	1155	73	JP	13	850	848	111	458	–	SMN		1-2	SMN
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* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 458

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 458

DAILY TOTAL WELDED (FT): 458

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 458

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTL[illegible]GINEERING, LLC

GEOMEMBRANE FUSION SEAM LOG

Top Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-3-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
~~TF-1~~	900	SM
TF-2	900	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (2) 414

MACHINE # 95

PAGE NUMBER: 4

SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	MACHINE SETTINGS MACH SPEED	DIGITAL SET WEDGE	INDICATOR WEDGE	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	REMARKS	** PASSING - NON DESTRUCTIVE TESTING TEST DATE	QA MON.
14 / 15	EEOS *	WEOS	0831	65	SM	17	850	848	167	581	–	SMN		1-3-13	SMN
15 / 16	EEOS *	WEOS	0850	65	SM	17	850	850	168	749	–	SMN		1-3	SMN
16 / 17	EEOS *	WEOS	0907	65	SM	17	850	849	168	917	–	SMN		1-3	SMN
17 / 18	EEOS *	WEOS	0927	67	SM	17	850	850	168	1085	–	SMN		1-3	SMN
20 / 21	EEOS *	WEOS	0938	68	SM	17	850	848	7	1092	–	SMN	Capped By	LP	
18 / 19	EEOS *	WEOS	0955	68	SM	17	850	850	56	1148	–	SMN		1-3	SMN
18 / 20	EEOS *	WEOS	1003	68	SM	17	850	849	56	1204	–	SMN		1-3	SMN
18 / 21	EEOS *	WEOS	1007	68	SM	17	850	850	56	1260	–	SMN		1-3	SMN
19 / 22	EEOS *	WEOS	1027	69	SM	17	850	848	56	1316	–	SMN		1-3	SMN
20 / 22	EEOS *	WEOS	1030	69	SM	17	850	849	56	1372	–	SMN		1-3	SMN
21 / 22	EEOS *	WEOS	1034	69	SM	17	850	848	56	1438	–	SMN		1-3	SMN
/	*														
/	*														
/	*														
/	*														

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 1024

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 1438

DAILY TOTAL WELDED (FT): 1024

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 1438

** DATA TO BE COMPLETED BY THE DATA REVIEWER ONLY.

REVIEWED BY : S. NEJAD

DATE : 1-3-13

Section 4
Geomembrane Extrusion Seaming Log

TOP LAYER

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : I.E.D. Leachate Pond Relocation

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PROJECT LOCATION : St. Cloud, Fl.

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-1	1300	JP

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 24

PAGE NUMBER: 1

EXTRUSION SEAMING										VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
1 / BLW	WEOS *	SEOS	1310	74	JP	22	22	—	CSJ	1-3	MS	P	CSJ	
1 / BL	WEOS *	EEOS	1320	74	JP	346	368	—	CSJ	1-3	MS	P	CSJ	
1 / BLE	SEOS *	WEOS	1607	74	JP	22	390	—	CSJ	1-3	MS	P	CSJ	
2 / BLE	SEOS *	WEOS	1615	74	JP	23	413	—	CSJ	1-3	MS	P	CSJ	
4 / BLE	SEOS *	WEOS	1622	74	JP	22	435	—	CSJ	1-3	MS	P	CSJ	
/	*													
/	*													
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/	*													
/	*													

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 435

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 435

DAILY TOTAL WELDED (FT): 435

DAILY DESTRUCTIVE LENGTH CARRY-OVER: 435

BLW = Bottom Liner West

BLE = Bottom Liner East

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

TOP LAYER

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PROJECT LOCATION : St. Cloud, Fl.

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-2	1300	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 29

PAGE NUMBER: 2

EXTRUSION SEAMING									VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
13 / BL	EEOS *	LSEOS	1335	74	SM	346	346	—	CSJ	1-3	MS	P	CSJ	
13 / BLW	WEOS *	SEOS	1546	74	SM	22	368	—	CSJ	1-3	MS	P	CSJ	
9 / BLW	WEOS *	SEOS	1556	74	SM	5	373	—	CSJ	1-3	MS	P	CSJ	
8 / BLW	WEOS *	SEOS	1557	74	SM	23	396	—	CSJ	1-3	MS	P	CSJ	
6 / BLW	WEOS *	SEOS	1605	74	SM	22	418	—	CSJ	1-3	MS	P	CSJ	
5 / BLW	WEOS *	SEOS	1615	74	SM	23	441	—	CSJ	1-3	MS	P	CSJ	
3 / BLW	WEOS *	2M	1625	74	SM	15	456	—	CSJ	1-3	MS	P	CSJ	
3 / BLW	2M *	SEOS	1627	74	SM	5	461	—	CSJ	1-3	MS	P	CSJ	
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL:	461
PAGE DESTRUCTIVE LENGTH CARRY-OVER	461
DAILY TOTAL WELDED (FT)	461
DAILY DESTRUCTIVE LENGTH CARRY-OVER	461

BLW = Bottom Liner West

BLE = Bottom Liner East

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG Top Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-3-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-1	900	BU
TX-4	1300	BU

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (Ø) Ø

MACHINE # 42

PAGE NUMBER: 3

EXTRUSION SEAMING										VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	* FINISH POINT	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
14/BL	WEOS	*EEOS	922	64	BU	154	154	—	CJJ	1-3	MS	P	CJJ	
14/BLE	SEOS	*NEOS	1022	66	BU	22	176	—	CJJ	1-3	MS	P	CJJ	
15/BLE	SEOS	*NEOS	1030	66	BU	22	198	—	CJJ	1-3	MS	P	CJJ	
16/BLE	SEOS	*NEOS	1038	66	BU	22	220	—	CJJ	1-3	MS	P	CJJ	
17/BLE	SEOS	*NEOS	1105	67	BU	22	242	—	CJJ	1-3	MS	P	CJJ	
18/BLE	SEOS	*NEOS	1111	67	BU	22	264	—	CJJ	1-3	MS	P	CJJ	
19/BLE	SEOS	*NEOS	1115	68	BU	10	274	—	CJJ	1-3	MS	P	CJJ	
22/BU	EEOS	*WEOS	1122	69	BU	87	361	—	CJJ	1-3	MS	P	CJJ	
/		*												
/		*												
/		*												
/		*												
/		*												
/		*												

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 361

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 361

DAILY TOTAL WELDED (FT): 361

DAILY DESTRUCTIVE LENGTH CARRY-OVER: ——

BLE = Bottom Liner East

REVIEWED BY : S. NEJAD

DATE : 1-6-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE EXTRUSION SEAM AND TEST LOG

Top Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-3-13

PASSING TRIAL SEAMS

NO.	TIME	TECH ID
TX-3	1100	SM

DESTRUCTIVE SEAM LENGTH CARRY-OVER

FROM PAGE # (2) 461

MACHINE # 29

PAGE NUMBER: 4

EXTRUSION SEAMING									VACUUM TESTING				
SEAM NUMBER	SEAM SECTION START POINT *	FINISH POINT *	APPROX. START TIME	AMB. AIR TEMP	WELD TECH	APPROX. LENGTH WELDED	LENGTH FROM PREVIOUS DESTR.	LOCATED DESTR. NO.	QA MON.	NON DESTR. TEST DATE	TECH ID	P/F	QA MON.	REMARKS
22/BL	EOS *	WEOS	1140	73	SM	154	615	—	CSJ	1-3	MS	P	CSJ	
22/BLW	WEOS *	SEOS	1300	75	SM	22	637	—	CSJ	1-3	MS	P	CSJ	
21/BLW	WEOS *	SEOS	1310	75	SM	5	642	—	CSJ	1-3	MS	P	CSJ	
18/BLW	WEOS *	SEOS	1313	75	SM	22	664	—	CSJ	1-3	MS	P	CSJ	
17/BLW	WEOS *	SEOS	1320	75	SM	22	686	—	CSJ	1-3	MS	P	CSJ	
16/BLW	WEOS *	SEOS	1330	76	SM	22	708	—	CSJ	1-3	MS	P	CSJ	
15/BLW	WEOS *	SEOS	1336	76	SM	22	730	—	CSJ	1-3	MS	P	CSJ	
14/BLW	WEOS *	SEOS	1342	76	SM	22	752	—	CSJ	1-3	MS	P	CSJ	
/	*													
/	*													
/	*													
/	*													
/	*													
/	*													

* REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

PAGE TOTAL: 252

PAGE DESTRUCTIVE LENGTH CARRY-OVER: 752

DAILY TOTAL WELDED (FT): 752

DAILY DESTRUCTIVE LENGTH CARRY-OVER: —

BLW = Bottom Liner West

REVIEWED BY : S. NEJAD

DATE : 1-6-13

Section 5
Geomembrane Defect, Repair, and Vacuum Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Top liner

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 1

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	1/2/3	Int	T	1-2		1-3	P	2x3	71	JP	CSJ	1-3	MS	P	CSJ
B	2/3/4	Int	T	1-2		1-3	P	2x5	71	JP	CSJ	1-3	MS	P	CSJ
C	3/4/5	Int	T	1-2		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
D	5	11'N, 3'W	D	1-2		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
F	4/5/6	Int	T	1-2		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
G	8/9/10	Int	T	1-2		1-3	C	3x7	71	JP	CSJ	1-3	MS	P	CSJ
H	8/10/11	Int	T	1-2		1-3	C	3x7	71	JP	CSJ	1-3	MS	P	CSJ
J	6/4	130'W of EEOS	IO	1-2		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
K	4	132'W, 10'N	D	1-2		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
M	3	6'N of SOC	B	1-2		1-3	P	6x8	71	JP	CSJ	1-3	MS	P	CSJ
N	21/22	20'E of LSEOS	Cut	1-3		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
P.	20/21	NEOS to SEOS	Cap	1-3		1-3	C	3x6	71	JP	CSJ	1-3	MS	P	CSJ
Q	19/20	NEOS to SEOS	Cap	1-3		1-3	C	3x7	71	JP	CSJ	1-3	MS	P	CSJ
R	1/BLA	8'N of SEOS	D	1-2		1-2	P	2x2	24	JP	CSJ	1-3	MS	P	CSJ
S	4/6	EEOS	Cut	1-3		1-2	P	2x3	24	JP	CSJ	1-3	MS	P	CSJ
T	6/7	EEOS	Cut	1-3		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
W	7/12	EEOS	PT	1-3		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
X	12/13	EEOS	PT	1-3		1-3	P	2x2	71	JP	CSJ	1-3	MS	P	CSJ
Y	11/12	NEOS to SEOS	Cap	1-3		1-3	C	4x9	71	JP	CSJ	1-3	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER B = Belt
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-6-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

Top Layer

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 2

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	3/5	12' W. OF EEOS	Bo	1-2-13		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
B	6/7/8	three panel int.	T	1-2-13		1-3	P	2X6	71	JP	CSJ	1-3	MS	P	CSJ
C	8	10'W, 3'W	D	1-3		1-3	P	2X3	71	JP	CSJ	1-3	MS	P	CSJ
D	7/9/11	Int	T	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
F	2	15'S, 15'E	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
G	1/5	20'W of EEOS	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
H	3	57'E, 60'S	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
J	5	43'E, 11'N	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
K	13/BL	30'W of EEOS	WR	1-3		1-3	P	3X4	71	JP	CSJ	1-3	MS	P	CSJ
M	13/BL	104'W of EEOS	Cut	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
N	8/9/BLW	Int.	T	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
P	6/8/BL	Int.	T	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
Q	5/6/BL	Int	T	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
R	3/5/BLW	Int	T	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
S	1/3/BLW	Int	T	1-3		1-2	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
T	1/BL	23'W of EEOS	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
W	1/BL	88'E of EEOS	D	1-3		1-2	P	2X2	24	JP	CSJ	1-3	MS	P	CSJ
X	1/BL	135'E of welds	D	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ
Y	1/BL	160'E of welds	B	1-3		1-3	P	2X2	71	JP	CSJ	1-3	MS	P	CSJ

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER B = Boot
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

REVIEWED BY : S. NEJAD

DATE : 1-6-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE DEFECT, REPAIR, AND TEST LOG

PROJECT # 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

PAGE# 3

DEFECT CODE	DEFECT LOCATION: SEAM, PANEL OR DEFECT CODE	DEFECT LOCATION: DEFECT LOCATION DESCRIPTION	DEFECT TYPE	DATE	REMARKS	REPAIR: DATE	REPAIR: TYPE	REPAIR: APPROX SIZE	REPAIR: MACH ID #	REPAIR: WELD TECH	REPAIR: QA MON.	VACUUM TEST: DATE	VACUUM TEST: TECH ID	VACUUM TEST: P/F	VACUUM TEST: QA MON.
A	1 / BLS	186' E. OF WEOS	FM	1-3-13		1-4	P	2x2	29	SM	CJT	1-4	MS	D	CJT
B	P-22	EEOP	EXT.	1-3-13		1-3	P	2x2	71	JP	CJT	1-3	MS	P	CJT
C	14 / BLS	20' E. OF WEOS	FM	1-3-13		1-3	P	2x3	71	JP	CJT	1-3	MS	P	CJT
D	14/15/BLE	Three Pond Int.	T	1-3-13		1-3	P	2x2	71	JP	CJT	1-3	MS	P	CJT
F	19/BLE	Riser Boot	B	1-3-13		1-4	Boot	10x8	29	SM	CJT	1-4	MS	P	CJT
G	22/BLN	Riser Boot	B	1-13-13		1-4	Boot	10x8	29	SM	CJT	1-4	MS	P	CJT
H															
J															
K															
M															
N															
P															
Q															
R															
S															
T															
W															
X															
Y															

DEFECTS TYPES

BO - BURNOUT
CO - CHANGE OF OVERLAP
CUT - CUT
D - DAMAGE
CR - CREASE
DF - FUSION DESTRUCTIVE
DX - EXTRUSION DESTRUCTIVE
ED - EQUIP. DAMAGE
EXT - PANEL EXTENTION
FM - FISHMOUTH
FS - FAILED SEAM
INT - INTERSECTION
IO - INSUFFICIENT OVERLAP
PT - PRESSURE TEST CUT
T - THREE PANEL INTERSECTION
VL - VACCUM LEAK
WR - WRINKLE
WS - WELDER RESTART
OTHER B = BOOT
OTHER _____

REPAIR TYPES

P - PATCH
C - CAP
RS - RECONSTRUCTED SEAM
G&W - GRIND AND WELD

* BLS = BOTTOM LAYER SOUTH
* BLE = BOTTOM Layer EAST, ETC.
* BLN = BOTTOM Layer NORTH

REVIEWED BY : S. NEJAD

DATE : 1-6-13

Section 6
Geomembrane Non-Destructive Pressure Test Log

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Top Layer

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PAGE# 1

SEAM NUMBER	SEAM SECTION* START POINT	*	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	FINISH	PRESSURE (PSI) INITIAL	*	FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	YES	QA MONITOR	REMARKS
2 / 4	EEOS	*	WEOS	1	CO	1325	*	1330	30	*	30	P		/	✓	SMN	
2 / 3	EEOS	*	WEOS	2	CO	1325	*	1330	30	*	29	P		/	✓	SMN	
1 / 2	EEOS	*	WEOS	3	CO	1327	*	1332	30	*	30	P		/	✓	SMN	
1 / 3	EEOS	*	WEOS	4	CO	1327	*	1332	30	*	30	P		/	✓	SMN	
2 / 3	EEOS	*	WEOS	5	CO	1327	*	1332	30	*	30	P		/	✓	SMN	
4 / 5	NEOS	*	SEOS	6	CO	1341	*	1346	30	*	29	P		/	✓	SMN	
4 / 6	EEOS	*	WEOS	7	CO	1341	*	1346	30	*	30	P		/	✓	SMN	
5 / 6	EEOS	*	WEOS	8	CO	1341	*	1346	30	*	29	P		/	✓	SMN	
3 / 5	EEOS	*	WEOS	9	CO	1342	*	1347	30	*	30	P		/	✓	SMN	
6 / 8	EEOS	*	WEOS	1	CO	1359	*	1404	30	*	30	P		/	✓	SMN	
6 / 7	EEOS	*	WEOS	2	CO	1359	*	1404	30	*	30	P		/	✓	SMN	
7 / 8	NEOS	*	SEOS	3	CO	1359	*	1404	30	*	30	P		/	✓	SMN	
8 / 9	EEOS	*	WEOS	4	CO	1425	*	1430	30	*	30	P		/	✓	SMN	
9 / 13	EEOS	*	WEOS	5	CO	1425	*	1430	30	*	30	P		/	✓	SMN	
8 / 10	EEOS	*	WEOS	6	CO	1440	*	1445	30	*	30	P		/	✓	SMN	
10 / 13	EEOS	*	WEOS	7	CO	1440	*	1445	30	*	30	P		/	✓	SMN	
8 / 11	EEOS	*	WEOS	8	CO	1455	*	1500	30	*	30	P		/	✓	SMN	
7 / 11	EEOS	*	WEOS	9	CO	1455	*	1500	30	*	30	P		/	✓	SMN	
7 / 12	EEOS	*	WEOS	1	CO	1459	*	1504	30	*	30	P		/	✓	SMN	
12 / 13	EEOS	*	WEOS	2	CO	1507	*	1512	30	*	30	P		/	✓	SMN	

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY: S. NEJAD

DATE: 1-2-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG Top Layer

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-2-13

PAGE# 2

SEAM NUMBER	SEAM SECTION* START POINT	*	SEAM SECTION* FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	*	TIME FINISH	PRESSURE (PSI) INITIAL	*	PRESSURE (PSI) FINAL	PASS/ FAIL	SEAM COMPLETE NO	/	SEAM COMPLETE YES	QA MONITOR	REMARKS
11 / 13	EEOS	*	WEOS	3	CO	1521	*	1526	30	*	30	P		/	✓	SMN	
/		*					*			*				/			
/		*					*			*				/			
/		*					*			*				/			
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/		*					*			*				/			

*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY : S. NEJAD

DATE : 1-3-13

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE PRESSURE TEST LOG

Top Layer

PROJECT # : 2012-102

PROJECT DESCRIPTION : J.E.D. Leachate Pond Relocation

PROJECT LOCATION : St. Cloud, Fl.

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC

ENGINEER: Geosyntec

INSTALLER: Comanco

DATE: 1-3-13

PAGE# 3

SEAM NUMBER	SEAM SECTION* START POINT	FINISH POINT	PRESS GUAGE NUMBER	TECH ID	TIME START	FINISH	PRESSURE (PSI) INITIAL	FINAL	PASS/ FAIL	SEAM COMPLETE NO	YES	QA MONITOR	REMARKS
14/15	WEOS	EEOS	1	CO	1110	1115	30	30	P		✓		
15/16	WEOS	EEOS	2	CO	1111	1116	30	30	P		✓		
16/17	WEOS	EEOS	3	CO	1112	1117	30	30	P		✓		
17/18	WEOS	EEOS	4	CO	1114	1119	30	30	P		✓		
21/22	WEOS	1N	5	CO	1141	1146	30	30	P	✓			
21/22	1N	EEOS	6	CO	1143	1148	30	30	P		✓		
18/21	EEOS	WEOS	7	CO	1143	1148	30	30	P		✓		
18/19	EEOS	WEOS	8	CO	1144	1149	30	30	P		✓		
18/20	EEOS	WEOS	9	CO	1144	1149	30	30	P		✓		
19/22	EEOS	WEOS	1	CO	1145	1150	30	30	P		✓		
20/22	EEOS	WEOS	2	CO	1145	1150	30	30	P		✓		
/											/		
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*REFERENCE SEAM ENDPOINTS FROM END OF SEAM (EOS), DEFECT NUMBER OR A POINT LOCATION ON A SEAM

REVIEWED BY: S. NEJAD

DATE: 1-3-13

APPENDIX L

Concrete Break Results and Concrete Placement Record Log

CONCRETE PLACEMENT RECORD

CLIENT: Omni Waste of Osceola County, LLC
PROJECT NUMBER: 2012-102
PROJECT NAME: J.E.D. Leachate Pond Relocation

Brantley Engineering, LLC

CONCRETE SUPPLIER: Bedrock Industries
GRADE/MIX DESIGN NO.: 4000 PSI
SUBCONTRACTOR: DeBeradinis Construction

SLUMP MAX/MIN: 6/4
SPECIFIED AIR CONTENT: 3

DATE	TRUCK NO.	BATCH TIME	START POUR TIME	FINISH POUR TIME	VOLUME/ACCUM. VOLUME yd^3	TEMP °F	MEASURED SLUMP	NO. CYLINDERS MADE	CYLINDER REF. NO.	AIR CONTENT	REMARKS
1/4/2013	1	7:30	8:00	8:20	10	80	4.5	4	C1,C3	3.25	
1/4/2013	2	7:40	8:10	8:30	6.5	78	4.5			3.25	
1/10/2013	1	6:30	7:00	7:20	10	77	5	4	C2,C4	3.5	
1/10/2013	2	6:40	7:20	7:30	10	81	5			3.5	
1/10/2013	3	6:50	7:30	7:40	10	80	5	4	C5-8	3.5	
1/10/2013	4	7:00	7:40	7:50	10	78	5			3.5	
1/10/2013	5	7:10	7:50	8:05	10	79	5	4	C9-12	3.5	
1/10/2013	6	7:20	8:05	8:20	10	79	5			3.5	
1/16/2013	1	6:30	7:00	7:20	10	76	4.75	4	C13-16	3.25	
1/16/2013	2	6:40	7:20	7:30	10	81	4.75			3.25	
1/16/2013	3	6:50	7:30	7:40	10	80	4.75			3.25	
1/16/2013	4	7:00	7:40	7:50	10	77	4.75	4	C17-18	3.25	
1/16/2013	5	7:10	7:50	8:05	10	77	4.75			3.25	
1/16/2013	6	7:20	8:05	8:20	10	75	4.75			3.25	

* ATTACHMENTS, NO. OF PAGES

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-1,C-3
Lab ID: 43275

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 1/22/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION

DATE SAMPLED: 1/4/13 **BY:** Client

TIME BATCHED: **TIME SAMPLED:**

BATCH PLANT:

TRUCK: **DATE RECV'D:** 1/9/13

TICKET:

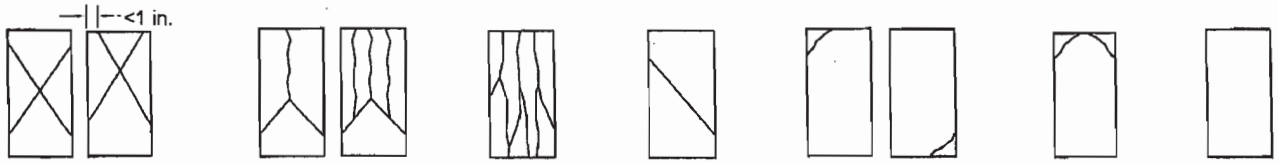
FIELD TESTS

	(ACTUAL)	(SPECIFIED)
SLUMP, INCHES:		LO: # HI: #
AIR CONTENT %:		LO: # HI: #
UNIT WEIGHT, PCF:		LO: # HI: #
AIR TEMP, °F:		LO: # HI: #
MIX TEMP, °F:		LO: # HI: #

COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-1	6.00	12.00	2	28.27	1/11/13	7	105450	3730	1
C-3	6.00	12.00	2	28.27	2/1/13	28	157270	5560	1

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064
* DENOTES CURED IN FIELD — SLUMP MEASURED TO ONE-QUARTER INCH
<<< DENOTES LOW COMPRESSIVE STRENGTH — AIR CONTENT MEASURED TO ONE-QUARTER PERCENT
# DENOTES SPECIFIED RANGES NOT PROVIDED — FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7

POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/9/13. Pour location and ticket details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-2, C-4
Lab ID: 43275

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 2/1/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION			FIELD TESTS (ACTUAL)	(SPECIFIED)
DATE SAMPLED: 1/4/13	**BY:** Client		**SLUMP, INCHES:**	LO: # HI: #
TIME BATCHED:	**TIME SAMPLED:**		**AIR CONTENT %:**	LO: # HI: #
BATCH PLANT:			**UNIT WEIGHT, PCF:**	LO: # HI: #
TRUCK:	**DATE RECV'D:** 1/9/13		**AIR TEMP, °F:**	LO: # HI: #
TICKET:			**MIX TEMP, °F:**	LO: # HI: #

COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

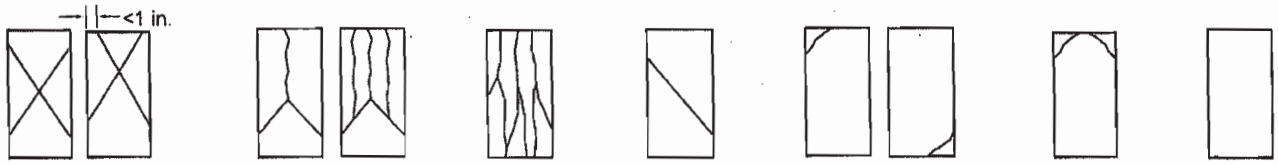
CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-2	5.97	12.00	2	27.99	1/22/13	18	145160	5190	5
C-4	6.00	12.00	2	28.27	2/1/13	28	161070	5700	1

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064

* DENOTES CURED IN FIELD — SLUMP MEASURED TO ONE-QUARTER INCH

<<< DENOTES LOW COMPRESSIVE STRENGTH — AIR CONTENT MEASURED TO ONE-QUARTER PERCENT

\# DENOTES SPECIFIED RANGES NOT PROVIDED — FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7

POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/9/13. Pour location and ticket details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY:

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-5 to C-8
Lab ID: 43281

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 1/24/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION

DATE SAMPLED: 1/10/13 **BY:** Client

TIME BATCHED: **TIME SAMPLED:**

BATCH PLANT:

TRUCK: **DATE RECV'D:**1/15/13

TICKET:

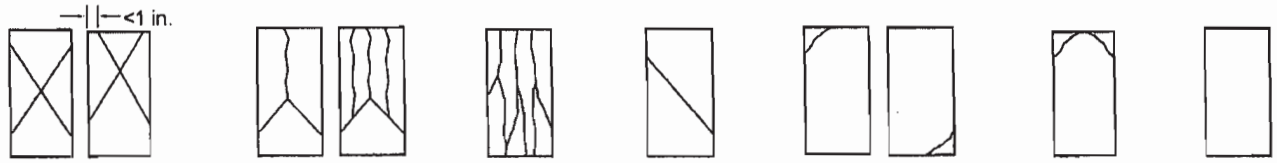
FIELD TESTS

	(ACTUAL)	(SPECIFIED)
SLUMP, INCHES:		LO: # HI: #
AIR CONTENT %:		LO: # HI: #
UNIT WEIGHT, PCF:		LO: # HI: #
AIR TEMP, °F:		LO: # HI: #
MIX TEMP, °F:		LO: # HI: #

COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-5	6.00	12.00	2	28.27	1/17/13	7	106610	3770	5
C-6	5.96	12.00	2	27.90	1/24/13	14	122520	4390	1
C-7					HOLD				
C-8					HOLD				

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064
* DENOTES CURED IN FIELD
<<< DENOTES LOW COMPRESSIVE STRENGTH
# DENOTES SPECIFIED RANGES NOT PROVIDED
SLUMP MEASURED TO ONE-QUARTER INCH
AIR CONTENT MEASURED TO ONE-QUARTER PERCENT
FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/15/13. Pour location and tilted details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-9 to C-12
Lab ID: 43281

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 1/24/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION			FIELD TESTS (ACTUAL)	(SPECIFIED)
DATE SAMPLED: 1/10/13	**BY:** Client		**SLUMP, INCHES:**	LO: # HI: #
TIME BATCHED:	**TIME SAMPLED:**		**AIR CONTENT %:**	LO: # HI: #
BATCH PLANT:			**UNIT WEIGHT, PCF:**	LO: # HI: #
TRUCK:	**DATE RECV'D:** 1/15/13		**AIR TEMP, °F:**	LO: # HI: #
TICKET:			**MIX TEMP, °F:**	LO: # HI: #

COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

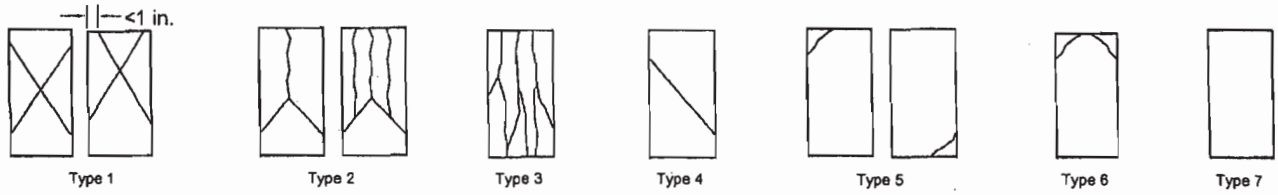
CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-9	5.99	12.00	2	28.18	1/17/13	7	101400	3600	5
C-10	5.97	12.00	2	27.99	1/24/13	14	118960	4250	6
C-11					HOLD				
C-12					HOLD				

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064

* DENOTES CURED IN FIELD — SLUMP MEASURED TO ONE-QUARTER INCH

<<< DENOTES LOW COMPRESSIVE STRENGTH — AIR CONTENT MEASURED TO ONE-QUARTER PERCENT

\# DENOTES SPECIFIED RANGES NOT PROVIDED — FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/15/13. Pour location and ticket details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-13 to C-16
Lab ID: 43281

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 1/24/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION			FIELD TESTS (ACTUAL)	(SPECIFIED)
DATE SAMPLED: 1/10/13	**BY:** Client		**SLUMP, INCHES:**	LO: # HI: #
TIME BATCHED:	**TIME SAMPLED:**		**AIR CONTENT %:**	LO: # HI: #
BATCH PLANT:			**UNIT WEIGHT, PCF:**	LO: # HI: #
TRUCK:	**DATE RECV'D:** 1/15/13		**AIR TEMP, °F:**	LO: # HI: #
TICKET:			**MIX TEMP, °F:**	LO: # HI: #

COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

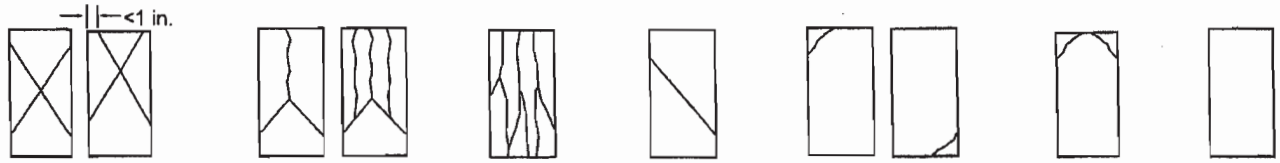
CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-13	6.00	12.00	2	28.27	1/17/13	7	100720	3960	1
C-14	5.99	12.00	2	28.18	1/24/13	14	130620	4620	1
C-15					HOLD				
C-16					HOLD				

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064

* DENOTES CURED IN FIELD — SLUMP MEASURED TO ONE-QUARTER INCH

<<< DENOTES LOW COMPRESSIVE STRENGTH — AIR CONTENT MEASURED TO ONE-QUARTER PERCENT

\# DENOTES SPECIFIED RANGES NOT PROVIDED — FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7

POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/15/13. Pour location and ticket details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

amec

4919 West Laurel Street, Tampa FL 33607

Set ID: C-17, C-18
Lab ID: 43281

CONCRETE FIELD AND LAB TEST REPORT

Client: Brantley Engineering **DATE:** 1/3024/13

Project: JED Landfill **JOB NO:** 300751

MIX ID: **28 DAY SPECIFIED STRENGTH:** 4000 **PSI**

MIX DESC: 4000 PSI

FIELD INFORMATION			FIELD TESTS (ACTUAL)	(SPECIFIED)
DATE SAMPLED:	1/10/13	**BY:** Client	**SLUMP, INCHES:**	LO: # HI: #
TIME BATCHED:		**TIME SAMPLED:**	**AIR CONTENT %:**	LO: # HI: #
BATCH PLANT:			**UNIT WEIGHT, PCF:**	LO: # HI: #
TRUCK:		**DATE RECV'D:** 1/15/13	**AIR TEMP, °F:**	LO: # HI: #
TICKET:			**MIX TEMP, °F:**	LO: # HI: #

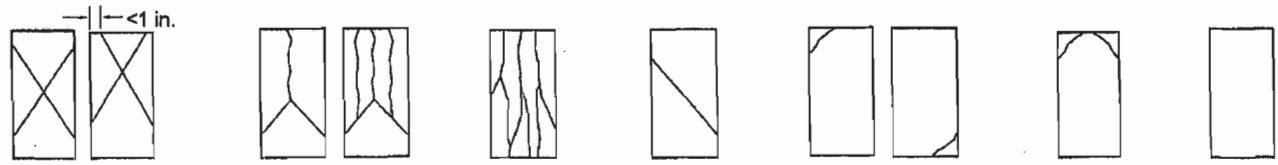
COMPRESSION TEST RESULTS OF CYLINDRICAL CONCRETE SPECIMENS

CYL. NO.	AVERAGE DIAMETER D (IN.)	AVERAGE HEIGHT L (IN.)	L/D RATIO	AREA (SQ. IN.)	DATE TESTED	TEST AGE (DAYS)	MAX. LOAD (LBS.)	COMP. STRENGTH (PSI)	FRACTURE TYPE
C-17	6.00	12.00	2	28.27	1/24/13	8	100720	3560	5
C-18	5.99	12.00	2	28.18	1/30/13	14	117540	4170	5

UNLESS OTHERWISE INDICATED, TESTS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE FOLLOWING ASTM TEST METHODS C39, C138, C143, C173 or C231, C1064

* DENOTES CURED IN FIELD
<<< DENOTES LOW COMPRESSIVE STRENGTH
# DENOTES SPECIFIED RANGES NOT PROVIDED

SLUMP MEASURED TO ONE-QUARTER INCH
AIR CONTENT MEASURED TO ONE-QUARTER PERCENT
FRACTURE TYPE IS CORRESPONDING TO FRACTURE PATTERN SHOWN IN ASTM C39 AND SKETCHES BELOW:



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6 Type 7

POUR LOCATION: **SAFETY DESIGNATION:**

REMARKS: Cylinders were molded and field cured by the client and delivered to AMEC on 1/15/13. Pour location and ticket details were not provided.

TECHNICIAN PERFORMING CONCRETE COMPRESSION TESTS

JEFFREY INGERSOLL

REVIEWED BY

THAI NGUYEN, P.E.
PROFESSIONAL ENGINEER
FLORIDA REGISTRATION NO. 66551

THAI NGUYEN LICENSE No. 66551 STATE OF FLORIDA PROFESSIONAL ENGINEER

APPENDIX M

Daily Field Monitoring Reports

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 1	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/9/12

Weather Description

Sky Cover:	Clear	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	70 at 7:00	a.m.		High (F)	88 at 3:00	p.m.

CQA's On Site: Chris Johnson, Allan Brantley

Daily Load Count:

Major Construction Equipment:

Contractor(s) Construction Progress:

Pre-Construction meeting.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the rwequest of the client to attend a pre-construction meeting for the JED Leachate Storage Facility Relocation project. Meeting was attended with representatives of WSI, Brantley Engineering and RSC Excavation. Project safety and scheduling were discussed as well as training for the endangered Indigo Snake. The site was visited by attendees after the meeting to discuss location and constructability logistics.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 2	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/17/12

Weather Description

Sky Cover:	Clear	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	69 at 7:00	a.m.		High (F)	80 at 3:00	p.m.

CQA's On Site: Allan Brantley

Daily Load Count:

Major Construction Equipment:

Contractor(s) Construction Progress:

RCS was installing silt fence along the southeastern and eastern portion of the borrow area. RCS was preparing the temporary access ramp near the southeast corner of the borrow area. RCS excavated test pits in the borrow area to assist in obtaining bulk soil samples.

CQA (s) Monitoring Activities and Test Results:

Observed excavation of the test pits in the borrow area. Obtained bulk samples for proctor analysis, sieve analysis, and soils classification. Transported bulk sampes to the AMEC laboratory in Lakeland, Florida for analysis.

CQA Specialist: Allan Brantley, PE

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 3	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/22/12

Weather Description

Sky Cover:	Clear	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	60 at 7:00	a.m.		High (F)	83 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 101

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozen, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor cleared organic material from the south side of the borrow area. A drainage pipe was placed in the ditch outside of the borrow area and backfilled to create an access road from Omni Dr.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Attended safety meeting. The contractor discussed proper procedure for encountering Indigo Snake. Pamphlets were given to employees outlining procedures. Monitored the contractors clearing and grubbing activities as well as pipe placement for the access road.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 4	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/23/12

Weather Description

Sky Cover:	Clear	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	71 at 7:00	a.m.		High (F)	82 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 164

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozen, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor cleared organic material from the proposed pond area. Spoils were stockpiled on the east side of the borrow area.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Attended safety meeting. Monitored the contractors clearing and grubbing activities. Checked silt fence for proper installation. Visited the wetlands areas to observe surveyors stake placement and observe prior brush clearing around existing wells in the area.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 5	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/24/12

Weather Description

Sky Cover:	Clear	Amt. of Precip:	0"	Wind:	5-10	(mph)
Temp: Low (F):	74 at 7:00	a.m.		High (F)	86 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 185

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozen, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor cleared organic material from the south side of the site. The material was stockpiled at the east side of the site behind the borrow area.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored clearing efforts to determine areas that may require further clearing due to excess organic material. No such areas were encountered at this time. Met with representatives of WSI and RSC to discuss structural fill schedule and toe placement for wetlands mitigation area.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 6	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/25/12

Weather Description

Sky Cover:	Mostly cloudy	Amt. of Precip:	Trace	Wind:	5-15	(mph)
Temp: Low (F):	75 at 7:00	a.m.	High (F)		83 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 117

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozen, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor cleared organic material from the berm footprint on the north and west side of the site. Organics were also removed from the borrow area along the north western side of the borrow area. The material was stockpiled at the east side of the site behind the borrow area.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored clearing efforts to determine areas that may require further clearing due to excess organic material. Some larger subsurface organics were found in the west side berm footprint and removed by the contractor.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 7	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/26/12

Weather Description

Sky Cover: Mostly cloudy Amt. of Precip: Trace Wind: 10-25 (mph)

Temp: Low (F): 72 at 7:00 a.m. High (F) 80 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 164

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozen, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor began placing material along the eastern berm to allow for drying. Material was also placed in the southeastern quadrant of the cell to construct a temporary access road to the pond area. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the eastern berm area and southeastern quadrant access road. No compunction testing was required today as placement of fill was for initial drying of the material. Monitored excavation of material from the borrow area for possible material changes or detriments.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 8	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/27/12

Weather Description

Sky Cover: Mostly cloudy Amt. of Precip: Trace Wind: 10-25 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 79 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 168

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the southeastern quadrant of the cell to construct a temporary access road to the pond area. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the southeastern quadrant access road. No compaction testing was required today as placement of fill was for initial drying of the material. Monitored excavation of material from the borrow area for possible material changes or detriments.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 9	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/29/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-15	(mph)
Temp: Low (F):	46 at 7:00	a.m.		High (F)	69 at 3:00	p.m.

CQA's On Site: Chris Johnson, Allan Brantley

Daily Load Count: 153

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the northern area of the pond to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for placement of compacted fill in the pond area. Silt fence was inspected for existing or potential issues. None were observed at this time. Mr. Brantley visited the site to assess current construction activities and deliver additional testing equipment.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 10	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/30/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-15	(mph)
Temp: Low (F):	46 at 7:00	a.m.	High (F)	72 at 3:0C	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 169

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the northern area of the pond to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for placement of compacted fill in the pond area. A haul road was constructed into the pond area.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 11	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 10/31/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-15	(mph)
Temp: Low (F):	43 at 7:00	a.m.		High (F)	73 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 242

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pond area to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for placement of compacted fill in the pond area. Preliminary testing was done to determine the current moisture content of materials placed to dry. Moisture contents ranged from 11.3% to 14.7%. Walked the site with representatives of WSI and RCS. Discussed construction schedule and delivery of geosynthetics.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 12	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/1/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	55 at 7:00	a.m.		High (F)	79 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 288

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pond area to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for placement of compacted fill in the pond area.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 13	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/2/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	56 at 7:00	a.m.		High (F)	78 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 190

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pad area in the center of the site to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for proper drying of the material. Preliminary testing was done to determine the current moisture contents. Moisture contents ranged from 11.4% to 28.7%.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 14	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/3/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00	a.m.		High (F)	79 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 88

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pad area in the center of the site to push existing standing water towards the southern section of site. No material was compacted today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the northern area of the site. Initial material was placed to force standing water to the south side of the site and allow for proper drying of the material. Compactor arrived on site today. The pond area was static rolled and the eastern edge of the pond was tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 15	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/5/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00	a.m.		High (F)	82 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pad area in the south side of the site to push existing standing water towards the southernmost section of the site.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the southern area of the site. Initial material was placed to force standing water to the south side of the site and allow for proper drying of the material. The pond area was static rolled and the eastern edge of the pond was tested. Test results can be found in the compaction summary. The remainder of the pond was disked and allowed to dry. This area was static rolled prior to leaving the site.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 16	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/6/12

Weather Description

Sky Cover:	M. Cloudy	Amt. of Precip:	0	Wind:	0-5	(mph)
Temp: Low (F):	51 at 7:00	a.m.		High (F)	77 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the proposed pad area in the south side of the site to push existing standing water towards the southernmost section of the site. A progress meeting was held to discuss scheduling and upcoming geosynthetic installation. Representatives of WSI, RSC Brantley Engineering and Comanco were present.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the southern area of the site. Initial material was placed to force standing water to the south side of the site and allow for proper drying of the material. The pond area was static rolled and the eastern and northern edges of the pond area was tested. Test results can be found in the compaction summary. The remainder of the pond was allowed to dry. This area was static rolled prior to leaving the site.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 17	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/7/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-15	(mph)
Temp: Low (F):	51 at 7:00	a.m.		High (F)	77 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was dumped in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 18	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/8/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	48 at 7:00	a.m.		High (F)	67 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was dumped in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. Geomembrane arrived on site.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 19	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/9/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	48 at 7:00	a.m.		High (F)	74 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was dumped in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. Geomembrane arrived on site. Silt fences were inspected and a small area was repaired due to wind damage.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 20	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/10/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	49 at 7:00	a.m.		High (F)	75 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 189

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. .

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 21	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/12/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	54 at 7:00 a.m.			High (F)	77 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. .

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 22	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/13/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00	a.m.		High (F)	82 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. .

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 23	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/14/12

Weather Description

Sky Cover:	M. Cloudy	Amt. of Precip:	0.1	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00 a.m.			High (F)	78 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area and the northern section of the proposed LFGTE pad. General fill was placed in the pond and LFGTE area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond and LFGTE area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 24	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/15/12

Weather Description

Sky Cover: M. Cloudy Amt. of Precip: trace Wind: 0-10 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area and the northern section of the proposed LFGTE pad. General fill was placed in the pond and LFGTE area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond and LFGTE area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 25	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/16/12

Weather Description

Sky Cover:	M. Cloudy	Amt. of Precip:	trace	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00	a.m.		High (F)	72 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area and the northern section of the proposed LFGTE pad. General fill was placed in the pond and LFGTE area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond and LFGTE area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 26	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/17/12

Weather Description

Sky Cover: M. Cloudy Amt. of Precip: trace Wind: 0-10 (mph)

Temp: Low (F): 56 at 7:00 a.m. High (F) 73 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area and the northern section of the proposed LFGTE pad. General fill was placed in the pond and LFGTE area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond and LFGTE area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 27	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/19/12

Weather Description

Sky Cover: M. Cloudy Amt. of Precip: trace Wind: 0-10 (mph)

Temp: Low (F): 56 at 7:00 a.m. High (F) 70 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 261

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area and the northern section of the proposed LFGTE pad. General fill was placed in the pond and LFGTE area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond and LFGTE area. The pond area was static rolled and tested. Test results can be found in the compaction summary. The borrow site for sump stone was visited and a sample was collected and taken to the lab.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 28	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/20/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 56 at 7:00 a.m. High (F) 74 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 224

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 29	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/21/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	57 at 7:00 a.m.		High (F)	73 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 206

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary. Silt fence was checked on site prior to leaving for the holiday and was observed to be in good condition.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 30	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/23/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	57 at 7:00 a.m.			High (F)	72 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 229

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 31	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/24/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00	a.m.	High (F)	70 at 3:00	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 214

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 32	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/26/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	58 at 7:00 a.m.		High (F)	74 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 221

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 33	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/27/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	62 at 7:00 a.m.			High (F)	75 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 196

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 34	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/28/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	61 at 7:00 a.m.			High (F)	77 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 204

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed material in the pond area. General fill was placed in the pond area and spread by means of D6 dozer and was compacted by means of smooth drum roller. The pond area was finish graded and prepared for geosynthetic placement. Mr. Nejad was familiarized with the project and attended the pre-construction meeting held on site for the geosynthetics installation.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of material in the pond area. The pond area was static rolled and tested. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 35	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/29/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	61 at 7:00	a.m.	High (F)		77 at 3:00	p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 212

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed general fill in the LGFTE pad area. Material was placed by means of D6 dozer and compacted by means of Smooth Drum Roller. Comanco placed GCL and Secondary Geomembrane in Pond A and Pond B. Geomembrane was seamed by the contractor using fusion wedges. Defects located in the bottom of the ponds were liestered to protect from water in the event of rain.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of general fill in the LFGTE pad. The LFGTE pad was static rolled and tested. Test results can be found in the compaction summary. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 36	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 11/30/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	60 at 7:00	a.m.		High (F)	77 at 3:00	p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 246

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

The contractor placed general fill in the LGFTE pad area. Material was placed by means of D6 dozer and compacted by means of Smooth Drum Roller. Comanco placed GCL and Secondary Geomembrane in Pond A and Pond B. Geomembrane was seamed by the contractor using fusion wedges. Defects located in the bottom of the ponds were liestered to protect from water in the event of rain.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of general fill in the LFGTE pad. The LFGTE pad was static rolled and tested. Test results can be found in the compaction summary. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 37	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/1/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	62 at 7:00	a.m.	High (F)	78 at 3:00	p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 0

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor installed silt fence for other areas of the project including Force Main Berm and Dry Retention Berm. Comanco placed GCL and Secondary Geomembrane in Pond C. Geomembrane was seamed by the contractor using fusion wedges. Comanco began detail work including repairs. Deployment of Geomembrane for the Secondary layer is completed.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of general fill in the LFGTE pad. The LFGTE pad was static rolled and tested. Test results can be found in the compaction summary. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 38	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/3/12

Weather Description

Sky Cover: P. Sunny Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 62 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 268

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Comanco completed detail work for the secondary geomembrane layer.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 39	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/4/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 60 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 270

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Contractor also installed stone and pipe for the secondary leak detection system. Comanco placed geocomposite material on the floor of ponds.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 40	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/5/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 60 at 7:00 a.m. High (F) 77 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 274

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Comanco deployed geomembrane for primary layer. Panels were deployed using a skid steer and were fusion seamed. Open edges were sandbagged and protected.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 41	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/6/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 61 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 274

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Comanco deployed geomembrane for primary layer. Panels were deployed using a skid steer and were fusion seamed. Open edges were sandbagged and protected. Once deployment was completed repairs and detail work were begun.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 42	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/7/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	60 at 7:00 a.m.			High (F)	79 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 252

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Comanco completed repairs and detail work for primary layer of geomembrane.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geosynthetics installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 43	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/8/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 62 at 7:00 a.m. High (F) 77 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 252

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Compaction test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 44	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/10/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10 (mph)
Temp: Low (F):	60 at 7:00 a.m.			High (F)	80 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 233

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor built access ramps into the ponds for sand placement. Composite was used under the ramp to protect geomembrane from damage. Ramp was constructed at 3' thickness to allow for weight distribution of equipment.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement activities for the ponds. Compaction test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 45	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/11/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	62 at 7:00 a.m.			High (F)	80 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 198

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor built access ramps into the ponds for sand placement. Composite was used under the ramp to protect geomembrane from damage. Ramp was constructed at 3' thickness to allow for weight distribution of equipment.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement activities for the ponds. Compaction test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 46	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/12/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 2" Wind: 0-10 (mph)

Temp: Low (F): 58 at 7:00 a.m. High (F) 74 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 10

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Contractor was unable to continue placing sand in the ponds due to previous nights rain. Pumps were set up to remove water from the ponds. Concrete drainage structure was placed in the ditchline along the main landfill road for the drainage under proposed entry road for the LFGTE pad.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as concrete drainage structure installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 47	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/13/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	59 at 7:00 a.m.			High (F)	77 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 156

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Ponds were pumped to remove standing water. Sand was placed in pond A in dried areas.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement in pond A.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 48	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/14/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	59 at 7:00 a.m.		High (F)	78 at 3:00 p.m.		

CQA's On Site: Chris Johnson, Aaron Yarborough

Daily Load Count: 108

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Ponds were pumped to remove standing water. Sand was placed in pond A and C at 1' thickness.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement in pond A and C.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 49	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/15/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	60 at 7:00 a.m.			High (F)	78 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Aaron Yarborough

Daily Load Count: 25

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Ponds were pumped to remove standing water. Sand was placed in pond A at 1' thickness. Pond C was finish graded.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement in pond A and C.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 50	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/17/12

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	0-10	(mph)
Temp: Low (F):	60 at 7:00 a.m.		High (F)	78 at 3:00 p.m.		

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 26

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Ponds were pumped to remove standing water. Sand was placed in pond B at 1' thickness. Pond A was finish graded.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as sand placement in pond A and B.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 51	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/18/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 10-20 (mph)

Temp: Low (F): 61 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 173

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Pond B was finish graded. All ponds were raked and prepared for liner installation including removal of access ramps. Comanco arrived on site, but was unable to deploy geomembrane due to high winds.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm as well as preparation of ponds for liner deployment.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 52	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/19/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 10-20 (mph)

Temp: Low (F): 61 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 170

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Comanco deployed geomembrane for all ponds. Geomembrane panels were fusion welded using wedges.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geomembrane installation.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 53	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/20/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 60 at 7:00 a.m. High (F) 76 at 3:00 p.m.

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 140

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Comanco performed repairs and detail work including pressure testing and vacuum testing for all ponds.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geomembrane repairs and testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 54	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/21/12

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	10-25	(mph)
Temp: Low (F):	48 at 7:00 a.m.			High (F)	65 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count: 159

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Comanco performed repairs and vacuum testing for all remaining repairs.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Monitored and documented geomembrane repairs and testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 55	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/22/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 0-10 (mph)

Temp: Low (F): 42 at 7:00 a.m. High (F) 63 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 142

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Anchor trenches were backfilled for all ponds.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 56	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/26/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 1/2" Wind: 20-30 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 82 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Force Main pipe was fused for installation around ponds. Contractor also constructed ballast weights for the bottom of the pond.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 57	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/27/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 77 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor constructed ballast weights for the bottom of the pond.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 58	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/28/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 62 at 7:00 a.m. High (F) 75 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor began forming for concrete on both of the proposed pump pads.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 59	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 12/29/12

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 62 at 7:00 a.m. High (F) 76 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor continued forming for concrete on both of the proposed pump pads.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 60	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/2/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	62 at 7:00 a.m.			High (F)	77 at 3:00 p.m.	

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor continued forming for concrete on both of the proposed pump pads. Comanco installed geomembrane panels in Pond A for he floating cover. Panels were deployed and seam using fusion seaming. The cover was welded to the Bottom liner by means of extrusion welding.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Istallation of the Floating Cover was monitored and documented, including any defects and necessary repairs.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 61	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/3/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	62 at 7:00 a.m.		High (F)	77 at 3:00 p.m.		

CQA's On Site: Chris Johnson, Sam Nejad

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor continued forming for concrete on both of the proposed pump pads. Comanco installed geomembrane panels in Pond C for the floating cover. Panels were deployed and seamed using fusion seaming. The cover was welded to the Bottom liner by means of extrusion welding.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Istallation of the Floating Cover was monitored and documented, including any defects and necessary repairs.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 62	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/4/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	61 at 7:00 a.m.			High (F)	79 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Contractor continued forming for concrete on both of the proposed pump pads. Comanco completed all repairs and detail work for the floating cover.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Monitored completion of repairs and detail work by Comanco. Monitored Concrete placement. Four cylinders were obtained and left on site to cure.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 63	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/5/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 61 at 7:00 a.m. High (F) 80 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Silt fences were checked to ensure there has been no damage. None was found.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 64	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/7/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	64 at 7:00	a.m.	High (F)	81 at 3:0C	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 109

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Concrete samples from previous pour were delivered to the lab for testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 65	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/8/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 83 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 125

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Forming of the loadout pad took place.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Monitored rebar placement and forming of loadout pad.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 66	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/9/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 83 at 3:0C p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 144

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Forming of the loadout pad took place.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Monitored rebar placement and forming of loadout pad.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 67	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/10/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	64 at 7:00 a.m.		High (F)	84 at 3:0C p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 148

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller. Concrete contractor poured concrete for the loadout pad.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Monitored concrete pour of loadout pad. 12 cylinders were taken and left on site to cure. Air and slump test were within parameters of the concrete companies specified mix.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 68	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/11/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	63 at 7:00	a.m.		High (F)	82 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 199

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary. Concrete samples from the previous days pour were taken to lab for testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 69	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/12/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	63 at 7:00	a.m.	High (F)	84 at 3:00	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 47

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed material for the inner berm and the dry retention berm. Material was placed using a bulldozer in lifts. Material was compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of fill in the inner berm and dry retention berm. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 70	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/14/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 63 at 7:00 a.m. High (F) 82 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 97

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor graded southwestern quadrant of the LFGTE pad for the proposed entry road. The contractoe also fused 8" SDR 11 HDPE pipe for force main installation. The slope between the loadout pad and pump pad was formed and prepared for concrete placement.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway, pipe fusion and concrete forming. Concrete forms and rebar placement were installed as per project specifications.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 71	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/15/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	61 at 7:00 a.m.		High (F)	80 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 114

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor graded northwestern quadrant of the LFGTE pad for the proposed entry road. The contractor also fused 8" SDR 11 HDPE pipe for force main installation. The concrete contractor formed areas around drainage pipe located at the proposed road entrance and the emergency spillway located on the storm water berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway, pipe fusion and concrete forming. Concrete forms and rebar placement were installed as per project specifications.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 72	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/16/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	58 at 7:00 a.m.		High (F)	79 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 173

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor graded northeastern quadrant of the LFGTE pad for the proposed entry road. The contractor also fused 8" SDR 11 HDPE pipe for force main installation. The concrete contractor poured concrete for the pad slope, drain skirts and emergency spillway.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway, pipe fusion and concrete forming. Concrete samples were taken and left on site to cure.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 73	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/17/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 59 at 7:00 a.m. High (F) 79 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 118

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor graded southeastern quadrant of the LFGTE pad for the proposed entry road. The contractor also fused 8" SDR 11 HDPE pipe for force main installation. Berm slopes were dressed to ensure proper slope grades.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway and pipe fusion. Concrete samples were taken to the lab for testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 74	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/18/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 10-15 (mph)

Temp: Low (F): 59 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 126

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor re-graded the proposed entry road as they decided to use 6" of LBR100 material as opposed to 12" of LBR40 for road subbase. The contractor also fused 8" SDR 11 HDPE pipe for force main installation.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway and pipe fusion.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 75	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/19/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 10-15 (mph)

Temp: Low (F): 59 at 7:00 a.m. High (F) 75 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 136

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor re-graded the proposed entry road as they decided to use 6" of LBR100 material as opposed to 12" of LBR40 for road subbase.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadway.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 76	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/21/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 10-15 (mph)

Temp: Low (F): 59 at 7:00 a.m. High (F) 76 at 3:0C p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 87

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for sub-base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 77	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/22/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	52 at 7:00	a.m.		High (F)	76 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 110

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for sub-base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds. Material was placed on the forcemain berm in nominal lifts at the southern end of the berm. Material was placed with a D-6 Dozer and compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways. Test results for soil placement can be found in the compaction summarry.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 78	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/23/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	60 at 7:00	a.m.		High (F)	78 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 100

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for sub-base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds. Material was placed on the forcemain berm in nominal lifts at the southern end of the berm. Material was placed with a D-6 Dozer and compacted using a smooth drum roller.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways. Test results for soil placement can be found in the compaction summarry.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 79	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/24/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	60 at 7:00 a.m.		High (F)	78 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 103

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds. Excavation for force main installation was done from south end toward the north end of the force main berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways. Test results for soil placement can be found in the compaction summarry.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 80	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/25/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 60 at 7:00 a.m. High (F) 78 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 126

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds. Excavation for force main installation was done from south end toward the north end of the force main berm. Force main and southernmost manhole were installed.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways. Monitored installation of manholes and force main.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 81	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/26/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 62 at 7:00 a.m. High (F) 81 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 116

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area. Material was installed at the road entrance and extended both eastward and northward in 6" lift. Contractor also graded the proposed road around the leachate ponds. Excavation for force main installation was done from south end toward the north end of the force main berm. Force main and 3 manholes were installed.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored grading of the roadways. Monitored installation of manholes and force main.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 82	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/28/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	62 at 7:00	a.m.		High (F)	80 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 116

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of bulldozer and compacted by means of vibratory smooth drum roller. Excavation for force main installation was done from south end toward the north end of the force main berm. Force main and 1 manhole were installed.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored installation of manholes and force main. Test results can be found in the compaction summary.

CQA Specialist: Chris Johnson

Brantley
Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 83	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/29/13

Weather Description

Sky Cover: Sunny Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 60 at 7:00 a.m. High (F) 80 at 3:0C p.m.

CQA's On Site: Chris Johnson, Allan Brantley

Daily Load Count: 89

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of bulldozer and compacted by means of vibratory smooth drum roller. Force Main and final manhole were installed nearest the existing pond.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored installation of manholes and force main. Test results can be found in the compaction summary. Mr. Brantley visited the site to get an overwiew of site progress.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 84	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/30/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	56 at 7:00	a.m.	High (F)	77 at 3:0(	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 100

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of rubber tire loader means of vibratory smooth drum roller. Blow offs and testing apparatus were mounted to force main for testing.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored installation testing apparatus for force main.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 85	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 1/31/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	56 at 7:00	a.m.		High (F)	75 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 60

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of rubber tire loader means of vibratory smooth drum roller. Water was pumped into force main for testing purposes.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored installation testing apparatus for force main.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 86	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/1/13

Weather Description

Sky Cover:	P. Cloudy	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	56 at 7:00 a.m.		High (F)	74 at 3:0C p.m.		

CQA's On Site: Chris Johnson

Daily Load Count: 49

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of rubber tire loader means of vibratory smooth drum roller. Water was pumped into force main for testing purposes.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 87	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/4/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	44 at 7:00 a.m.		High (F)		73 at 3:00 p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 62

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of rubber tire loader means of vibratory smooth drum roller. Hydrostatic testing was performed on the force main during the afternoon. The force main was still in expansion phase at the end of the day. The force main was left under pressure for the evening to complete testing in the morning.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored hydrostatic testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 88	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/5/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	44 at 7:00	a.m.		High (F)	73 at 3:0C	p.m.

CQA's On Site: Chris Johnson

Daily Load Count: 58

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor placed LBR100 material for base layer in roadway area surrounding the pond. Material was placed in the LFGTE pad. Material was spread by means of rubber tire loader means of vibratory smooth drum roller. Hydrostatic testing was performed on the force main. Once initial expansion phase was completed the pressure was mantained at 130 psi for one hour. There was no loss of pressure after one hour test period.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored placement of limerock in the roadways. Monitored hydrostatic testing.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 89	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/6/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	52 at 7:00	a.m.	High (F)	77 at 3:00	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count: 40

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor backfilled force main trench and placed final lift on force main berm on the northern section of the berm. The storm water berm was finish graded in a small section at the south side of the berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Placement of fill in the force main trench and final lift of the force main berm were monitored. Finish grading for the storm water berm was monitored.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 90	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/7/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	57 at 7:00 a.m.		High (F)	80 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor backfilled force main trench and placed final lift on force main berm on the middle section of the berm. The storm water berm was finish graded in a small section at the south side of the berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Placement of fill in the force main trench and final lift of the force main berm were monitored. Finish grading for the storm water berm was monitored.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 91	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/8/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	60 at 7:00	a.m.	High (F)	80 at 3:0C	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor backfilled force main trench and placed final lift on force main berm on the middle section of the berm. The storm water berm was finish graded in a small section at the middle section of the berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Placement of fill in the force main trench and final lift of the force main berm were monitored. Finish grading for the storm water berm was monitored.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 92	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/11/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	60 at 7:00 a.m.		High (F)	80 at 3:00 p.m.		

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 3 off road trucks, 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 93	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/12/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	57 at 7:00	a.m.		High (F)	75 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 94	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/13/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	57 at 7:00	a.m.		High (F)	75 at 3:00	p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 95	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/14/13

Weather Description

Sky Cover:	Cloudy	Amt. of Precip:	1/2"	Wind:	5-10	(mph)
Temp: Low (F):	57 at 7:00	a.m.	High (F)	75 at 3:0C	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, D6 dozer, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 96	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/18/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 55 at 7:00 a.m. High (F) 76 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, 2 dozers, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement. Subcontractor was placing sod on Force main berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities. Monitoring of sod placement on berms was also performed. Testing was performed for small remaining areas of the berm.Test results can be found in the testing summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 97	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/20/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 1/2" Wind: 5-10 (mph)

Temp: Low (F): 55 at 7:00 a.m. High (F) 76 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, 2 dozers, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Sub contractor worked on grading and prepping the LFGTE pad road for asphalt placement. Subcontractor was placing sod on Force main berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities. Monitoring of sod placement on berms was also performed. Testing was performed for road areas.Test results can be found in the testing summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 98	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/21/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 55 at 7:00 a.m. High (F) 76 at 3:00 p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, 2 dozers, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Subcontractor was placing sod on Force main berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities. Monitoring of sod placement on berms was also performed. Testing was performed for small remaining areas of the berm.Test results can be found in the testing summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 99	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 2/22/13

Weather Description

Sky Cover: P. Cloudy Amt. of Precip: 0 Wind: 5-10 (mph)

Temp: Low (F): 56 at 7:00 a.m. High (F) 78 at 3:0(p.m.

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: 2 excavators, 2 dozers, Tractor with a disc hare.

Contractor(s) Construction Progress:

General contractor worked on finish grading for both berms. No material was hauled today. Subcontractor was placing sod on Force main berm.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. Monitored finish grading and road preperation activities. Monitoring of sod placement on berms was also performed. Testing was performed for road areas.Test results can be found in the testing summary.

CQA Specialist: Chris Johnson

Brantley Engineering, LLC

CQA Daily Field Monitoring Summary

Project Number: 2012-102	Owner: Omni Waste of Osceola County, LLC
Report Number: 99	Contractor: RCS Excavation
Project Name: JED Leachate Storage Facility Relocation	Installer: Comanco
Location: St. Cloud, Florida	Date: 4/8/13

Weather Description

Sky Cover:	Sunny	Amt. of Precip:	0	Wind:	5-10	(mph)
Temp: Low (F):	63 at 7:00	a.m.	High (F)	82 at 3:0	p.m.	

CQA's On Site: Chris Johnson

Daily Load Count:

Major Construction Equipment: Water Truck

Contractor(s) Construction Progress:

General contractor was not on site today.

CQA (s) Monitoring Activities and Test Results:

The site was visited at the request of the client to perform CQA services for the JED leachate pond relocation project. A final visit was performed to observe finished project. Asphalt completion and sod placement, as well as final pipe connections at the pond an pump pad were specifically observed. Photographs of the area were taken for insertion into the final report.

CQA Specialist: Chris Johnson