BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/21/2014 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	1240	74	32	FG	12	850			INSIDE	111	112	123	103	97	134	137	146	139	133	P	CJ
									OUTSIDE	107	114	110	110	104							
TF-2	1245	74	43	AL	12	850			INSIDE	114	108	115	108	116	144	147	141	142	147	P	CJ
									OUTSIDE	110	114	107	110	104							
TF-3	1248	74	20	MI	11	850			INSIDE	114	108	110	109	99	149	157	153	148	142	P	CJ
									OUTSIDE	113	117	115	112	115							
TF-4	1320	74	32	FG	12	850			INSIDE	136	149	137	127	139	144	154	149	141	154	P	CJ
									OUTSIDE	134	141	139	128	143							
TX-1	1326	74	72	ED			550	550	INSIDE	137	141	138	138	139	137	146	148	147	145	P	CJ
									OUTSIDE												
TX-2	1530	80	42	BV			485	400	INSIDE	88	103	117	95	98	131	121	124	125	124	P	CJ
									OUTSIDE												
									INSIDE												
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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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/22/2014 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	1117	80	43	AL	12	850			INSIDE	98	99	99	96	97	134	126	133	132	139	P	CJ
									OUTSIDE	102	103	107	101	105							
TF-2	1115	80	20	MI	12	850			INSIDE	95	99	94	97	94	133	140	138	124	146	P	CJ
									OUTSIDE	104	99	994	97	94							
TF-3	1120	80	32	FG	12	850			INSIDE	114	105	106	93	99	128	142	141	137	125	P	CJ
									OUTSIDE	108	107	105	105	105							
TF-4	1136	82	32	FG	12	850			INSIDE	135	136	127	130	115	138	144	132	139	131	P	CJ
									OUTSIDE	137	133	129	131	116							
TX-1	1315	88	72	ED			480	470	INSIDE	106	143	139	133	127	138	144	146	141	131	P	CJ
									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 : SN

DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/23/2014 PAGE# 3

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.
TX-1	738	62	72	ED			530	520	INSIDE	121	125	128	109	114	174	162	171	171	173	P	CJ
									OUTSIDE												
TF-1	1040	80	32	FG	13	850			INSIDE	113	113	105	111	109	146	150	148	142	137	P	CJ
									OUTSIDE	109	113	102	112	112							
TF-2	1035	80	43	AL	12	850			INSIDE	107	116	103	92	121	145	148	147	140	145	P	CJ
									OUTSIDE	97	107	112	115	106							
TF-3	1050	80	20	MI	12	850			INSIDE	116	119	115	111	122	141	155	146	141	145	P	CJ
									OUTSIDE	109	114	115	106	117							
TF-4	1055	80	32	FG	13	850			INSIDE	139	135	136	128	130	146	151	150	147	145	P	CJ
									OUTSIDE	142	135	113	127	123							
TF-5	1102	80	43	AL	12	850			INSIDE	122	135	127	133	131	153	150	149	139	145	P	CJ
									OUTSIDE	122	136	135	129	129							
TX-2	1420	92	42	BV			465	400	INSIDE	126	123	122	119	114	125	121	129	131	128	P	CJ
									OUTSIDE												
TX-3	1426	92	72	ED			530	520	INSIDE	114	121	126	121	146	129	138	132	131	130	P	CJ
									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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/24/2014 PAGE# 4

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.
TX-1	1300	90	72	ED			520	520	INSIDE	127	125	121	126	128	127	135	133	126	129	P	CJ
									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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/25/2014 PAGE# 5

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	1300	95	43	AL	12	850			INSIDE	102	99	104	92	101	128	134	134	139	132	P	CJ
									OUTSIDE	99	100	102	92	91							
TF-2	1320	95	32	FG	14	850			INSIDE	103	104	107	100	101	128	131	121	131	135	P	CJ
									OUTSIDE	97	103	111	110	102							
TF-3	1335	95	20	MI	14	850			INSIDE	91	98	101	91	97	127	126	126	127	140	P	CJ
									OUTSIDE	95	96	104	97	102							
TF-4	1402	95	32	FG	13	850			INSIDE	100	103	109	127	110	121	130	123	125	129	P	CJ
									OUTSIDE	107	109	111	110	105							
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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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 4/26/2014 PAGE# 6

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.
TX-1	755	70	72	AL			530	500	INSIDE	126	132	134	129	136	149	153	155	152	145	P	CJ
									OUTSIDE												
TX-2	803	70	42	ST			500	500	INSIDE	107	104	111	105	91	161	168	165	161	155	P	CJ
									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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

Brantley Engineering, LLC

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 5/7/2014 PAGE# 7

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	1110	90	32	FG	14	850			INSIDE	106	110	116	116	108	146	145	140	146	145	P	CJ
									OUTSIDE	101	112	115	109	106							
TF-2	1115	90	33	AL	12	850			INSIDE	100	106	113	102	105	121	134	138	135	141	P	CJ
									OUTSIDE	104	106	107	99	102							
TF-3	1120	90	20	MI	13	850			INSIDE	104	108	99	99	117	137	141	148	144	141	P	CJ
									OUTSIDE	97	108	100	104	95							
TF-4	1125	90	33	AL	12	850			INSIDE	127	127	134	128	132	131	134	135	136	136	P	CJ
									OUTSIDE	119	124	131	130	136							
TF-5	1130	90	32	FG	14	850			INSIDE	103	131	129	119	121	135	141	137	137	139	P	CJ
									OUTSIDE	121	131	132	121	126							
TF-6	1135	90	20	MI	13	850			INSIDE	130	128	132	140	134	143	139	145	150	147	P	CJ
									OUTSIDE	135	129	137	135	142							
TX-1	1235	92	72	ED			500	500	INSIDE	122	128	126	127	117	136	139	137	137	139	P	CJ
									OUTSIDE												
TX-2	1600	92	42	ST			450	450	INSIDE	117	119	117	121	112	133	128	137	135	130	P	CJ
									OUTSIDE												
									INSIDE												
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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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 5/8/2014 PAGE# 8

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.
TX-1	850	80	72	ED			500	500	INSIDE	118	130	123	121	113	131	134	135	129	128	P	CJ
									OUTSIDE												
TF-1	855	80	32	FG	13	850			INSIDE	98	111	101	94	114	155	158	154	144	160	P	CJ
									OUTSIDE	104	107	103	95	104							
TF-2	900	80	20	MI	12	850			INSIDE	100	112	102	102	101	153	158	157	152	159	P	CJ
									OUTSIDE	95	117	113	91	104							
TF-3	905	82	32	FG	13	850			INSIDE	122	129	132	124	123	132	141	131	137	136	P	CJ
									OUTSIDE	115	123	130	124	120							
									INSIDE												
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									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 : SN

DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 5/9/2014 PAGE# 9

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	820	80	33	AL	12	850			INSIDE	99	101	101	95	109	144	149	151	141	152	P	CJ
									OUTSIDE	104	109	111	110	105							
TF-2	825	80	32	FG	13	850			INSIDE	109	116	121	113	116	160	165	163	155	160	P	CJ
									OUTSIDE	98	129	107	123	104							
TF-3	830	80	20	MI	12	850			INSIDE	103	108	119	111	101	135	143	143	139	145	P	CJ
									OUTSIDE	111	124	107	97	110							
TF-4	835	80	33	AL	12	850			INSIDE	108	114	120	106	118	137	146	145	141	145	P	CJ
									OUTSIDE	112	132	111	105	114							
TF-5	840	80	32	FG	13	850			INSIDE	120	121	139	127	127	141	143	152	144	138	P	CJ
									OUTSIDE	135	139	131	124	127							
TX-1	1235	92	72	ED			540	540	INSIDE	115	120	125	107	114	136	131	137	135	133	P	CJ
									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 : SN
DATE : 6/9/14

BRANTLEY ENGINEERING, LLC

GEOMEMBRANE TRIAL SEAM LOG

PROJECT # : 2014-101
PROJECT DESCRIPTION : JED Cell 10 Construction
PROJECT LOCATION : St. Cloud, Florida
PRIMARY:
SECONDARY: X

OWNER: Omni Waste of Osceola County, LLC
ENGINEER: Geosyntec
INSTALLER: Comanco
DATE: 5/10/2014 PAGE# 10

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	79	20	MI	12	850			INSIDE	114	117	118	104	112	148	150	150	147	140	P	CJ
									OUTSIDE	110	110	113	103	101							
TF-2	805	79	32	FG	13	850			INSIDE	101	121	105	102	102	154	160	166	158	165	P	CJ
									OUTSIDE	134	116	117	105	104							
TF-3	810	80	32	FG	13	850			INSIDE	133	133	141	139	124	149	154	156	153	139	P	CJ
									OUTSIDE	139	141	143	139	137							
TF-4	815	80	20	MI	12	850			INSIDE	135	131	146	138	140	158	150	156	153	149	P	CJ
									OUTSIDE	137	129	135	129	127							
TF-5	849	85	33	SM	10	800			INSIDE	101	102	97	105	108	141	134	130	138	143	P	CJ
									OUTSIDE	103	96	99	99	101							
TX-1	1000	72	72	ED			540	540	INSIDE	132	129	130	123	131	133	137	135	147	138	P	CJ
									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 : SN
DATE : 6/9/14