

## SCS ENGINEERS

August 12, 2011  
File No. 09207049.04

Mr. Steven G. Morgan  
Solid Waste Section  
Florida Department of Environmental Protection  
Southwest District  
13051 North Telecom Parkway  
Temple Terrace, Florida 33637

Dept. of Environmental  
Protection  
AUG 15 2011  
Southwest District

Subject: Response to RAI No. 2  
Citrus County Central Class I Landfill  
7-Acre Re-Closure Construction Certification  
Permit No. 21375-014-SF/01, Citrus County  
WACS No.: SWD/09/39859

Dear Mr. Morgan:

On behalf of Citrus County (County), SCS Engineers (SCS) submits the following responses to your request for additional information, in a letter directed to Mr. Casey Stephens, dated March 23, 2011. For ease of review, the Department's comments are restated in **bold print**, followed by our response in normal print.

### REPORT OF CONSTRUCTION

#### Summary of Construction:

**Vertical Gas Vents: Rule 62-701.530(1) (a)3., F.A.C. specifies that "Collection pipes, pathways, or vents shall (be designed to) collect gas from the upper two-thirds of the filled waste or where the most anaerobic conditions exist". Based on a review of the gas vent depths reported on the Vent Schedule on Sheet 10 of 27 of the Record Drawings, gas vents GV-2, GV-3, and GV-6 do not appear to meet this criterion.**

a. The February 9, 2011 response letter refers to the shortening of the three gas vents (GV-2, GV-3, and GV-6) "by approximately 7 ft each". The Vent Schedule indicates that these vents were shortened by 14 ft, 14 ft, and 19 ft respectively. Please verify and explain this discrepancy.

Response: Gas vents GV-2 and GV-3 and GV-6 were all drilled to 35 feet as indicated on the well logs submitted with the original Report of Construction dated August 31, 2010. All the gas vents were originally designed to be 50 feet deep with 49 feet of perforated and solid pipe below grade. Of the pipe below grade 19 feet was



designed to be solid and 30 feet to be perforated.

Once construction commenced the actual ground elevations at the vent locations were surveyed and elevations were lower than expected. i.e. Vent GV-1 design ground elevation = 129 feet, actual ground elevation = 125 feet. It was also decided during construction to drill the wells 15 feet less than the estimated depth of waste instead of the originally designed 10 feet to assure no encounters with the bottom liner system since the settlement had been so significant and the bottom liner elevation data was very old. This resulted in new design boring depths for all of the wells. The wells in question had new design depths of 42 feet for GV-2, 41 feet for GV-3 and 43 feet for GV-6. The statement made in the February 9, 2011 response was stating that the 35 feet drill depth achieved was approximately 7 feet less than the new design depths determined during construction. Actually 7 ft, 6 ft and 7 ft for vents GV-2, GV-3 and GV-6 respectively. The vent schedule with that submittal on sheet 10 of 27 indicated the actual depth of refuse and actual boring depths, however this drawings did have three inaccurate values, which were the boring depth of GV-3, which should be 35 feet instead of 41 feet, the slotted pipe length of GV-6, which should be 15 feet instead of 11 feet and the slotted pipe length of GV-2, which should be 15 feet instead of 16 feet. Attachment 1 contains a new Sheet 10 with the corrections noted. And Attachment 2 contains corrected drilling logs for vents GV-2 and GV-6.

The 14 ft., 14 ft. and 19 ft. referred to in this request are the lengths by which the slotted pipe was shortened from the original design not considering the new revised design depths. Considering the new design depths the slotted pipe lengths were shortened by 7 feet for GV-1, 0 ft for GV-3 (solid pipe shortened by 6 feet) and 6 feet for GV-6.

**b. The revised narrative in this section addressing the shortening of all the gas vents and boreholes states, "the fact that they have slightly shortened perforated pipes lengths will not prohibit these vents from performing their intended task of relieving and venting rising pressure before it reaches the newly installed cap". Please provide the supporting information, gas generation data, calculations, and assumptions relied upon in support of this conclusion.**

Response: This closed portion of the landfill stopped accepting waste in 1990, therefore the waste in the newly enclosed cell is at least 20 years old and is no longer producing large quantities of landfill gas that would have to be collected at a specific depth within the waste. Attachment 2 contains a LandGEM 3.02 LFG Generation Projection model for the 7-Acre closed portion of the Citrus County Central landfill, which indicates that the total Landfill gas flow expected from the waste mass is approximately 159 standard cubic feet per minute (scfm) for 2011 dropping to only 75 scfm in 2013. Since the landfill is producing this small amount of gas the vents simply must provide a pathway for the gas to vent to the atmosphere without building up pressure underneath the now air tight liner system, which the installed vents and modified

LCRS vent are doing adequately. The system construction was completed on July 6, 2010 and has been in place and operational now for over 1 year with no issues with gas buildup under the liner (bubbles, earth cracking), therefore further indicating that the revised gas vents are sufficient in depth and pipe quantities to vent the gas from within the landfill.

c. It appears that, except for gas vent GV-3, the shortening of all the gas vents was done entirely in the perforated pipe section of the vents. The revised narrative in this section indicates that the solid pipe lengths in the vents were not shortened in case the vents were required to be converted to active gas extraction wells in the future. Since no additional waste is proposed to be disposed in the 7-Acre Cell, it is not clear how an active extraction system would be necessary in the future. Please re-evaluate your justification for shortening the perforated pipe sections rather than the solid pipe sections based on the information provided in response to Comment #1.b. above.

**Response:** The perforated pipe sections were shortened due to the design depths of the wells being shortened as described in response 1.a. above. The further justification for not shortening the solid pipe sections in case of conversion to an active gas system is valid (although not likely) as that would be the design criteria for an active gas system. An active gas system would not likely be necessary as indicated in your request above unless there were to be significant changes in the compliance legislation, however if the County were able to find some use for this small amount of gas or there ever became a beneficial energy use for the gas an active gas system could voluntarily be installed and would function better with the minimum solid pipe requirements included in this construction. The fact that the perforated pipes are shorter will not affect the system's ability to vent gas. Should gas encapsulation under the liner become a problem it would be addressed by the County immediately, however that is not the case as the vents, as they are installed, are performing the required function in collecting gas from within the waste mass and venting it to the atmosphere.

## 2. Leachate Riser Modifications

**Gas Vent on Leachate Risers:** This section indicates that, instead of installing replacements of existing passive gas flares on the leachate risers, passive vents were installed on the leachate risers. In support of this construction modification, the February 9, 2011 response indicates that the existing flares had not operated over the past 3-5 years and states, "The proposed conditions would therefore be the same as the existing conditions in that regard, thus there would be no significant environmental impacts therefore no modification was requested at the time of the change."

a. The information provided as part of the 7-Acre landfill re-closure permit application indicated that the existing passive gas flares would be replaced rather than reinstalled. The stated non-operational condition of the existing passive gas

flares appears to provide supporting justification why the flares should have been replaced rather than support why the flares were not replaced. As confirmed in the February 9, 2011 response, a permit modification was not applied for and issued by the Department for this construction modification and this construction modification was not otherwise approved by the Department in accordance with Specific Condition #A.3.a. of Permit No. 21375-014- SF/01. This comment is provided for informational purpose only and does not necessarily require a response other than acknowledgement of the comment.

Response: Comment Acknowledged.

b. The supporting justification neither addresses or considers resulting environmental impacts caused by the non-operational passive gas flares during the 3-5 years period nor provides supporting justification why allowing the proposed conditions (i.e., environmental impacts) to be the same as the existing conditions is an acceptable alternative. Please address these issues and provide supporting justification for not replacing the passive gas flares, as previously permitted.

Response: Please review comments to 1.a and 1.b above. It is understood that the purpose of the installed gas venting system in a landfill that has not accepted waste for over 20 years is to remove the small amount of gases generated from within the landfill and safely vent these gases to the atmosphere since the landfill is now properly sealed with a new geomembrane cap. The conditions prior to the construction were that gas vented to the atmosphere through passive vents that penetrated a non encapsulating cap. The system installed performs this function without the need for the gas flares, which require additional maintenance and cost to the County. SCS and The County acknowledge comment 2.a and will notify FDEP should changes in design occur during future construction and rather than waiting until the construction Certification report to inform FDEP of the field engineering changes.

c. Department records do not appear to indicate that the Department was previously notified of the non-operational passive gas flares, as required by Specific Condition #C.6.b. of the facility operation permit, which includes long-term care of the closed 7-Acre landfill. Please verify whether the Department was previously notified of this non-operational landfill system and provide a copy of such notification, as applicable.

Response: Records of a notification were not located.

Appendix B - As-Built Record Drawings - SCS Engineering Record Drawings:

3. **Sheet 10 of 27:**

a. **Vent Schedule:** The reported slotted pipe length of 11 ft. for gas vent GV-6 appears inconsistent with the boring log on the vent construction log for GV-6 in Appendix C, which appears to indicate that the slotted pipe is installed approximately from 19 ft to 34 ft below ground surface. Please verify and revise this sheet and/or the vent construction log, as appropriate.

**Response:** Attachment 1 contains a new Sheet 10 in which the correct well depths, solid and slotted pipe lengths are given and noted. Attachment 3 contains a revised boring log for GV-6 in which the 11 feet of slotted pipe has been increased to 15 to indicate the appropriate amount of installed pipe.

**Appendix B-2 - Revised Panel Layout Drawing**

Please provide a revised panel layout drawing that addresses the following comments, where appropriate.

4. The revised panel layout drawing appears to show the panel previously identified as Panel P63A as Panel P72 and does not appear to show Panel P63A elsewhere on the panel layout. However the Geomembrane Seaming Log in Appendix E-4 identifies an installed seam between Panel P63A and Panel P72, the Non-Destructive Test Log in Appendix E-6 identifies non-destructive testing of the seam between Panel P63A and Panel P72, and Repair #R-199 in the Repair Log in Appendix E-7 is reported at the intersection of these two panels and Panel P73. Please verify and revise the panel layout drawing to identify the location of these two panels, as appropriate.

**Response:** Attachment 4 Contains a corrected Panel layout drawing that correctly identifies Panels P63A, P72, P73 and the correct location of Repair #199.

5. Based on the revision of the panel layout drawing in response to Comment #4 above, please revise the locations of the repairs shown on Panels 63A and 72 to be consistent with the locations identified in the Repair Log in Appendix E-5, as appropriate.

**Response:** Attachment 4 Contains a corrected Panel layout drawing that correctly identifies the locations of all geomembrane repairs including those on panels 63A and 72, which now agree with the geomembrane repair logs (Original Appendix E-5), which are included in Attachment 5.

6. The February 9, 2011 response letter indicates that the location of the destructive test samples in Appendix E-7 can be found by referencing the sample number in Appendix E-7 to the defect code in the geomembrane repair log in Appendix E-5.

- a. **Destructive tests DS-28 and DS-30 do not appear to be identified in the defect codes in the repair log in Appendix E-5. Please verify and revise the repair log and the panel layout drawing to identify the location of these destructive tests, as appropriate.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the locations of all Destructive test locations with the corresponding repair number. DS-28 is located at repair R150 and DS-30 is located at Repair R202. The repairs were previously indicated in the comments column of Appendix E-5 rather than in the defect code column as indicated.

- b. **Destructive tests DS-18A and DS 18B are identified on the Seam P51/P54 in the destructive test log in Appendix E-7, but are associated with Repair #247 on Seam P51/P53 in the repair log in Appendix E-5. Please verify and revise these logs and the panel layout drawing as applicable.**

**Response:** Attachment 4 Contains a corrected Panel layout drawing that correctly identifies the locations of all geomembrane repairs including the original destructive test repair DS-18 which was in the location of repair R163. This repair was on the seam between panels P51 and P53 as indicated in the repair log. Following the test failure a second repair was made over this location which was R247 again on the seam between panels P51 and P53. Attachment 5 includes revised repair and destructive test logs that now correctly identifies the location of the repair (DS-18A & DS-18B) on seam between P51 and 53.

- c. **Please verify the location of the following repairs on the panel layout drawing and revise the drawing and/or the Geomembrane Repair log in Appendix E-5, as appropriate based on the following apparent inconsistencies:**

- 1) **Repair #R42 is reported on Seam P19/31 in the repair log and shown on Seam P18/19 on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the correct location of repair R42 on seam between panels P19 and P31 as indicated in the repair log.

- 2) **Repair #R128 is reported on Seam P45/42 in the repair log and shown on Seam P45/43 on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the correct location of repair R128 on seam between panels P19 and P31 as indicated in the repair log.

- 3) **Repair #R199 is reported on Seam P72/63A/73 in the repair log and shown**

**on Seam P72/73/61 on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the correct location of repair R199 on seam at intersection of Panels 72, 63A and 73 as indicated in the repair log.

- 4) Repair #R201 is reported on Seam P63A/61 in the repair log and appears to be shown on Seam 72A only on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the correct location of repair R201 which is located at the boot to GV-1 within Panel 63A rather than on the seam between panels 63A and 61 as indicated in the repair log. Attachment 5 includes revised repair log that now correctly identifies the location of R201.

- 5) Repair #R207 is reported on Seam P62/61 in the repair log and appears to be shown on Seam 62 only on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout Drawing that identifies the correct location of repair R207 which is located at the boot to GV-3 within Panel 62 rather than on the seam between panels 62 and 61 as indicated in the previous repair log. Attachment 5 includes revised repair log that now correctly identifies the location of R207

- 6) Repair #R208 is reported on Seam P62/61 in the repair log and appears to be shown on Seam 63 only on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout Drawing that identifies the correct location of repair R208 which is located at a boot on a penetration within Panel 62 rather than on the seam between panels 62 and 61 as indicated in the previous repair log. Attachment 5 includes revised repair log that now correctly identifies the location of R208

- 7) Repair #R219 is reported on Seam P63A/66/72 in the repair log and shown on Seam P72/66 on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that identifies the correct location of repair R219 which is located at the intersection of Panels 66, 63A and 72 as indicated in the repair log.

- 8) Repair #R239 is reported on Seam P74/75 in the repair log and shown on Seam P69/75 on the panel layout.**

**Response:** Attachment 4 Contains an updated Panel layout drawing that



identifies the correct location of repair R239 which is located on the seam between panels 74 and 75 as indicated in the repair log. The panel is very narrow at this location so the location has been called out on the drawing as being located on the correct seam.

**Attachment 3A - Existing Liner Repair Locations**

7. The existing liner Repair Numbers and locations on the figure provided in Attachment 3A are not legible. Please provide a revised figure of sufficient size and scale to allow identification of the repair designations on the figure.

**Response:** Attachment 6 Contains a revised Existing liner repair drawing more clearly indicating the location of the Repairs. The Existing repair log submitted as Attachment A-3 of the February 9, response does correctly indicate the northing and easting of the repairs as well.

8. Repair RR-1 and RR-2 are shown on the bottom liner in the interior of the landfill (i.e., beneath the existing waste). Please verify the location of these repairs reported in the log and revise the figure and/or the location of the repairs reported in the repair log, as appropriate.

**Response:** The points RRR-1 and RRR-2 indicated on the interior of the liner are not repair locations and have been deleted from the drawing in Attachment 6. They were reference points used for internal purposes only.

Attached are two copies of our responses and requested information. Please do not hesitate to contact us if you need anything further.

Sincerely,

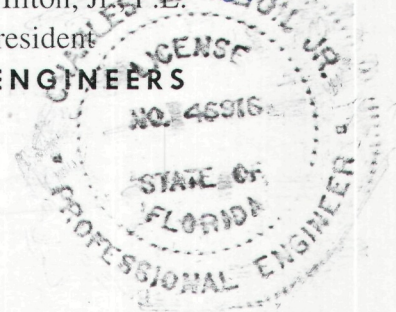


Daniel R. Cooper, P.E.  
Project Manager  
**SCS ENGINEERS**

DRC/CEH:drc

cc: Susan Pelz, P.E., FDEP, Tampa  
Casey Stephens, Citrus County

Charles E. Hilton, Jr. P.E. 12/15/11  
C. Ed Hilton, Jr., P.E.  
Vice President  
**SCS ENGINEERS**





FLORIDA DEPARTMENT OF  
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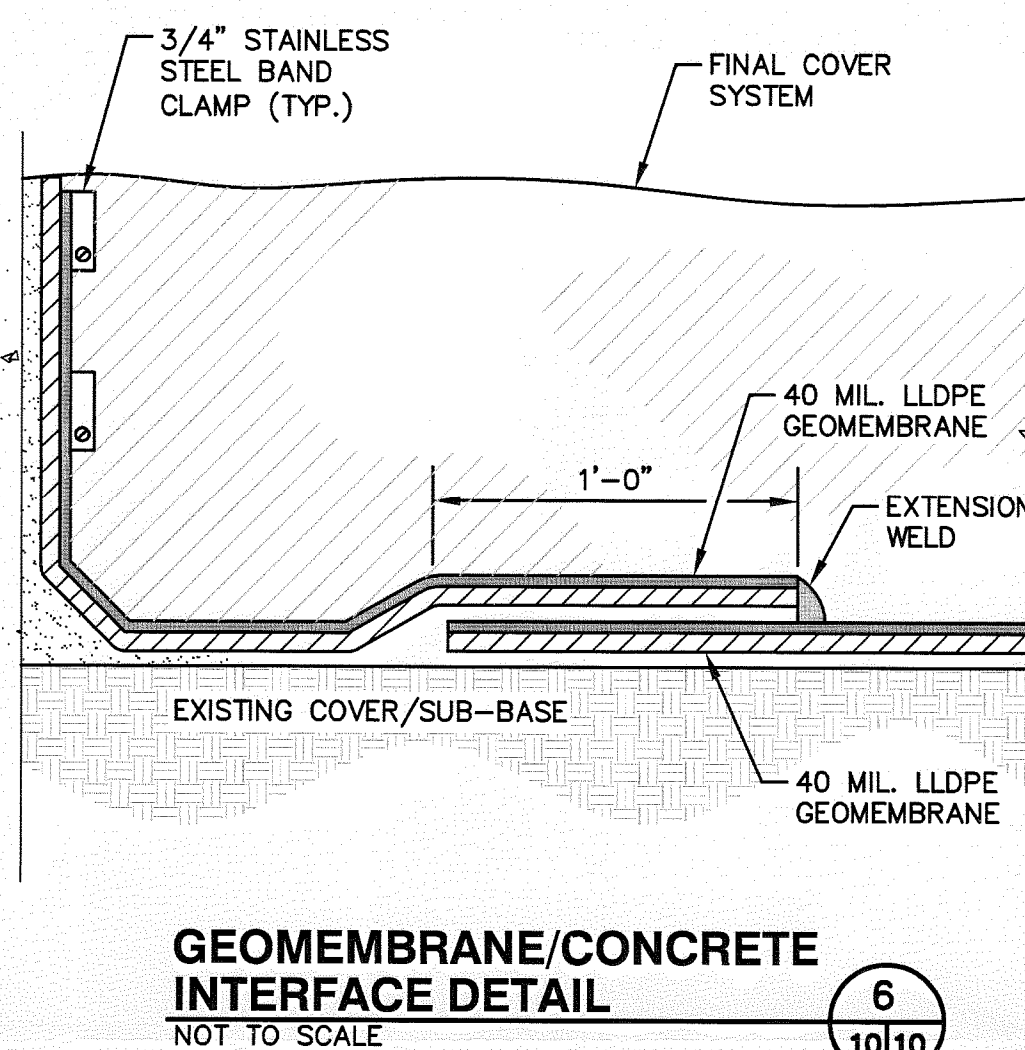
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SOUTHWEST DISTRICT  
TAMPA

ATTACHMENT 1

REVISED RECORD DRAWINGS SHEET 10 OF 27





36" BOREHOLE

EXTRUSION WELD TO EXISTING LINER

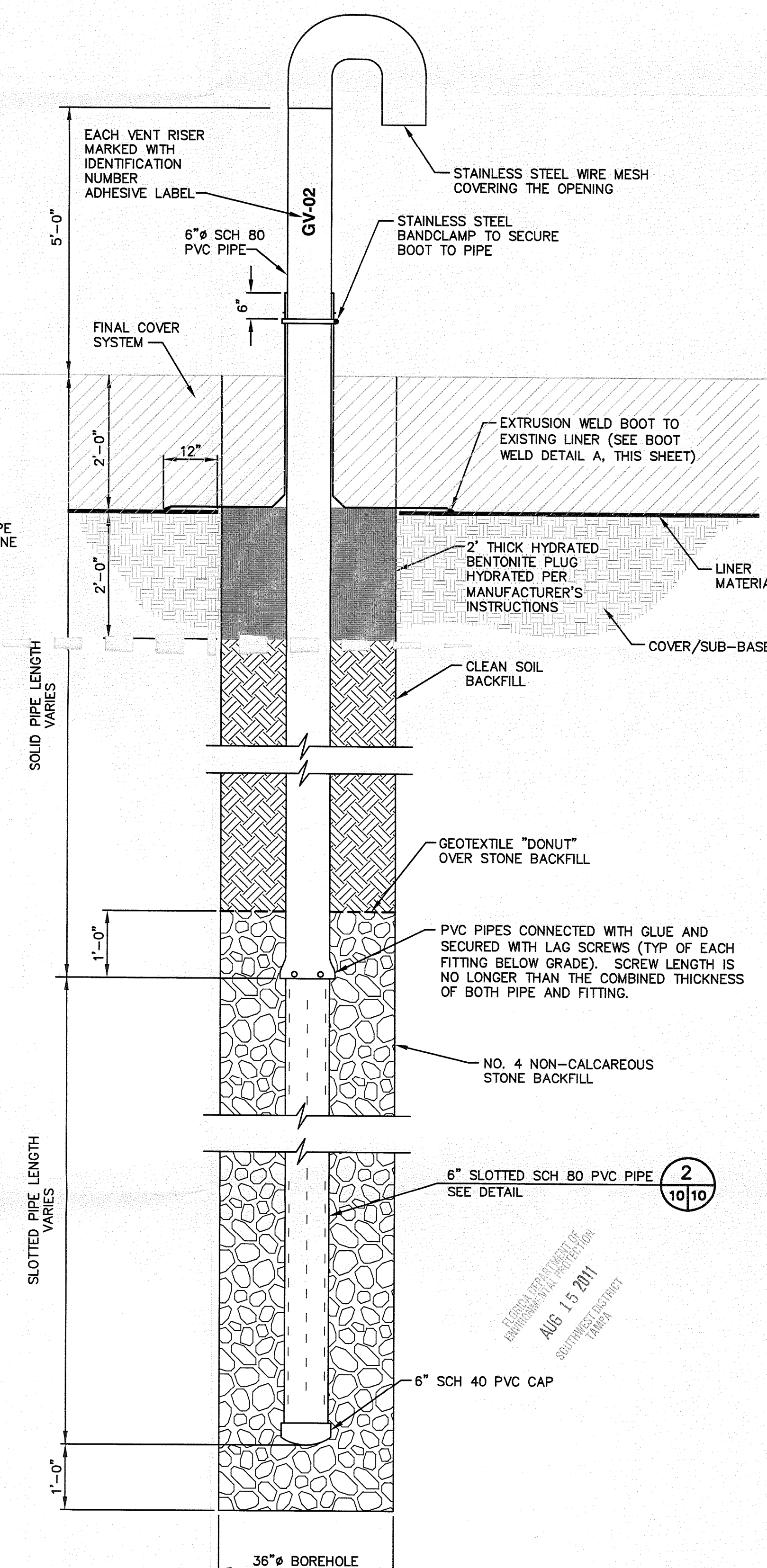
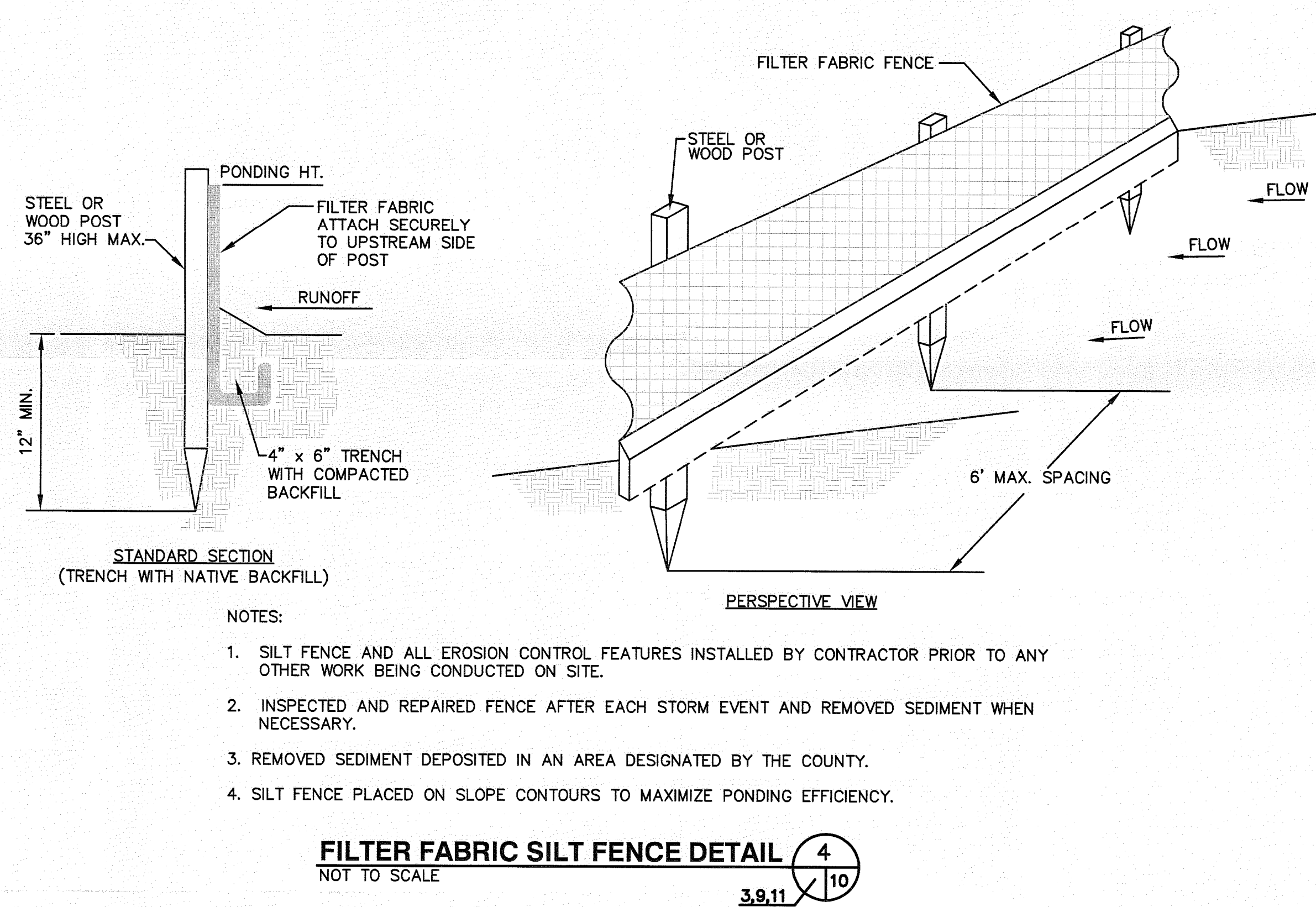
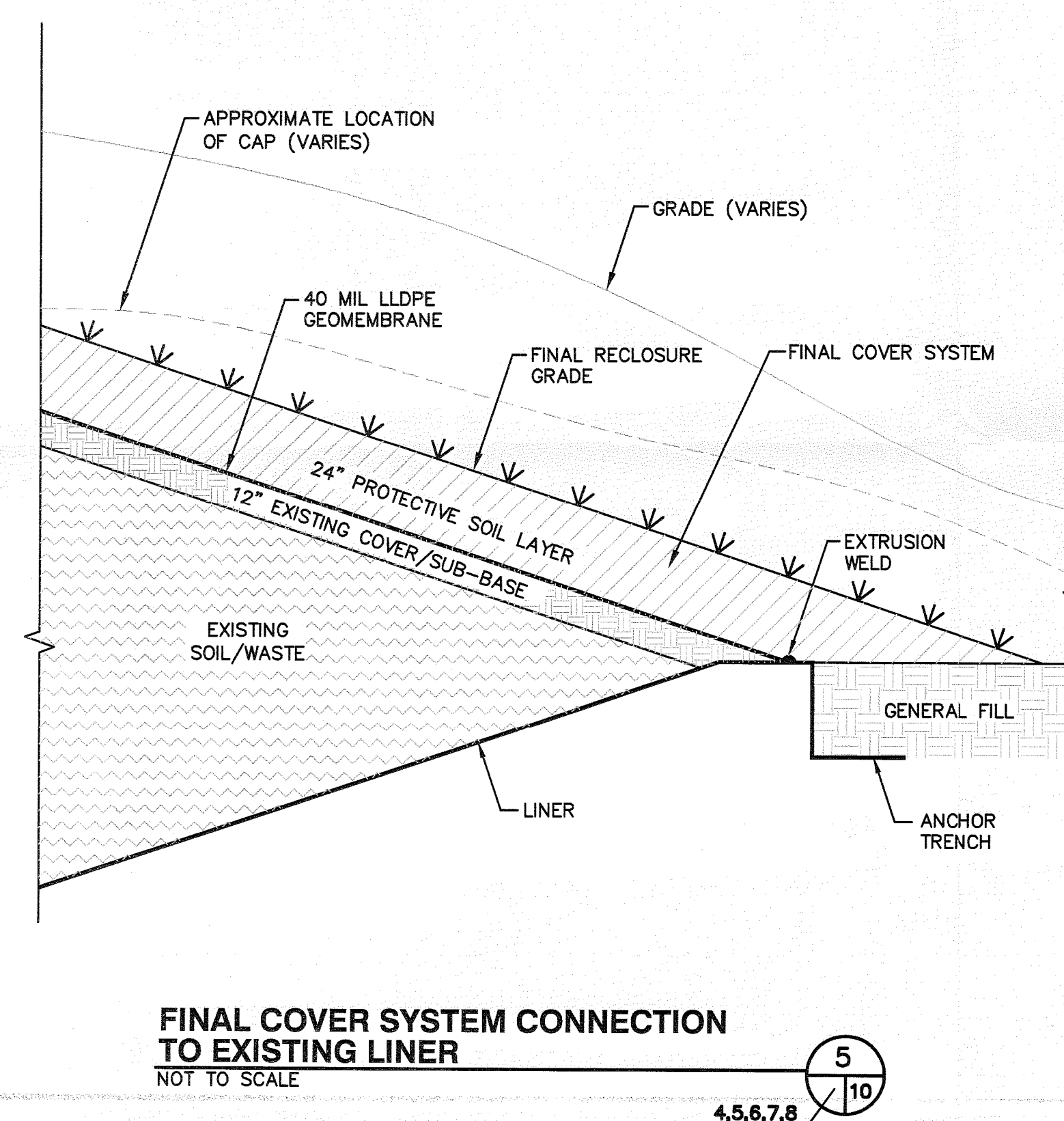
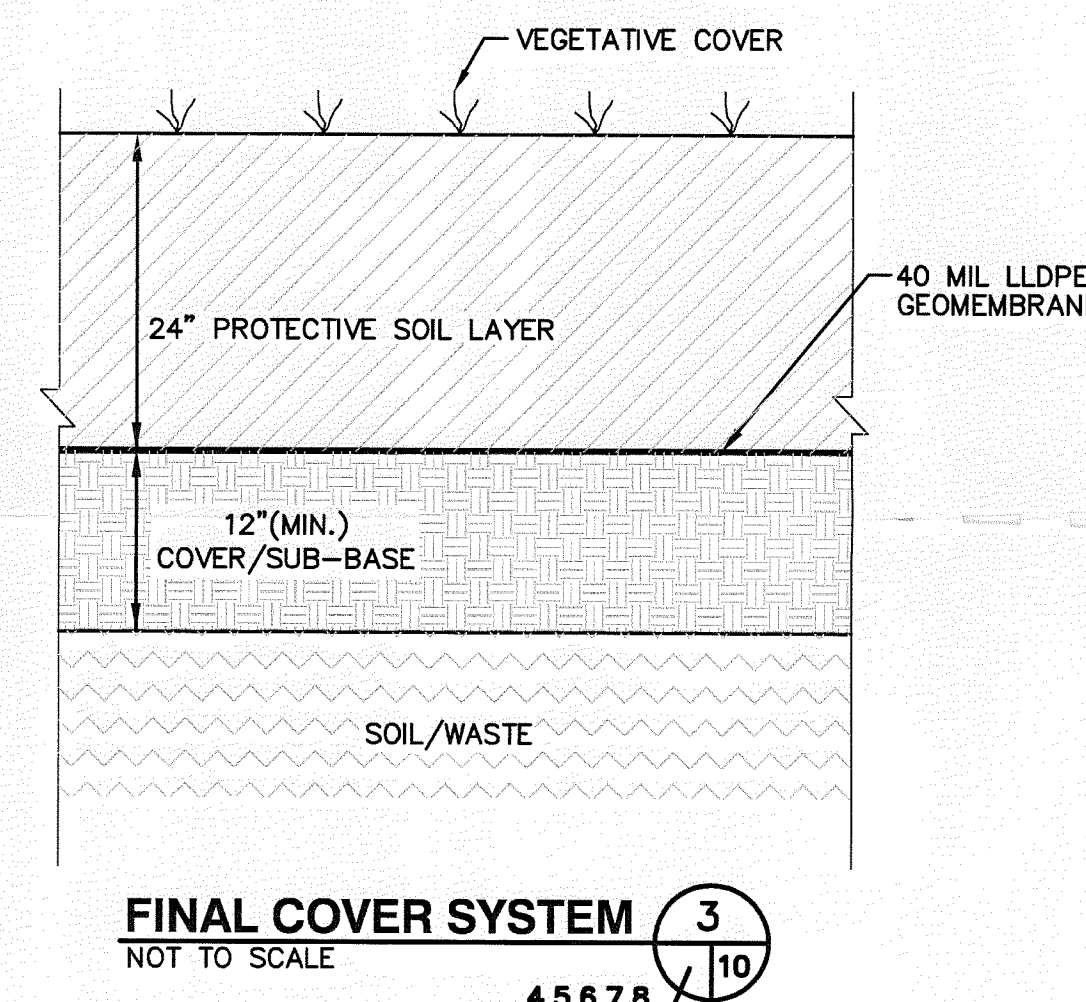
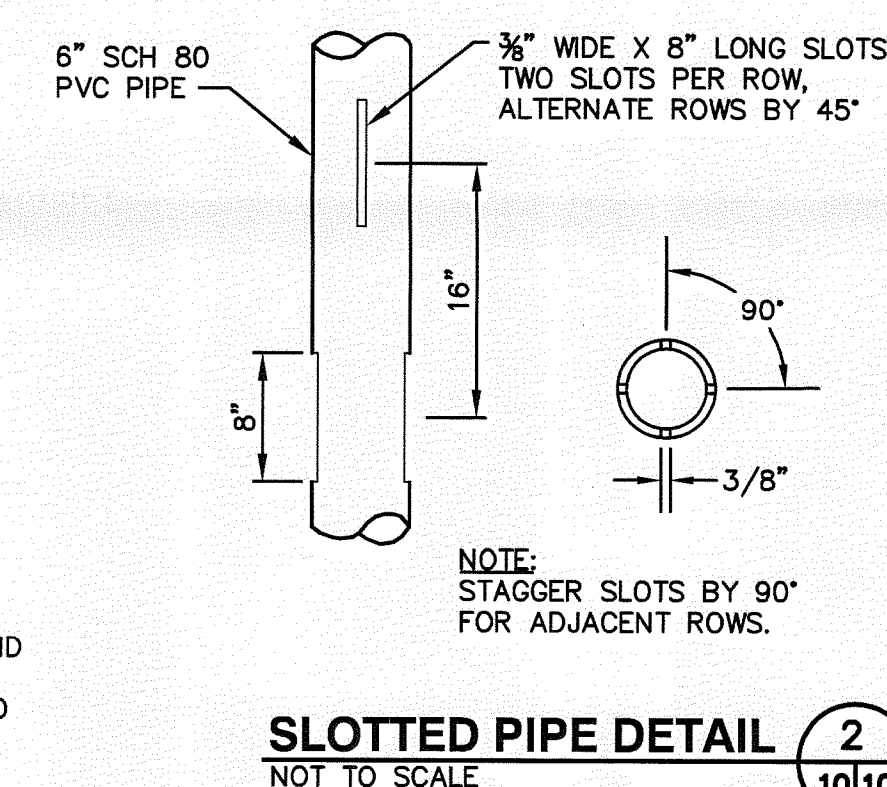
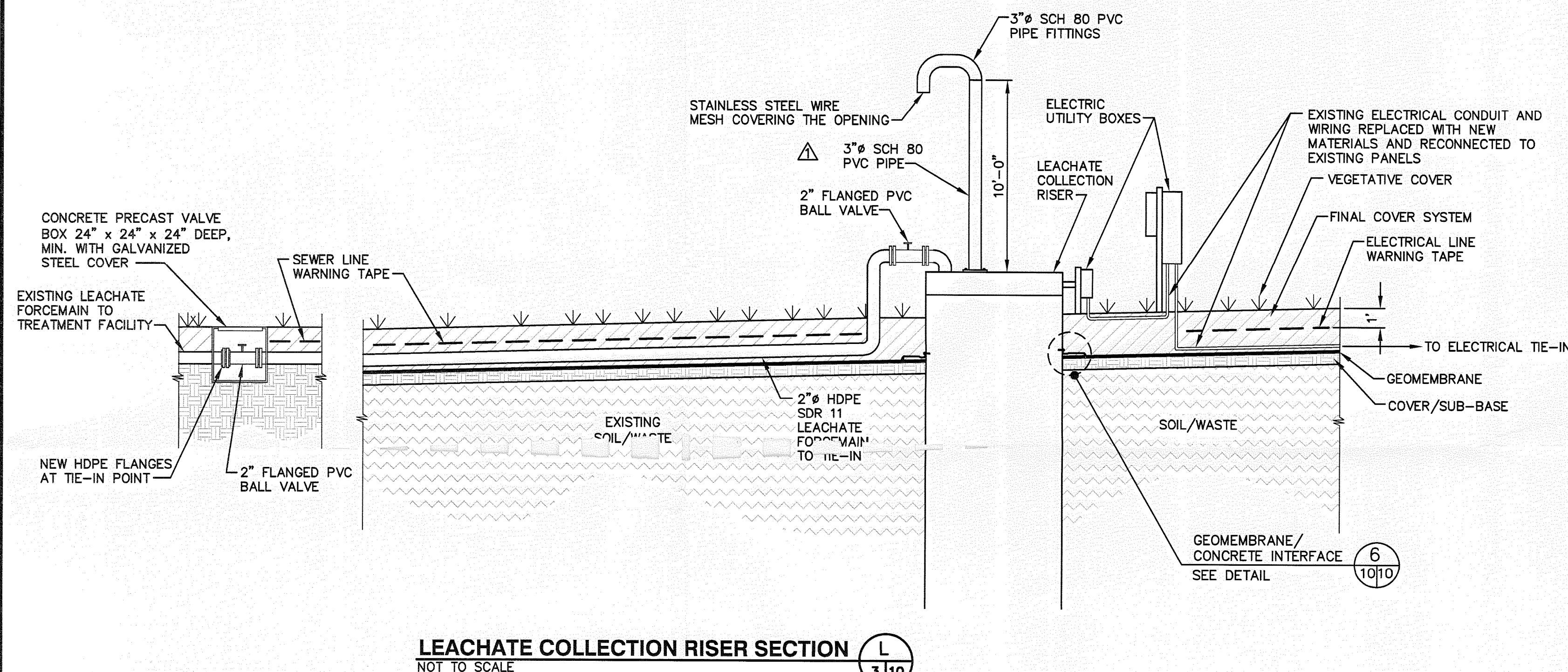
12" OF OVERLAP AREA TO ASSURE SEAL

PLAN

**BOOT WELD DETAIL**

NOT TO SCALE

**A**  
10/16





FLORIDA DEPARTMENT OF  
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AUG 15 2011

SOUTHWEST DISTRICT  
TAMPA

ATTACHMENT 2

LANDGEM 3.02 LFG GENERATION PROJECTION  
7- ACRE CLOSED LANDFILL AREA

**ATTACHMENT 1 - LFG GENERATION PROJECTION, CLOSED AREA**  
**Citrus County Central Landfill-Lecanto, Florida**

Year	Disposal Rate	Refuse In-Place	Disposal Rate	Refuse In-Place	LFG Generation			NMOC Generation Rates	NMOC Generation Rates
	(tons/yr)	(tons)	(Mg/yr)	(Mg)	(scfm)	(m <sup>3</sup> /min)	(Million ft <sup>3</sup> /yr)	(tons/yr)	(Mg/yr)
1975	25,329	0	22,978	0	0	0.0	0.000	0.0	0.0
1976	25,329	25,329	22,978	22,978	30	0.8	15.718	0.1	0.1
1977	25,329	50,658	22,978	45,956	58	1.7	30.670	0.22	0.20
1978	25,329	75,987	22,978	68,934	85	2.4	44.893	0.32	0.29
1979	25,329	101,316	22,978	91,912	111	3.1	58.422	0.41	0.37
1980	25,329	126,645	22,978	114,890	136	3.8	71.291	0.50	0.45
1981	25,329	151,974	22,978	137,868	159	4.5	83.532	0.59	0.53
1982	25,329	177,303	22,978	160,847	181	5.1	95.177	0.67	0.61
1983	25,329	202,632	22,978	183,825	202	5.7	106.253	0.75	0.68
1984	25,329	227,961	22,978	206,803	222	6.3	116.790	0.82	0.74
1985	25,329	253,290	22,978	229,781	241	6.8	126.812	0.89	0.81
1986	25,329	278,619	22,978	252,759	259	7.3	136.346	0.96	0.87
1987	25,329	303,948	22,978	275,737	277	7.8	145.415	1.02	0.93
1988	25,329	329,277	22,978	298,715	293	8.3	154.041	1.08	0.98
1989	64,338	354,606	58,366	321,693	309	8.7	162.247	1.14	1.03
1990	68,019	418,944	61,706	380,060	370	10.5	194.260	1.36	1.24
1991	0	486,963	0	441,765	432	12.2	226.996	1.59	1.45
1992	0	486,963	0	441,765	411	11.6	215.926	1.52	1.38
1993	0	486,963	0	441,765	391	11.1	205.395	1.44	1.31
1994	0	486,963	0	441,765	372	10.5	195.378	1.37	1.24
1995	0	486,963	0	441,765	354	10.0	185.849	1.31	1.18
1996	0	486,963	0	441,765	336	9.5	176.785	1.24	1.13
1997	0	486,963	0	441,765	320	9.1	168.163	1.18	1.07
1998	0	486,963	0	441,765	304	8.6	159.962	1.12	1.02
1999	0	486,963	0	441,765	289	8.2	152.160	1.07	0.97
2000	0	486,963	0	441,765	275	7.8	144.739	1.02	0.92
2001	0	486,963	0	441,765	262	7.4	137.680	0.97	0.88
2002	0	486,963	0	441,765	249	7.1	130.966	0.92	0.83
2003	0	486,963	0	441,765	237	6.7	124.578	0.88	0.79
2004	0	486,963	0	441,765	225	6.4	118.503	0.83	0.76
2005	0	486,963	0	441,765	214	6.1	112.723	0.79	0.72
2006	0	486,963	0	441,765	204	5.8	107.226	0.75	0.68
2007	0	486,963	0	441,765	194	5.5	101.996	0.72	0.65
2008	0	486,963	0	441,765	185	5.2	97.022	0.68	0.62
2009	0	486,963	0	441,765	176	5.0	92.290	0.65	0.59
2010	0	486,963	0	441,765	167	4.7	87.789	0.62	0.56
2011	0	486,963	0	441,765	159	4.5	83.51	0.59	0.53
2012	0	486,963	0	441,765	151	4.3	79.43	0.56	0.51
2013	0	486,963	0	441,765	75	2.1	39.45	0.28	0.25
2014	0	486,963	0	441,765	71	2.0	37.52	0.26	0.24
2015	0	486,963	0	441,765	68	1.9	35.69	0.25	0.23
2016	0	486,963	0	441,765	65	1.8	33.95	0.24	0.22
2017	0	486,963	0	441,765	61	1.7	32	0.2	0.2
2018	0	486,963	0	441,765	58	1.7	31	0.2	0.2
2019	0	486,963	0	441,765	56	1.6	29	0.2	0.2
2020	0	486,963	0	441,765	53	1.5	28	0.2	0.2
2021	0	486,963	0	441,765	50	1.4	26	0.2	0.2

Methane Content of LFG Adjusted to: 43%  
 Selected Decay Rate Constant (k): 0.050  
 Selected Ultimate Methane Recovery Rate (Lo): 170 m<sup>3</sup>/Mg = 5,446 cu ft/ton  
 NMOC Concentration in LFG: 73 ppmv as Hexane

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

AUG 15 2011

SOUTHWEST DISTRICT  
TAMPA

ATTACHMENT 3  
REVISED BORING LOGS

# SCS Engineers

Site Name: Citrus County  
 Project #: 09207049.04  
 Start Date: 1-20-10  
 Completed: 1-20-10

Well Number: GV-02  
 Coordinates:  
 Surface Elevation: 124.00  
 Top of Casing Elevation: 131.00

Contractor: Belair

Boring Diameter: 36"

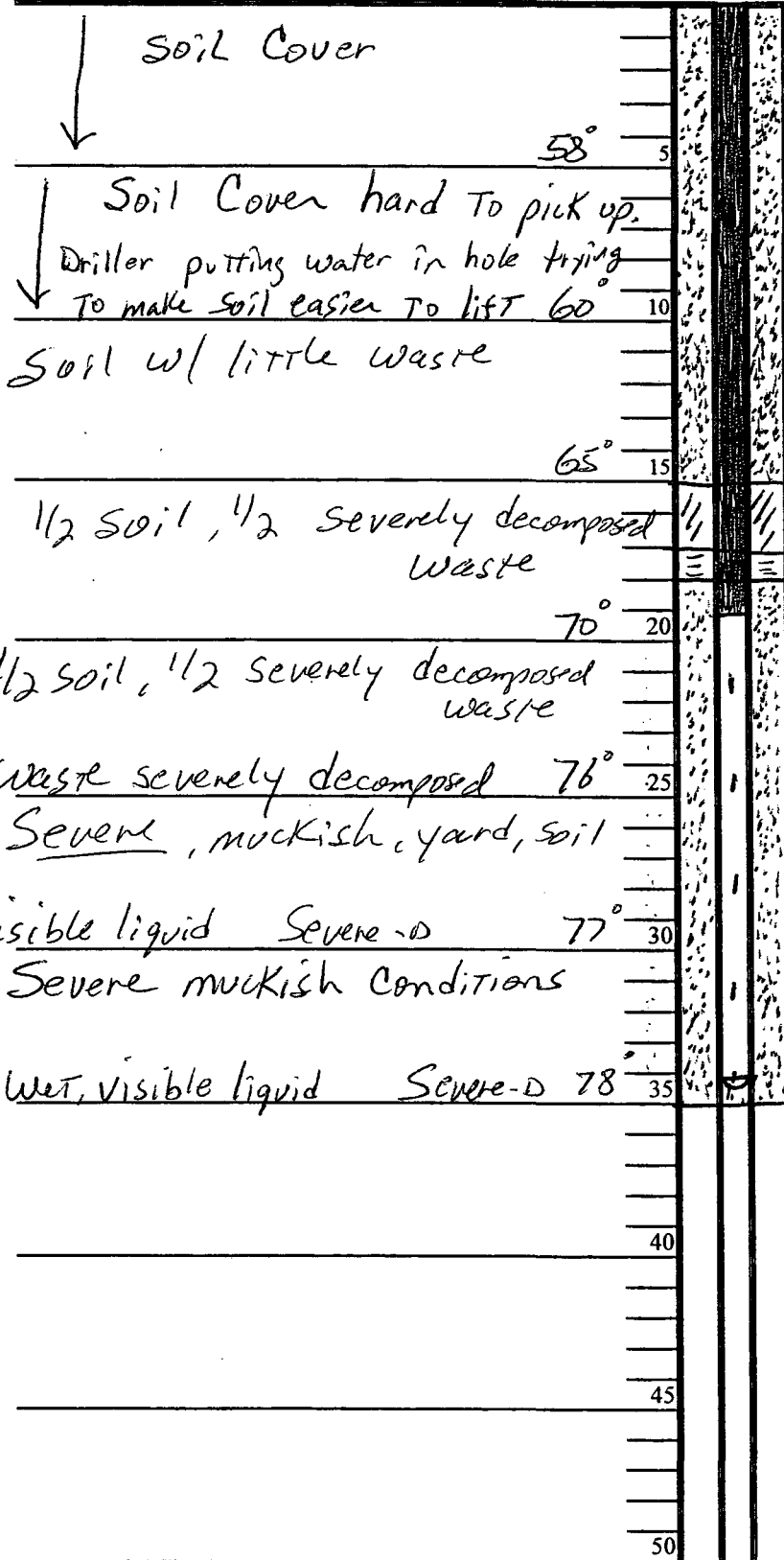
Inspector: Jim Burzenski

Pipe Material Diameter 6" Sch. 80 PVC

Driller: Shaw Drilling

Total Depth Drilled: 35'

Completion: Y



COMPLETION LOG	
RISER STICK UP	7'
RISER BELOW	19'
SLOTTED PIPE	16' 15'
BACKFILL	15'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	18'
Stone	
Structural fill	
Bentonite fill	
MATERIALS LIST	
TOP CAP	✓
SOLID PIPE	7' + 19'
SLOTTED PIPE	16' 15'
BOTTOM CAP	✓
BENTONITE	12 bags
BACKFILL	15' + 1'
STONE	18'

## LEGEND:

D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

## NOTES:

Driller stuck at 34-35' for over an hour.

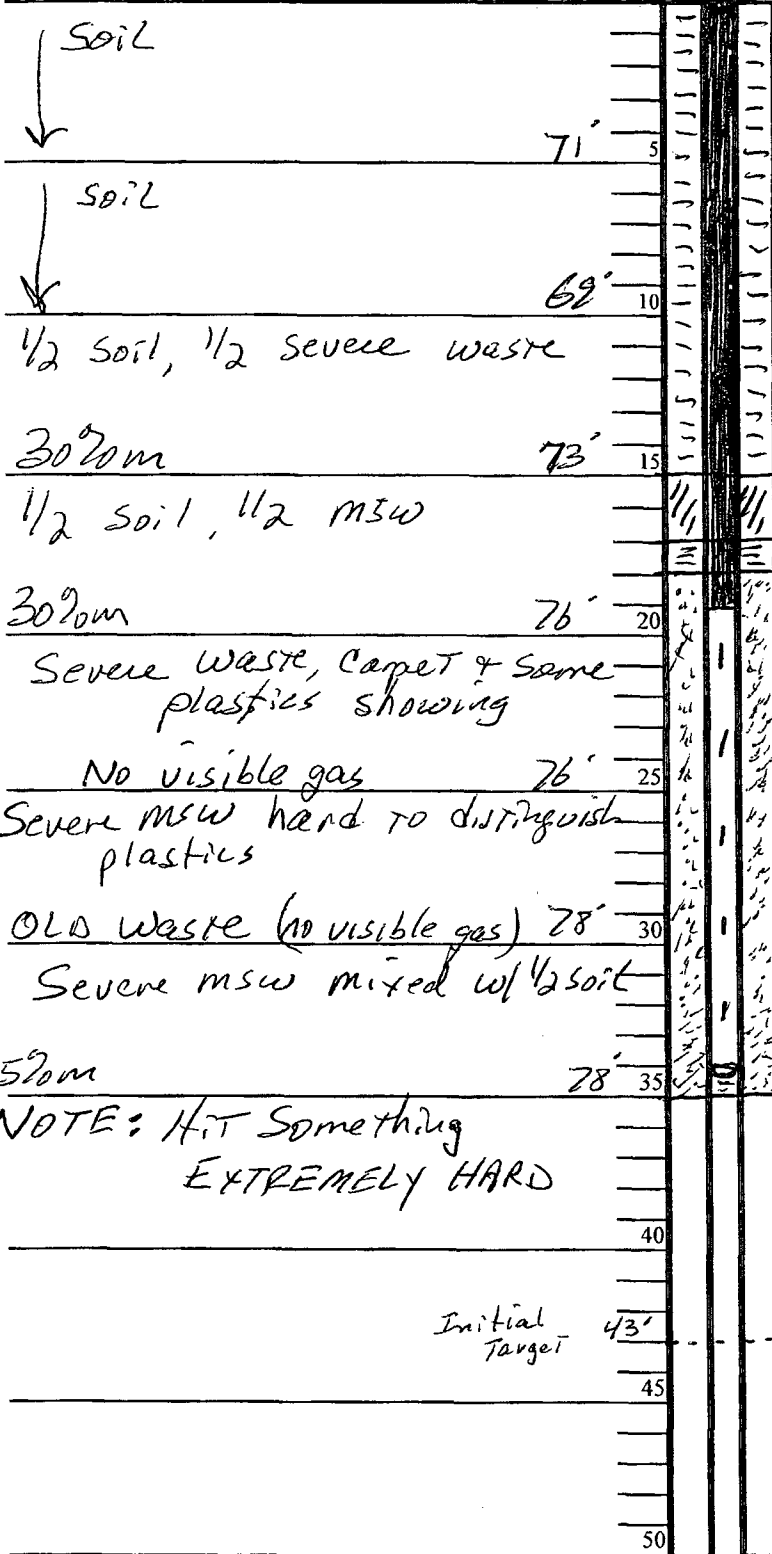
Bucket spinning in muck

I called Dan, well shortened from 41' to 35'

# SCS Engineers

Site Name: \_\_\_\_\_ Well Number: **GV-06**  
 Project #: \_\_\_\_\_ Coordinates: \_\_\_\_\_  
 Start Date: \_\_\_\_\_ Surface Elevation: **126.00**  
 Completed: \_\_\_\_\_ Top of Casing Elevation: **133.00**

Contractor: Belair Boring Diameter: 36"  
 Inspector: Jim Burzenski Pipe Material Diameter 6" Sch. 80 PVC  
 Driller: Shaw Drilling Total Depth Drilled: **35**  
 Completion: **35**



COMPLETION LOG	
RISER STICK UP	7'
RISER BELOW	19'
SLOTTED PIPE	15'
BACKFILL	15'
HYDRATE	✓
BENTONITE #1	2'
BACKFILL	1'
DONUT	✓
GRAVEL PACK	13'
MATERIALS LIST	
Stone	
Structural fill	
Bentonite fill	
TOP CAP	✓
SOLID PIPE	7' + 19'
SLOTTED PIPE	15'
BOTTOM CAP	✓
BENTONITE	12 BAGS
BACKFILL	1' + 15'
STONE	13'

**LEGEND:**  
 D = Decomposition and is shown as: little, some, moderate, much or severe

C = Compaction and is listed as loose, moderate or tight

## NOTES:

NOTE: Hit something EXTREMELY HARD

Hit something extremely hard at 35' could not go deeper. Slotted amount reduced by 8'.



ATTACHMENT 4

PANEL LAYOUT DRAWING 7-ACRE RECLOSURE

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

AUG 15 2011

SOUTHWEST DISTRICT  
TAMPA



ATTACHMENT 5

GEOMEMBRANE REPAIR AND DESTRUCTIVE TEST LOGS

FLORIDA DEPARTMENT OF  
TRANSPORTATION

AUG 15 2011

SOUTHWEST DISTRICT  
TAMPA

SCS Engineers <b>GEOMEMBRANE REPAIR LOG</b>	SHEET PROJECT TITLE PROJECT NO. DATE	<div style="text-align: right;">1 of 16</div> 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill 09207049.04 1/29 - 1/30/10
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DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
1/30/10	R1	P28, 20	32 E	BO	2x4	BN	0383	1/31/10	RH	
1/30/10	R2	P28, 20, T1	T	T	1x1	BN	0383			
1/30/10	R3	P20, 23, T1	T	T	1x1	BN	0383			
1/30/10	R4	P23, 25, T1	T	T	1x1	BN	0383			
1/30/10	R5	P25, 26, T1	T	T	1x1	BN	0383			
1/30/10	R6	P25, 26, 24, 22	T	T	2x6	BN	0383			
1/30/10	R7	P26, 27, 24	T	T	3x3	BN	0383			
1/30/10	R8	P27, T1, 26	T	T	1x1	BN	0383			
1/30/10	R9	P27, T1, 24	T	T	1x1	BN	0383			
1/30/10	R10	P24, 22, T1	T	T	1x1	BN	0383			
1/30/10	R11	P22, 8, T1	T	T	2x2	BN	0383			
1/29/10	R12	P1, 2, T1	T	T	1x1	BN	0383			
1/29/10	R13	P1, 2	23 N	BO	1x3	BN	0383			
1/29/10	R14	P1, 2	34 N	BO	1x3	BN	0383			
1/29/10	R15	P2, 3, T1	T	T	1x1	BN	0383			
1/29/10	R16	P3, 4, T1	T	T	1x1	BN	0383			

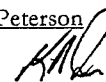
**DEFECT CODES:**

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PIC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



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SHEET

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of

16

## GEOMEMBRANE REPAIR LOG

PROJECT TITLE

7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill

PROJECT NO.

09207049.04

DATE

1/29 - 1/31

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
1/29/10	R17	P4,5,T1	T	T	1X1	BN	0383	1/31/10	RH	
1/29/10	R18	P5,6,T1	T	T	1X1	BN	0383			
1/29/10	R19	P5,6	40N	DS2	2X5	BN	0383			
1/29/10	R20	P6	14E 3N	EE	2X2	BN	0383			
1/29/10	R21	P6	14E 5N	EE	1X1	BN	0383			
1/29/10	R22	P6	14E 10N	EE	2X2	BN	0383			
1/29/10	R23	P6	14E 18N	EE	1X1	BN	0383			
1/29/10	R24	P6,7,T1	T	T	1X1	BN	0383			
1/29/10	R25	P7,8,T1	T	T	1X1	BN	0383			
1/29/10	R26	P8,9,T1	T	T	1X1	BN	0383			
1/29/10	R27	P9,10,T1	T	T	1X1	BN	0383			
1/30/10	R28	P10,11,T1	T	T	2X2	BN	0383			
1/31/10	R29	P10,11	68N	DS3	2X6	BN	0383			
1/31/10	R30	P11,12,T1	T	T	1X1	BN	0383			
1/31/10	R31	P9,10	40N	BO	2X3	BN	0383			
1/31/10	R32	P12,13,T1	T	T	1X1	BN	0383			

## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTH/WRK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

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## GEOMEMBRANE REPAIR LOG

SHEET -  
PROJECT TITLE  
PROJECT NO.  
DATE

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7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
09207049.04

11/31/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
1/31/10	R33	P13,14,T1	T	T	1X1	BN	0383	1/31/10	RH	
1/31/10	R34	P14,15,T1	T	T	1X1	BN	0383			
1/31/10	R35	P14,15	64N	DS4	2X6	BN	0383			
1/31/10	R36	P15,17,T1		T	1X1	BN	0383			
1/31/10	R37	P15,16,17	T	T	2X2	BN	0383			
1/31/10	R38	P17,18,T1	T	T	1X1	BN	0383			
1/31/10	R39	P16,17,18	T	T	2X2	BN	0383			
1/31/10	R40	P18,19,T1	T	T	T	BN	0383			
1/31/10	R41	P18,19	43N	DS5	2X6	BN	0383			
1/31/10	R42	P19,31	56N	DS6	2X6	BN	0383			
1/31/10	R43	P19,31,T1	T	T	T	BN	0383			
1/31/10	R44	P32,31,T1	T	T	T	BN	0383			
1/31/10	R45	P32,30,33	T	T	2X3	BN	0383			
1/31/10	R46	P32,33,T1	T	T	1X1	BN	0383			
1/31/10	R47	P33,30,T1	T	T	1X1	BN	0383			
1/31/10	R48	P30,29,T1	T	T	1X1	BN	0383			

## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

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KAQ

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## GEOMEMBRANE REPAIR LOG

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PROJECT TITLE

PROJECT NO.

DATE

7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
09207049.04

11/31/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
1/31/10	R49	P29,30	20E	B0	1x5	BN	0383	1/31/10	RH	
1/31/10	R50	P29,30	7E	D07	2x6	BN	0383			
1/31/10	R51	P29,30,32,31	T	T	2x3	BN	0383			
1/31/10	R52	P29,31,71	T	T	T	BN	0383			
1/31/10	R53	P21,28T1	T	T	2x2	BN	0383			
1/31/10	R54	P21,28	51W	D58	2x6	BN	0383			
1/31/10	R55	P21,28	59W	B0	2x3	BN	0383	2/17/10	KC	
1/31/10	R56	P21,29,31,19	T	T	3x4	BN	0383	2/17/10	KC	
1/31/10	R57	P19,18,21	T	T	2x2	BN	0383	1/31/10	RH	
1/31/10	R58	P18,16,21	T	T	2x2	BN	0383			
1/31/10	R59	P16,15,21	T	T	2x2	BN	0383			
1/31/10	R60	P15,14,21	T	T	2x2	BN	0383			
1/31/10	R61	P14,13,21	T	T	1x1	BN	0383			
1/31/10	R62	P13,12,21	T	T	1x1	BN	0383			
1/31/10	R63	P12,11,21	T	T	1x1	BN	0383			
1/31/10	R64	P11,20,21	T	T	1x1	BN	0383			

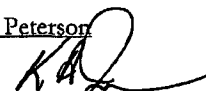
## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

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## GEOMEMBRANE REPAIR LOG

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PROJECT NO.

DATE

5 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
 09207049.04

1/29 - 1/31/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
1/31/10	R65	P20,21,20	T	T	3x2	BN	0383	1/31/10	RH	
1/30/10	R66	P10,11,20	T	T	2x2	BN	0383			
1/30/10	R67	P10,9,20	T	T	2x2	BN	0383			
1/30/10	R68	P8,9,20	T	T	2x2	BN	0383			
1/30/10	R69	P7,8,20	T	T	2x3	BN	0383			
1/31/10	R70	P20,28	89W	Bo	2x3	BN	0383			
1/30/10	R71	P6,7,20	T	T	1x1	BN	0383			
1/30/10	R72	P6,5,20	T	T	1x1	BN	0383			
1/30/10	R73	P5,4,20	T	T	2x2	BN	0383			
1/30/10	R74	P4,3,20	T	T	2x2	BN	0383			
1/30/10	R75	P2,3,20	T	T	2x2	BN	0383			
1/30/10	R76	P2,1,20	T	T	1x2	BN	0383			
1/29/10	R77	P2,1	135	DS1	2x6	BN	0383			
1/30/10	R78	P1,20,23	T	T	2x4	BN	0383			
1/30/10	R79	P1,23,25	T	T	2x2	BN	0383			
1/30/10	R80	P1,25,22	T	T	1x1	BN	0383			

## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

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## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

6 of 16

7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill

09207049.04

2/1 - 2/7

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/3/10	R81	P28,35,T1	T	T	1X	BN	0383	2/7/10	RH	
2/3/10	R82	P35	116E 12N	BS	3X16	BN	0383	2/7/10	KC	
2/3/10	R83	P35,34,28	T	T	2X2	RH	0715	2/2/10	KC	
2/4/10	R84	P19,31	3W	DS6BI	2X12	RH	0715	2/6/10	KC	CAP DS6BI
2/4/10	R85	P19,31	0-79N	DS6A1	2X79	RH	0715	2/6/10	KC	CAP DS6A1
2/3/10	R86	P35,34	11N	DS9	2X5	RH	0715	2/7/10	KC	
2/3/10	R87	P34	32E 0-65	BS	2X6	RH	0715	2/7/10	KC	BOOT 1
2/3/10	R88	P34	187E 0-35	BS	2X4	RH	0715	2/7/10	KC	BOOT 2
2/1/10	R89	P34,28,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/1/10	R90	P34,37,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/3/10	R91	P34,37	99W	BO	2X3	RH	0715	2/7/10	KC	
2/3/10	R92	P34,37,36	T	T	2X4	RH	0715	2/7/10	KC	
2/3/10	R93	P34,35,36	T	T	2X2	RH	0715	2/7/10	KC	
2/3/10	R94	P35,36	80E	DS10	2X5	BN	0383	2/7/10	KC	
2/3/10	R95	P35,36,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/3/10	R96	P36,38,T1	T	T	1X1	BN	0383	2/7/10	RH	

## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

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## GEOMEMBRANE REPAIR LOG

SHEET

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16

PROJECT TITLE

7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill

PROJECT NO.

09207049.04

DATE

2/1 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/3/10	R97	P36,38	154E	B0	2x7	BN	0383	2/7/10	KC	
2/3/10	R98	P36,38	285E	B0	2x4	RH	715	2/7/10	KC	
2/3/10	R99	P36,38	298E	DS11	2x5	RH	715	2/7/10	KC	
2/3/10	R100	P36,38	318E	B0	2x6	RH	715	2/7/10	KC	
2/3/10	R101	P36,38	335E	B0	2x6	RH	715	2/7/10	KC	
2/3/10	R102	P36,38	348E	B0	2x6	RH	715	2/7/10	KC	
2/3/10	R103	P36,39,38	T	T	2x7	RH	715	2/7/10	KC	
2/8/10	R104	P37,36,39	T	T	2x6	RH	715	2/7/10	KC	
2/3/10	R105	P39,37	16E	B0	2x7	RH	715	2/7/10	KC	
2/3/10	R106	P39,37	40E	B0	2x4	RH	715	2/7/10	KC	
2/3/10	R107	P39,37	51E	B0	2x5	RH	715	2/7/10	KC	
2/4/10	R108	P28	18W60	D	2x2	RH	715	2/4/10	RH	
2/3/10	R109	P39,37	87E	B0	2x3	RH	715	2/7/10	KC	
2/1/10	R110	P37,39,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/1/10	R111	P39	2W11N	D	1x1	BN	0383	2/7/10	KC	
2/1/10	R112	P39,41,T1	T	T	1x1	BN	0383	2/7/10	RH	

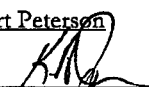
## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

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8 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
 09207049.04

2/6 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM/PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R113	P40,41,37	T	T	3x4	BN	0383	2/7/10	RH	
2/6/10	R114	P38,39,40	T	T	1x1	BN	0383	2/7/10	KC	
2/3/10	R115	P38,40	94E	DS12	2x5	BN	0383	2/7/10	RH	
2/3/10	R116	P38,40,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/3/10	R117	P40,44,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/3/10	R118	P44,43,40	T	T	2x2	BN	0383	2/7/10	RH	
2/3/10	R119	P44,43	10's	D	2x5	BN	0383	2/7/10	RH	
2/3/10	R120	P43,42,40	T	T	2x2	BN	0383	2/7/10	RH	
2/3/10	R121	P40	61E53	D	2x2	BN	0383	2/7/10	RH	
2/6/10	R122	P40,41,42	T	T	3x5	BN	0383	2/7/10	KC	
2/7/10	R123	P41,42,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/7/10	R124	P42,46,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R125	P45,46,42	T	T	3x6	BN	0383	2/7/10	KC	
2/3/10	R126	P45,42	265W	BO	2x3	BN	0383	2/7/10	RH	
2/3/10	R127	P45,42	285W	DS14	2x5	BN	0383	2/7/10	RH	
2/3/10	R128	P45,42	357W	BO	2x5	BN	0383	2/7/10	RH	

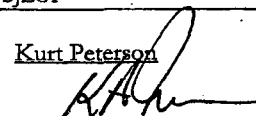
## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

9 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System - Citrus County Landfill  
 09207049.04

2/3 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/3/10	P129	P42,45,43	T	T	2x2	BN	0383	2/7/10	RH	
2/3/10	P130	P43,45	28W	BO	2x2	BN	0333	2/7/10	RH	
2/3/10	P131	P44,43	6S	DS13	2x5	BN	0383	2/7/10	RH	
2/3/10	P132	P43,44,45	T	T	2x2	BN	0383	2/7/10	RH	
2/3/10	P133	P44,45,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/3/10	P134	P48,45,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/3/10	P135	P48,45	6E	D	2x2	BN	0383	2/7/10	RH	
2/3/10	P136	P45,47,48	T	T	2x2	BN	0383	2/7/10	RH	
2/6/10	P137	P47,45	24E	D	2x3	RH	0715	2/7/10	RH	
2/3/10	P138	P47,45	25E	BO	2x5	BN	0383	2/7/10	RH	
2/6/10	P139	P45,47	414	DS15	2x5	BN	0383	2/7/10	RH	
2/6/10	P140	P45,46,47	T	T	2x5	BN	0383	2/7/10	RH	
2/2/10	P141	P46,47,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/3/10	P142	P47,50,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/2/10	P143	P47,50,49	T	T	2x3	BN	0383	2/7/10	RH	
2/6/10	P144	P49,47	67W	D16	2x5	BN	0383	2/7/10	RH	

## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

SHEET  
PROJECT TITLE  
PROJECT NO.  
DATE

10 of 16  
7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
09207049.04

## GEOMEMBRANE REPAIR LOG

2/1 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R145	P49,47	81 W	B5	12x4	BN	0383	2/7/10	RH	BOOT
2/3/10	R146	P49,47	233 W	B5	12x4	BN	0383	2/7/10	RH	BOOT
2/6/10	R147	P47,49	325 W	B0	2x3	RH	0715	2/7/10	RH	
2/6/10	R148	P47,49	335 W	B0	3x6	RH	0715	2/7/10	RH	
2/3/10	R149	P47,49	370 W	B0	2x6	BN	0383	2/7/10	RH	
2/3/10	R150	P49,47	395 W	B5	3x8	BN	0383	2/7/10	RH	BOOT DS28
2/6/10	R151	P47,49	428 W	B0	2x2	RH	0715	2/7/10	RH	
2/6/10	R152	P47,49,48	T	T	2x18	RH	0715	2/7/10	RH	
2/1/10	R153	P49,49,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/1/10	R154	P49,52,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R155	P51,52,49	T	T	2x2	RH	0715	2/7/10	RH	
2/6/10	R156	P51,49	52E	B0	2x4	RH	0715	2/7/10	RH	
2/6/10	R157	P51,49	403E	B0	2x4	BN	0383	2/7/10	RH	
2/6/10	R158	P51,49	444E	DS17	2x4	BN	0383	2/7/10	RH	
2/6/10	R159	P51,49,50	T	T	2x3	BN	0383	2/7/10	RH	
2/3/10	R160	P51,50,T1	T	T	1x1	BN	0383	2/7/10	RH	

## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

PRINT NAME: Kurt Peterson

SIGNATURE: 

SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

11 of 16  
7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill

09207049.04

2/3 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM/PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/3/10	R161	P51,54,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/6/10	R162	P51,54,53	T	T	2X1	BN	0383	2/7/10	KC	
2/6/10	R163	P51,53	43W	DS18	2X5	BN	0383	2/7/10	KC	
2/6/10	R164	P51,53	378W	BO	2X4	RH	0715	2/7/10	KC	
2/6/10	R165	P52,57,53	T	T	2X2	RH	0715	2/7/10	KC	
2/3/10	R166	P52,53,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/3/10	R167	P53,55,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/6/10	R168	P53,55	402E	DS19	2X5	BN	0383	2/7/10	KC	
2/6/10	R169	P53,55,54	T		1X2	BN	0383	2/7/10	KC	
2/6/10	R170	P53,54	11N	DS20	2X5	BN	0383	2/7/10	KC	
2/3/10	R171	P54,55,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/4/10	R172	P55,58,T1	T	T	1X1	BN	0383	2/7/10	RH	
2/6/10	R173	P55,58	195W	DS21	2X5	BN	0383	2/7/10	KC	
2/6/10	R174	P58,57,55	T	T	2X3	RH	0715	2/7/10	KC	
2/6/10	R175	P57,55	21W45	D	1X1	RH	0715	2/7/10	KC	
2/5/10	R176	P57,56,55	T	T	2X2	RH	0715	2/7/10	KC	

## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

PRINT NAME:

Kurt Peterson

SIGNATURE:

KAP



SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

7-Acre Closed Area Re-closure and Landfill Gas System - Citrus County Landfill

09207049.04

2/4 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R177	P56,55	10 N	B0	2x5	RH	0715	2/7/10	KC	
2/6/10	R178	P56,55	17 N	DS29	2x6	RH	0715	2/7/10	KC	
2/4/10	R179	P56,57,71	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R180	P56,76,71	T	T	2x3	RH	0715	2/7/10	RH	
2/6/10	R181	P56,76	12E	B0	2x2	RH	0715	2/7/10	KC	
2/6/10	R182	P56,76,57	31E	T	2x4	RH	0715	2/7/10	KC	
2/6/10	R183	P76,59,56	T	T	2x2	RH	0715	2/7/10	KC	
2/6/10	R184	P52,59,58	2E	B0	2x2	RH	0715	2/7/10	KC	
2/6/10	R185	P58,54,57	T	T	2x2	RH	0715	2/7/10	KC	
2/6/10	R186	P58,59	252E	B0	3x3	BN	0383	2/7/10	KC	
2/6/10	R187	P58,59	264E	DS22	2x5	BN	0383	2/7/10	KC	
2/4/10	R188	P58,59,71	T	T	1x1	BN	0383	2/7/10	RH	
2/4/10	R189	P59,60,71	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R190	P59,60,61	T	T	2x2	BN	0383	2/7/10	KC	
2/6/10	R191	P61,59	21W	DS23	2x5	BN	0383	2/7/10	KC	
2/6/10	R192	P61,59	23W	B0	2x3	BN	0383	2/7/10	KC	

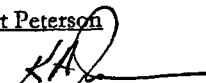
## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



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## GEOMEMBRANE REPAIR LOG

 SHEET  
 PROJECT TITLE  
 PROJECT NO.  
 DATE

 13 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
 09207049.04

2/5 - 2/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R193	P61,59	312W	BS	4x9	RH	0715	2/7/10	KC	
2/6/10	R194	P61,59,73	T	T	3x3	RH	0715	2/7/10	KC	
2/6/10	R195	P73,59,76	T	T	2x3	RH	0715	2/7/10	KC	
2/5/10	R196	P73,76,T1	T	T	1x1	RH	0715	2/7/10	RH	
2/5/10	R197	P73,72,T1	T	T	1x1	RH	0715	2/7/10	RH	
2/5/10	R198	P73,72	12E	BO	1x2	RH	0715	2/7/10	KC	
2/6/10	R199	P72,63,73	T	T	1x1	RH	0715	2/7/10	KC	
2/6/10	R200	P63,61,73	T	T	1x2	RH	0715	2/7/10	KC	
2/6/10	R201	P63,61	2N47E	BS	4x4	RH	0715	2/7/10	KC	
2/6/10	R202	P63,63,61	T	T	16x12	RH	0715	2/7/10	KC	DS-30
2/6/10	R203	P63,61	104E	BS	5x5	RH	0715	2/7/10	KC	
2/6/10	R204	P63,61	126E	BO	2x4	RH	0715	2/7/10	KC	
2/6/10	R205	P63,61	202	DS24	2x5	BN	0383	2/7/10	KC	
2/6/10	R206	P63,61,62	T	T	3x3	BN	0383	2/7/10	KC	
2/6/10	R207	P62	46E11N	BS	3x3	BN	0383	2/7/10	KC	BOOT
2/6/10	R208	P62	65E4N	BS	6x6	BN	0383	2/7/10	KC	BOOT

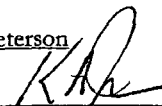
## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

14 of 16  
7-Acre Closed Area Re-closure and Landfill Gas System - Citrus County Landfill  
09207049.04

2/5 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R209	P61,62,60	T	T	2x2	BN	0383	2/7/10	KC	
2/6/10	R210	P60,62	17E	BO	3x8	BN	0383	2/7/10	KC	
2/6/10	R211	P60,62	44E	BO	3x6	BN	0383	2/7/10	KC	
2/4/10	R212	P62,60,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/4/10	R213	P62,64,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R214	P62,64,65	110W	DS-25 T	16x14	BN	0383	2/7/10	KC	CONCRETE DS COVERED
2/6/10	R215	P65,62,63	T	T	2x2	BN	0383	2/7/10	KC	
2/6/10	R216	P65,63,66	T	T	2x2	RH	0715	2/7/10	KC	
2/6/10	R217	P63A,63,66	T	T	2x2	RH	0715	2/7/10	KC	
2/6/10	R218	P63A,66	10W	DS26	2x5	RH	0715	2/7/10	KC	
2/6/10	R219	P63A,66,72	T	T	2x4	RH	0715	2/7/10	KC	
2/6/10	R220	P66,72	9W	BO	2x5	RH	0715	2/7/10	KC	
2/5/10	R221	P72,66,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R222	P66,67,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R223	P66,67	91E	BO	1x4	RH	0715	2/7/10	KC	
2/6/10	R224	P66,67	137E	BO	1x3	RH	0715	2/7/10	KC	

## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

15 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
 09207049.04

2/5 - 2/7/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/6/10	R225	P66,67	152E	DS27	2x6	RH	0715	2/7/10	KC	
2/6/10	R226	P66,65,67	T	T	2x2	RH	0715	2/7/10	KC	
2/6/10	R227	P67,68,65	T	T	2x2	BN	0383	2/7/10	KC	
2/6/10	R228	P65,64,68	T	T	2x3	BN	0383	2/7/10	KC	
2/5/10	R229	P64,68,TI	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R230	P68,69,TI	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R231	P68/69	136W	BO	2x2	BN	0383	2/7/10	KC	
2/6/10	R232	P68/69	145W	WS	3x3	BN	0383	2/7/10	KC	
2/6/10	R233	P69,68,67	T	T	2x2	BN	0383	2/7/10	KC	
2/6/10	R234	P69,71,67	T	T	2x2	RH	0715	2/7/10	KC	
2/5/10	R235	P67,71,TI	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R236	P71,74,TI	T	T	1x1	BN	0383	2/7/10	RH	
2/6/10	R237	P71,74	12E	BO	1x3	BN	0383	2/7/10	KC	
2/6/10	R238	P71,74,69	T	T	2x10	RH	0715	2/7/10	KC	
2/6/10	R239	P74,75	21E	BO	2x5	RH	0715	2/7/10	KC	
2/6/10	R240	P74,75,69	T	T	3x7	BN	0383	2/7/10	KC	

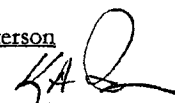
## DEFECT CODES:

AD -ANIMAL RELATED DAMAGE	DS -DESTRUCTIVE SAMPLE	IO -INSUFFICIENT OVERLAP	SS -START/STOP
B -UNDISPERSED RESIN BEAD	EE -EARTHWORK EQUIP DAMAGE	LB -LEISTER BURN	SSI -SOIL SURFACE IRREGULARITY
BO -BURN OUT	EXT -EXTENSION	MOT -MACHINE OFF TRACK	T -MULTIPLE PANEL INTERSECTION
BS -BOOT SKIRT	FB -FUSION WELDER BURN	N -NODULE	VL -VACUUM TEST LEAK
C -COUPON	FD -FACTORY DAMAGE	PTC -PRESSURE TEST CUT	WC -WRINKLE CUT
CO -CHANGE OF OVERLAP	FM -FISH MOUTH	SI -SUBGRADE IRREGULARITY	WR -WRINKLE
CR -CREASE	FS -FAILED SEAM	SL -SLAG ON TEXTURED SHEET	WS -WELDER RESTART
D -INSTALLATION DAMAGE	HT -HEAT TACK BURN	SO -SHARP OBJECT	

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

## GEOMEMBRANE REPAIR LOG

SHEET

PROJECT TITLE

PROJECT NO.

DATE

 16 of 16  
 7-Acre Closed Area Re-closure and Landfill Gas System -Citrus County Landfill  
 09207049.04

2/5 - 2/24/10

DATE REPAIRED	REPAIR NO.	SEAM / PANEL ID	LOCATION	DEFECT CODE	SIZE OF REPAIR	TECH ID	MACHINE NO.	DATE TESTED	TESTED BY	COMMENTS
2/5/10	R241	P69,75,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R242	P74,75,T1	T	T	1x1	BN	0383	2/7/10	RH	
2/5/10	R243	P74,70,T1	T	T	1x1	BN	0383	2/7/10	RH	W
2/5/10	R244	P74,70,T1	T	T	1x1	BN	0383	2/7/10	RH	E
2/6/10	R245	P74,70	126	BO	1x2	RH	0715	2/7/10	KC	
2/6/10	R246	P41	11N 5E	D	1x1	BN	0383	2/7/10	KC	
2/8/10	R247	P53,51	50 W	DS/BAB	2x55	RH	0383	2/8/10	KC	CAT
2/24/10	R248	P34	130W 85	D	4x4	BW	0251	2/24/10	BW	VENT FOR LFG
2/24/10	R249	P49	245W 33	D	2x2	BW	0251	2/24/10	BW	VENT FOR LFG
2/24/10	R250	P64	15N 9N	D	2x2	BW	0251	2/24/10	BW	VENT FOR LFG

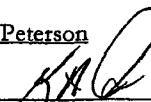
## DEFECT CODES:

AD	-ANIMAL RELATED DAMAGE	DS	-DESTRUCTIVE SAMPLE	IO	-INSUFFICIENT OVERLAP	SS	-START/STOP
B	-UNDISPERSED RESIN BEAD	EE	-EARTHWORK EQUIP DAMAGE	LB	-LEISTER BURN	SSI	-SOIL SURFACE IRREGULARITY
BO	-BURN OUT	EXT	-EXTENSION	MOT	-MACHINE OFF TRACK	T	-MULTIPLE PANEL INTERSECTION
BS	-BOOT SKIRT	FB	-FUSION WELDER BURN	N	-NODULE	VL	-VACUUM TEST LEAK
C	-COUPON	FD	-FACTORY DAMAGE	PTC	-PRESSURE TEST CUT	WC	-WRINKLE CUT
CO	-CHANGE OF OVERLAP	FM	-FISH MOUTH	SI	-SUBGRADE IRREGULARITY	WR	-WRINKLE
CR	-CREASE	FS	-FAILED SEAM	SL	-SLAG ON TEXTURED SHEET	WS	-WELDER RESTART
D	-INSTALLATION DAMAGE	HT	-HEAT TACK BURN	SO	-SHARP OBJECT		

PRINT NAME:

Kurt Peterson

SIGNATURE:



SCS Engineers

## DESTRUCTIVE TEST LOG

SHEET:

1

of

2

PROJECT TITLE: 7-Acre Closed Area Re-closure and Landfill Gas System - Citrus County Landfill

PROJECT NO: 09207049.04

DATE: 1/29 - 2/5/10

SAMPLE NO.	SEAM I.D.	MACHINE NO.	WELD TYPE	DATE SEAMED	DATE SAMPLED	TEST STATUS			COMMENTS
						PASS/FAIL			
						INSTALLER	SCS	ARCH	
D51	P1/P2	0833	F	1/29/10	1/29/10	P	P	P	TRI P
D52	P5/P6	0833	F	1/29/10	1/29/10	P	P	P	TRI P
D53	P10/P11	0839	F	1/29/10	1/31/10	P	P	P	TRI P
D54	P14/P15	0839	F	1/29/10	1/31/10	P	P	P	TRI P
D55	P18/P19	0839	F	1/29/10	1/31/10	P	P	P	TRI P
D56	P19/P31	0839	F	1/30/10	1/31/10	P	P	P	TRI <del>F</del>
D57	P29/P30	0833	F	1/30/10	1/31/10	P	P	P	TRI P
D58	P21/P28	0843	F	1/29/10	1/31/10	P	P	P	TRI P
D59	P34/P35	0842	F	2/1/10	2/3/10	P	P	P	TRI P
D510	P35/P36	0842	F	2/1/10	2/3/10	P	P	P	TRI P
D511	P36/P38	0833	F	2/1/10	2/3/10	P	P	P	TRI P
D512	P38/P40	0842	F	2/1/10	2/3/10	P	P	P	TRI P
D513	P43/P44	0839	F	2/1/10	2/3/10	P	P	P	TRI P
D514	P45/P42	0833	F	2/1/10	2/3/10	P	P	P	TRI P
D515	P45/P47	0842	F	2/3/10	2/5/10	P	P	P	TRI P
D516	P47/P49	0842	F	2/3/10	2/5/10	P	P	P	TRI P
D517	P51/P49	0839	F	2/3/10	2/5/10	P	P	P	TRI P
D518	P51/P53	0842	F	2/3/10	2/5/10	P	P	P	TRI F
D519	P53/P55	0842	F	2/3/10	2/5/10	P	P	P	TRI P
D520	P53/P54	0833	F	2/3/10	2/5/10	P	P	P	TRI P
D521	P55/P58	0839	F	2/3/10	2/5/10	P	P	P	TRI P
D522	P58/P59	0842	F	2/3/10	2/5/10	P	P	P	TRI P
D523	P61/P59	0833	F	2/4/10	2/5/10	P	P	P	TRI P

PRINT NAME: Kurt Peterson

SIGNATURE: 

SCS Engineers

## DESTRUCTIVE TEST LOG

SHEET:

2

of

2

PROJECT TITLE:

7-Acre Closed Area Re-closure and Landfill Gas System - Citrus County Landfill

PROJECT NO:

09207049.04

DATE:

1/30 - 2/8/10

SAMPLE NO.	SEAM I.D.	MACHINE NO.	WELD TYPE	DATE SEAMED	DATE SAMPLED	TEST STATUS			COMMENTS
						PASS/FAIL			
						INSTALLER	SCS	ARCH	
D524	P61/P63	0839	F	2/4/10	2/5/10	P	P	P	TRI P
D525	P64/P65	0842	F	2/4/10	2/5/10	P	P	P	TRI P
D526	P63A/P66	0842	F	2/4/10	2/5/10	P	P	P	TRI P
D527	P67/P66	0833	F	2/4/10	2/5/10	P	P	P	TRI P
D528	P47/P49	0383	E	2/5/10	2/5/10	P	P	P	TRI P
D529	P56/P55	0715	E	2/5/10	2/5/10	P	P	P	TRI P
D530	P63A/P63	0715	E	2/5/10	2/5/10	P	P	P	TRI P
D56A	P19/P31	0839	F	1/30/10	2/3/10	P	P	P	TRI F
D56B	P19/P31	0839	F	1/30/10	2/3/10	P	P	P	TRI F
D56A1	P19/P31	0839	F	1/30/10	2/5/10	P	P	P	TRI P
D56B1	P19/P31	0839	F	1/29/10	2/5/10	P	P	P	TRI P
D518A	P51/P53	0842	F	2/3/10	2/5/10	P	P	P	TRI P
D518B	P51/P53	0842	F	2/3/10	2/5/10	P	P	P	TRI P

PRINT NAME: Kurt Peterson

SIGNATURE:

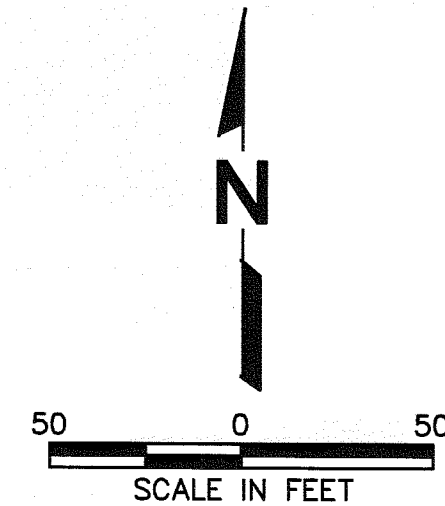
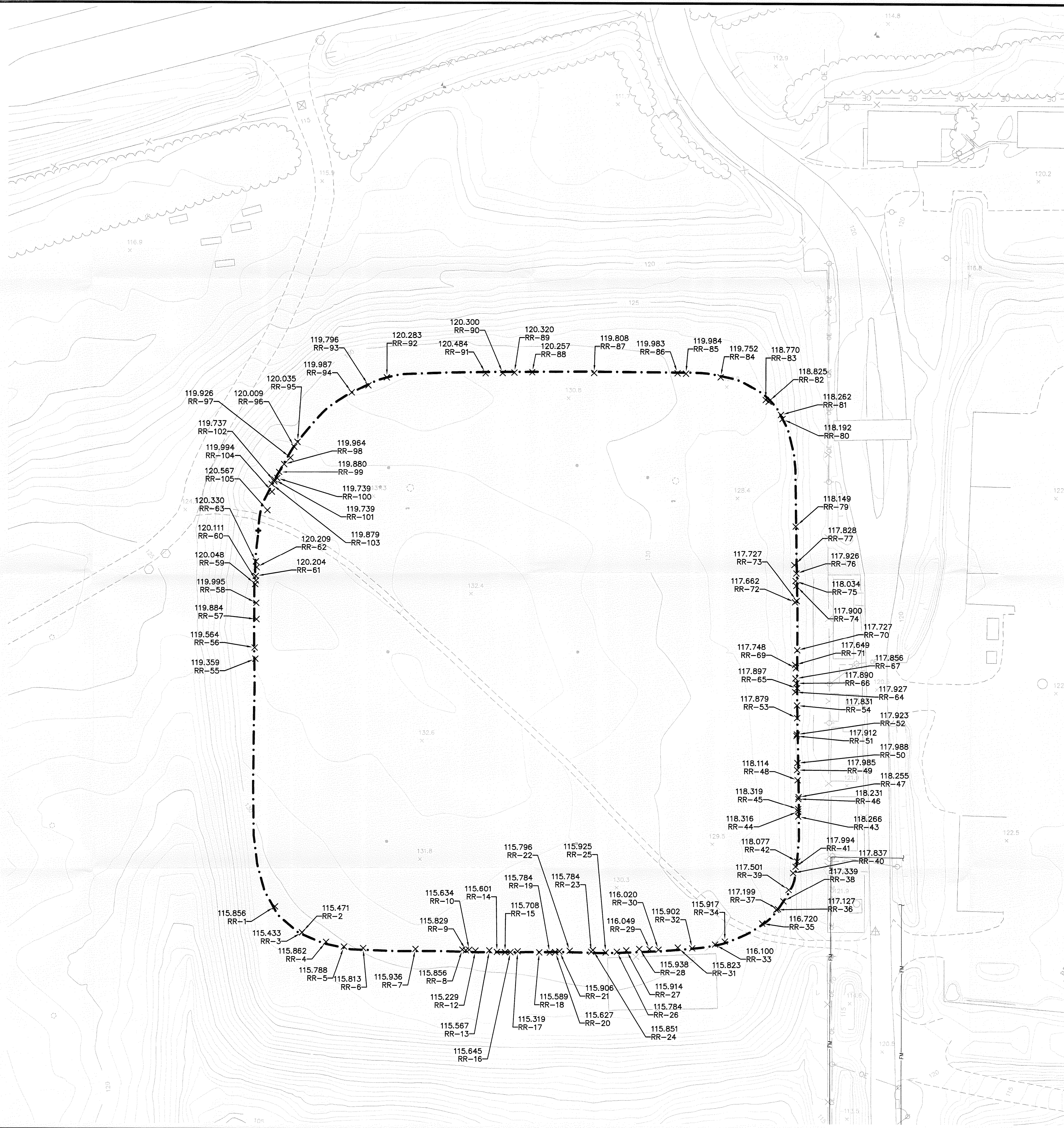


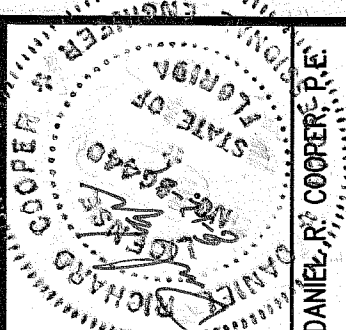


ATTACHMENT 6  
EXISTING LINER REPAIR DRAWING

FLORIDA DEPARTMENT OF  
TRANSPORTATION  
AUG 15 2011  
SOUTHWEST DISTRICT  
TAMPA

C:\Users\scs\OneDrive\Documents\Projects\7-Acre Closed Area Re-Closure\7-Acre Closed Area Re-Closure.dwg Aug 11, 2011 3:56pm Local Name: 7-Acre Closed Area Re-Closure.dwg



	
BY	
DESCRIPTION	
DATE	
REV	
DRAWING TITLE <b>7-ACRE CLOSED AREA RE-CLOSURE EXISTING LINER REPAIR LOCATIONS</b>	
PROJECT TITLE <b>7-ACRE CLOSED AREA RE-CLOSURE AND LANDFILL GAS SYSTEM CONSTRUCTION DRAWINGS</b>	
CLIENT <b>CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION LECANTO, FLORIDA</b>	
SCS ENGINEERS STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS 4041 PARK OAKS BLVD., SUITE 100, TAMPA, FL 33610 813.821-0080 FAX 813.824-8757 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892 PROJ. NO. 07049.04 OWN. BY: CDA CHK. BY: DRC APP. BY: DRC	
CADD FILE: 074904RC-GRADING	
DATE: AUGUST 2009	
SCALE: AS SHOWN	
DRAWING NO. <b>1</b> of 1	

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION  
Aug 15 2011  
TAMPA DISTRICT