

SCS ENGINEERS

August 30, 2006
File No. 09199033.12

Susan J. Pelz, P.E.
Solid Waste Program Manager
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637

Dept. of Environmental
Protection

AUG 31 2006

Subject: Estimate of Remaining Capacity and Life of Site
Hardee County Landfill - Permit No. 38414-007-Southwest District
Hardee County, Florida

Dear Ms. Pelz:

SCS Engineers (SCS) is pleased to submit the estimates of remaining capacity and life of site for the Hardee County Landfill. The estimates of remaining capacity and life of site are being submitted in fulfillment of Specific Condition No. 9E of Operation Permit No. 38414-007-SO for the Hardee County Landfill. In addition, as required by Specific Condition No. 9E of the Operation Permit, a full aerial topographic survey of the landfill was conducted on June 16, 2006 by Pickett & Associates, Inc. (Pickett) for preparation of the calculations to estimate the remaining capacity and site life. Please refer to Attachment A for a copy of the June 16, 2006 Pickett aerial topographic survey.

WASTE DISPOSAL PROJECTIONS

Hardee County (County) supplied SCS with historic waste quantity reports for 2002 through July 2006. This information is provided in Attachment B and is also summarized in this section. As shown in the waste quantity reports, the amount of waste disposed in the Class I landfill area is the total amount of residential, commercial, and construction and demolition (C&D) waste material minus the quantity of waste recycled in the Materials Recycling Facility (MRF).

SCS used the projected population estimates prepared by the Florida Legislative Office of Economic and Demographic Research (FLOEDR) for Hardee County to estimate the waste quantity disposal rate per capita. The period from 2002 was selected since mandatory collection was started in 2002 and is representative of current County collection policies. Using the FLOEDR population projections and the actual tonnages disposed in the Class I landfill, SCS estimated an annual waste disposal tonnage per capita of approximately 0.736 tons per person. This disposal rate was assumed to remain constant for future projections. Adjustments for total waste disposed at the landfill were accounted for by variations in population growth for Hardee County (estimated by FLOEDR) for years 2006 and beyond. Table 1 was prepared to show the history and projected waste disposal rates in the landfill.



**TABLE 1. WASTE DISPOSAL IN CLASS I LANDFILL
BASED ON POPULATION**

Year	Population¹	Waste Disposed in Class I Landfill (tons/yr)	AIRSPACE CONSUMED (CY)
Sept 02 - Aug 03	27,152	18,639	33,889
Sept 03 - Aug 04	27,607	21,016	38,211
Sept 04 - Aug 05	28,178	21,991	39,983
Sept 05 - Aug 06	28,756	20,900	38,000

Notes:

¹ Source: Florida Legislative Office of Economic and Demographic Research.

² Actual Waste Quantity disposed in landfill (loose and baled) provided by Hardee County.

³ Disposed waste quantities based upon actual and projected rates.

⁴ Waste disposed based upon project population estimated and average per capita waste rates.

ESTIMATED REMAINING DISPOSAL CAPACITY AND SITE LIFE

To estimate the remaining available airspace for placement of waste materials and cover soils SCS compared the final operating buildout plan for the landfill, specifically Drawing No. 8 of 12 of the Operations Permit, to the June 16, 2006 aerial topographic survey flown by Pickett. Please refer to Attachment C Drawing 1 of 1 Site Life Volume Estimate for a comparison between the final operating buildout plan (referenced to the top of waste) to the June 16, 2006 aerial topographic survey flown by Pickett. The net remaining available airspace for placement of waste materials and cover soils was estimated to be 29,967 cubic yards (CY) as of June 16, 2006. SCS assumed that 10 percent of the remaining net available airspace would be used for cover material, therefor, leaving approximately 26,970 CY of airspace available for waste disposal.

SCS used an estimated in-place density for the waste material of approximately 43 pounds per cubic foot (pcf) or approximately 1,100 pounds per cubic yard. This density is consistent with either baled waste or loose waste fill using dozers for compaction. Table 2 represents the available and consumed airspace on a yearly basis. The consumed airspace was estimated by converting the annual waste disposal quantity into pounds per year and dividing by the estimated in-place waste density.

Ms. Susan Pelz, P.E.
August 30, 2006
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TABLE 2. AVAILABLE AND CONSUMED AIRSPACE

Year	Waste Disposed of in Class I Landfill (tons)	Airspace Consumed (CY)	Available Airspace (CY)
June 16, 06 Through August 06	4,281	7,374	19,596
Sep-06	1,742	3,167	16,429
Oct-06	1,742	3,167	13,262
Nov-06	1,742	3,167	10,094
Dec-06	1,742	3,167	6,927
Jan-07	1,742	3,167	3,760
Feb-07	1,742	3,167	593
Mar-07	1,742	3,167	-2,575

As shown in Table 2, the landfill will use the remaining available airspace by early March 2007. Please refer to Attachment D for a further breakdown of the site life calculations.

Please do not hesitate to call should you have any questions or require additional information.

Sincerely,



Shane R. Fischer, P.E.
Project Manager
SCS ENGINEERS

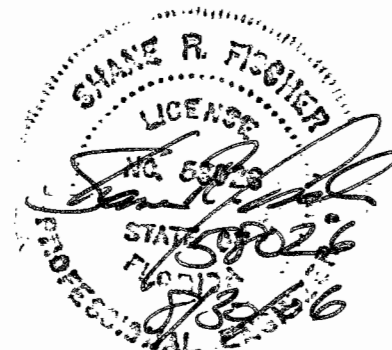


C. Ed Hilton, P.E.
Solid Waste Director
SCS ENGINEERS

cc: Teresa Carver, Hardee County Solid Waste Director

Attachments

SRF/CEH:srf



ATTACHMENT A

PICKETT & ASSOCIATES, INC.
AERIAL TOPOGRAPHIC SURVEY
JUNE 16, 2006



PICKETT

SURVEYING & PHOTOGRAMMETRY

REPORT OF SURVEY

NOTE: THIS REPORT AND ACCOMPANYING MAP ARE NOT FULL AND COMPLETE WITHOUT THE OTHER AND ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

PICKETT & ASSOCIATES PROJECT NO.: 14198-1

TITLE/TYPE OF SURVEY: TOPOGRAPHIC SURVEY

DATE OF IMAGERY: 06/16/06

SUBJECT: HARDEE COUNTY LANDFILL

CLIENT: SCS ENGINEERS, INC

ACCURACY STATEMENT: The following stated plus or minus tolerances encompass a minimum of 90% of the difference between photogrammetrically measured values and any ground truth of all well-identified features. Mapped features meet or exceed the Florida Minimum Technical Standards.

VERTICAL:

Contours have been measured to an estimated vertical positional accuracy of 0.5'. Spot elevations and well-identified features have been measured to an estimated vertical positional accuracy of 0.25'.

HORIZONTAL:

Well-identified features have been measured to an estimated horizontal positional accuracy of 1.66'.

MAP PLOTTING:

This map is intended to be displayed at a scale of 1" = 50' (1:600) or smaller.

DATUM:

HORIZONTAL:

Coordinates are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83/90. Pickett & Associates provided the horizontal coordinates.

VERTICAL:

Elevations are to National Geodetic Vertical Datum of 1929. Pickett & Associates provided the vertical elevations.

PICKETT & ASSOCIATES, INC.

Feature List

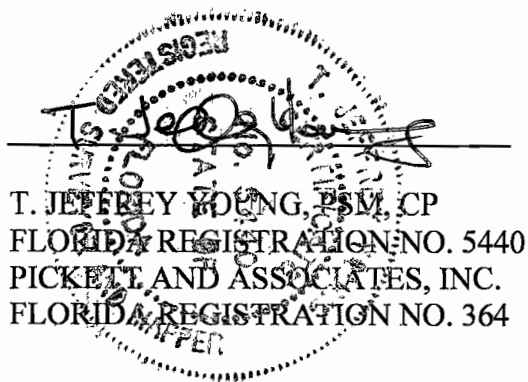
(THESE FEATURES ARE REPRESENTED BY SYMBOLS NOT TO SCALE)		(THESE FEATURES ARE TO SCALE)			
△ CONTROL	□ CATCH BASIN	— CURB	— PIPELINE	—	RECREATION
○ UTILITY POLE	⊗ VALVE	— PAVED ROAD	—	—	EDGE OF GROVE
★ LIGHT POLE	⊗ ELECTRICAL	— CONCRETE SURFACE	—	—	EDGE OF WATER
⊗ TRAFFIC LIGHT	⊗ AC	— UNPAVED SURFACE	—	—	SWAMPLINE
○ SIGN POST	⊗ MISC SYMBOL	— SIDEWALK	—	—	OBSCURED CONTOUR
⊗ FLAG	⊗ CULVERT	— FENCE	—	—	DEPRESSION CONTOUR
⊗ MAIL BOX	⊗ SWAMP/MARSH	— GUARDRAIL	—	—	(THESE INFORMATIVE LABELS ARE NOT SCALE DEPENDENT)
⊗ MANHOLE	○ TREE	— WALL	—	W.E. 74.4	WATER ELEVATION
⊗ HYDRANT	★ PALM	— RAILROAD	—	120.0	TYPICAL SPOT ELEVATION
	○ SHRUB	— STRUCTURE	—	120.0	OBSCURED SPOT ELEVATION
		— TREE LINE			
		— SHRUB LINE			

Measurement Methods:

In areas where vegetation makes the ground difficult to determine contours are shown dashed and do not meet the above stated accuracy. Contours are removed from areas where vegetation completely hides the ground. This map is limited to those features visible on aerial photography. Aerial photography was acquired at a negative scale of 1:3960, scanned at a 15-micron resolution and mapped using softcopy photogrammetric techniques.

Limitations:

This mapping should be used for preliminary design work only and should not replace an actual field survey where the required accuracy is greater than the accuracy stated in this report. No responsibility is assumed for areas outside the contracted scope.



T. JEFFREY YOUNG, P.E., CP
FLORIDA REGISTRATION NO. 5440
PICKETT AND ASSOCIATES, INC.
FLORIDA REGISTRATION NO. 364

6/16/06
SURVEY DATE



ATTACHMENT B

**2005 AND 2006 WASTE QUANTITY REPORT
HARDEE COUNTY LANDFILL**

**WASTE QUANTITY REPORT
REPORTED IN TONS
CALENDAR YEAR 2005**

MONTH	RESIDENTIAL	COMMERCIAL	CONSTRUCTION AND DEMOLITION DEBRIS	WOOD AND YARD WASTE	SCRAP METAL	TIRES	TOTAL	TEMP SITE	ACCUMALATIVE TONNAGE
Jan-05	879.61	1022.36	293.49	154.81	98.47	8.30	2457.04	696.36	3153.40
Feb-05	767.72	846.27	9.17	51.88	69.51	12.02	1756.57	446.99	2203.56
Mar-05	986.48	781.92	37.43	148.20	111.74	32.26	2098.03	610.77	2708.80
Apr-05	918.58	791.89	196.76	167.10	58.45	16.49	2149.27	189.30	2338.57
May-05	1016.66	1027.26	224.00	126.56	32.09	19.60	2446.17	0.00	2446.17
Jun-05	975.74	759.80	151.87	387.73	57.94	20.68	2353.76	0.00	2353.76
Jul-05	870.44	648.53	82.07	205.07	75.12	7.74	1888.97	0.00	1888.97
Aug-05	897.59	985.30	122.32	784.29	77.87	17.45	2884.82	0.00	2884.82
Sep-05	788.62	735.81	130.25	1004.92	77.53	8.25	2745.38	0.00	2745.38
Oct-05	772.61	708.60	60.42	819.32	67.96	14.94	2443.85	0.00	2443.85
Nov-05	893.45	713.07	94.62	465.00	73.25	14.55	2253.94	0.00	2253.94
Dec-05	973.59	768.73	64.11	304.36	132.05	8.47	2251.31	0.00	2251.31
TOTAL	10741.09	9789.54	1466.51	4619.24	931.98	180.75	27729.11	0.00	27729.11

**DISPOSITION REPORT
REPORTED IN TONS
CALENDAR YEAR 2005**

MONTH	PROCESSED THROUGH MRF	BALED WASTE DISPOSED OF IN CLASS I	LOOSE WASTE DISPOSED OF IN CLASS I	TOTAL WASTE DISPOSED OF IN CLASS I	RECYCLED THROUGH MRF	SCRAP METAL RECYCLED	WOOD AND YARD TRASH PROCESSED	WASTE TIRES REMOVED FOR RECYCLING
Jan-05	1358.67	1353.78	836.79	2190.57	4.89	416.95	0.00	0.00
Feb-05	953.93	937.14	669.23	1606.37	16.79	0.00	0.00	0.00
Mar-05	1428.86	1420.26	376.97	1797.23	8.60	0.50	0.00	92.67
Apr-05	969.08	969.08	938.15	1907.23	0.00	264.40	0.00	0.00
May-05	1462.33	1450.60	805.59	2256.19	11.73	0.00	846.64	0.00
Jun-05	1353.25	1331.15	534.16	1865.31	22.10	172.34	0.00	10.19
Jul-05	1041.68	1017.03	559.36	1576.39	24.65	0.00	0.00	0.00
Aug-05	1237.24	1237.24	767.97	2005.21	0.00	206.51	0.00	9.32
Sep-05	1261.12	1244.19	393.56	1637.75	16.93	0.00	2382.01	47.70
Oct-05	1134.29	1102.22	407.34	1509.56	32.07	0.00	0.00	20.31
Nov-05	1088.93	1075.65	612.21	1687.86	13.28	174.38	0.00	10.47
Dec-05	1216.71	1212.01	589.72	1801.73	4.70	0.00	0.00	14.64
TOTAL	14506.09	14350.35	7491.05	21841.40	155.74	1235.08	3228.65	205.30

**WASTE QUANTITY REPORT
REPORTED IN TONS
CALENDAR YEAR 2006**

MONTH	RESIDENTIAL	COMMERCIAL	CONSTRUCTION AND DEMOLITION DEBRIS	WOOD AND YARD WASTE	SCRAP METAL	TIRES	TOTAL
Jan-06	960.33	803.25	43.64	97.45	125.09	17.24	2047.00
Feb-06	823.07	710.07	65.68	107.73	68.06	9.88	1784.49
Mar-06	972.29	899.74	55.24	121.28	80.72	11.46	2140.73
Apr-06	861.10	820.61	39.42	49.34	70.46	6.40	1847.33
May-06	998.83	1015.18	15.53	96.25	64.93	19.26	2209.98
Jun-06	991.59	642.15	255.50	63.79	101.14	16.56	2070.73
Jul-06	850.72	522.84	226.12	106.05	70.19	24.13	1800.05
Aug-06							0.00
Sep-06							0.00
Oct-06							0.00
Nov-06							0.00
Dec-06							0.00
TOTAL	6457.93	5413.84	701.13	641.89	580.59	104.93	13900.31

**DISPOSITION REPORT
REPORTED IN TONS
CALENDAR YEAR 2006**

MONTH	PROCESSED THROUGH MRF	BALED WASTE DISPOSED OF IN CLASS I	LOOSE WASTE DISPOSED OF IN CLASS I	TOTAL WASTE DISPOSED OF IN CLASS I	RECYCLED THROUGH MRF	SCRAP METAL RECYCLED	WOOD AND YARD TRASH PROCESSED	WASTE TIRES REMOVED FOR RECYCLING
Jan-06	951.63	940.72	855.59	1796.31	10.91	163.24	0.00	8.38
Feb-06	1206.30	1201.12	392.52	1593.64	5.18	0.00	1109.89	22.16
Mar-06	672.26	664.37	1255.01	1919.38	7.89	0.00	0.00	11.33
Apr-06	191.92	174.58	1529.21	1703.79	17.34	0.00	0.00	13.52
May-06	110.00	107.17	1919.54	2026.71	2.83	257.26	0.00	0.00
Jun-06	671.32	667.39	1217.92	1885.31	3.93	0.00	0.00	11.92
Jul-06	120.94	117.63	1478.74	1596.37	3.31	0.00	0.00	33.68
Aug-06		0.00	0.00	0.00				
Sep-06		0.00	0.00	0.00				
Oct-06		0.00	0.00	0.00				
Nov-06		0.00	0.00	0.00				
Dec-06		0.00	0.00	0.00				
TOTAL	3924.37	3872.98	8648.53	12521.51	51.39	420.50	1109.89	100.99

ATTACHMENT C

DRAWING 1 OF 1 SITE LIFE VOLUME ESTIMATE

ATTACHMENT D
SITE LIFE CALCULATIONS

SCS ENGINEERS

SHEET 1 of 2

CLIENT Hardee County	PROJECT Landfill Expansion	JOB NO. 09199033.12	
SUBJECT Site Life Estimates 2006 Waste Quantity Estimates		BY SRF	DATE 8/30/2006
		CHECKED CET	DATE 8/30/2006

	Baled Waste Disposed of in Class I (tons)	Loose Waste Disposed of in Class I (tons)	Total Waste Disposed of in Class I (tons)	Estimated Waste Disposed of in Class I (tons)
Sep-05	1,244	394	1,638	1,638
Oct-05	1,102	407	1,510	1,510
Nov-05	1,076	612	1,688	1,688
Dec-05	1,212	590	1,802	1,802
Jan-06	941	856	1,796	1,796
Feb-06	1,201	393	1,594	1,594
Mar-06	664	1,255	1,919	1,919
Apr-06	175	1,529	1,704	1,704
May-06	107	1,920	2,027	2,027
Jun-06	667	1,218	1,885	1,885
Jul-06	118	1,479	1,596	1,596
Aug-06				1,742

Average (September 2005 - July 2006) = 1,742

Estimated Waste Quantity (September 2005 Through Mid June 2006) = 16,619

Estimated Waste Quantity (Mid June 2006 Through August 2006) = 4,281

Estimated Annual Waste Quantity (September 2005 Through August 2006) = 20,900

SCS ENGINEERS

SHEET 2 of 2

CLIENT Hardce County	PROJECT Landfill Expansion	JOB NO. 09199033.12	
SUBJECT Site Life Estimates 2006 Waste Quantity Estimates		BY SRF	DATE 8/30/2006
		CHECKED CEH	DATE 8/30/06

YEAR	POPULATION ¹	WASTE DISPOSED OF IN CLASS I LANDFILL (tons/yr)	ANNUAL WASTE TONNAGE PER CAPITA
Sept 02 - Aug 03	27,152	18,639	0.686
Sept 03 - Aug 04	27,607	21,016	0.761
Sept 04 - Aug 05	28,178	21,991	0.780
Sept 05 - Aug 06	29,270	20,900	0.714

TONS PER CAPITA PER YEAR²: 0.736 tons/capita-yr

Gross Airspace Available June 16, 2006³ = 29,967 CY
 Estimated Percent Cover = 10%
 Airspace for Cover = 2,997 CY
 Net Airspace available from June 16, 2006 = 26,970 CY
 Waste Density⁴ = 43 lb/CF

YEAR	WASTE DISPOSED OF IN CLASS I LANDFILL (tons) ⁵	AIRSPACE CONSUMED (CY)	AVAILABLE AIRSPACE (CY)
			26,970
June 16, 06 Through August 06 ⁶	4,281	7,374	19,596
Sep-06	1,742	3,167	16,429
Oct-06	1,742	3,167	13,262
Nov-06	1,742	3,167	10,094
Dec-06	1,742	3,167	6,927
Jan-07	1,742	3,167	3,760
Feb-07	1,742	3,167	593
Mar-07	1,742	3,167	-2,575

The landfill will use the available airspace by early March 2007

NOTES:

¹ Source : Florida Legislative Office of Economic and Demographic Research² The annual tonnage per capita reflects years 2002 thru August 2006 since mandatory collection has been instated.³ Airspace computed using June 16, 2006 topography versus the permitted final buildout, refer to Attachment C.⁴ Waste density based upon average bale weight (2150 lb)/(bale size 2.6' x 3.8' x 5.1').⁵ Waste quantity disposed in landfill (loose and baled) provided by Hardce County, refer to Attachment B.⁶ Data from September 2005 through mid June 2006 (time of Pickett survey) totals 8,056 tons of baled waste and 8,564 tons of loose waste for a total waste disposed of 16,619 tons. The average waste disposed per month (September 2005 through July 2006) computes to 1,742 tons/month. Using the average waste disposed per month for August 2006 yields an annual total of 20,900 tons. Estimated waste quantity mid June 2006 (time of Pickett survey) through August 2006 totals 4,281 tons.