Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Friday, May 15, 2020 1:08 PM
To: SWD_Waste; Jarmolowski, James; Black, Alexis; Tafuni, Steven
Cc: Marissa Alexander; Ofelia Reyna; Janice Williamson
Subject: Hardee County Landfill Remaining Disposal Capacity and Site Life
Attachments: Hardee County Landfill Annual Site Life.pdf

In accordance with Permit No. 38414-016-SO/01, please find attached the Hardee County Landfill Remaining Disposal Capacity and Site Life calculations for Reporting Year 2020.

Please let me know if you have any questions or need any additional information.

Thank you

Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers
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(813) 804-6714 (W)
(813) 503-1044 (C)
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Driven by Client Success
www.scsengineers.com

May 15, 2020
File No. 09199033.27

Mr. James Jarmolowski, P.G.
Florida Department of Environmental Protection
Solid Waste Section, MS 4565
2600 Blair Stone Road
Tallahassee, Florida 32399

Subject: Remaining Disposal Capacity and Site Life – Reporting Year 2020
Hardee County Landfill
Permit No.: 38414-016-SO/01

Dear Mr. Jarmolowski:

On behalf of the Hardee County Solid Waste Division (County), SCS Engineers (SCS) has prepared the remaining disposal capacity and site life estimate for the Hardee County Landfill in accordance with Rule 62-701.500(13)(c) and Section 2 - Specific Condition Part C.14.b of the facility's solid waste operation permit. As required by the Specific Condition an aerial topographic survey of the landfill was conducted on April 3, 2020 by Sherco, Inc. (Sherco) and was used in the preparation of the calculations. Please refer to Attachment A for a copy of the Sherco Survey.

Based on the attached calculations, there is roughly 839,761 CY of remaining capacity in Phase II Section II which relates to approximately 24.8 years as of the survey date. The anticipated closure year is mid-January 2045. Please refer to Attachment B for the remaining life and capacity calculations.

If you have any questions regarding the information contained herein, please contact the undersigned at (813) 503-1044.

Sincerely,

Ian Spurlock

Ian Spurlock, P.E.
Senior Project Professional
SCS Engineers

Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers

IUS/SRF

cc: Marissa Alexander, Hardee County
Ofelia Reyna, Hardee County

This item has been digitally signed and sealed by Shane R. Fischer, PE on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

SHANE R. FISCHER
LICENSE
No 58026
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

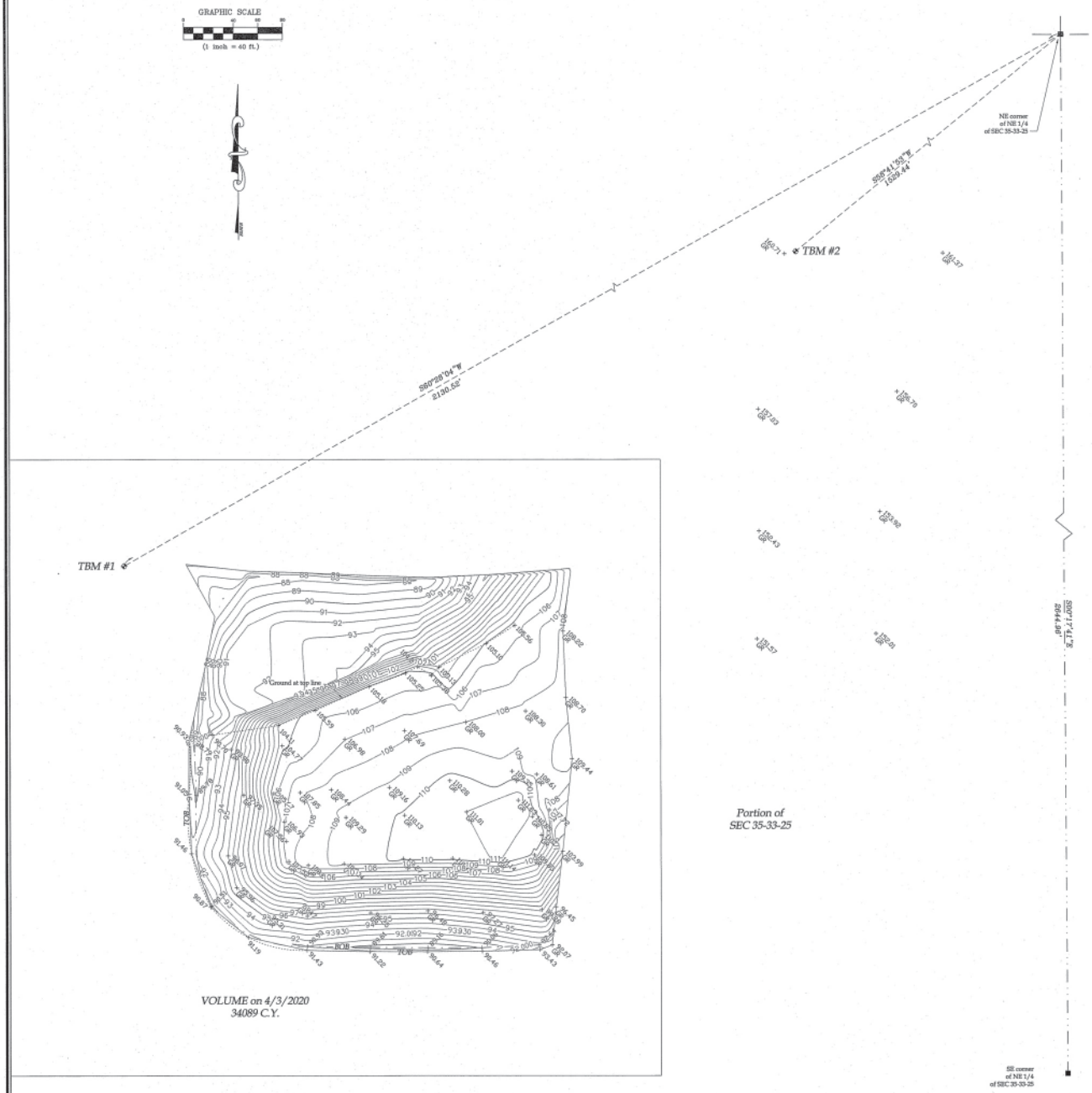
Shane Fischer

Digitally signed by Shane Fischer
Date: 2020.05.15 13:04:24 -04'00'

ATTACHMENT A

SHERCO TOPOGRAPHIC SURVEY

TOPOGRAPHIC SURVEY



VOLUME on 4/3/2020
34089 C.Y.

PROPERTY ADDRESS:
685 AIRPORT ROAD
WAUCHULA, FLORIDA 33873

CERTIFIED TO, AND FOR THE EXCLUSIVE USE OF:
HARDEE COUNTY PUBLIC WORKS

LEGEND:

◆ = Temporary Benchmark (TBM)

■ = 4" x 4" Concrete Monument Found (No Cap)

..... = Top of Bank (TOB)

—— · —— = Bottom of Bank (BOB)

HORIZONTAL CONTROL DATA:
Florida State Plane Coordinate System, East Zone,
North American Datum of 1983 (2007 adjustment)

PRIMARY CONTROL:
NGS DES - P 650 - PID - DJ6161
Elevation = 65.68'

TBM #1:
5/8" Iron Rod & Reference Cap Set (LB 7827)
Elevation = 65.59'

TBM #2:
5/8" Iron Rod & Reference Cap Set (LB 7827)
Elevation = 161.06'

N. A. V. D. 88

I hereby certify that I am a Florida Registered Professional Land Surveyor and that the map or plat shown hereon is a graphic representation of the described lands recently surveyed under my direction and meets or exceeds the "Standards of Practice" as set forth by the Board of Professional Surveyors and Mappers, Chapter 5J-17 of the Florida Administrative Code, Pursuant to Section 472.027 of the Florida Statutes.

Sherco, Inc.
SURVEYING SERVICES
16 North Lake Avenue
Avon Park, Florida 33825
Ofc: (863) 453-4113 Fax: (863) 453-4192

EMBOSSED SEAL

Robert Phillip Schuler, P.L.S.
Florida Registration # LS 3916
Certificate of Authorization # LB 7827

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

HARDEE COUNTY PUBLIC WORKS

TOPOGRAPHIC SURVEY

PROJECT NO.: 35352501
Field Survey Completed: 4/03/20
Drawn: JEK
Checked: RPS
F.B.: Notes in file

Revised:

ATTACHMENT B

REMAINING LIFE AND CAPACITY CALCULATIONS

SCS ENGINEERS

SHEET 1 OF 1

CLIENT	PROJECT	JOB NO.
Hardee County	Annual Remaining Life Estimate Phase II Section II	09199033.27

SUBJECT	BY	DATE
Hardee County Landfill Annual Remaining Life Estimate	SRF	5/15/2020
Reporting Year 2020	CHECKED	DATE
	IUS	5/15/2020

YEAR	MONTH	POPULATION[1]	WASTE DISPOSED (tons)[2]	WASTE DISPOSED (tons/yr)[2]	WASTE DISPOSED (tons/day)	WASTE DISPOSED (tons/capita/yr)	AIRSPACE CONSUMED (CY)	REMAINING CAPACITY PHASE II SECTION II (CY)
2012		27,627		16,237	53.1	0.59		
2013		27,682		17,243	56.3	0.62		
2014		27,712		16,981	55.5	0.61		
2015		27,645		18,200	59.5	0.66		
2016		27,637		19,379	63.3	0.70		
2017		27,426		20,562	67.2	0.75		
2018		27,425		21,387	69.9	0.78	36,465	884,021
2019		27,512		20,742	67.8	0.75	35,365	848,656
2020		27,651						
	January 20		1,708		55.1		2,912	845,744
	February 20		1,735		62.0		2,959	842,785
	March 20		1,774		57.2		3,024	839,761
	Apr 20 - Dec 20						22,783	816,978
2021		27,751		19,684	64.3	0.71	33,561	783,417
2022		27,807		19,723	64.5	0.71	33,629	749,788
2023		27,832		19,741	64.5	0.71	33,659	716,129
2024		27,843		19,749	64.5	0.71	33,672	682,456
2025		27,855		19,757	64.6	0.71	33,687	648,769
2026		27,879		19,774	64.6	0.71	33,716	615,053
2027		27,914		19,799	64.7	0.71	33,758	581,295
2028		27,955		19,828	64.8	0.71	33,808	547,487
2029		28,000		19,860	64.9	0.71	33,862	513,625
2030		28,043		19,891	65.0	0.71	33,914	479,711
2031		28,081		19,918	65.1	0.71	33,960	445,750
2032		28,115		19,942	65.2	0.71	34,001	411,749
2033		28,146		19,964	65.2	0.71	34,039	377,710
2034		28,175		19,984	65.3	0.71	34,074	343,636
2035		28,203		20,004	65.4	0.71	34,108	309,528
2036		28,231		20,024	65.4	0.71	34,142	275,387
2037		28,260		20,045	65.5	0.71	34,177	241,210
2038		28,288		20,065	65.6	0.71	34,211	206,999
2039		28,317		20,085	65.6	0.71	34,246	172,754
2040		28,345		20,105	65.7	0.71	34,280	138,474
2041		28,372		20,124	65.8	0.71	34,312	104,162
2042		28,399		20,143	65.8	0.71	34,345	69,817
2043		28,426		20,162	65.9	0.71	34,377	35,440
2044		28,452		20,181	66.0	0.71	34,409	1,031
2045		28,477		20,199	66.0	0.71	34,439	-33,408
	January 45						2,870	-1,839

Airspace consumed mid January 2045

Tons per Capita:	0.71	Average 2014 - 2019

Gross Airspace Available (Design Volume)[3] =	884,021	CY
Waste Density[4] =	1,173	lbs/CY
Waste Density =	0.59	tons/CY
2014 - 2019 average tons/day =	63.86	tons/day
Operating Days/Year =	306	days/year
1/1/20 - 3/31/20 average tons/month =	1,739	tons/month
1/1/20 - 3/31/20 average tons/day =	58.10	tons/day
Operating Days from 4/1/20 - 12/31/20 =	230	days

SOURCES:

1. Based on the results from the Florida Demographic Estimating Conference, December 2017 and UF, BEBR, Florida Population Studies, Volume 51, Bulletin 180, January 2018 medium county projections.

2. Waste quantity disposed in landfill provided by Hardee County through March 2020.

3. Estimated volume available in Phase II Section II assumed to be the design life based on the Construction Certification prepared by SCS and received 8/5/2015.

4. In-place density assumed to be the last actual calculated value based on comparing the topographic survey conducted by Pickett dated March 22, 2013 and the topographic survey conducted by Pickett dated April 3, 2012 per the Estimate of Remaining Capacity and Life of Site report submitted by SCS dated June 28, 2013.