

Smith, George

From: Tift, Rachel
Sent: Tuesday, September 05, 2017 9:06 AM
To: SWD_Waste
Subject: FW: WACS 39859, Citrus County Central Landfill Inspection Response
Attachments: FDEP Inspection Response 8.30.17.pdf

From: Ray Oates [mailto:ray.oates@citrusbocc.com]
Sent: Friday, September 1, 2017 3:46 PM
To: Tift, Rachel
Cc: Henry C. Norris ; Troy D. Hays (thays@jonesedmunds.com) ; LARRY J. BROCK
Subject: WACS 39859, Citrus County Central Landfill Inspection Response

Dear Ms. Tift:

In reply to your site inspection of February 22, 2017, and subsequent inspection-related correspondence dated August 15, 2017; attached please find our response(s) to each of two (2) FDEP Current Violations and seven (7) Areas of Concern.

The attached file also includes the following.

1. Annual Site Life Calculation dated January 13, 2016.
2. Final Closure Soils Certification (related to *Declaration of Restrictive Covenant and Access Agreement*), dated August 27, 2017.
3. Second Quarter, 2017, Leachate Generation and Daily Precipitation Report, dated April 5, 2017, and
4. Second Quarter 2017, Phase 3 Secondary Leachate Flow Chart (3-D, Flow vs. Rainfall over time).

Should you have any questions regarding this correspondence, please do not hesitate to contact me.

Respectfully,

Ray Oates, PG

Solid Waste Compliance Manager

Citrus County Division of Solid Waste Management

230 W. Gulf to Lake Hwy

Lecanto, FL 34460

(352) 527-7670

(352) 527-7679 Direct #

(352) 527-7672 Fax

Ray.Oates@citrusbocc.com

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Board of County Commissioners

DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION

8/30/2017

Ms. Rachel Tift
Engineering Specialist, Compliance Assurance
Florida Department of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, Florida, 33637-0926

RE: Citrus County Central Class I Landfill and Closed Class I Landfill
Facility ID Number 39859
Citrus County

Dear Ms. Tift:

In response to your correspondence dated August 15, 2017, enclosed please find our response to matters pertaining to Consent Order #05-1078 and your current areas of concern:

CITRUS CENTRAL SLF
02/22/2017

FDEP Current Violations:

Rule: 62-701.510(3), 62-701.510(4), 62-701.730(10), 62-701.730(8)(f), 62-713.400(3)

Question Number: 1.6

Explanation: VOCs were reported above groundwater standards at MW-7 and MW-19 in the second SA 2016 Groundwater Monitoring Report and first SA 2017 Groundwater Monitoring Report. The first SA 2016 Groundwater Monitoring Report attributed the VOC exceedances at these wells to landfill gas. Corrective Action: On 2/22/2017 prior to the inspection, DEP, Citrus County, and Jones Edmunds had a meeting to discuss landfill gas migration and groundwater exceedances at the facility. After the inspection, the facility assessed the adequacy of the existing landfill gas monitoring system and groundwater monitoring system and submitted a plan (Landfill Gas Assessment and Groundwater Delineation plan, revised 6/6/2017, received 6/9/2017) to retrofit/expand both systems to determine the extent and path of landfill gas migration and impacts to groundwater. Please submit updates on the implementation of the Landfill Gas Assessment and Groundwater Delineation plan. The results of the expanded monitoring should be used to develop a remediation plan.

County Response Question Number 1.6:

The three groundwater wells and the eleven landfill gas monitoring probes proposed in the 6/6/2017 Landfill Gas Assessment and Groundwater Delineation Plan (Plan) were installed July 24th through August 18th at the landfill. The three groundwater wells have been developed and sampled and we are currently awaiting the analytical results from the laboratory. All of the landfill gas monitoring probes were fitted with dedicated tubing. As detailed in the Plan, the existing and

new landfill gas monitoring probes were fitted with tubing to multiple depths for measuring landfill gas levels at discrete intervals in the probe. The County is currently working on a report detailing the well and probe construction details and the initial sampling event of the new groundwater wells. The report will be submitted to FDEP by the October 24, 2017 deadline included in the Landfill Gas Assessment and Groundwater Delineation plan.

FDEP Current Areas of Concern:

Area: Phase III

Rule: 62-701.500(7)(d)

Question Number: 2.17

Explanation: At the time of the inspection, a narrow working face was not being practiced in Phase 3, and daily and intermediate cover was sparse in places leaving waste exposed. Corrective Action: Documentation was provided via email on 3/3/2017 and 3/10/2017 which included: pictures of efforts to reduce the working face area and improve cover, the landfill daily inspection log updated to include a checklist item for maintaining the working face width < 50' x 75', and a copy of a Citrus County memo dated 2/24/2017 used to brief operations staff on the permit requirements related to the working face and daily and intermediate cover. Please continue to maintain a narrow working face and apply initial and intermediate cover as required so that waste is not exposed.

Area: Phase III

Rule: 62-701.500(7)(e)

Question Number: 2.18

Explanation: See 2.17

Corrective Action: See 2.17

Area: Phase III

Rule: 62-701.500(7)(f)

Question Number: 2.19

Explanation: See 2.17.

Corrective Action: See 2.17.

County Response Question Number 2.17:

As documented via email on 3/3/2017 and 3/10/2017 and per your direction, we are continuing to maintain a narrow working face and applying initial and intermediate cover as required so that waste is not exposed.

Comment 1.2 - It appears that a landfill survey was conducted in September 2016 but an annual estimate of remaining life was not received. Please provide.

County Response Comment Number 1.2:

Please see the attached Annual Site Life Calculation Report and supporting documentation prepared on December 21, 2016. GET SEALED COPY FROM MARK SCHROEDER

Comment 1.8 - Please be reminded that the wording in the next audit note submitted should be revised per the request sent to Ms. Angela Vick of the Citrus County Board of County Commissioners by the Solid Waste Financial Assurance group on 4/27/2016.

County Response Comment 1.8:

FDEP's reminder is noted. The Citrus County Clerk's Office (Solid Waste Financial Assurance group) is in receipt of the FDEP's letter by Mr. Tor JM Benjar, (dated April 27, 2016). We have reminded our Clerk's Office personnel of the importance of making the FDEP's requested language changes in the 2017 Financial Assurance Report.

Comment 1.9 - Please be reminded that the report required by Appendix 4 of Permit 21375-25-SO/01, Declaration of Restrictive Covenant and Access Easement Agreement, Item 2.c, is due to the Department by July 1 each year. The report is necessary in order for the Department to review cost estimates. Please provide the report as soon as practical, but by no later than September 1, 2017.

County Response Comment 1.9:

The Soils Covenant Area Report was forwarded to Ms. Melissa Madden of FDEP on August 28, 2017. Attached is a copy of the report.

Comment 2.22 - Several Phase 3 leakage action rate (LAR) exceedances were noted during the month of June 2017 in the 2017 Quarter 2 Leachate Generation and Daily Precipitation Report. Please provide an update on the status of the storm water controls currently in place and their effectiveness in reducing leachate generation in Phase 3. If these controls are found to be adequate, additional investigation into the continued exceedances of the Phase 3 LAR may be required. Please note that the 2017 Quarter 1 Leachate Generation and Daily Precipitation Report (.xls file) was not attached to the submittal email dated April 7, 2017. Please provide this report.

County Response Comment 2.22:

Attached is a copy of the 2017 Quarter 1 Leachate Generation and Daily Precipitation report. In our continued efforts to reduce Phase 3 leakage action rates (LAR's), we have performed maintenance to the swales located at the top of the embankments of the active waste cell to reduce the area of influence of leachate generation and to decrease the potential for surface water infiltration into the secondary liner.

Attached is graph of Second Quarter 2017 Phase 3 Secondary Leachate Flow, plotted along with date and rainfall data. The graphs shows exceedances for the periods of June 10th through June 14th, and June 29th through June 30th, when respective rainfall amounts of 3.3 inches and 1.9 inches were recorded.

In the past, summer rainfall events exceeding 1.0-2.0 inches occasionally resulted in secondary liner exceedances of 680 gallons/day. Based on our observations of the relationship between rainfall and LAR exceedances, our maintenance to the swales surrounding the active waste cell appear to support a consequential reduction in secondary leachate flow.

Comment 3.13 - GP-3 appeared damaged at the time of the inspection. Jones Edmunds personnel evaluated the adequacy of this well and determined that the probe was bent in the protective casing. The County proposed to cut this probe at the surface and install a new pad with a flush mount cover. Please provide updates on the progress of this repair.

County Response Comment 3.13:

GP-3 was bent over; however, the probe was open to the original total depth and functioning correctly. The casing was put back vertical and the pad was reinforced with compacted soil under and around it. The PVC probe is not damaged and is working as intended. At this time the probe will continue to have the above ground stick-up. Therefore, flush mount completion is not necessary. It has been repaired.

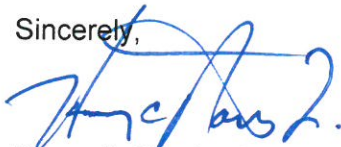
Comment 3.14 - Landfill gas odors were detected at the facility near the property boundary north of the closed landfill areas. Please continue to monitor this area and implement the Landfill Gas Assessment and Groundwater Delineation plan (see Corrective Action for Area of Concern Item 1.6).

County Response Comment 3.14:

We will continue to monitor landfill gas odors throughout the facility as well as near the property boundary north of the closed landfill areas. Newly installed gas and groundwater wells (see County Response 1.6) should detect concentrations of any north and northwest migrating landfill gas. The GCCS expansion design by Jones Edmunds is approximately 90% and we expect the expansion of the solar powered vapor extraction north of the closed cells to be operational by the second quarter of 2018.

If you should need additional information or clarification of these responses, please let me know.

Sincerely,



Henry C. Norris, Jr.

Director, Citrus County Division of Solid Waste Management

HCN:RO

CC: Jeff Rogers, P.E., Director, Department of Public Works (Electronic)

Troy Hays, Jones Edmunds



**Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION**

P.O. Box 340, Lecanto, Florida 34460

Telephone: (352) 527-7670 FAX: (352) 527-7672

TDD Telephone 527-5303

email: landfillinfo@bocc.citrus.fl.us

Citrus Springs/Dunnellon/Inglis/Yankeetown area Toll Free (352) 489-2120

January 13, 2016

Mr. Steve Morgan
Dept of Environmental Protection
13051 N Telecom Parkway
Temple Terrace, FL 33637-0926

**Re: Citrus County Central Class I Landfill (FDEP Permit No. 21375-018-S0/01)
Annual Site Life Calculation Transmittal for Phases 1/1A, 2 and 3**

Dear Mr. Morgan:

Pursuant to Specific Condition # C.13.e. of the subject operation permit (which requires landfill site life calculations to be submitted annually no later than January 15th of each year), please find enclosed 2015 Site Life Calculations reports and supporting documentation prepared by Citrus County Division of Engineering.

If you should need additional information, please let me know.

Sincerely,

Henry C. Norris, Jr.
Director, Division of
Solid Waste Management

CC: Jeff Rogers, P.E. Director, Dept. Of Public Works (w/o map attachments)

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Date 3/21/17
Initials RO
Solid Waste Management



**DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING**

3600 W. Sovereign Path, Suite 241
Lecanto, Florida 34461

Telephone: (352) 527-5446 Fax: (352) 527-5476
Citrus Springs/Dunnellon/Inglis/Yankeetown area - Toll Free (352) 489-2120
TTY Telephone: (352) 527-0825 or (352) 527-5312

**CITRUS COUNTY CENTRAL LANDFILL
OCTOBER 2016 SITE LIFE CALCULATION ANNUAL REPORT**

FDEP PERMIT NO. 21375-008-S0/01


PHASES 1/1A, 2 and 3

Located in S1/T19S/R18E, Citrus County, Florida

Prepared for:

**Citrus County Department of Public Works
Solid Waste Management Division
Attn: Henry Norris, Director
230 W. Gulf-to-Lake Highway
Lecanto, FL 34461
(352) 527-7670**

Prepared on December 19, 2016


12/20/16 Mark E. Schroder, P.E.
FL. License No. 67585
County Engineer

Citrus County's Department of Public Works - Division of Engineering has calculated the remaining site life for Phases 1/1A, 2 and 3 of the Citrus County Central Landfill based on the past twelve months of data. The remaining airspace was estimated using population projections, projections of future waste receipts and topographic survey efforts performed by the Citrus County Survey Section in September 2016. The topographic survey information was compiled using real time kinematic satellite navigation (GPS) and is based on NAVD88 datum.

Phases 1/1A, 2, and 3:

The airspace consumed from October 1, 2015 (the date of the previous topographic survey as prepared by the Citrus County Survey Section and as referenced in the December 2015 Site Life Calculation Report) to September 29, 2016 (the date of the current survey) was calculated by comparing the digitally generated surfaces from the two surveys. The airspace consumed during this time period was 89,425CY, as shown on sheet 1 of 3 in attachment A. Waste tonnage records supplied by Citrus County Solid Waste Management Division for the same period recorded 88,186 tons entering the landfill. This translates to an effective airspace consumption rate of 1,904lb./CY or 1.05 CY/TN of waste disposed. The volume of the Cap was entered on the calculation as zero. For the calculations, the final closure surface has been lowered by two feet and the final 4' cap will be installed after 2' of settlement. Therefore the volume of the cap was entered into the calculations as 0CY assuming that the airspace will be available before placement.

The remaining life through build out of Phases 1/1A, 2 and 3 was estimated by multiplying the future projected quantities of waste by the current effective airspace consumption rate. Waste tonnage was assumed to increase each year at the same rate as the population. Population growth in Citrus County from 2015 to 2016 was significantly higher than past years. This year population growth has been estimated using the "Medium" projections in the University of Florida Bureau of Economic Research (BEBR) population projections for Citrus County. The projected waste tonnage for each year is multiplied by the effective airspace consumption rate to obtain the airspace volume consumed each year. This is then subtracted from the remaining airspace for each year until the available airspace is depleted. The calculations indicate that Phases 1/1A, 2, and 3 have approximately 1,823,829CY of available airspace as of the September 29, 2016 survey (Attachment #1, Sheet 2) and that this airspace could be completely utilized by July 2032. This assumes that waste will continue to be added to the landfill at the current generation rates and effective density. As Statutory Recycling is implemented waste generation rates will decrease thereby adding a factor of safety to the calculations. For quick reference, the previous Site Life Calculation Report prepared on December, 15 2015 estimated this date to be September 2030 Using Low projection.

Phases 1/1A, 2, and 3

Landfill Side Slopes

Specific Condition C.13.f of the site's FDEP Permit (Permit No. 21375-008-S0/01) requires that the disposal capacity and site life calculations submitted each year be accompanied by a survey indicating that the actual above grade side slopes are no greater than the design slopes and that the top elevation does not exceed the design elevation. As shown in the cross-sections provided on Sheet 3 of Attachment #1, the side slopes appear to be less than or equal to the design slopes, and the design top elevation of the landfill has not been attained.

ATTACHMENT 1

VOLUME CALCULATION DRAWINGS

(Refer to 24"x36" Drawings)



CITRUS COUNTY
CENTRAL LANDFILL
OCTOBER 2016 SITE
LIFE CALCULATION
REPORT



CITRUS COUNTY
CENTRAL LANDFILL
10/01/2015 SURVEY

vs.

09/26/2016 SURVEY
VOLUME ESTIMATE
PLAN

MAIRIE Z. SCHROEDER, P.E.
Clatsop County Engineer
P.O. BOX 100, SEASIDE, OR 97138

1 OF 3

16-2003

12/12/2018

1" = 60'

LEGEND AND ABBREVIATIONS

EXISTING ELEVATION CONTOUR (25' INTERVAL) 09/28/2016 SURVEY
EXISTING ELEVATION CONTOUR (5' INTERVAL) 09/28/2016 SURVEY
PREVIOUS ELEVATION CONTOUR (25' INTERVAL) 10/04/2015 SURVEY
PREVIOUS ELEVATION CONTOUR (5' INTERVAL) 10/04/2015 SURVEY

SITE VOLUME TABLE

CITRUS COUNTY CENTRAL LANDFILL	
SITE	OCTOBER 2015 (FIELD SURVEY OF 2015)
SURFACE 1	SEPTEMBER 2016 (FIELD SURVEY OF 2016)
SURFACE 2	86 CU. YD.
CUT UNADJUSTED	89,511 CU. YD.
FILL UNADJUSTED	89,425 CU. YD.
NET UNADJUSTED	
METHOD	COMPOSITE

SURVEY SOURCE NOTE

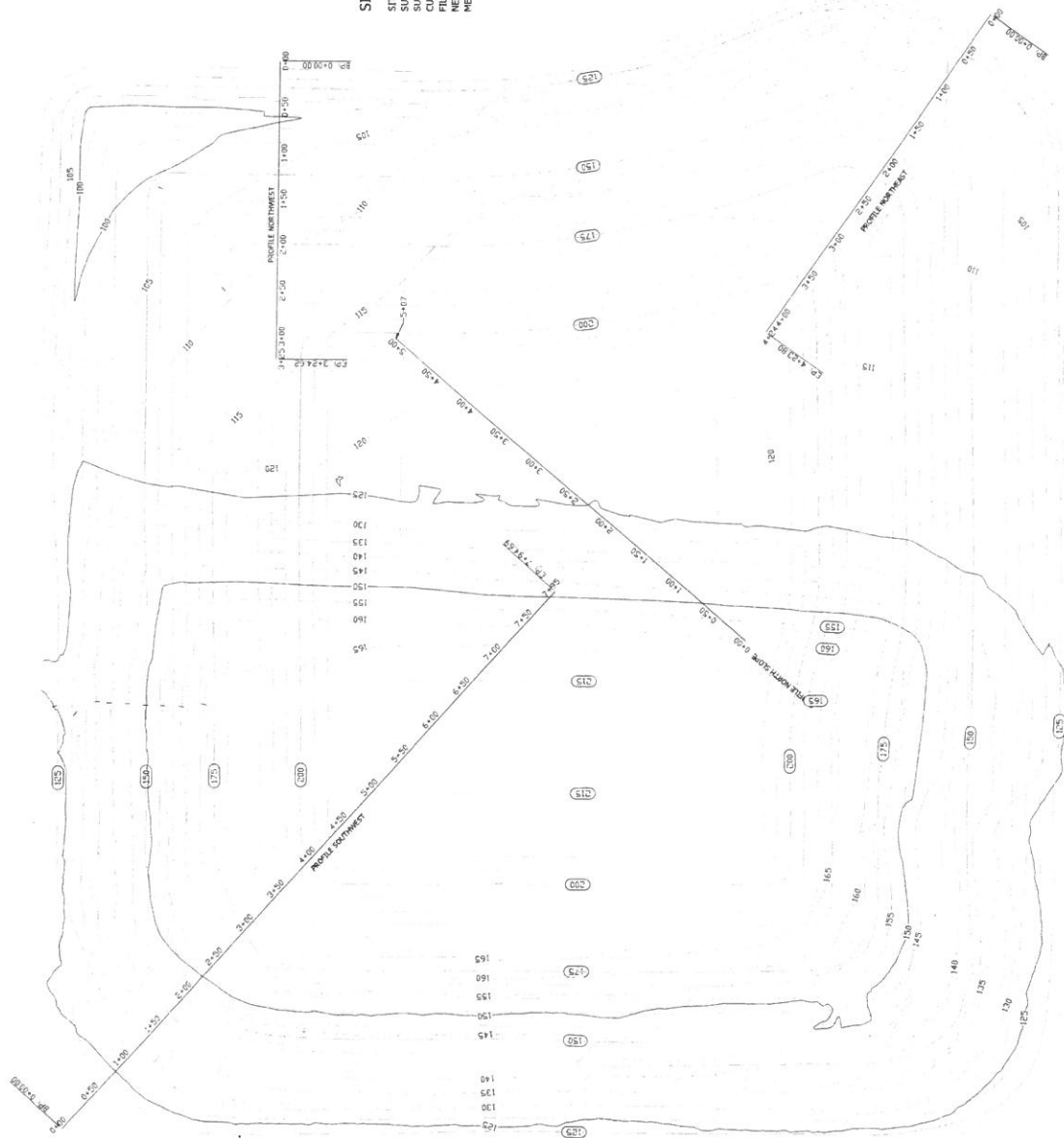
This Comparable Volume report for the period started was calculated based on a Citrus County Surface compilation of Real Time Kinematic (RTK) Global Positioning data collected by Citrus County Surface personnel on or around September 28, 2016 for the 2015-2016 Volume Calculation Report. This data was compared to a Base Surface generated from data collected by Citrus County Surface personnel on or around October 1, 2015, for the 2014 - 2015 Base Surface Comparable Report.

As the original designed landfill closure surface was calculated and published utilizing NAVD of 29, the original 2014–2015 and 2015–2016 were collected in NAVD 88 and the surfaces were adjusted +0.85', per NGS Vertcon transformation, converting the NAVD 88 elevations to NAVD 29 elevations for relative volume calculations.

The above stated data was collected via GPS RTK under my direction utilizing acceptable Survey Standards.

Mark T. Thomas

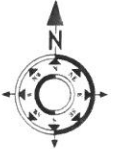
Florida Registered Surveyor no. 5151



CONTOUR LABELS WITH ROUNDED
RECTANGULAR SYMBOL ARE FINAL
SURFACE LABELS, ALL OTHER
CONTOUR LABELS ARE 2016 SURFACE.



DATE	10-20-2016
BY	2
CHECKED	0/0
DATE	10-20-2016
BY	3
CHECKED	0/0



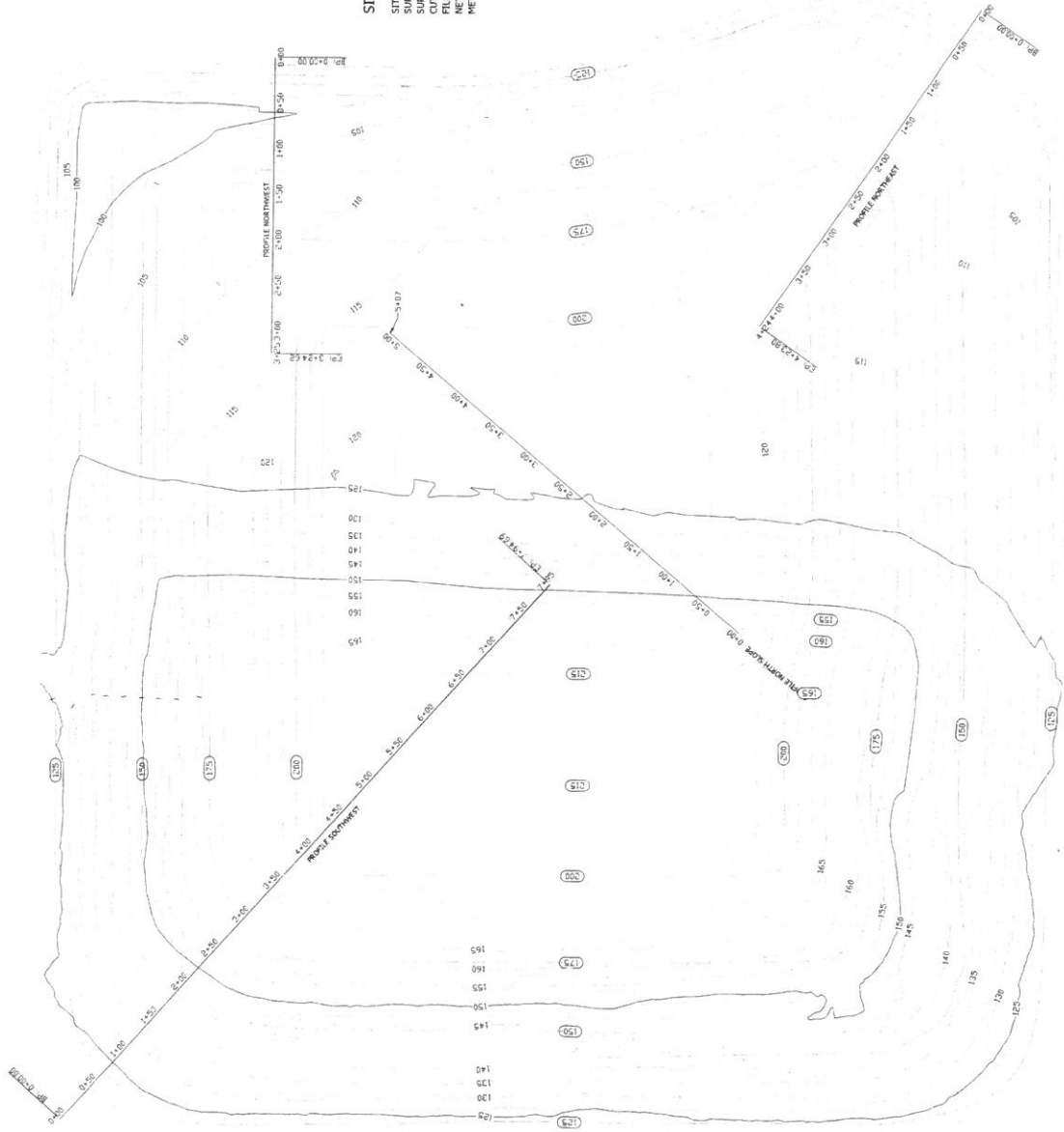
PROFILE VIEWS ARE ON SHEET 3

LEGEND AND ABBREVIATIONS

- EXISTING ELEVATION CONTOUR (5' INTERVAL) 10/01/2016 SURVEY
- EXISTING ELEVATION CONTOUR (1' INTERVAL) 10/01/2016 SURVEY
- DESIGN ELEVATION CONTOUR (5' INTERVAL) FINAL CLOSURE
- DESIGN ELEVATION CONTOUR (1' INTERVAL) FINAL CLOSURE

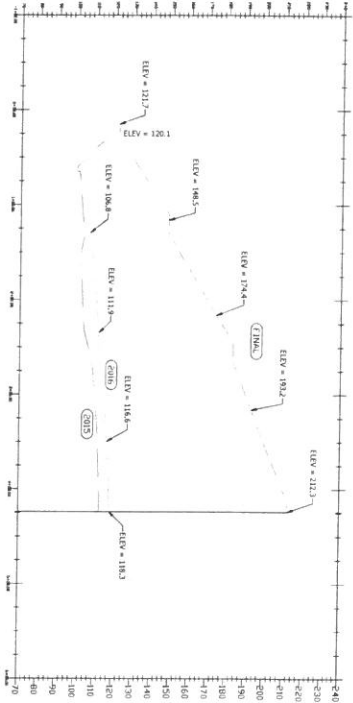
SITE VOLUME TABLE

SITE	CITRUS COUNTY CENTRAL LANDFILL
SURFACE 1	FINAL CLOSURE (DESIGN)
SURFACE 2	OCTOBER 2016 (FIELD SURVEY OF 2016 WASTE AREA COMBINED WITH 2015 BASE SURFACE)
CUT UNADJUSTED	668 CU. YD.
FILL UNADJUSTED	1,274,497 CU. YD.
CUT ADJUSTED	668 CU. YD.
FILL ADJUSTED	1,274,497 CU. YD.
METHOD	COMPOSITE



CONTOUR LABELS WITH AN ARROW
RECTANGULAR SYMBOL ARE FINAL
CONTOUR LINES AND SURFACE
CONTOUR LABELS WITH A CIRCLE
SYMBOL ARE EXISTING SURFACE

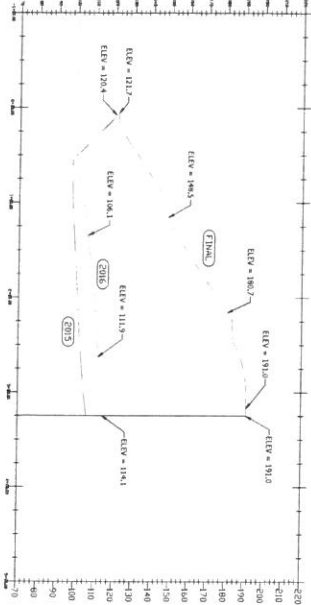
PROFILE NORTHEAST



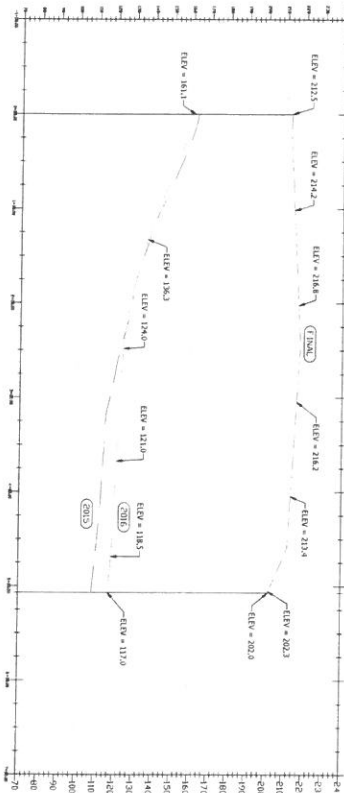
LEGEND AND ABBREVIATIONS

SURFACE 1 FINAL CLOSURE (DESIGN)
 SURFACE 2 OCTOBER 2015 (FILED SURVEY BY CITRUS COUNTY)
 SURFACE 3 09/28/2015 (FIELD SURVEY BY CITRUS COUNTY)
 PLAN VIEWS ARE ON SHEETS 1 AND 2

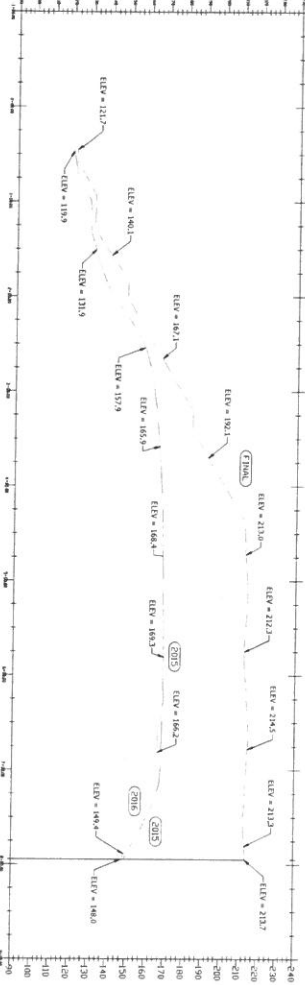
PROFILE NORTHWEST



PROFILE NORTH SLOPE



PROFILE SOUTHWEST



CITRUS COUNTY
 CENTRAL LANDFILL
 OCTOBER 2016 SITE
 LIFE CALCULATION
 REPORT

CITRUS COUNTY
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF ENGINEERING

3600 COVERED PARKWAY
 SUITE 201
 LEICANTO, FLORIDA 34461
 (813) 517-5448

CITRUS COUNTY
 CENTRAL LANDFILL
 FINAL CLOSURE
 09/28/2015 SURVEY
 10/04/2015 SURVEY
 PROFILES

NAME: E. GONZALEZ
 DATE: 10/04/2015
 SCALE: 1" = 50'

3

3

ATTACHMENT 2

SITE LIFE CALCULATIONS

ATTACHMENT 2

SITE LIFE CALCULATIONS

**CITRUS COUNTY SOLID WASTE MANAGEMENT DIVISION
CENTRAL LANDFILL SITE LIFE CALCULATION
DECEMBER 2016 REPORT**

Objective: Calculate the October 2016 remaining site life for Phases 1 thru 3 using waste tonnage records from Citrus County and calculated waste generation projections.

Approach:

1. Calculate the available airspace as of the most recent survey.
2. Calculate the "Effective Density" using volume consumed between October 2015 through September 2016.
3. Use the effective density to calculate the remaining life of the available airspace.

Available Airspace Calculation:

Airspace available from Oct 2016 to Final Grade = 1,823,829 CY (From Survey)

Air volume consumed Oct 2015 through September 2016 = 92,654 CY (From SWM)

Effective Density Calculation:

Waste Disposed of between 10/2015 through 09/2016 = 88,186 tons (From Landfill Records)

Effective Density= $\frac{88,186 \text{ ton}}{92,654 \text{ CY}} \times \frac{2,000 \text{ lbs}}{1 \text{ ton}} = \frac{1,903.56 \text{ lbs}}{1 \text{ CY}}$

Effective Airspace Consumption Rate= $\frac{92,654 \text{ CY}}{88,186 \text{ ton}} = 1.05 \text{ CY/ton}$

Assuming the waste will be filled up to the final capacity and allowed to settle before placing the cover soil.

Cap Volume = 0 CY

Subtract Cap Volume from air volume (airspace available) to determine useable waste volume for site life calculation.

Remaining Volume= 1,823,829 CY - 0 CY = 1,823,829 CY

Site Life Calculation

The site life calculation is based on Citrus County waste tonnage records and population projections from the University of Florida Bureau of Business and Economic Research (BEER). The historic population growth trends have been lower than the BEER Low estimates. This year population growth was significantly higher than past years. Therefore, the Medium population projection was used.

FISCAL YEAR	TONNAGE	VOLUME CONSUMED (CY)	NET REMAINING AIRSPACE (CY)
2013-2014	79,908	113,295	
2014-2015	82,992	87,197	1,823,829
2015-2016	88,186	92,654	1,731,175
2016-2017	90,079	94,643	1,636,532
2017-2018	91,036	95,648	1,540,884
2018-2019	91,992	96,653	1,444,231
2019-2020	92,949	97,658	1,346,572
2020-2021	93,924	98,683	1,247,889
2021-2022	94,899	99,708	1,148,182
2022-2023	95,875	100,732	1,047,450
2023-2024	96,850	101,757	945,693
2024-2025	97,825	102,781	842,911
2025-2026	98,728	103,730	739,182
2026-2027	99,631	104,678	634,503
2027-2028	100,533	105,627	528,876
2028-2029	101,436	106,575	422,301
2029-2030	102,339	107,524	314,777
2030-2031	103,120	108,345	206,432
2031-2032	103,902	109,166	97,266
2032-2033	104,684	109,988	-12,722
2033-2034	105,465	110,809	-123,531
2034-2035	106,247	111,630	-235,161

CONCLUSION: Estimated Phases 1/1A, 2 & 3 Fill Completion Date = July 2032

**CITRUS COUNTY CENTRAL LANDFILL
WASTE TONNAGE PROJECTION**

Year	*Population (BEBR Medium Estimate)	% Change in Population	Tons/Year
2010 ⁽¹⁾	141,236		
2011 ⁽¹⁾	140,956	-0.20%	81,477
2012 ⁽¹⁾	140,761	-0.14%	81,326
2013 ⁽¹⁾	140,519	-0.17%	81,326
2014 ⁽¹⁾	140,796	0.20%	79,908
2015⁽¹⁾	138,100	-1.95%	82,992
2016	143,054	3.46%	88,186
2017	146,192	2.15%	90,079
2018	147,762	1.06%	91,036
2019	149,331	1.05%	91,992
2020	150,900	1.04%	92,949
2021	152,500	1.05%	93,924
2022	154,100	1.04%	94,899
2023	155,700	1.03%	95,875
2024	157,300	1.02%	96,850
2025	158,900	1.01%	97,825
2026	160,380	0.92%	98,728
2027	161,860	0.91%	99,631
2028	163,340	0.91%	100,533
2029	164,820	0.90%	101,436
2030	166,300	0.89%	102,339
2031	167,580	0.76%	103,120
2032	168,860	0.76%	103,902
2033	170,140	0.75%	104,684
2034	171,420	0.75%	105,465
2035	172,700	0.74%	106,247
2036	173,860	0.67%	106,956
2037	175,020	0.66%	107,665
2038	176,180	0.66%	108,374
2039	177,340	0.65%	109,083
2040	178,500	0.65%	109,792

*Population projection data for Citrus County originated from the University of Florida Bureau of Economic and Business Research (BEBR) Florida Population Studies, Bulletin 168. A linear interpolation for yearly population increase was performed between the years in bold.

⁽¹⁾ Previously reported value: 2015 Site Life Calculation Annual report.

The 2016 "Tons/Year" amount is based on scale house data supplied by the Waste Management Department and is based upon the monthly collection reports from 10/01/2015 - 09/30/2016.

**CITRUS COUNTY CENTRAL LANDFILL
WASTE TONNAGE PROJECTION**

Year	*Population (BEBR Medium Estimate)	% Change in Population	Tons/Year
2010 ⁽¹⁾	141,236		
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2016	143,054	3.46%	88,186
2017	146,192	2.15%	90,079
2018	147,762	1.06%	91,036
2019	149,331	1.05%	91,992
2020	150,900	1.04%	92,949
2021	152,500	1.05%	93,924
2022	154,100	1.04%	94,899
2023	155,700	1.03%	95,875
2024	157,300	1.02%	96,850
2025	158,900	1.01%	97,825
2026	160,380	0.92%	98,728
2027	161,860	0.91%	99,631
2028	163,340	0.91%	100,533
2029	164,820	0.90%	101,436
2030	166,300	0.89%	102,339
2031	167,580	0.76%	103,120
2032	168,860	0.76%	103,902
2033	170,140	0.75%	104,684
2034	171,420	0.75%	105,465
2035	172,700	0.74%	106,247
2036	173,860	0.67%	106,956
2037	175,020	0.66%	107,665
2038	176,180	0.66%	108,374
2039	177,340	0.65%	109,083
2040	178,500	0.65%	109,792

*Population projection data for Citrus County originated from the University of Florida Bureau of Economic and Business Research (BEBR) Florida Population Studies, Bulletin 168. A linear interpolation for yearly population increase was performed between the years in bold.

⁽¹⁾ Previously reported value: 2015 Site Life Calculation Annual report.

The 2016 "Tons/Year" amount is based on scale house data supplied by the Waste Management Department and is based upon the monthly collection reports from 10/01/2015 - 09/30/2016.



Board of County Commissioners

DEPARTMENT OF PUBLIC WORKS

DIVISION OF ENGINEERING

3600 W. Sovereign Path, Suite 241

Lecanto, Florida 34461

Telephone: (352) 527-5446 Fax: (352) 527-5482

Citrus Springs/Dunnellon/Inglis/Yankeetown area - Toll Free (352) 489-2120

TTY Telephone: (352) 527-0825 or (352) 527-5312

August 25, 2017

Mr. Henry C. Norris, Jr., Director
Citrus County Division of Solid Waste Management
230 W. Gulf to Lake Hwy
Lecanto, FL 34461

RE: FDEP Permit #21375-18-SO/01
Final Closure Soils

Dear Mr. Norris,

In accordance with Appendix 4 of the above-referenced permit, *Declaration of Restrictive Covenant and Access Agreement*, Item 2.c, I have performed a site inspection and topographic analysis of the "Soils Covenant Area" depicted in Figure 1 attached to the SCS Engineers letter to Mr. Henry Freedenberg PE, PG dated May, 3, 2016. With this Letter I hereby provide the following certification:

The Quantity Of Suitable Soils Needed For Use As Final Cover Of The Facility Remains Within The Restricted Property.

If you have any questions or require additional information, please don't hesitate to contact me.

Sincerely,

Mark E Schröder, P.E.
FL License #67585
Citrus County Department of Public Works
Engineering Division - Engineer I

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Date 8/28/17
Initials RU
Solid Waste Management

Submitted Electronically
SWD_Waste@dep
Addresses & cc
Date: 8/28/17
Initials RU

SCS ENGINEERS

May 3, 2016
File No: 09210021.26

Mr. Henry Freedenberg PE, PG
Solid Waste Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 4565
Tallahassee, Florida 32399

RE: Soils Covenant for the Citrus County Central Landfill Operations Permit Renewal
Permit No: 21375-18-SO/01

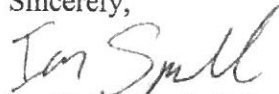
Dear Mr. Freedenberg,

Citrus County intends to complete a covenant with the Florida Department of Environmental Protection in order to allow for the preservation of a volume of soil that the State of Florida could utilize to close the permitted landfill Phases 1 through 3. This would only occur if the County fails to conduct the closure when the landfill is filled to the permitted capacity. SCS Engineers has computed the necessary volumes to provide the closure soil based on computer modeling for the final configuration of the landfill. The area shown on Figure 1 will provide sufficient cover material to close Phases 1 through 3. The attached cover material calculations include one foot of intermediate cover and two feet of protective liner cover.

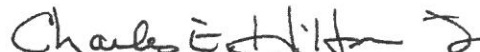
Please note that the calculations include the one foot thick intermediate cover as per the regulations. The County has been placing the intermediate cover in accordance with the regulations on those locations where the waste fill has reached final grades. Therefore, more soil material is available in the covenant designated borrow area than is necessary for the final closure.

On behalf of Citrus County, SCS is pleased to present this information.

Sincerely,



Ian U. Spurlock, E.I.
Staff Professional
SCS ENGINEERS



Charles E. "Ed" Hilton, Jr. P.E.
Vice President 513116
SCS ENGINEERS

CC: Cory Dilmore, FDEP
Philip J. Ciaravella, FDEP
Larry Brock, Citrus County
Henry Norris, Citrus County
Cathy Winter, Citrus County

Attachments



CLIENT Citrus County	PROJECT Operations Permit Renewal	JOB NO. 09210021.26
SUBJECT Closure Soil Calculations	BY IUS	DATE 3/9/2016
	CHECKED CEH	DATE 3/9/2016

Volume of Soil for closure of Phases 1-3

The volume includes 12" of Intermediate Cover addition to in place cover plus 24" protective cover soil over the liner. From the Closure Cost Estimate Calculations sheets the total soil volume required is:

$$3' \times 1,531,581 \text{ sq. ft.} = 4,594,743 \text{ cu. ft.} = 170,176 \text{ cu. yd.}$$

The calculation is based on the surface area of the proposed closure, including side slope consideration.

Immediately following this page, Figure 1 shows the approximate area being set aside for soils covenant area. The area is approximately 148,226 sq. ft. and 80 feet deep at its deepest. This area contains a total volume of 171,875 cu. yd. of soil. Therefore there is enough soil in the soils covenant area for the closure construction.

Soil Classifications

Based on the CH2M HILL geotechnical investigation provided to DEP in the Application for Permit, Citrus County Transfer Station, Volume II, received by FDEP on June 11, 2009, the following information is provided.

"The soil boring and soundings generally encountered medium dense to dense sand, silty sand and clayey sand to the maximum borings and sounding depth of 80 feet, except for borings B-1, B-3, B-6 and B-12, which encountered very loose to loose sand from ground surface to approximately 10 feet below the ground surface. The water table was not encountered in any of the borings."

Borings B-1(60'), B-3(60'), B-10(30'), P-6(30') and P-7(25') are near or inside the soils covenant area as seen on Figure 1. The locations of all the borings can be seen on Figure 2 by King Engineering Associates. Based on the Soil classifications from the report the soils are classified as SP, SM, SP-SM, SM-SC and SP-SC. These soil types are acceptable for closures. During the closure project(s) the material excavated will be monitored for unsuitable material and any found will be removed from the application.

Note: The County has decided not to build the Transfer Station and associated improvements shown on the King drawing.

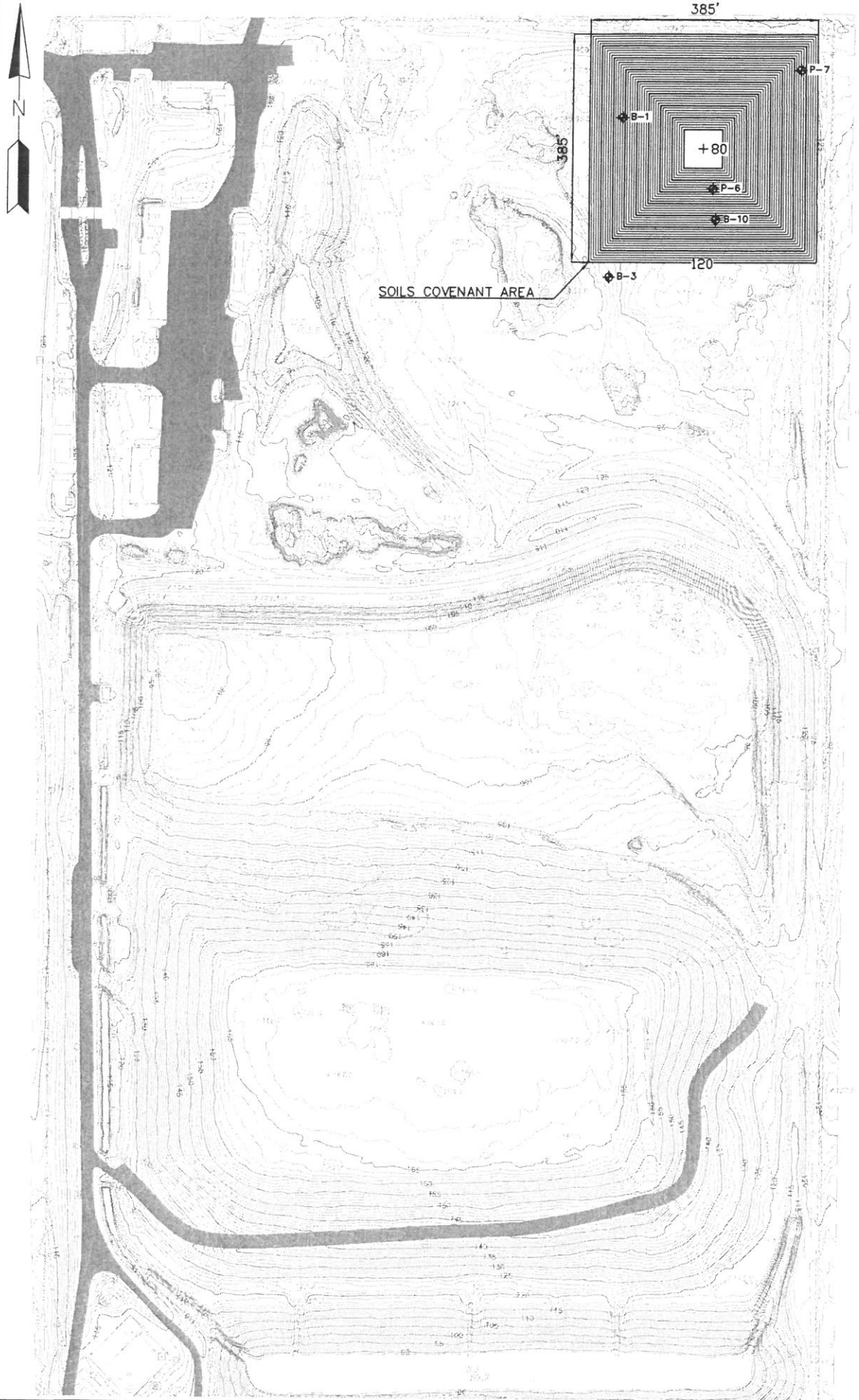


FIGURE 1 - SOILS COVENANT AREA

SCS ENGINEERS



**Board of County Commissioners
DEPARTMENT OF PUBLIC WORKS
SOLID WASTE MANAGEMENT DIVISION**

P.O. Box 340, Lecanto, Florida 34460
Telephone: (352) 527-7670 FAX: (352) 527-7672
TDD Telephone 527-5303
email: landfillinfo@bocc.citrus.fl.us
Citrus Springs/Dunnellon/Ingles/Yankeetown area Toll Free (352) 489-2120

April 5, 2017

Florida Department of Environmental Protection
Solid Waste Section
13051 N Telecom Pkwy
Temple Terrace, FL 33637-0926

Re: **Citrus County Central Landfill - Permit No. 21375-018-SO/01
Leachate Generation and Daily Precipitation Report
WACS I.D. # 39859 - Electronic Submittal**

Dear FDEP:

In compliance with Specific Condition C.8.e.2, of the above referenced permit, enclosed please find the quarterly Leachate Generation and Daily Precipitation Report for the months of January, February and March, 2017; together with the Year-to-Date Leachate Tracking Summary.

Exceedances on 2/16/17 and 3/03/17-3/5/17 from secondary flow phases 1 and 1A were related to intermittent pump failure.

If you should need additional information, please let me know.

Sincerely,

Henry C. Norris, Jr.
Director, Citrus County
Division of Solid Waste Management

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Solid Waste Management

HCN:RO

CC: Jeff Rogers, P.E., Director, Department of Public Works (Electronic)
Troy Hays, Jones Edmunds – Gainesville (Electronic)

CITRUS COUNTY CENTRAL LANDFILL

PHASE 1 AND 1A														PHASE 2														PHASE 3														TOTAL PHASE 1, 1A, 2 & 3			
DATE	DAY	RAIN IN INCHES	80-1 (S) P LS O	Secondary 80-1 (S) P LS O	Primary 80-2 (P) P LS O FLOW	80-1 (P) P LS O FLOW	80-2 (P) P LS O FLOW	Primary 80-2 (P) P LS O FLOW	80-3 (S) P LS O FLOW	Secondary 80-3 (S) P LS O FLOW	80 (P-1) P LS O FLOW	Primary 80 (P-1) P LS O FLOW	80 (P-2) P LS O FLOW	Secondary 80 (P-2) P LS O FLOW	80 ACRE TOTAL	80 ACRE TOTAL	80 ACRE TOTAL FLOW GALLONS																												
01/01/17	Sun	0.00	204742 A	259	508783 A	2390	1350551 A	1519	2202852 A	2035	5833 A	0	24181707 A	3607	922074 A	8	267	9651																											
01/02/17	Mon	0.00	205001 A	159	5090273 A	4113	1361080 A	901	2307059 A	2521	5833 A	0	24186314 A	3671	922082 A	3	162	11366																											
01/03/17	Tue	0.00	205160 A	141	5094386 A	1167	1361961 A	1799	2303108 A	2486	5833 A	0	24188985 A	2928	922085 A	3	141	8390																											
01/04/17	Wed	0.00	205301 A	242	5095553 A	0	1363780 A	937	2305594 A	1490	5833 A	0	24191913 A	3204	922091 A	6	248	5631																											
01/05/17	Thu	0.00	205443 A	294	5095553 A	2082	1364687 A	1771	2307094 A	2579	5833 A	233	24195117 A	12515	922095 A	1	235	18847																											
01/06/17	Fri	2.70	205837 A	188	5097635 A	2429	1365932 A	1405	2343924 A	4161	6066 A	1	24200632 A	14157	922326 A	0	189	782																											
01/07/17	Sat	0.00	206025 A	435	5100064 A	6	1369312 A	1405	2347188 A	3362	6067 A	54	24207189 A	14157	922328 A	3	493	9434																											
01/08/17	Sun	0.00	206460 A	435	5100070 A	30	1370712 A	2935	2360548 A	1000	6172 A	9	24225946 A	14157	922329 A	3	493	18830																											
01/09/17	Mon	0.00	206895 A	275	5100070 A	6	1372712 A	2935	2360548 A	1000	6176 A	9	24255946 A	9710	922363 A	3	237	493																											
01/10/17	Tue	0.00	207170 A	250	5100106 A	6268	1376933 A	1776	2360548 A	2682	6185 A	0	24255946 A	6789	922565 A	3	256	4055																											
01/11/17	Wed	0.00	207420 A	254	5106374 A	0	1378575 A	1742	2361320 A	2701	6185 A	0	24255946 A	6789	922568 A	2	256	16047																											
01/12/17	Thu	0.00	207674 A	186	5106374 A	0	1379553 A	978	2361320 A	2504	6185 A	0	24255946 A	6646	922808 A	2	426	10271																											
01/13/17	Fri	0.00	207860 A	201	5106374 A	0	1381207 A	1304	2363393 A	2492	6185 A	0	24264049 A	6646	922813 A	2	206	9678																											
01/14/17	Sat	0.00	208061 A	218	5106374 A	2377	1382511 A	1304	2363393 A	2492	6185 A	0	24267069 A	6646	922815 A	2	220	9884																											
01/15/17	Sun	0.00	208279 A	218	5106374 A	2376	1382511 A	1304	2363393 A	2492	6185 A	0	24267069 A	6646	922815 A	2	220	9884																											
01/16/17	Mon	0.00	208497 A	200	5111127 A	2955	1384705 A	1819	2367235 A	1350	6185 A	0	24282776 A	6039	922815 A	2	220	12213																											
01/17/17	Tue	0.00	208692 A	195	5111127 A	2955	1384705 A	1819	2367235 A	1350	6185 A	0	24282776 A	6039	922815 A	2	220	12213																											
01/18/17	Wed	0.00	208892 A	220	5114082 A	2276	1386525 A	824	2368599 A	2567	6185 A	0	24288157 A	5381	922817 A	2	446	7822																											
01/19/17	Thu	0.00	209112 A	246	5116358 A	2241	1387349 A	1779	2371166 A	2551	6185 A	0	24292962 A	4805	923063 A	4	201	10843																											
01/20/17	Fri	0.00	209368 A	167	5118598 A	7135	1389128 A	1171	2373704 A	2538	6185 A	0	24297712 A	4750	923069 A	9	229	10417																											
01/21/17	Sat	0.00	209525 A	191	5125734 A	6035	1390299 A	2606	2376255 A	3365	6185 A	0	24303376 A	5684	923078 A	84	330	10646																											
01/22/17	Sun	1.20	209716 A	190	5131768 A	6034	1392905 A	2606	2376255 A	3365	6185 A	0	24303376 A	5684	923162 A	316	483	12292																											
01/23/17	Mon	0.00	209906 A	374	5137803 A	0	1395511 A	1894	2384396 A	1412	6185 A	0	24315204 A	7896	923448 A	80	271	14789																											
01/24/17	Tue	0.00	210280 A	514	5137803 A	8	1396382 A	1894	2384396 A	1412	6185 A	0	24315204 A	7896	923448 A	80	271	14789																											
01/25/17	Wed	0.00	210794 A	485	5137811 A	0	1399123 A	1772	2388457 A	1462	6185 A	0	24330761 A	7896	923448 A	47	421	19903																											
01/26/17	Thu	0.00	211260 A	465	5137811 A	0	1399123 A	1772	2388457 A	1462	6185 A	0	24330761 A	7896	923448 A	47	421	19903																											
01/27/17	Fri	0.00	211746 A	612	5137822 A	3447	1400895 A	1882	2392659 A	2720	6185 A	104	24353108 A	5279	923456 A	74	581	9954																											
01/28/17	Sat	0.00	212358 A	780	5137822 A	3447	1400895 A	1882	2392659 A	2720	6185 A	104	24353108 A	5279	923456 A	74	581	9954																											
01/29/17	Sun	0.00	213138 A	823	5141269 A	3445	1401987 A	1882	2392659 A	2720	6185 A	104	24353108 A	5279	923456 A	74	581	9954																											
01/30/17	Mon	0.00	213918 A	777	5144714 A	0	1405551 A	1722	2392659 A	2523	6185 A	6	24377675 A	6009	924280 A	201	1014	14634																											
01/31/17	Tue	0.00	214741 A	5144/36	5144/36	1408260	3007139	73887	534	201977	2877	14187	381136	385323	924648 A	68	897	9386																											
02/01/17	Wed	0.00	215518												924951	303	1090	10521																											
TOTAL		3.90			10776		56853		48719		73887		534	201977		2877		14187																											
																		381136																											
																		385323																											

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CITRUS COUNTY CENTRAL LANDFILL

PHASE 1 AND 1A																				PHASE 2																				PHASE 3																				TOTAL PHASE 1, 1-A, 2 & 3			
DATE	DAY	INCHES	RAIN	80-1 (S) P	80-1 (S) FLOW	80-2 (P) P	80-2 (P) FLOW	80-1 (P) P	80-1 (P) FLOW	80-2 (P) P	80-2 (P) FLOW	80-3 (S) P	80-3 (S) FLOW	80 (P-1) P	80 (P-1) FLOW	80 (P-2) P	80 (P-2) FLOW	80 ACRE TOTAL	80 ACRE PRIMARY	80 ACRE TOTAL FLOW																																											
02/01/17	Wed	0.00	216518	622	5144736	30	1409138	878	3004139	1289	6367	6367	0	24398354	4644	924951	29	651	651	7492																																											
02/02/17	Thu	0.00	216540	713	5144766	0	1410004	866	3004383	1387	6367	6367	0	24398328	4644	924950	37	750	8190	7492																																											
02/03/17	Fri	0.00	216563	531	5144766	0	1410004	1802	3004815	1440	6367	6367	0	24394265	3420	925017	45	576	6667	7243																																											
02/04/17	Sat	0.00	217384	795	5145908	1142	1413089	1278	3006289	2033	6367	6367	0	24397685	5455	925062	180	975	9910	10885																																											
02/05/17	Sun	0.00	218179	795	5145908	1142	1413089	1278	3006289	2033	6367	6367	0	24403140	5454	925242	179	974	9910	10885																																											
02/06/17	Mon	0.00	218974	543	5147051	3225	1414356	965	3011632	2572	6367	6367	0	24408564	3482	925421	56	599	9907	10881																																											
02/07/17	Tue	1.00	219517	675	5149221	1754	1416218	1646	3014204	2477	6367	6367	140	24418297	6221	925477	42	717	7848	8447																																											
02/08/17	Wed	0.00	220192	690	5154200	28	1417864	878	3016824	1303	6507	6507	45	24425709	5957	925519	245	1075	12983	13700																																											
02/09/17	Thu	0.00	220882	676	5154200	28	1417864	877	3017984	1303	6507	6507	51	24425709	5957	925614	45	728	13289	14364																																											
02/10/17	Fri	0.00	221558	830	5154200	28	1417864	878	3016824	1303	6507	6507	41	24438455	4989	925689	186	818	9961	10881																																											
02/11/17	Sat	0.00	222388	615	5154228	2139	1419619	1790	3019359	1955	6603	6603	4	24448433	4989	925986	186	805	9961	10883																																											
02/12/17	Sun	0.00	223003	614	5156367	2139	1421408	1790	3019359	1955	6603	6603	4	24448433	4989	925986	186	804	9961	10883																																											
02/13/17	Mon	0.00	223617	706	5158366	2139	1421408	1790	3019359	1955	6603	6603	4	24448433	4989	925986	186	804	9961	10883																																											
02/14/17	Tue	0.00	224323	628	5160545	2979	1423199	932	3023268	2660	6611	6611	0	24454344	4989	925986	186	804	9961	10883																																											
02/15/17	Wed	0.00	224951	658	5163524	0	1425802	1006	3027562	2806	6611	6611	0	24459815	5496	926363	62	650	10932	11786																																											
02/16/17	Thu	0.00	225609	748	5163524	5	1426808	1635	3027562	2806	6611	6611	0	24459815	5496	926363	62	650	10932	11786																																											
02/17/17	Fri	0.00	226759	748	5163529	2012	1428443	1635	3031688	1288	6611	6611	0	24465192	5317	926385	22	720	9899	11457																																											
02/18/17	Sat	0.00	227507	686	5165541	4339	1428443	1365	3031456	1466	6611	6611	0	24465192	5317	926385	22	720	9899	11457																																											
02/19/17	Sun	0.00	228193	686	5165980	4338	1430737	1365	3034530	1466	6611	6611	0	24465192	5317	926385	22	720	9899	11457																																											
02/20/17	Mon	0.70	228879	561	5174218	0	1432102	851	3037958	1265	6723	6723	56	24479428	5573	926819	11	754	13784	14557																																											
02/21/17	Tue	0.00	229440	653	5174218	2408	1432953	851	3037958	1265	6723	6723	0	24485001	5599	926819	11	754	13784	14557																																											
02/22/17	Wed	0.20	229440	653	5174218	2408	1432953	851	3037958	1265	6723	6723	0	24485001	5599	926819	11	754	13784	14557																																											
02/23/17	Thu	1.10	230818	546	5176526	2121	1434680	1749	3038223	2603	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
02/24/17	Fri	0.10	231384	534	5176747	0	1434680	1749	3038223	2603	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
02/25/17	Sat	0.00	231898	835	5178747	0	1434680	1749	3038223	2603	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
02/26/17	Sun	0.00	232733	835	5178747	0	1434680	1749	3038223	2603	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
02/27/17	Mon	0.00	233568	712	5178747	0	1440342	1359	3048374	1929	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
02/28/17	Tue	0.00	234280	597	5178747	2442	1441701	1250	3052232	1388	6724	6724	0	24485001	5599	926819	11	754	13784	14557																																											
03/01/17	Wed	0.00	234877	518189	1444254	0	1442951	1303	3055620	2570	6724	6724	4	24550618	6217	928137	231	832	10599	11326																																											
TOTAL		3.10		19339		36453		35994		54051		361		173151		3417		23137		289648	327786																																										

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CITRUS COUNTY CENTRAL LANDFILL

PHASE 1 AND 1A														PHASE 2														PHASE 3														TOTAL PHASE 1, 1-A, 2 & 3			
DATE	DAY	RAIN IN INCHES	80-1 (S) P O METER C	Secondary 80-1 (S) FLOW GAL	80-2 (P) LS O FLOW METER C	Primary 80-2 (P) LS O FLOW METER C	80-1 (P) LS O FLOW METER C	Primary 80-1 (P) LS O FLOW METER C	80-2 (P) LS O FLOW METER C	Primary 80-2 (P) LS O FLOW METER C	80-3 (S) P LS O FLOW METER C	Secondary 80-3 (S) LS O FLOW METER C	80 (P-1) LS O FLOW METER C	Primary 80 (P-1) LS O FLOW METER C	80 (P-2) LS O FLOW METER C	Secondary 80 (P-2) LS O FLOW METER C	80 ACRES TOTAL PRIMARY	80 ACRES TOTAL PRIMARY	80 ACRES TOTAL FLOW																										
03/01/17	Wed	0.00	234877 O	540	5181189 A	2038	1442554 A	878	3056108 A	2465	6727 A	39	2456635 A	5495	928367 A	6	585	10076	11461	8560																									
03/02/17	Wed	0.00	234877 O	540	5181227 A	2038	1442554 A	878	3056674 A	2465	6727 A	39	2456635 A	5495	928367 A	6	585	10076	11461	8560																									
03/03/17	Fri	0.00	238235 O	1802	5183327 A	542	1466005 A	1182	3058967 A	1331	6786 A	22	2456230 A	5454	928377 A	39	1993	10302	23688	8319																									
03/04/17	Sat	0.00	238235 O	1802	5183369 A	12432	1447187 A	1181	3061296 A	2163	6797 A	7	2457286 A	5899	928416 A	184	1590	21675	23688	8319																									
03/05/17	Sun	0.00	240037 O	1802	5186201 A	12432	1448368 A	1181	3061296 A	2163	6797 A	7	2457286 A	5899	928416 A	184	1590	21675	23688	8319																									
03/06/17	Mon	0.00	241639 O	720	5206833 A	2946	1449349 A	1851	3065623 A	2835	6904 A	6	24561425 A	5641	928781 A	137	857	14273	23688	8319																									
03/07/17	Tue	0.00	241639 O	660	5211579 A	2946	1449349 A	1851	3065623 A	2835	6904 A	6	24561425 A	5641	928781 A	137	857	14273	23688	8319																									
03/08/17	Wed	0.00	242319 O	747	5211579 A	2036	1451188 A	1953	3066937 A	2947	6810 A	16	2456506 A	5481	928918 A	340	1006	8748	19640	21674																									
03/09/17	Thu	0.00	242319 O	838	5211579 A	2036	1451188 A	1953	3066937 A	2947	6810 A	16	2456506 A	5481	928918 A	340	1006	8748	19640	21674																									
03/10/17	Fri	0.00	243966 O	667	5213615 A	1220	1457195 A	1323	3078008 A	2504	6879 A	53	24603518 A	4739	929458 A	200	963	11713	12716	8894																									
03/11/17	Sat	0.00	244804 O	662	5213615 A	1220	1457195 A	1323	3078008 A	2504	6879 A	53	24603518 A	4739	929458 A	200	963	11713	12716	8894																									
03/12/17	Sun	0.00	245471 O	671	5216054 A	1219	1458118 A	1322	3078008 A	2504	6879 A	53	24603518 A	4739	929458 A	200	963	11713	12716	8894																									
03/13/17	Mon	1.00	246794 O	617	5216054 A	1219	1458118 A	1322	3078008 A	2504	6879 A	53	24603518 A	4739	929458 A	200	963	11713	12716	8894																									
03/14/17	Tue	0.00	246794 O	617	5216054 A	1219	1458118 A	1322	3078008 A	2504	6879 A	53	24603518 A	4739	929458 A	200	963	11713	12716	8894																									
03/15/17	Wed	0.00	247411 O	894	5222919 A	16	1463202 A	1342	3084545 A	2797	6901 A	14	24622613 A	4829	930113 A	241	76	1045	9965	8751																									
03/16/17	Thu	0.00	248305 O	872	5222935 A	16	1463202 A	1342	3084545 A	2797	6901 A	14	24622613 A	4829	930113 A	241	76	1045	9965	8751																									
03/17/17	Fri	0.00	249171 O	777	5222935 A	10	1463985 A	1760	3089916 A	2574	6915 A	9	24637106 A	5358	920367 A	116	997	10285	11377	10085																									
03/18/17	Sat	0.00	249954 O	777	5222935 A	10	1463985 A	1760	3089916 A	2574	6915 A	9	24637106 A	5358	920367 A	116	997	10285	11377	10085																									
03/19/17	Sun	0.00	250831 O	730	5222962 A	1148	1466745 A	1147	1468963 A	1752	6924 A	9	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/20/17	Mon	0.00	251661 O	729	5224110 A	1147	1468963 A	1329	3093465 A	2405	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/21/17	Tue	0.00	252390 O	748	5225257 A	25	1470292 A	1361	3097869 A	2404	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/22/17	Wed	0.00	253038 O	684	5225282 A	2740	1471653 A	1360	3099299 A	2681	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/23/17	Thu	0.00	253722 O	576	5228022 A	0	1473013 A	1762	3101980 A	2681	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/24/17	Fri	0.00	254298 O	625	5228022 A	0	1473013 A	1762	3101980 A	2681	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/25/17	Sat	0.00	254923 O	555	5228022 A	2146	1475181 A	1794	3102937 A	2553	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/26/17	Sun	0.00	255478 O	723	5230168 A	1777	1477513 A	1794	3102937 A	2553	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/27/17	Mon	0.00	256201 O	523	5231945 A	1776	1478819 A	1305	3103360 A	2015	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/28/17	Tue	0.00	256724 O	689	5233721 A	1052	1480124 A	1730	3111314 A	2536	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/29/17	Wed	0.00	257413 O	659	5234773 A	2286	1481854 A	1730	3111314 A	2536	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/30/17	Thu	0.00	258072 O	529	5237059 A	2048	1482832 A	1764	3116425 A	2515	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
03/31/17	Fri	0.00	258601 O	513	5239107 A	2016	1484596 A	1764	3116425 A	2441	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
04/01/17	Sat	0.00	259114 O	506	5241123 A	77	1485502 A	905	3120256 A	1389	6933 A	0	2463465 A	5313	930982 A	116	997	10285	11377	10085																									
TOTAL	1.00		24743		80011		42153		65536		206		156071		5118		30067	335771	355838																										

POC - PUMP OPERATION CODE
A - AUTOMATIC
M - MANUAL
O - OFF

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Date 4/6/2017
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**CITRUS COUNTY CENTRAL LANDFILL
LEACHATE GALLONS**

MONTH	RAIN DATA	7-ACRE TOTAL OF LEACHATE	80-ACRE TOTAL OF PRIMARY LEACHATE PHASE 1, 1A, 2 & 3	80-ACRE TOTAL OF SECONDARY LEACHATE PHASE 1, 1A, 2 & 3	SURFACE LEACHATE OR SPECIAL PROJECT	TOTAL INFLUENT LEACHATE	HAULED LEACHATE (RAW) FOR DISPOSAL OFF-SITE	FORCE MAIN LEACHATE (RAW) FOR DISPOSAL OFF-SITE	EFFLUENT DISPOSAL ON-SITE	TOTAL DISPOSAL	BALANCE
JANUARY	3.90	10086	381136	14187	0	405409	0	169000	0	169000	236409
FEBRUARY	3.10	8986	299649	23137	0	331772	0	197000	0	197000	134772
MARCH	1.00	6921	355838	30067	0	392826	0	159000	0	159000	233826
APRIL	0.00	0	0	0	0	0	0	0	0	0	0
MAY	0.00	0	0	0	0	0	0	0	0	0	0
JUNE	0.00	0	0	0	0	0	0	0	0	0	0
JULY	0.00	0	0	0	0	0	0	0	0	0	0
AUGUST	0.00	0	0	0	0	0	0	0	0	0	0
SEPTEMBER	0.00	0	0	0	0	0	0	0	0	0	0
OCTOBER	0.00	0	0	0	0	0	0	0	0	0	0
NOVEMBER	0.00	0	0	0	0	0	0	0	0	0	0
DECEMBER	0.00	0	0	0	0	0	0	0	0	0	0
TOTAL	8.00	25993	1036623	67391	0	1130007	0	525000	0	525000	605007

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Citrus County Central Landfill Phase 3 Secondary Leachate Flow 2nd Quarter 2017

