Johnson, Sabrina O

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Monday, April 15, 2019 10:34 AM
To: SWD_Waste
Cc: Morgan, Steve; Ruiz, Larry; Cope, Ronald; Byer, Kimberly; Madden, Melissa; 'Curtis, Bob'; O'Neill, Joseph; KGuilbeault@scsengineers.com
Subject: WACS ID 41193 - Qtr 1 2019 Water Balance & Waste Tire Report for Southeast County
Attachments: 1Q2019 Water Balance Report.pdf; 1Q2019 Waste Tire rpt.pdf

Mr. Morgan:

The Quarterly Water Balance and Waste Tire Reports for the Southeast County Landfill are attached (WACS ID 41193).

Please advise should you have any questions concerning the information provided.

Ron Wiesman II
Manager
Solid Waste Management Division
Transportation & Utilities Services

P: (813) 671-7707 VOIP 42801
M: (813) 455-2194
E: wiesmanr@HCFLGov.net
W:http://HCFLGOV.net

Hillsborough County
15960 County Road 672 Lithia, FL 33547

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Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

April 15, 2019

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Waste Tire Facility Quarterly Report - Permit No. 126787-005-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-005-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period January 1 2019 through March 31, 2019. The SWMD staff compiled the information from the site's daily reports for this Quarterly Report.

Should you have any questions or require additional information concerning this submittal, please contact me at (813) 671-7707.

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division

LER/rw
Attachments
xc: Ron Cope, EPC
Kimberly Byer, SWMD

WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
FIRST QUARTER 2019

		FIRST QUARTER	Beginning Tonnage (Jan. 1, 2019)	534.26
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2019	166.23	128.51	73.25	4.72
Beginning Tons	528.12			
	694.35	-128.51	-73.25	-4.72
			Ending Tonnage	487.87
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Feb. 2019	178.50	50.45	98.38	0.00
Beginning Tons	487.87			
	666.37	-50.45	-98.38	0.00
			Ending Tonnage	517.54
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Mar. 2019	184.88	144.53	30.48	5.43
Beginning Tons	517.54			
	702.42	-144.53	-30.48	-5.43
			Ending Tonnage	521.98
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2019	166.23	128.51	73.25	4.72
Feb. 2019	178.50	50.45	98.38	0.00
Mar. 2019	184.88	144.53	30.48	5.43
Sub-Total	529.61	323.49	202.11	10.15
Beginning Tons	534.26			
TOTAL	1,063.87	-323.49	-202.11	-10.15
			Ending Tonnage	528.12

Department of Environmental Protection

DEP Form # 62-701.900(21)
Form Title Waste Tire Processing Facility Quarterly Report
Effective Date 3/22/00
DEP Application No. _____ (Filled in by DEP)

Waste Tire Processing Facility Quarterly Report

Pursuant to Rule 62-711.530, Florida Administrative Code, the owner or operator of a waste tire processing facility shall submit the following information to the Department quarterly.

Quarter covered by this report 1/1/19 thru 3/31/19 **(First quarter begins on January 1 of any given year)**

1. **Facility name:** Hillsborough County Southeast Landfill Waste Tire Facility
2. **Facility mailing address:** 332 N. Falkenburg Road
   City: Tampa **County:** Hillsborough **Zip:** 33619
3. **Facility permit number:** 126787-005-WT/02
4. **Facility telephone number** (813) 671-7707
5. **Authorized person preparing report:** Larry E. Ruiz
6. **Affiliation with facility:** Owner Represnentative - Manager Landfill Operations
7. **Telephone number (if different from above):** ( )
8. **Activity: Report in tons**

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending Inventory
Used Tires	534.26	529.61			-525.60		
Other whole Tires							
Processed tires							
Processing Waste						-10.15	
Other							
Total	534.26	529.61			-525.60	-10.15	528.12

a. **Explain all inventory adjustments.**
-10.15 tons of unprocessed truck tires.

b. **List any period in which one or more category of inventory exceeded the permitted maximum for that category. How was that condition relieved?**

For any excess inventory at the end of the quarter, state how and when this condition will be relieved. Attach Additional sheets, if necessary.

9. **Certification:**

To the best of my knowledge and belief, I certify the information provided in this report is true, accurate, and complete.

Larry E. Ruiz — **Print Name of Authorized Agent**
Larry E. Ruiz — **Signature of Authorized Agent**
4/15/2019 — **Date**

Mail complete form to
the appropriate district office

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

April 15, 2019

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection, Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – Leachate Data Quarterly Report

Dear Mr. Morgan:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-023-SO/01, the Solid Waste Management Division (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending March 31, 2019.

The data is being submitted as separate monthly reports for January, February, and March 2019. The attached reports include the leachate level in Pump Station B (PS-B).

Please advise should you have any questions concerning the attached submittal.

Sincerely,

Larry E. Ruiz, SC
Manager Landfill Operations
Solid Waste Management Division

LER/rw
Attachment
xc: Ken Guilbeault, SCS
Ron Cope, EPC

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

MEMORANDUM

DATE: February 14, 2019

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Sr. Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for January 2019
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2019 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 3.49 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month there was no effluent stored in Pond A, however small amounts of rain water collected in the pond.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 0.3 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 15.4 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 110,973 gallons. A total of 3,440,156 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column VII)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 3,242 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column VIII)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 300,356 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 3,740,512 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 183,458 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 280 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XII presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 86,476 gallons of leachate was removed from the compost area and pumped to the LTRF.

Leachate in 575,000-Gallon Tank (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month leachate was not stored in the tank.

Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June 2018. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 421,800 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 3,729,332 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month leachate was not used for dust control.

Pond A Storage (Column XVIII)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month effluent was not stored in Pond A however rainwater collected in Pond A after a couple large storm events.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month an average of 11,100 gallons per day of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month effluent was not used for spray irrigation.

Effluent Dust Control Sprayed (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month effluent was not sprayed as dust control.

Total Effluent Hauled (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month effluent was not hauled off site.

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was zero gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 4,016,691 gallons. Total outflow quantity from the LTRF was 3,729,332 gallons. The change in storage for the month increased by 287,359 gallons.

Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Compost Leachate (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	0.0	2.3	15.7	97,783	198	16,117	113,900	8,092	5	0	0	373,000	0	0	0	0	97,000	0	0	0	0	0
2	0.00	0.0	2.0	10.9	97,505	198	16,117	113,622	8,092	5	0	0	430,000	0	170,790	0	0	80,000	0	0	0	0	0
3	0.00	0.0	1.7	18.4	100,776	170	5,174	105,950	6,693	0	0	0	408,000	0	148,154	0	0	57,000	0	0	0	0	0
4	0.55	0.0	1.1	19.7	98,698	173	20,156	118,854	7,237	0	0	0	425,000	0	156,771	0	0	23,000	0	0	0	0	0
5	0.00	0.0	0.0	13.9	102,445	143	5,046	107,491	6,371	0	0	0	425,000	0	134,592	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	14.5	92,170	145	13,979	106,149	6,871	0	0	0	461,000	0	0	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	15.1	92,760	145	13,979	106,739	6,871	0	0	0	497,000	0	125,210	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	15.9	97,037	161	12,558	109,595	6,722	0	0	0	468,000	0	139,788	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	12.4	108,711	102	10,410	119,121	5,758	0	0	0	466,000	0	138,202	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	13.1	103,584	159	10,472	114,056	7,234	0	0	0	437,000	0	97,837	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	13.9	99,814	92	9,002	108,816	4,870	0	0	0	396,000	0	147,703	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	20.0	112,710	129	8,622	121,332	5,470	0	0	0	350,000	0	154,587	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	19.1	108,625	102	10,295	118,920	5,331	0	0	0	392,000	0	0	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	18.2	138,070	102	10,295	148,365	5,331	0	0	0	434,000	0	126,195	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	12.7	134,025	96	8,038	142,063	7,030	0	0	0	441,000	0	133,583	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	12.4	128,661	94	2,178	130,839	4,789	0	0	0	439,000	0	132,941	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	17.6	125,633	96	14,676	140,309	4,654	41	0	0	430,000	0	153,158	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	20.5	121,955	68	8,952	130,907	6,295	0	6	0	410,000	0	155,008	0	0	0	0	0	0	0	0
19	0.01	0.0	0.0	17.6	124,311	97	8,670	132,981	3,617	0	0	0	379,000	0	153,091	0	0	0	0	0	0	0	0
20	0.08	0.0	0.0	16.8	124,336	71	8,757	133,093	5,851	0	0	0	430,000	0	0	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	15.9	120,118	71	8,757	128,875	5,851	0	0	0	480,000	0	139,763	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	20.7	106,193	83	6,728	112,921	4,041	0	0	0	422,000	0	152,581	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	16.8	112,936	68	8,816	121,752	4,222	133	0	0	415,000	0	160,337	0	0	0	0	0	0	0	0
24	0.87	0.0	0.0	11.0	120,238	69	8,596	128,834	4,745	96	0	0	374,000	0	151,899	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	20.0	115,017	60	6,590	121,607	4,965	0	9,228	0	360,000	0	152,478	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	16.7	106,033	60	6,756	112,789	4,580	0	0	0	331,000	0	122,170	0	0	0	0	0	0	0	0
27	1.97	0.0	0.0	14.4	112,963	67	8,661	121,624	5,254	0	394	0	391,000	0	0	0	0	0	0	0	0	0	0
28	0.01	1.0	0.9	12.0	111,251	67	8,661	119,912	5,254	0	394	0	451,000	0	137,584	0	24,000	15,000	0	0	0	0	0
29	0.00	0.0	1.7	7.0	110,151	64	6,970	117,121	7,013	0	76,454	0	425,000	0	130,588	0	0	57,000	0	0	0	0	0
30	0.00	0.0	0.9	17.2	113,529	33	3,594	117,123	7,218	0	0	0	475,000	0	164,216	0	0	15,000	0	0	0	0	0
31	0.00	0.0	0.0	7.4	102,121	62	12,734	114,855	7,138	0	0	0	461,000	0	150,106	0	0	0	0	0	0	0	0
Total	3.49				3,440,156	3,242	300,356	3,740,512	183,458	280	86,476			0	3,729,332	0			0	0	0	0	0
Daily Average		0.0	0.3	15.4	110,973	105	9,689	120,662	5,918	9	2,790	0	421,800				0	11,100					
Mo. Average																0				0	0	0	0

balance\2019\01-19bal.xls

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Columns VII & VIII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XII, XVI, and XX-XXIV, quantities from flow meters.
10. Column XXIV includes 80% of the daily values from Columns XVII, XXI - XXII, plus 5% of the daily values from column XX.

TABLE 2. FIELD DATA ENTRY FORM
JANUARY 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal)
																	Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	*9,979,350*	*15.7*	*1,432,667*	*1,400,338*	*5,881,647*	*2,125,977*	*9,237,973*	*86,577*	*2.25*	*0.0*	*0.0*	0	*0.00*	*12.96*	0	0	0				
2	0.00	72,200	10.9	1,436,663	1,404,434	5,881,652	2,125,977	9,254,090	86,775	2.00	0.0	0.00	0	0.00	14.92	0	135,191	35,599				
3	0.00	167,800	18.4	1,439,977	1,407,813	5,881,647	2,125,977	9,259,264	86,945	1.70	0.0	0.00	0	0.00	14.17	0	112,544	35,610				
4	0.55	261,234	19.7	1,443,545	1,411,482	5,881,639	2,125,977	9,279,420	87,118	1.10	0.0	0.00	0	0.00	14.75	0	120,662	36,109				
5	0.00	359,339	13.9	1,446,692	1,414,706	5,881,633	2,125,977	9,284,466	87,261	0.00	0.0	0.00	0	0.00	14.75	0	90,576	44,016				
6	0.00	*447,170*	*14.5*	*1,450,079*	*1,418,191*	*5,881,627*	*2,125,978*	*9,298,445*	*87,406*	*0.00*	0.0	*0.00*	0	*0.00*	*16.00*	0	0	0				
7	0.00	535,000	15.1	1,453,465	1,421,675	5,881,620	2,125,979	9,312,424	87,551	0.00	0.0	0.00	0	0.00	17.25	0	89,198	36,012				
8	0.00	627,000	15.9	1,456,797	1,425,065	5,881,613	2,125,979	9,324,982	87,712	0.00	0.0	0.00	0	0.00	16.25	0	82,631	57,157				
9	0.00	730,639	12.4	1,459,644	1,427,976	5,881,612	2,125,979	9,335,392	87,814	0.00	0.0	0.00	0	0.00	16.17	0	67,637	70,565				
10	0.00	829,269	13.1	1,463,230	1,431,624	5,881,610	2,125,979	9,345,864	87,973	0.00	0.0	0.00	0	0.00	15.17	0	75,493	22,344				
11	0.00	923,958	13.9	1,465,645	1,434,079	5,881,607	2,125,979	9,354,866	88,065	0.00	0.0	0.00	0	0.00	13.75	0	83,005	64,698				
12	0.00	1,015,871	20.0	1,468,354	1,436,840	5,881,606	2,125,981	9,363,488	88,194	0.00	0.0	0.00	0	0.00	12.17	0	75,361	79,226				
13	0.00	*1,103,699*	*19.1*	*1,470,988*	*1,439,537*	*5,881,604*	*2,125,981*	*9,373,783*	*88,296*	*0.00*	0.0	*0.00*	0	*0.00*	*13.63*	0	0	0				
14	0.00	1,191,527	18.2	1,473,621	1,442,234	5,881,601	2,125,981	9,384,078	88,397	0.00	0.0	0.00	0	0.00	15.08	0	90,551	35,644				
15	0.00	1,282,900	12.7	1,477,093	1,445,792	5,881,602	2,125,981	9,392,116	88,493	0.00	0.0	0.00	0	0.00	15.33	0	90,464	43,119				
16	0.00	1,365,638	12.4	1,479,458	1,448,216	5,881,600	2,125,981	9,394,294	88,587	0.00	0.0	0.00	0	0.00	15.25	0	75,456	57,485				
17	0.00	1,447,754	17.6	1,481,763	1,450,565	5,881,641	2,125,981	9,408,970	88,683	0.00	0.0	0.00	0	0.00	14.92	0	90,800	62,358				
18	0.00	1,528,560	20.5	1,484,870	1,453,753	5,881,635	2,125,987	9,417,922	88,751	0.00	0.0	0.00	0	0.00	14.25	0	83,021	71,987				
19	0.01	1,610,452	17.6	1,486,638	1,455,602	5,881,635	2,125,987	9,426,592	88,848	0.00	0.0	0.00	0	0.00	13.17	0	81,120	71,971				
20	0.08	*1,692,369*	*16.8*	*1,489,538*	*1,458,554*	*5,881,631*	*2,125,986*	*9,435,349*	*88,919*	*0.00*	0.0	*0.00*	0	*0.00*	*14.92*	0	0	0				
21	0.00	1,774,286	15.9	1,492,437	1,461,505	5,881,626	2,125,984	9,444,106	88,989	0.00	0.0	0.00	0	0.00	16.67	0	95,795	43,968				
22	0.00	1,842,507	20.7	1,494,035	1,463,948	5,881,622	2,125,984	9,450,834	89,072	0.00	0.0	0.00	0	0.00	14.67	0	73,985	78,596				
23	0.00	1,915,300	16.8	1,496,533	1,465,672	5,881,755	2,125,984	9,459,650	89,140	0.00	0.0	0.00	0	0.00	14.42	0	89,032	71,305				
24	0.87	1,998,679	11.0	1,498,891	1,468,059	5,881,851	2,125,984	9,468,246	89,209	0.00	0.0	0.00	0	0.00	13.00	0	88,944	62,955				
25	0.00	2,077,100	20.0	1,501,337	1,470,578	5,881,848	2,135,212	9,474,836	89,269	0.00	0.0	0.00	0	0.00	12.50	0	80,666	71,812				
26	0.00	2,146,322	16.7	1,503,617	1,472,878	5,881,843	2,135,212	9,481,592	89,329	0.00	0.0	0.00	0	0.00	11.50	0	36,316	85,854				
27	1.97	2,222,461	14.4	1,506,222	1,475,527	5,881,839	2,135,606	9,490,253	89,396	0.00	0.0	0.00	0	0.00	13.59	0						
28	0.01	2,298,600	12.0	1,508,826	1,478,176	5,881,835	2,136,000	9,498,914	89,462	0.9	0.0	1.00	0	0.00	15.67	0	95,224	42,360				
29	0.00	2,373,683	7.0	1,512,308	1,481,707	5,881,866	2,212,454	9,505,884	89,526	1.7	0.0	0.00	0	0.00	14.75	0	87,875	42,713				
30	0.00	2,453,133	17.2	1,515,862	1,485,371	5,881,865	2,212,454	9,509,478	89,559	0.9	0.0	0.00	0	0.00	16.50	0	85,874	78,342				
31	0.00	2,521,800	7.4	1,519,398	1,488,973	5,881,864	2,212,454	9,522,212	89,621	0.0	0.0	0.00	0	0.00	16.00	0	79,312	70,794				
Totals	3.49										0		0			0	2,256,733	1,472,599	0	0	0	0

balance\2019\01-19bal.xls

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 9 acres
Open	5	0
Intermediate	134.4	15
Final	23	0
Not Opened	0	0

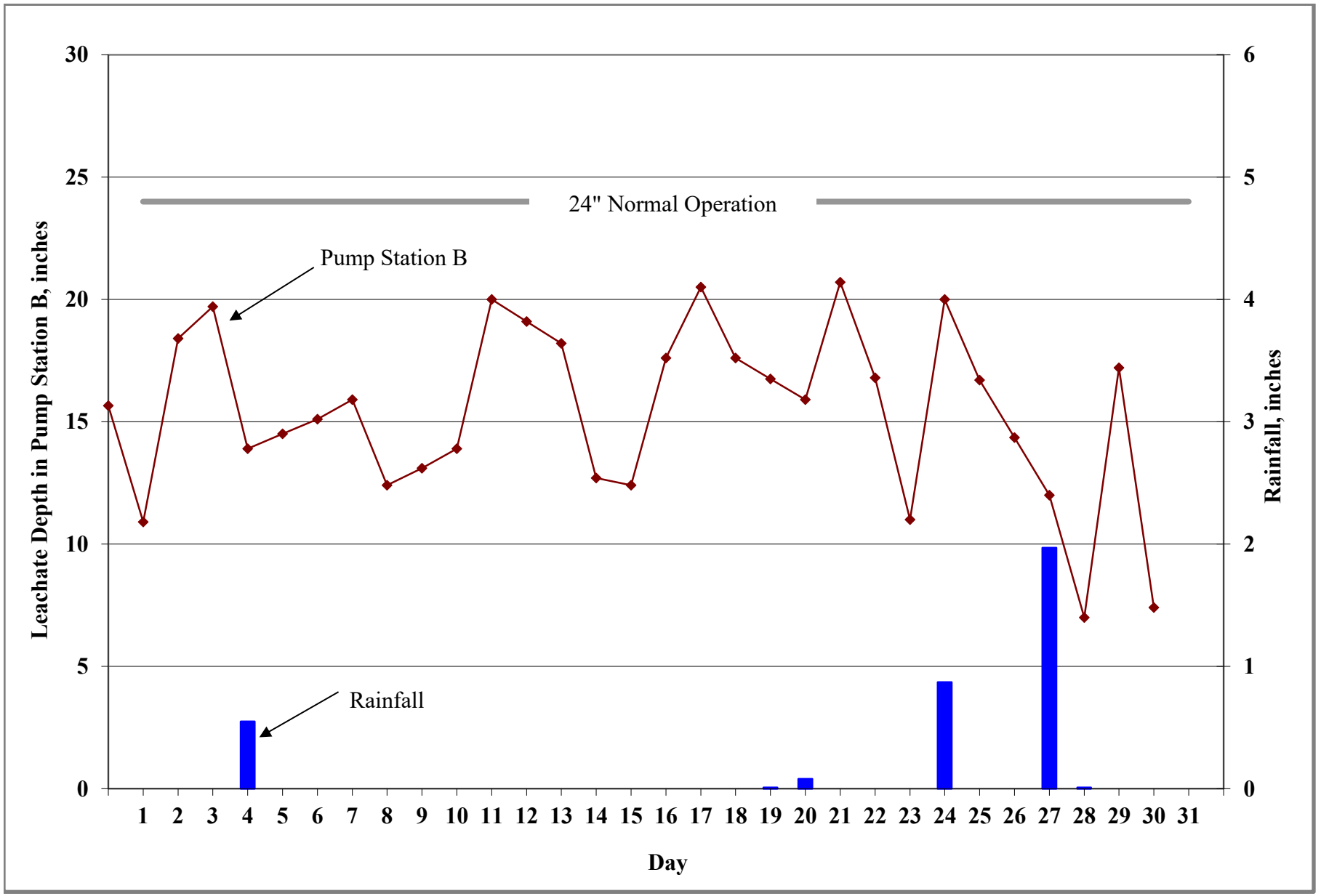

Figure 1. Leachate Levels in Pump Station B and Rainfall for January 2019.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2019

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.49	5,965	183,738	300,356	3,440,156	86,476	3,729,332	0	0	0	0	0	4,016,691	3,729,332	287,359
February															
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															
YTD Total	3.49	5,965	183,738	300,356	3,440,156	86,476	3,729,332	0	0	0	0	0	4,016,691	3,729,332	287,359

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

MEMORANDUM

DATE: March 11, 2019

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Sr. Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for February 2019
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2019 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.79 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month there was no effluent stored in Pond A, however small amounts of rain water collected in the pond.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 0.0 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 14 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 101,887 gallons. A total of 2,852,838 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column VII)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 1,174 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column VIII)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 209,810 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 3,062,648 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 133,136 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 1,847 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XII presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 8,503 gallons of leachate was removed from the compost area and pumped to the LTRF.

Leachate in 575,000-Gallon Tank (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month leachate was not stored in the tank.

Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June 2018. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 344,800 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 3,154,367 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month leachate was not used for dust control.

Pond A Storage (Column XVIII)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month effluent was not stored in Pond A however rainwater collected in Pond A after a couple large storm events.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month an average of 300 gallons per day of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month effluent was not used for spray irrigation.

Effluent Dust Control Sprayed (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month effluent was not sprayed as dust control.

Total Effluent Hauled (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month effluent was not hauled off site.

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was zero gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 3,211,899 gallons. Total outflow quantity from the LTRF was 3,154,367 gallons. The change in storage for the month increased by 57,532 gallons.

Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
FEBRUARY 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Compost Leachate (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	0.0	0.0	12.3	105,591	66	9,086	114,677	6,549	0	0	0	425,000	0	152,629	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	10.9	109,110	31	8,826	117,936	4,643	0	0	0	374,000	0	158,269	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	13.5	110,505	65	9,032	119,537	5,683	0	0	0	415,000	0	0	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	16.0	107,643	65	9,032	116,675	5,683	0	0	0	456,000	0	132,504	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	12.6	104,616	37	6,766	111,382	5,920	0	0	0	439,000	0	162,167	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	16.6	104,026	68	8,896	112,922	5,519	0	0	0	381,000	0	160,654	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	12.3	103,512	35	8,178	111,690	5,249	0	0	0	336,000	0	152,593	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	11.3	98,850	67	8,156	107,006	4,433	97	0	0	302,000	0	115,297	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	15.5	98,521	34	640	99,161	4,731	61	0	0	281,000	0	123,156	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	13.1	98,911	52	128	99,039	4,625	72	0	0	313,000	0	0	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	10.6	99,677	52	128	99,805	4,625	72	0	0	345,000	0	117,891	0	0	0	0	0	0	0	0
12	0.32	0.0	0.0	18.4	120,975	0	56	121,031	4,604	0	0	0	345,000	0	130,033	0	0	0	0	0	0	0	0
13	0.20	0.0	0.0	12.0	102,901	109	24,954	127,855	4,906	171	0	0	348,000	0	123,654	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	10.3	99,454	34	14,658	114,112	4,869	53	0	0	322,000	0	115,988	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	7.7	104,748	69	8,822	113,570	5,179	81	0	0	317,000	0	138,160	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	16.8	114,600	36	9,056	123,656	4,579	147	0	0	309,000	0	122,736	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	17.9	106,210	38	8,332	114,542	4,051	131	0	0	349,000	0	0	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	18.9	104,951	38	8,332	113,283	4,051	131	0	0	389,000	0	132,735	0	0	0	0	0	0	0	0
19	0.00	0.0	0.0	15.1	96,985	83	6,770	103,755	4,521	0	0	0	372,000	0	108,857	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	16.9	100,074	41	7,110	107,184	4,554	102	0	0	360,000	0	115,763	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	7.4	103,919	41	7,300	111,219	5,036	0	0	0	345,000	0	123,254	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	18.1	100,192	30	7,248	107,440	4,393	0	0	0	317,000	0	139,905	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	17.0	100,886	0	5,590	106,476	4,206	13	0	0	274,000	0	132,314	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	15.2	98,817	30	6,494	105,311	3,835	199	0	0	311,000	0	0	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	13.3	97,717	30	6,494	104,211	3,835	199	0	0	348,000	0	132,683	0	0	0	0	0	0	0	0
26	1.00	0.0	0.0	9.6	90,897	13	7,210	98,107	3,232	127	0	0	317,000	0	130,590	0	0	0	0	0	0	0	0
27	0.27	0.6	0.0	20.2	84,108	0	7,088	91,196	4,461	89	0	0	290,000	0	109,171	0	10,000	0	0	0	0	0	0
28	0.00	0.7	0.6	12.3	84,445	13	5,428	89,873	5,165	103	8,503	0	274,000	0	123,364	0	13,000	7,000	0	0	0	0	0
Total	1.79				2,852,838	1,174	209,810	3,062,648	133,136	1,847	8,503			0	3,154,367	0			0	0	0	0	0
Daily Average		0.0	0.0	14.0	101,887	42	7,493	109,380	4,755	66	304	0	344,800				800	300					
Mo. Average																0				0	0	0	0

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Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Columns VII & VIII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XII, XVI, and XX-XXIV, quantities from flow meters.
10. Column XXIV includes 80% of the daily values from Columns XVII, XXI - XXII, plus 5% of the daily values from column XX.

TABLE 2. FIELD DATA ENTRY FORM
FEBRUARY 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
											Pond B		Effluent	Depth in	Depth in	Leachate	Leachate Hauled		Leachate	Effluent Hauled		Effluent
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Effluent Sprayed (gal)	Pond A Depth (ft.)	Spray Irrigation (gal.)	575K Tank Leachate (ft.)	575K Tank Effluent (ft.)	Treated at LTRF (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal)
1	0.00	2,592,869	12.3	1,522,652	1,492,268	5,881,862	2,212,454	9,531,298	89,687	0.0	0.0	0.0	0	0.00	14.75		67,003	85,626				
2	0.00	2,667,904	10.9	1,524,970	1,494,593	5,881,862	2,212,454	9,540,124	89,718	0.0	0.0	0.0	0	0.00	13.00		86,871	71,398				
3	0.00	*2,744,334*	*13.5*	*1,527,800*	*1,497,447*	*5,881,860*	*2,212,454*	*9,549,156*	*89,783*	*0.0*	*0.0*	*0.0*	*0*	*0.00*	*14.42*							
4	0.00	2,820,763	16.0	1,530,629	1,500,300	5,881,858	2,212,454	9,558,188	89,848	0.0	0.0	0.0	0	0.00	15.83		89,291	43,213				
5	0.00	2,894,247	12.6	1,533,578	1,503,271	5,881,859	2,212,454	9,564,954	89,885	0.0	0.0	0.0	0	0.00	15.25		90,276	71,891				
6	0.00	2,966,994	16.6	1,536,320	1,506,048	5,881,858	2,212,454	9,573,850	89,953	0	0	0	0	0	13.25		89,491	71,163				
7	0.00	3,039,600	12.3	1,538,923	1,508,694	5,881,857	2,212,454	9,582,028	89,988	0.0	0.0	0.0	0	0.00	11.67		89,650	62,943				
8	0.00	3,110,871	11.3	1,541,139	1,510,911	5,881,954	2,212,454	9,590,184	90,055	0.0	0.0	0.0	0	0.00	10.50		52,731	62,566				
9	0.00	3,179,854	15.5	1,543,456	1,513,325	5,882,015	2,212,454	9,590,824	90,089	0.0	0.0	0.0	0	0.00	9.75		44,063	79,093				
10	0.00	*3,249,227*	*13.1*	*1,545,764*	*1,515,642*	*5,882,087*	*2,212,454*	*9,590,952*	*90,141*	*0.0*	*0.0*	*0.0*	*0*	*0.00*	*10.88*							
11	0.00	3,318,600	10.6	1,548,072	1,517,959	5,882,159	2,212,454	9,591,080	90,192	0.0	0.0	0.0	0	0.00	12.00		89,444	28,447				
12	0.32	3,408,700	18.4	1,550,360	1,520,275	5,882,158	2,212,454	9,591,136	90,192	0.0	0.0	0.0	0	0.00	12.00		45,046	84,987				
13	0.20	3,481,700	12	1,552,795	1,522,746	5,882,329	2,212,454	9,616,090	90,301	0	0	0	0	0.00	12.08		45,051	78,603				
14	0.00	3,551,000	10.3	1,555,240	1,525,170	5,882,382	2,212,454	9,630,748	90,335	0.0	0.0	0.0	0	0.00	11.17		37,227	78,761				
15	0.00	3,625,577	7.7	1,557,805	1,527,784	5,882,463	2,212,454	9,639,570	90,404	0.0	0.0	0.0	0	0.00	11.00		52,159	86,001				
16	0.00	3,710,029	16.8	1,560,093	1,530,075	5,882,610	2,212,454	9,648,626	90,440	0.0	0.0	0.0	0	0.00	10.75		44,010	78,726				
17	0.00	*3,786,091*	*17.9*	*1,562,122*	*1,532,098*	*5,882,741*	*2,212,454*	*9,656,958*	*90,478*	*0.0*	*0.0*	*0.0*	*0*	*0.00*	*12.13*							
18	0.00	3,862,153	18.9	1,564,150	1,534,120	5,882,872	2,212,454	9,665,290	90,515	0.0	0.0	0.0	0	0.00	13.50		89,547	43,188				
19	0.00	3,930,400	15.1	1,566,387	1,536,404	5,883,036	2,212,454	9,672,060	90,598	0.0	0.0	0.0	0	0.00	12.92		45,035	63,822				
20	0.00	4,001,969	16.9	1,568,651	1,538,694	5,883,138	2,212,454	9,679,170	90,639	0.0	0.0	0.0	0	0.00	12.50		44,743	71,020				
21	0.00	4,077,400	7.4	1,571,162	1,541,219	5,883,240	2,212,454	9,686,470	90,680	0.0	0.0	0.0	0	0.00	12.00		52,255	70,999				
22	0.00	4,149,195	18.1	1,573,352	1,543,422	5,883,356	2,212,454	9,693,718	90,710	0.0	0.0	0.0	0	0.00	11.00		97,209	42,696				
23	0.00	4,221,435	17.0	1,575,456	1,545,524	5,883,369	2,212,454	9,699,308	90,710	0.0	0.0	0.0	0	0.00	9.50		89,525	42,789				
24	0.00	*4,291,606*	*15.2*	*1,577,373*	*1,547,442*	*5,883,568*	*2,212,454*	*9,705,802*	*90,740*	*0.0*	*0.0*	*0.0*	*0*	*0.00*	*10.79*							
25	0.00	4,361,777	13.3	1,579,290	1,549,359	5,883,766	2,212,454	9,712,296	90,769	0.0	0.0	0.0	0	0.00	12.08		89,498	43,185				
26	1.00	4,425,500	9.6	1,580,899	1,550,982	5,883,893	2,212,454	9,719,506	90,782	0.0	0.0	0.0	0	0.00	11.00		45,044	85,546				
27	0.27	4,491,375	20.2	1,583,130	1,553,212	5,883,982	2,212,454	9,726,594	90,782	0.0	0.0	0.6	0	0.00	10.08		45,053	64,118				
28	0.00	4,565,142	12.3	1,585,699	1,555,808	5,884,085	2,220,957	9,732,022	90,795	0.6	0.0	0.7	0	0.00	9.50		52,228	71,136				
Totals	1.79										0		0			0	1,572,450	1,581,917	0	0	0	0

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Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 9 acres
Open	5	0
Intermediate	134.4	15
Final	23	0
Not Opened	0	0

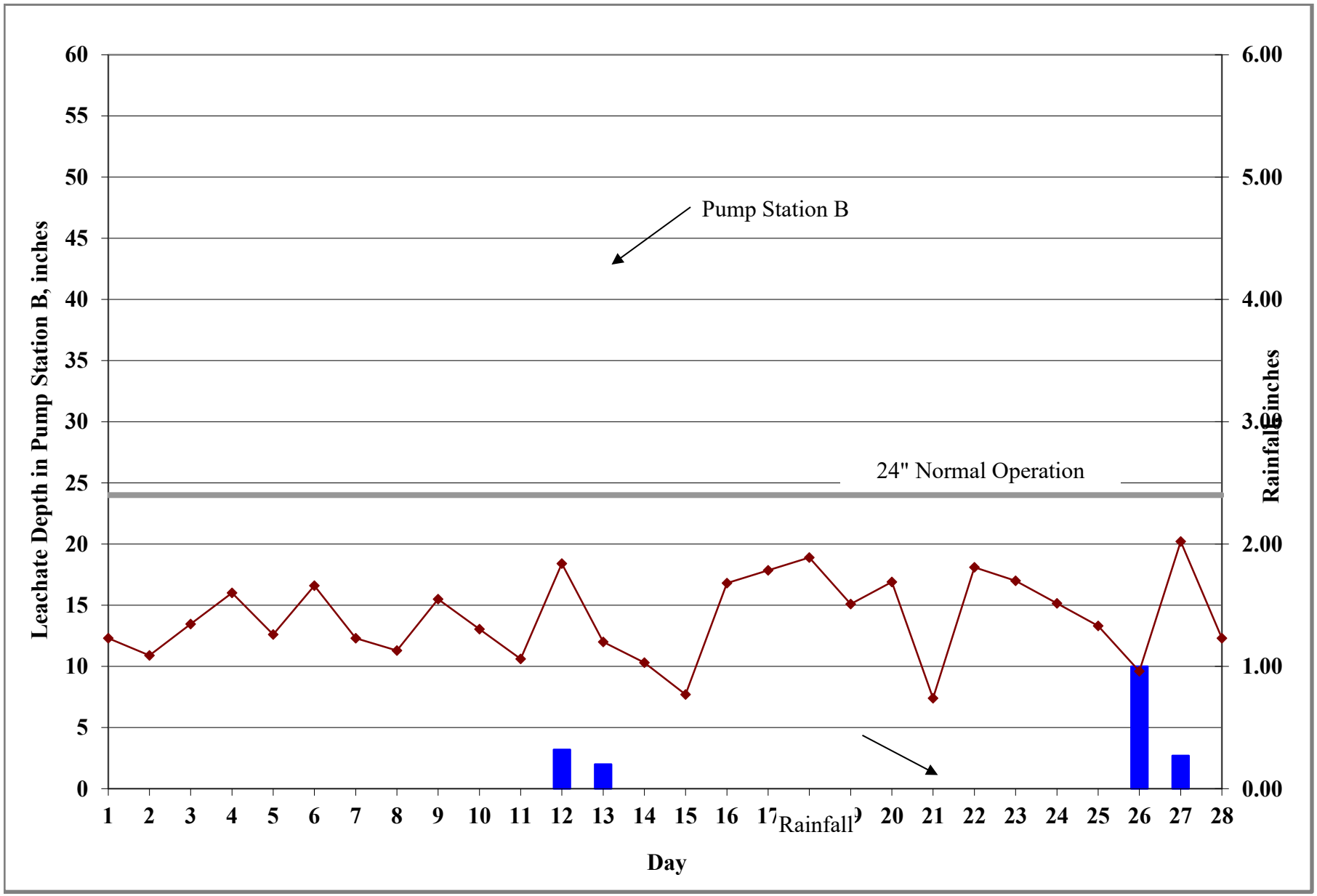

Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2019.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2019

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.49	5,965	183,738	300,356	3,440,156	86,476	3,729,332	0	0	0	0	0	4,016,691	3,729,332	287,359
February	1.79	5,764	134,983	209,810	2,852,838	8,503	3,154,367	0	0	0	0	0	3,211,899	3,154,367	57,532
March															
April															
May															
June															
July															
August															
September															
October															
November															
December															
YTD Total	5.28	11,729	318,721	510,166	6,292,994	94,979	6,883,699	0	0	0	0	0	7,228,590	6,883,699	344,891

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.

Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

MEMORANDUM

DATE: April 11, 2019

TO: Larry E. Ruiz, Manager Landfill Operations, Solid Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for March 2019
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2019 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.66 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month there was no effluent stored in Pond A, small amounts of stormwater collected in the pond.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 0.0 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 13.4 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 88,978 gallons. A total of 2,758,333 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column VII)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 203 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column VIII)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 197,794 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,956,127 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 112,015 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 1,300 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XII presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 2,816 gallons of leachate was removed from the compost area and pumped to the LTRF.

Leachate in 575,000-Gallon Tank (Column XIII)

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month leachate was not stored in the tank.

Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June 2018. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 236,500 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,856,561 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month leachate was not used for dust control.

Pond A Storage (Column XVIII)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month effluent was not stored in Pond A, an average of 800 gallons per day of stormwater was stored in Pond A sump.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month an average of 0 gallons per day of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month effluent was not used for spray irrigation.

Effluent Dust Control Sprayed (Column XXII)

Column XXII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month effluent was not sprayed as dust control.

Total Effluent Hauled (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month effluent was not hauled off site.

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was zero gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 3,077,909 gallons. Total outflow quantity from the LTRF was 2,856,561 gallons. The change in storage for the month increased by 221,348 gallons.

Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Compost Leachate (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	0.0	0.0	18.0	81,647	12	5,988	87,635	4,010	79	0	0	238,000	0	95,268	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	18.8	82,186	7	7,382	89,568	2,710	110	0	0	216,000	0	123,069	0	0	0	0	0	0	0	0
3	0.00	*0.0*	*0.0*	*17.6*	*84,935*	*23*	*6,324*	*91,259*	*4,628*	*76*	*0*	*0*	*254,000*	0	0	0	0	0	0	0	0	0	0
4	0.73	0.7	0.0	16.4	83,947	23	6,324	90,271	4,628	76	0	0	293,000	0	86,542	0	13,000	0	0	0	0	0	0
5	0.20	0.7	0.0	13.1	84,018	26	5,334	89,352	4,561	0	0	0	293,000	0	129,371	0	13,000	0	0	0	0	0	0
6	0.00	0.0	0.0	8.3	101,143	0	7,116	108,259	5,398	88	0	0	240,000	0	136,993	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	7.4	98,189	0	5,654	103,843	3,530	0	0	0	197,000	0	115,343	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	5.1	100,079	8	9,162	109,241	2,384	74	0	0	202,000	0	129,752	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	8.7	102,491	0	15,654	118,145	2,977	120	0	0	187,000	0	85,974	0	0	0	0	0	0	0	0
10	0.00	*0.0*	*0.0*	*6.6*	*99,950*	*5*	*11,629*	*111,579*	*3,976*	*34*	*0*	*0*	*241,000*	0	0	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	4.4	98,531	5	11,629	110,160	3,976	34	0	0	295,000	0	114,890	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	7.5	98,371	0	98	98,469	3,688	0	0	0	274,000	0	58,892	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	5.9	95,220	0	5,454	100,674	2,737	71	2,763	0	307,000	0	87,277	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	9.9	101,631	0	5,460	107,091	4,416	89	0	0	317,000	0	86,772	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	3.8	104,604	3	5,464	110,068	2,975	30	0	0	324,000	0	86,710	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	13.8	97,219	0	5,494	102,713	4,320	117	0	0	331,000	0	123,484	0	0	0	0	0	0	0	0
17	0.01	*0.0*	*0.0*	*15.1*	*93,550*	*3*	*5,600*	*99,150*	*3,224*	*26*	*0*	*0*	*355,000*	0	0	0	0	0	0	0	0	0	0
18	0.45	0.0	0.0	16.3	94,192	3	5,600	99,792	3,224	26	0	0	379,000	0	124,478	0	0	0	0	0	0	0	0
19	0.27	0.0	0.0	20.9	89,750	0	5,266	95,016	4,341	60	0	0	345,000	0	136,942	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	12.4	88,840	0	5,800	94,640	2,945	20	0	0	307,000	0	144,340	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	9.4	92,357	0	5,816	98,173	2,966	54	53	0	247,000	0	158,302	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	19.1	89,602	0	5,864	95,466	5,040	0	0	0	187,000	0	136,536	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	20.2	87,134	0	5,840	92,974	2,557	15	0	0	173,000	0	86,324	0	0	0	0	0	0	0	0
24	0.00	*0.0*	*0.0*	*20.1*	*84,821*	*0*	*4,936*	*89,757*	*3,213*	*11*	*0*	*0*	*203,000*	0	0	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	20.0	76,645	0	4,936	81,581	3,213	11	0	0	233,000	0	136,450	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	12.5	76,229	0	5,938	82,167	2,760	30	0	0	182,000	0	129,290	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	11.9	81,407	87	5,946	87,353	4,068	0	0	0	115,000	0	114,453	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	15.8	72,021	0	5,758	77,779	2,932	0	0	0	101,000	0	93,374	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	16.7	73,185	0	4,910	78,095	4,361	0	0	0	94,000	0	78,602	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	20.2	74,438	0	5,770	80,208	3,424	0	0	0	84,000	0	57,133	0	0	0	0	0	0	0	0
31	0.00	0.0	0.0	18.6	70,004	0	5,648	75,652	2,836	50	0	0	117,000	0	0	0	0	0	0	0	0	0	0
Total	1.66				2,758,333	203	197,794	2,956,127	112,015	1,300	2,816			0	2,856,561	0			0	0	0	0	0
Daily Average		0.0	0.0	13.4	88,978	7	6,380	95,359	3,613	42	91	0	236,500				800	0					
Mo. Average																0				0	0	0	0

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Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Columns VII & VIII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XII, XVI, and XX-XXIV, quantities from flow meters.
10. Column XXIV includes 80% of the daily values from Columns XVII, XXI - XXII, plus 5% of the daily values from column XX.

TABLE 2. FIELD DATA ENTRY FORM
MARCH 2019
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal)
																	Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	4,638,597	18.0	1,587,447	1,558,070	5,884,164	2,220,957	9,738,010	90,807	0.0	0.0	0.0	0	0.00	8.25	0	52,256	43,012				
2	0.00	4,711,847	18.8	1,588,798	1,559,429	5,884,274	2,220,957	9,745,392	90,814	0.0	0.0	0.0	0	0.00	7.50	0	80,630	42,439				
3	0.00	***4,787,847***	***17.6***	***1,591,102***	***1,561,753***	***5,884,350***	***2,220,959***	***9,751,716***	***90,837***	*0.0*	*0.0*	*0.0*	*0*	*0.00*	***8.84***	0	0	0				
4	0.73	4,863,846	16.4	1,593,406	1,564,076	5,884,426	2,220,961	9,758,040	90,860	0.0	0.0	0.7	0	0.00	10.17	0	86,542	0				
5	0.20	4,941,000	13.1	1,595,674	1,566,369	5,884,424	2,220,964	9,763,374	90,886	0.0	0.0	0.7	0	0.00	10.17	0	86,478	42,893				
6	0.00	5,013,318	8.30	1,598,761	1,568,680	5,884,512	2,220,964	9,770,490	90,886	0.00	0	0.00	0	0.00	8.33	0	94,289	42,704				
7	0.00	5,082,097	7.4	1,601,751	1,569,220	5,884,512	2,220,964	9,776,144	90,886	0.0	0.0	0.0	0	0.00	6.83	0	79,807	35,536				
8	0.00	5,153,448	5.1	1,601,752	1,571,603	5,884,586	2,220,964	9,785,306	90,894	0.0	0.0	0.0	0	0.00	7.00	0	87,071	42,681				
9	0.00	5,226,940	8.7	1,603,233	1,573,099	5,884,706	2,220,964	9,800,960	90,894	0.0	0.0	0.0	0	0.00	6.50	0	43,243	42,731				
10	0.00	***5,297,891***	***6.6***	***1,605,209***	***1,575,099***	***5,884,740***	***2,220,964***	***9,812,589***	***90,899***	*0.0*	*0*	*0.0*	*0*	*0.00*	***8.38***	0	0	0				
11	0.00	5,368,842	4.4	1,607,185	1,577,099	5,884,773	2,220,964	9,824,218	90,903	0.0	0.0	0.0	0	0.00	10.25	0	79,334	35,556				
12	0.00	5,438,650	7.5	1,608,991	1,578,981	5,884,773	2,220,964	9,824,316	90,903	0.0	0.0	0.0	0	0.00	9.50	0	51,748	7,144				
13	0.00	5,506,118	5.9	1,610,357	1,580,352	5,884,844	2,223,727	9,829,770	90,903	0.00	0	0.00	0	0.00	10.67	0	44,366	42,911				
14	0.00	5,580,257	9.9	1,612,542	1,582,583	5,884,933	2,223,727	9,835,230	90,903	0.0	0.0	0.0	0	0.00	11.00	0	43,896	42,876				
15	0.00	5,655,785	3.8	1,614,016	1,584,084	5,884,963	2,223,727	9,840,694	90,906	0.0	0.0	0.0	0	0.00	11.25	0	43,882	42,828				
16	0.00	5,725,869	13.8	1,616,162	1,586,258	5,885,080	2,223,727	9,846,188	90,906	0.0	0.0	0.0	0	0.00	11.50	0	80,630	42,854				
17	0.01	***5,792,285***	***15.1***	***1,617,752***	***1,587,892***	***5,885,106***	***2,223,728***	***9,851,788***	***90,909***	*0.0*	*0.0*	*0.0*	*0*	*0.00*	***12.34***	0	0	0				
18	0.45	5,858,700	16.3	1,619,342	1,589,525	5,885,132	2,223,728	9,857,388	90,911	0.0	0.0	0.0	0	0.00	13.17	0	124,478	0				
19	0.27	5,921,315	20.9	1,621,495	1,591,713	5,885,192	2,223,730	9,862,654	90,911	0.0	0.0	0.0	0	0.00	12.00	0	94,420	42,522				
20	0.00	5,982,900	12.4	1,622,949	1,593,204	5,885,212	2,223,730	9,868,454	90,911	0.0	0.0	0.0	0	0.00	10.67	0	94,364	49,976				
21	0.00	6,047,200	9.4	1,624,411	1,594,708	5,885,266	2,223,783	9,874,270	90,911	0.0	0.0	0.0	0	0.00	8.58	0	87,168	71,134				
22	0.00	6,111,356	19.1	1,626,884	1,597,275	5,885,266	2,223,783	9,880,134	90,911	0.0	0.0	0.0	0	0.00	6.50	0	93,750	42,786				
23	0.00	6,172,567	20.2	1,628,146	1,598,570	5,885,281	2,223,783	9,885,974	90,911	0.0	0.0	0.0	0	0.00	6.00	0	43,582	42,742				
24	0.00	***6,231,465***	***20.1***	***1,629,727***	***1,600,202***	***5,885,292***	***2,223,784***	***9,890,910***	***90,911***	*0.0*	*0.0*	*0.0*	*0*	*0.00*	***7.04***	0	0	0				
25	0.00	6,290,363	20.0	1,631,307	1,601,834	5,885,303	2,223,785	9,895,846	90,911	0.0	0.0	0.0	0	0.00	8.08	0	93,766	42,684				
26	0.00	6,357,500	12.5	1,632,667	1,603,234	5,885,333	2,223,785	9,901,784	90,911	0.0	0.0	0.0	0	0.00	6.33	0	79,344	49,946				
27	0.00	6,428,300	11.9	1,634,671	1,605,298	5,885,333	2,223,785	9,907,730	90,998	0.0	0.0	0.0	0	0.00	4.00	0	65,111	49,342				
28	0.00	6,491,360	15.8	1,636,120	1,606,781	5,885,332	2,223,784	9,913,488	90,998	0.0	0.0	0.0	0	0.00	3.50	0	21,622	71,752				
29	0.00	6,555,606	16.7	1,637,475	1,609,787	5,885,332	2,223,784	9,918,398	90,998	0.0	0.0	0.0	0	0.00	3.25	0	0	78,602				
30	0.00	6,625,827	20.2	1,639,154	1,611,532	5,885,332	2,223,784	9,924,168	90,998	0.0	0.0	0.0	0	0.00	2.92	0	14,415	42,718				
31	0.00	6,692,380	18.6	1,640,557	1,612,965	5,885,382	2,223,784	9,929,816	90,998	0.0	0.0	0.0	0	0.00	4.08	0	0	0				
Totals	1.66										0		0			0	1,766,192	1,090,369	0	0	0	0

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Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 9 acres
Open	5	0
Intermediate	134.4	15
Final	23	0
Not Opened	0	0

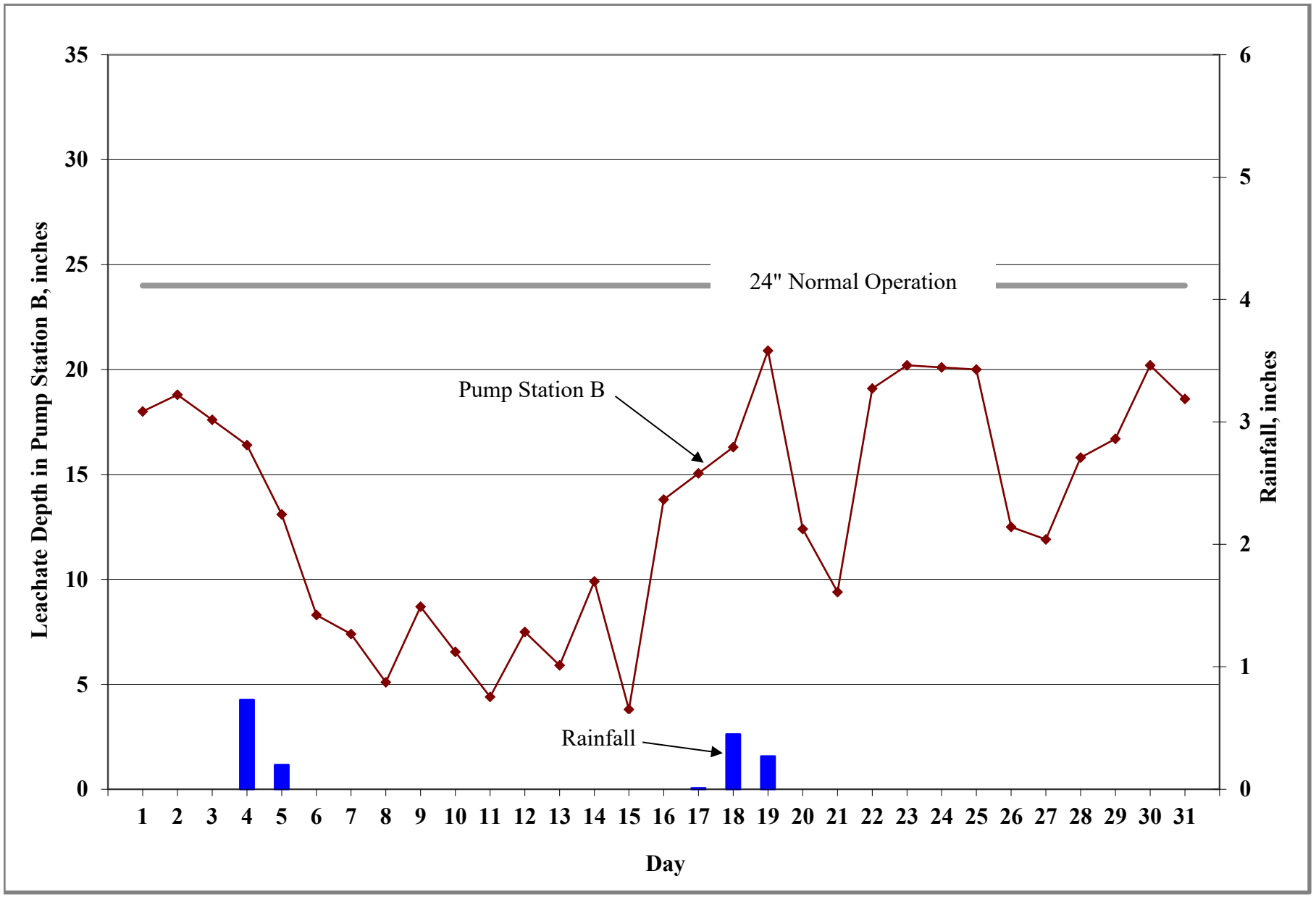

Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2019.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2019

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.49	5,965	183,738	300,356	3,440,156	86,476	3,729,332	0	0	0	0	0	4,016,691	3,729,332	287,359
February	1.79	5,764	134,983	209,810	2,852,838	8,503	3,154,367	0	0	0	0	0	3,211,899	3,154,367	57,532
March	1.66	5,650	113,315	197,794	2,758,333	2,816	2,856,561	0	0	0	0	0	3,077,909	2,856,561	221,348
April															
May															
June															
July															
August															
September															
October															
November															
December															
YTD Total	6.94	17,379	432,036	707,960	9,051,327	97,795	9,740,260	0	0	0	0	0	10,306,499	9,740,260	566,239

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.