

Johnson, Sabrina O

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Monday, July 15, 2019 7:42 AM
To: Morgan, Steve; SWD_Waste
Cc: Madden, Melissa; Cope, Ronald; Byer, Kimberly; Ruiz, Larry; O'Neill, Joseph; Spradlin, Kollan; Curtis, Bob
Subject: WACS ID 41193 - Qtr 2 2019 Water Balance & Waste Tire Report for Southeast County
Attachments: 2Q2019 Water Balance Report.pdf; 2Q2019 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
Public Utilities Department

P: (813) 671-7707 VOIP 42801

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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

July 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 April 1, 2019 through June 30, 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

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**WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
SECOND QUARTER 2019**

		SECOND QUARTER	Beginning Tonnage (Apr. 1, 2019) 528.12	
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Apr. 2019	216.15	98.12	33.18	17.42
Beginning Tons	528.12			
	744.27	-98.12	-33.18	-17.42
			Ending Tonnage	595.55
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
May 2019	187.09	40.18	125.41	11.35
Beginning Tons	595.55			
	782.64	-40.18	-125.41	-11.35
			Ending Tonnage	605.70
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jun. 2019	240.42	124.04	113.67	6.80
Beginning Tons	605.70			
	846.12	-124.04	-113.67	-6.80
			Ending Tonnage	608.41
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Apr. 2019	216.15	98.12	33.18	17.42
May 2019	187.09	40.18	125.41	11.35
Jun. 2019	240.42	124.04	113.67	6.80
Sub-Total	643.66	262.34	272.26	35.57
Beginning Tons	528.12			
TOTAL	1,171.78	-262.34	-272.26	-35.57
			Ending Tonnage	601.61



Department of Environmental Protection

DEP Form # 62-701.900(21)
Waste Tire Processing Facility
Form Title 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 4/1/19 thru 6/30/19 (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 Representative - 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	528.12	643.66			534.60		
Other whole Tires							
Processed tires							
Processing Waste						35.57	
Other							
Total	528.12	643.66			534.60	35.17	601.61

- a. Explain all inventory adjustments. 35.17 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

7/15/19

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

July 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 June 30, 2019.

The data is being submitted as separate monthly reports for April, May, and June 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: Kollan Spradlin, SCS
Ron Cope, EPC

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**Hillsborough
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SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110
813-272-5680

MEMORANDUM

DATE: May 6, 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 April 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 1.93 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.

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 there was no leachate/effluent stored in Pond B.

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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 16.5 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 74,318 gallons. A total of 2,229,544 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 flow meter was replaced on April 29, 2019 with an ending reading of 91,025. The new flow meter started with a reading of 233. The removal rate did not exceed 1,930 gallons per day. This month 34 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 150,765 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 2,380,309 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 91,397 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 92 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 0 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 253,400 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 2,151,105 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.

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 leachate/effluent was not 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 2,476,694 gallons. Total outflow quantity from the LTRF was 2,151,105 gallons. The change in storage for the month increased by 325,589 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
APRIL 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
		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.)
Day	Rainfall (in.)																						
1	0.01	0.0	0.0	18.9	75,643	0	3,984	79,627	3,279	0	0	0	173,000	0	78,859	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	16.7	90,958	0	5,728	96,686	2,700	29	0	0	173,000	0	86,480	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	13.6	90,243	0	5,796	96,039	4,508	11	0	0	178,000	0	86,415	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	21.4	66,939	0	4,208	71,147	2,726	0	0	0	178,000	0	85,553	0	0	0	0	0	0	0	0
5	0.20	0.0	0.0	19.0	73,009	0	8,768	81,777	3,051	0	0	0	173,000	0	78,898	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	17.8	78,522	0	11,412	89,934	2,618	0	0	0	173,000	0	86,158	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	19.0	77,887	0	5,064	82,951	3,159	0	0	0	199,000	0	0	0	0	0	0	0	0	0	0
8	0.09	0.0	0.0	20.1	75,236	0	5,064	80,300	3,159	12	0	0	225,000	0	78,924	0	0	0	0	0	0	0	0
9	0.37	0.0	0.0	14.1	78,495	0	1,308	79,803	2,622	0	0	0	242,000	0	64,156	0	0	0	0	0	0	0	0
10	0.01	0.0	0.0	13.9	84,849	0	1,158	86,007	4,500	20	0	0	250,000	0	71,226	0	0	0	0	0	0	0	0
11	0.01	0.0	0.0	17.4	80,661	15	8,776	89,437	2,957	20	0	0	264,000	0	71,126	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	20.4	78,760	0	5,648	84,408	2,919	0	0	0	266,000	0	71,289	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	12.0	75,529	0	3,972	79,501	2,999	0	0	0	264,000	0	79,425	0	0	0	0	0	0	0	0
14	0.58	0.0	0.0	17.9	84,433	0	5,631	90,064	2,808	0	0	0	281,000	0	0	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	13.5	64,428	0	5,540	69,968	2,937	0	0	0	317,000	0	86,360	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	15.4	75,883	0	3,695	79,578	3,025	0	0	0	302,000	0	121,921	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	16.3	69,942	0	5,675	75,617	2,603	0	0	0	266,000	0	78,154	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	19.2	68,264	0	4,064	72,328	3,052	0	0	0	269,000	0	71,100	0	0	0	0	0	0	0	0
19	0.63	0.0	0.0	17.9	76,762	9	3,930	80,692	2,942	0	0	0	274,000	0	85,710	0	0	0	0	0	0	0	0
20	0.01	0.0	0.0	12.9	72,295	0	5,849	78,144	3,059	0	0	0	269,000	0	85,902	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	16.2	65,805	0	4,799	70,604	3,470	0	0	0	290,000	0	0	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	19.5	68,088	0	4,799	72,887	3,470	0	0	0	312,000	0	57,931	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	15.6	67,785	0	3,895	71,680	2,877	0	0	0	317,000	0	79,025	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	17.4	68,631	0	3,892	72,523	2,730	0	0	0	305,000	0	94,079	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	14.4	72,290	0	5,807	78,097	2,941	0	0	0	278,000	0	93,833	0	0	0	0	0	0	0	0
26	0.02	0.0	0.0	19.5	72,886	0	3,901	76,787	3,870	0	0	0	266,000	0	93,113	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	14.1	72,626	0	3,681	76,307	1,689	0	0	0	240,000	0	100,689	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	12.1	68,785	0	4,627	73,412	2,826	0	0	0	269,000	0	0	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	10.1	68,454	0	4,627	73,080	2,826	0	0	0	297,000	0	64,679	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	18.5	65,459	10	5,468	70,927	3,078	0	0	0	293,000	0	100,100	0	0	0	0	0	0	0	0
Total	1.93				2,229,544	34	150,765	2,380,309	91,397	92	0	0	0	0	2,151,105	0	0	0	0	0	0	0	0
Daily Average		0.0	0.0	16.5	74,318	1	5,026	79,344	3,047	3	0	0	253,400				0	0			0	0	0
Mo. Average																					0	0	0

balance\2019\04-19bal.xls

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in *italics* 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. tank.
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
APRIL 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.)	575K Tank Leachate (ft.)	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	0.01	6,761,912	18.9	1,642,175	1,614,626	5,885,413	2,223,773	9,933,800	90,998	0.0	0.0	0.0	0	0.00	6.00		43,260	35,599				
2	0.00	6,828,287	16.7	1,643,506	1,615,995	5,885,442	2,223,773	9,939,528	90,998	0.0	0.0	0.0	0	0.00	6.00		43,635	42,845				
3	0.00	6,893,700	13.6	1,645,732	1,618,277	5,885,453	2,223,773	9,945,324	90,998	0.0	0.0	0.0	0	0.00	6.17		43,633	42,782				
4	0.00	6,954,382	21.4	1,647,078	1,619,657	5,885,453	2,223,774	9,949,532	90,998	0.0	0.0	0.0	0	0.00	6.17		43,270	42,283				
5	0.20	7,019,919	19	1,648,577	1,621,209	5,885,453	2,223,774	9,958,300	90,998	0.0	0.0	0.0	0	0.00	6.00		43,283	35,615				
6	0.00	7,087,819	17.8	1,649,873	1,622,531	5,885,474	2,223,774	9,969,712	90,998	0	0	0	0	0	6.00		43,331	42,827				
7	0.00	7,155,084	18.95	1,651,421	1,624,142	5,885,486	2,223,774	9,974,776	90,998	0.0	0.0	0.0	0	0.00	6.92							
8	0.09	7,222,349	20.1	1,652,969	1,625,752	5,885,498	2,223,773	9,979,840	90,998	0.0	0.0	0.0	0	0.00	7.83		43,240	35,684				
9	0.37	7,292,565	14.1	1,654,261	1,627,082	5,885,498	2,223,773	9,981,148	90,998	0.0	0.0	0.0	0	0.00	8.42		0	64,156				
10	0.01	7,369,312	13.9	1,656,470	1,629,373	5,885,518	2,223,773	9,982,306	90,998	0.0	0	0.0	0	0.00	8.67		0	71,226				
11	0.01	7,442,251	17.4	1,657,928	1,630,872	5,885,538	2,223,773	9,991,082	91,013	0.0	0.0	0.0	0	0.00	9.17		0	71,126				
12	0.00	7,513,679	20.4	1,659,370	1,632,349	5,885,538	2,223,773	9,996,730	91,015	0.0	0.0	0.0	0	0.00	9.25		0	71,289				
13	0.00	7,581,259	12	1,660,850	1,633,868	5,885,538	2,223,773	702	91,016	0	0	0	0	0	9.17		0	79,425				
14	0.58	7,658,805	17.90	1,662,230	1,635,296	5,885,538	2,223,773	6,333	91,016	0.0	0.0	0.0	0	0.00	9.75							
15	0.00	7,716,500	13.5	1,663,680	1,636,783	5,885,538	2,223,757	11,873	91,016	0.0	0.0	0.0	0	0.00	11.00		50,507	35,853				
16	0.00	7,783,363	15.4	1,665,168	1,638,320	5,885,538	2,223,757	15,568	91,016	0.0	0.0	0.0	0	0.00	10.50		43,346	78,575				
17	0.00	7,847,325	16.3	1,666,441	1,639,650	5,885,538	2,223,757	21,243	91,016	0.0	0.0	0.0	0	0.00	9.25		0	78,154				
18	0.00	7,906,662	19.2	1,667,926	1,641,217	5,885,538	2,223,757	25,307	91,016	0.0	0.0	0.0	0	0.00	9.33		0	71,100				
19	0.63	7,976,527	17.9	1,669,352	1,642,733	5,885,538	2,223,757	29,237	91,025	0.0	0.0	0.0	0	0.00	9.50		0	85,710				
20	0.01	8,043,937	12.9	1,670,851	1,644,293	5,885,538	2,223,757	35,086	91,025	0.0	0.0	0.0	0	0.00	9.33		0	85,902				
21	0.00	8,104,857	16.20	1,672,542	1,646,072	5,885,538	2,223,757	39,885	91,025					0.00	10.08							
22	0.00	8,165,776	19.5	1,674,232	1,647,851	5,885,538	2,223,757	44,684	91,025	0.0	0.0	0.0	0	0.00	10.83		36,061	21,870				
23	0.00	8,226,683	15.6	1,675,643	1,649,317	5,885,538	2,223,757	48,579	91,025	0.0	0.0	0.0	0	0.00	11.00		36,164	42,861				
24	0.00	8,288,736	17.4	1,676,983	1,650,707	5,885,538	2,223,757	52,471	91,025	0.0	0.0	0.0	0	0.00	10.58		43,340	50,739				
25	0.00	8,354,253	14.4	1,678,419	1,652,212	5,885,538	2,223,757	58,278	91,025	0.0	0.0	0.0	0	0.00	9.67		43,339	50,494				
26	0.02	8,419,974	19.5	1,680,325	1,654,176	5,885,538	2,223,757	62,179	91,025	0.0	0.0	0.0	0	0.00	9.25		43,339	49,774				
27	0.00	8,486,310	14.1	1,681,146	1,655,044	5,885,538	2,223,757	65,860	91,025	0.0	0.0	0.0	0	0.00	8.33		43,333	57,356				
28	0.00	8,548,805	12.10	1,682,534	1,656,482	5,885,538	2,223,757	70,487	91,025					0.00	9.33							
29	0.00	8,611,300	10.1	1,683,922	1,657,919	5,885,538	2,223,757	75,113	233	0.0	0.0	0.0	0	0.00	10.33		43,342	21,337				
30	0.00	8,670,900	18.5	1,685,421	1,659,498	5,885,538	2,223,757	80,581	243	0.0	0.0	0.0	0	0.00	10.17		43,344	56,756				
Totals	1.93										0		0			0	729,767	1,421,338	0	0	0	0

balance\2019\04-19\ba1.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

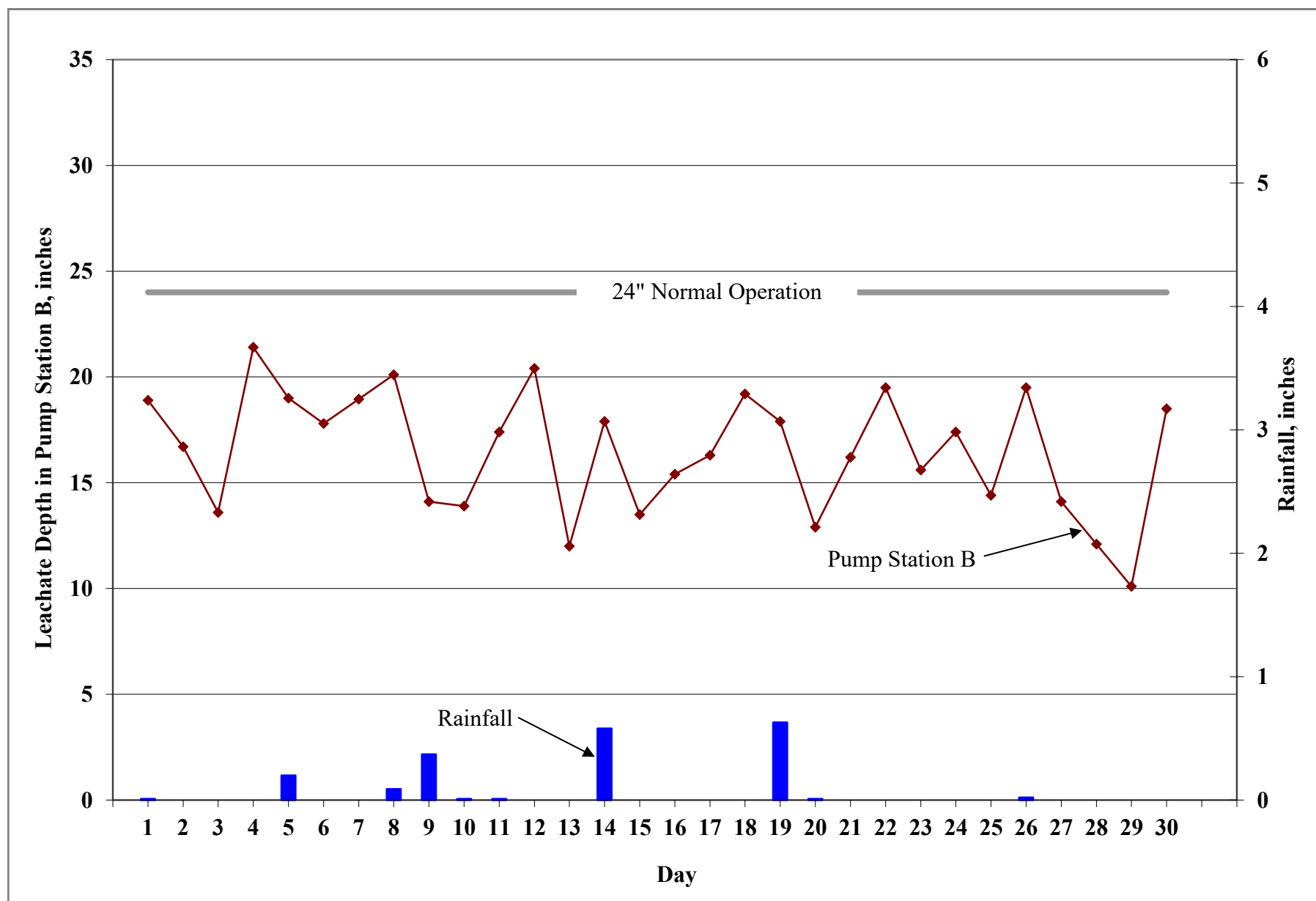


Figure 1. Leachate Levels in Pump Station B and Rainfall for April 2019.

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

Month	Rainfall (in.)	Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		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	1.93	4,894	91,489	150,765	2,229,544	0	2,151,105	0	0	0	0	0	2,476,694	2,151,105	325,589
May															
June															
July															
August															
September															
October															
November															
December															
YTD Total	8.87	22,273	523,525	858,725	11,280,870	97,795	11,891,365	0	0	0	0	0	12,783,192	11,891,365	891,827

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: June 5, 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 May 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 3.48 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.

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 0.1 feet.

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ADMINISTRATOR**

John Lyons

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 16.7 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 70,889 gallons. A total of 2,197,558 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 zero 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 138,667 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 2,336,225 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 85,825 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 no 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. The flow meter was replaced on May 8, 2019. This month 13,400 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 291,400 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, 2018, 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 2,180,324 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.

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 900 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 2,440,326 gallons. Total outflow quantity from the LTRF was 2,180,324 gallons. The change in storage for the month increased by 260,002 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MAY 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	14.3	66,821	0	3,578	70,399	2,876	0	0	0	274,000	0	93,190	0	0	0	0	0	0	0	0
2	0.12	0.0	0.0	17.8	67,837	0	3,697	71,534	3,812	0	0	0	230,000	0	71,771	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	13.7	72,692	0	5,515	78,207	2,912	0	0	0	223,000	0	93,462	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	15.5	69,171	0	3,798	72,969	2,814	0	0	0	211,000	0	71,608	0	0	0	0	0	0	0	0
5	0.42	0.0	0.0	17.2	71,273	0	8,388	79,660	3,109	0	0	0	257,000	0	0	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	18.9	70,959	0	8,388	79,346	3,109	0	0	0	302,000	0	50,767	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	20.4	67,143	0	10,106	77,249	1,887	0	0	0	297,000	0	87,020	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	13.8	66,894	0	251	67,145	2,710	0	0	0	283,000	0	86,327	0	0	0	0	0	0	0	0
9	0.60	0.0	0.0	15.0	67,020	0	107	67,127	2,714	0	0	0	271,000	0	86,409	0	0	0	0	0	0	0	0
10	1.00	0.0	0.0	19.5	66,444	0	7,298	73,742	4,176	0	0	0	245,000	0	86,503	0	0	0	0	0	0	0	0
11	0.12	0.0	0.0	11.4	67,320	0	2,204	69,524	1,652	0	0	0	250,000	0	93,565	0	0	0	0	0	0	0	0
12	0.30	0.0	0.0	14.4	67,691	0	64	67,754	3,628	0	0	0	266,000	0	0	0	0	0	0	0	0	0	0
13	0.92	0.0	0.0	17.4	67,740	0	64	67,804	3,628	0	0	0	283,000	0	59,159	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	20.5	67,651	0	12,402	80,053	3,816	0	0	0	290,000	0	64,986	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	11.6	68,452	0	6,111	74,563	1,564	0	13,400	0	293,000	0	93,464	0	0	0	0	0	0	0	0
16	0.00	0.0	0.8	17.4	67,688	0	3,995	71,683	1,492	0	0	0	274,000	0	93,414	0	0	12,000	0	0	0	0	0
17	0.00	0.0	0.7	18.0	68,166	0	108	68,274	2,668	0	0	0	252,000	0	93,303	0	0	9,000	0	0	0	0	0
18	0.00	0.0	0.6	19.2	69,813	0	8,292	78,105	2,995	0	0	0	242,000	0	71,531	0	0	7,000	0	0	0	0	0
19	0.00	0.0	0.0	17.9	71,286	0	4,010	75,296	2,124	0	0	0	281,000	0	0	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	16.5	71,054	0	4,010	75,064	2,124	0	0	0	319,000	0	65,179	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	14.9	70,984	0	4,436	75,420	3,479	0	0	0	341,000	0	65,304	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	20.1	71,089	0	3,756	74,845	2,946	0	0	0	343,000	0	94,364	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	19.2	64,593	0	5,741	70,334	2,597	0	0	0	317,000	0	95,577	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	10.5	66,963	0	3,985	70,948	2,972	0	0	0	286,000	0	95,918	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	19.6	68,345	0	3,761	72,106	1,437	0	0	0	274,000	0	93,583	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	18.9	68,717	0	4,248	72,965	2,703	0	0	0	306,000	0	0	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	18.3	68,775	0	4,248	73,022	2,703	0	0	0	339,000	0	0	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	17.6	95,497	0	4,248	99,745	2,703	0	0	0	372,000	0	88,619	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	16.5	88,568	0	173	88,741	3,378	0	0	0	379,000	0	96,115	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	11.6	81,933	0	7,564	89,497	1,657	0	0	0	365,000	0	94,472	0	0	0	0	0	0	0	0
31	0.00	0.0	0.0	20.6	78,983	0	4,125	83,108	3,443	0	0	0	369,000	0	94,714	0	0	0	0	0	0	0	0
Total	3.48				2,197,558	0	138,667	2,336,225	85,825	0	13,400			0	2,180,324	0			0	0	0	0	0
Daily Average		0.0	0.1	16.7	70,889	0	4,473	75,362	2,769	0	432	0	291,400				0	900					
Mo. Average																0				0	0	0	0

balance/2019/05-19bal.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
MAY 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	8,731,700	14.30	1,686,830	1,660,965	5,885,538	2,223,757	84,159	243	0.0	0.0	0.0	0	0.00	9.50		43,333	49,857				
2	0.12	8,793,834	17.80	1,688,705	1,662,902	5,885,538	2,223,757	87,856	243	0.0	0.0	0.0	0	0.00	8.00		36,090	35,681				
3	0.00	8,860,064	13.70	1,690,137	1,664,382	5,885,538	2,223,757	93,371	243	0.0	0.0	0.0	0	0.00	7.75		36,422	57,040				
4	0.00	8,922,820	15.50	1,691,522	1,665,811	5,885,538	2,223,757	97,169	243	0.0	0.0	0.0	0	0.00	7.33		36,104	35,504				
5	0.42	8,987,678	17.20	1,693,035	1,667,407	5,885,538	2,223,757	105,557	243	0.0	0.0	0.0	0	0.00	8.92		0.0	0.0				
6	0.00	9,052,536	18.90	1,694,547	1,669,003	5,885,538	2,223,757	113,944	243	0.00	0	0.00	0	0.00	10.50		36,551	14,216				
7	0.00	9,113,714	20.40	1,695,462	1,669,975	5,885,538	2,223,757	124,050	243	0.0	0.0	0.0	0	0.00	10.33		36,703	50,317				
8	0.00	9,174,900	13.80	1,696,794	1,671,353	5,885,538	0	124,301	243	0.0	0.0	0.0	0	0.00	9.83		36,622	49,705				
9	0.60	9,236,700	15.00	1,698,129	1,672,732	5,885,538	0	124,408	243	0.0	0.0	0.0	0	0.00	9.42		36,570	49,839				
10	1.00	9,298,632	19.50	1,700,168	1,674,869	5,885,538	0	131,706	243	0.0	0	0.0	0	0.00	8.50		36,755	49,748				
11	0.12	9,361,074	11.40	1,700,957	1,675,732	5,885,538	0	133,910	245	0.0	0.0	0.0	0	0.00	8.67		36,682	56,883				
12	0.30	9,423,887	14.40	1,702,733	1,677,584	5,885,527	0	133,974	245	0.0	0.0	0.0	0	0.00	9.25		0.0	0.0				
13	0.92	9,486,700	17.40	1,704,508	1,679,436	5,885,515	0	134,037	245	0.0	0.0	0.0	0.0	0.00	9.83		36,907	22,252				
14	0.00	9,548,226	20.50	1,706,736	1,681,024	5,885,515	0	146,439	245	0.0	0.0	0.0	0	0.00	10.08		36,651	28,335				
15	0.00	9,610,000	11.60	1,707,934	1,681,390	5,885,514	13,400	152,550	245	0.0	0.0	0.0	0	0.00	10.17		36,605	56,859				
16	0.00	9,669,800	17.40	1,708,619	1,682,197	5,885,514	13,400	156,545	245	0.8	0.0	0.0	0	0.00	9.50		36,583	56,831				
17	0.00	9,729,678	18.00	1,709,926	1,683,558	5,885,509	13,400	156,653	245	0.7	0.0	0.0	0	0.00	8.75		36,441	56,862				
18	0.00	9,789,830	19.20	1,711,371	1,685,108	5,885,509	13,400	164,945	245	0.6	0.0	0.0	0	0.00	8.42		35,993	35,538				
19	0.00	9,851,455	17.85	1,712,625	1,685,978	5,885,509	13,400	168,955	245	0.0	0.0	0.0	0	0.00	9.75		0.0	0.0				
20	0.00	9,913,080	16.50	1,713,879	1,686,848	5,885,509	13,400	172,964	245	0.0	0.0	0.0	0	0.00	11.08		36,648	28,531				
21	0.00	9,974,584	14.90	1,715,535	1,688,671	5,885,509	13,400	177,400	245	0.0	0.0	0.0	0	0.00	11.83		36,562	28,742				
22	0.00	37,632	20.10	1,716,977	1,690,175	5,885,509	13,400	181,156	245	0.0	0.0	0.0	0	0.00	11.92		65,939	28,425				
23	0.00	95,760	19.20	1,718,242	1,691,507	5,885,509	13,400	186,897	245	0.0	0.0	0.0	0	0.00	11.00		67,152	28,425				
24	0.00	154,280	10.50	1,719,672	1,693,049	5,885,509	13,400	190,882	245	0.0	0.0	0.0	0	0.00	9.92		67,429	28,489				
25	0.00	214,379	19.60	1,720,375	1,693,783	5,885,509	13,400	194,643	245	0.0	0.0	0.0	0	0.00	9.50		65,102	28,481				
26	0.00	274,908	18.93	1,721,679	1,695,182	5,885,509	13,400	198,891	245	0.0	0.0	0.0	0.0	0.0	11		0.0	0.0				
27	0.00	335,436	18.27	1,722,983	1,696,580	5,885,509	13,400	203,138	245	0.0	0.0	0.0	0.0	0.0	12		0.0	0.0				
28	0.00	395,965	17.60	1,724,287	1,697,979	5,885,509	13,400	207,386	245	0.0	0.0	0.0	0	0.00	12.92		67,285	21,334				
29	0.00	458,768	16.50	1,725,922	1,699,722	5,885,507	13,400	207,559	245	0.0	0.0	0.0	0	0.00	13.17		67,398	28,717				
30	0.00	517,100	11.60	1,726,705	1,700,596	5,885,507	13,400	215,123	245	0.0	0.0	0.0	0	0.00	12.67		37,629	56,843				
31	0.00	573,938	20.60	1,728,355	1,702,389	5,885,507	13,400	219,248	245	0.0	0.0	0.0	0	0.00	12.83		37,706	57,008				
Totals	3.48										0		0			0	1,139,862	1,040,462	0	0	0	0

balance\2019\05-19ba1.xls

Notes:

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

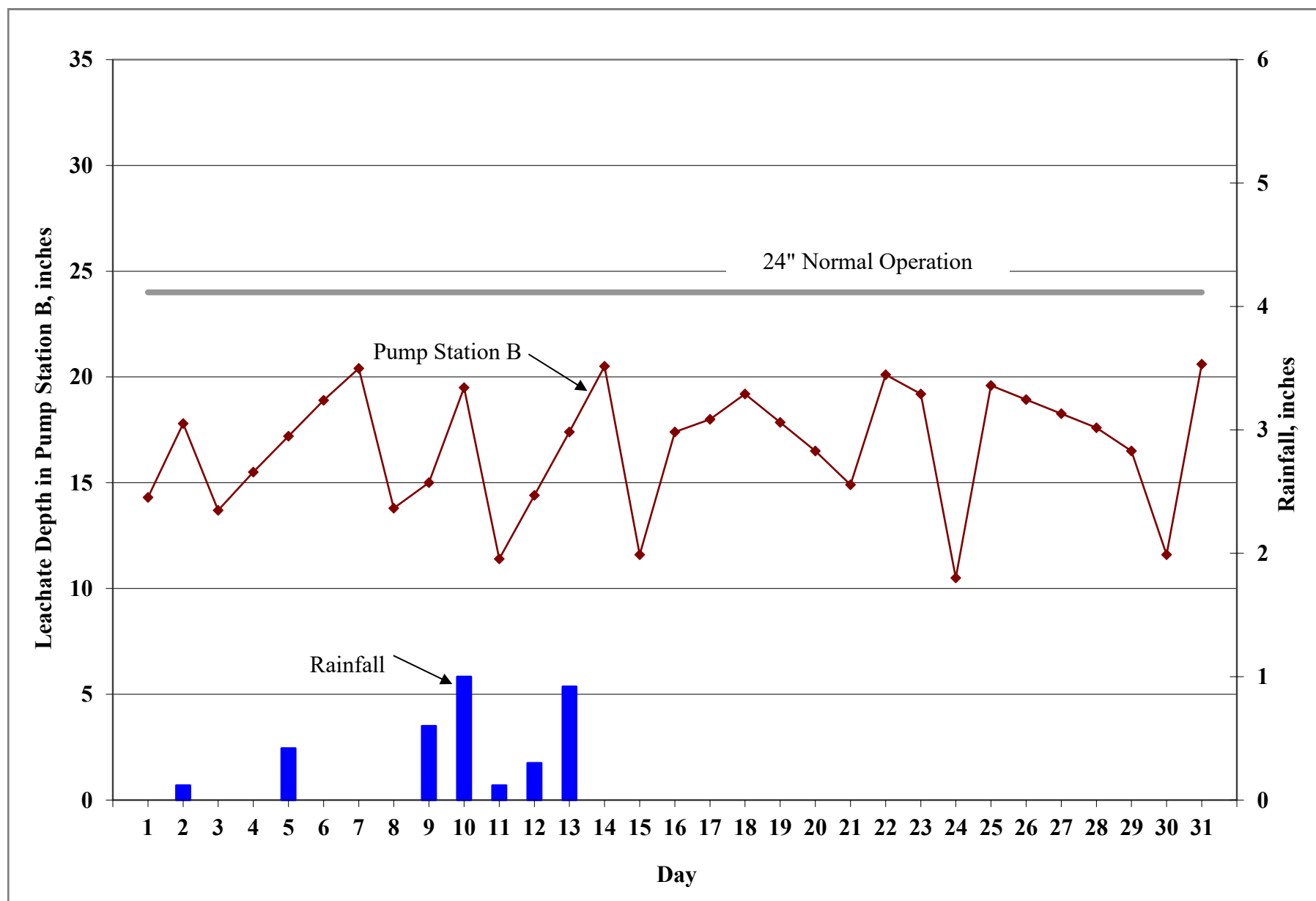


Figure 1. Leachate Levels in Pump Station B and Rainfall for May 2019.

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

Month	Rainfall (in.)	Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		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	1.93	4,894	91,489	150,765	2,229,544	0	2,151,105	0	0	0	0	0	2,476,694	2,151,105	325,589
May	3.48	4,873	85,825	138,667	2,197,558	13,400	2,180,324	0	0	0	0	0	2,440,326	2,180,324	260,002
June															
July															
August															
September															
October															
November															
December															
YTD Total	12.35	27,146	609,350	997,392	13,478,429	111,195	14,071,689	0	0	0	0	0	15,223,519	14,071,689	1,151,830

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.



SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110
813-272-5680

MEMORANDUM

DATE: July 12, 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 June 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 8.24 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.

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 0.8 feet.

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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 number recorded on the eleventh was caused by a telemetry system malfunction. The depth measurement device was reset and depth measurements returned to normal. The average recorded depth of leachate in the PS-B sump was 15.9 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 68,145 gallons. A total of 2,044,338 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 124 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 139,810 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 2,184,148 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 82,019 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 no 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 213,400 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 335,400 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, 2018, 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 2,595,924 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.

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 34,000 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 2,485,931 gallons. Total outflow quantity from the LTRF was 2,595,924 gallons. The change in storage for the month decreased by 109,993 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JUNE 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 LDS (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	16.0	76,784	0	4,210	80,994	1,413	0	0	0	355,000	0	93,043	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	12.8	76,560	0	4,311	80,871	2,978	0	0	0	384,000	0	0	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	9.6	74,939	0	4,311	79,250	2,978	0	0	0	413,000	0	66,166	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	8.6	70,661	0	4,586	75,247	2,737	0	0	0	413,000	0	80,335	0	0	0	0	0	0	0	0
5	0.37	0.0	0.0	8.5	69,484	2	4,737	74,221	2,569	0	0	0	405,000	0	87,378	0	0	0	0	0	0	0	0
6	0.63	0.0	0.0	17.2	70,871	0	4,946	75,817	2,828	0	100	0	401,000	0	87,597	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	18.0	72,543	0	2,808	75,351	1,555	0	0	0	381,000	0	94,445	0	0	0	0	0	0	0	0
8	0.37	0.0	0.0	16.0	73,151	0	5,337	78,488	2,699	0	0	0	374,000	0	93,900	0	0	0	0	0	0	0	0
9	2.57	0.0	0.0	12.8	71,068	0	4,931	75,999	3,497	0	0	0	408,000	0	0	0	0	0	0	0	0	0	0
10	0.27	0.0	0.0	9.6	74,485	0	4,931	79,416	3,497	0	0	0	441,000	0	95,303	0	0	0	0	0	0	0	0
11	0.20	0.0	2.1	32.2	70,002	0	10,732	80,734	3,036	0	111,900	0	403,000	0	139,370	0	0	88,000	0	0	0	0	0
12	0.05	0.0	2.1	13.3	72,774	0	9,742	82,516	5,704	0	0	0	345,000	0	138,131	0	0	88,000	0	0	0	0	0
13	0.45	0.0	2.2	13.1	57,923	0	528	58,451	1,047	0	49,600	0	274,000	0	108,265	0	0	97,000	0	0	0	0	0
14	1.40	0.0	2.3	16.2	67,883	3	2,151	70,034	1,269	0	1,000	0	252,000	0	123,662	0	0	106,000	0	0	0	0	0
15	0.07	0.0	2.3	21.4	68,835	2	2,877	71,712	2,784	0	0	0	252,000	0	93,594	0	0	106,000	0	0	0	0	0
16	0.00	0.0	2.3	18.6	70,786	0	4,771	75,556	2,650	0	0	0	284,000	0	0	0	0	106,000	0	0	0	0	0
17	0.00	0.0	2.3	15.8	67,680	0	4,771	72,451	2,650	0	0	0	317,000	0	109,875	0	0	106,000	0	0	0	0	0
18	0.09	0.0	1.9	8.4	65,829	0	4,241	70,070	2,667	0	0	0	297,000	0	71,375	0	0	72,000	0	0	0	0	0
19	0.57	0.0	2.2	17.1	67,445	0	4,274	71,719	3,439	0	46,300	0	317,000	0	87,322	0	0	97,000	0	0	0	0	0
20	0.56	0.0	2.2	9.5	65,354	0	6,184	71,538	1,301	0	0	0	305,000	0	122,957	0	0	97,000	0	0	0	0	0
21	0.00	0.0	1.3	21.7	64,437	0	1,181	65,618	3,244	0	0	0	341,000	0	87,068	0	0	33,000	0	0	0	0	0
22	0.00	0.0	1.1	18.0	65,451	0	171	65,622	2,949	0	4,500	0	345,000	0	117,363	0	0	23,000	0	0	0	0	0
23	0.00	0.0	0.0	18.7	63,665	15	8,101	71,765	3,234	0	0	0	379,000	0	0	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	19.3	63,919	15	8,101	72,020	3,234	0	0	0	413,000	0	123,477	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	14.0	66,735	15	4,116	70,851	2,945	0	0	0	355,000	0	115,181	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	18.9	64,387	45	4,105	68,492	825	0	0	0	326,000	0	114,970	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	18.7	62,825	8	6,103	68,928	0	0	0	0	286,000	0	100,988	0	0	0	0	0	0	0	0
28	0.28	0.0	0.0	16.4	64,667	0	4,334	69,001	6,166	0	0	0	238,000	0	128,843	0	0	0	0	0	0	0	0
29	0.09	0.0	0.0	15.5	62,010	0	4,170	66,180	2,740	0	0	0	187,000	0	115,316	0	0	0	0	0	0	0	0
30	0.27	0.0	0.0	19.8	61,189	20	4,051	65,240	3,388	0	0	0	170,000	0	0	0	0	0	0	0	0	0	0
31																							
Total	8.24				2,044,338	124	139,810	2,184,148	82,019	0	213,400			0	2,595,924	0			0	0	0	0	0
Daily Average		0.0	0.8	15.9	68,145	4	4,660	72,805	2,734	0	7,113	0	335,400				0	34,000					
Mo. Average																0				0	0	0	0

balance/2019/06-19bal.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
JUNE 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 Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.00	629,908	16.0	1,729,044	1,703,113	5,885,507	13,400	223,458	245	0.0	0.0	0.0	0	0.00	12.33		36,130	56,913				
2	0.00	685,654	13	1,730,486	1,704,649	5,885,507	13,400	227,769	245	0	0	0	0	0.00	13.33							
3	0.00	741,400	9.6	1,731,927	1,706,185	5,885,507	13,400	232,080	245	0.0	0.0	0.0	0	0.00	14.33		37,678	28,488				
4	0.00	793,500	8.6	1,733,259	1,707,590	5,885,507	13,400	236,666	245	0.0	0.0	0.0	0	0.00	14.33		37,587	42,748				
5	0.37	844,500	8.5	1,734,499	1,708,919	5,885,507	13,400	241,403	247	0.0	0.0	0.0	0	0.00	14.08		37,612	49,766				
6	0.63	896,772	17.20	1,735,862	1,710,384	5,885,507	13,500	246,349	247	0	0	0.00	0	0.00	13.92		37,650	49,947				
7	0.00	950,359	18.0	1,736,619	1,711,182	5,885,507	13,500	249,157	247	0.0	0.0	0.0	0	0.00	13.25		37,594	56,851				
8	0.37	1,004,072	16.0	1,737,930	1,712,570	5,885,507	13,500	254,494	247	0.0	0.0	0.0	0	0.00	13.00		36,130	57,770				
9	2.57	1055702.0	12.8	1739624.5	1714372.0	5885506.5	13500.0	259425.0	247.0	0.0	0.0	0.0	0.0	0.0	14.17							
10	0.27	1,107,332	9.6	1,741,319	1,716,174	5,885,506	13,500	264,356	247	0.0	0	0.0	0	0.00	15.33		73,833	21,470				
11	0.20	1,155,197	32.2	1,742,777	1,717,752	5,885,506	125,400	275,088	247	2.1	0.0	0.0	0	0.00	14.00		89,601	49,769				
12	0.05	1,206,438	13.3	1,746,977	1,719,256	5,885,492	125,400	284,830	247	2.1	0.0	0.0	0	0.00	12.00		88,570	49,561				
13	0.45	1,255,841	13.10	1,748,022	1,719,258	5,885,485	175,000	285,358	247	2.20	0	0.00	0	0.00	9.50		79,723	28,542				
14	1.40	1,305,420	16.2	1,748,641	1,719,908	5,885,485	176,000	287,509	250	2.3	0.0	0.0	0	0.00	8.75		66,090	57,572				
15	0.07	1,354,400	21.4	1,749,998	1,721,335	5,885,485	176,000	290,386	252	2.3	0.0	0.0	0	0.00	8.75		36,661	56,933				
16	0.00	1,405,331	19	1,751,287	1,722,696	5,885,481	176,000	295,157	252	2	0	0	0	0	9.88							
17	0.00	1,456,262	15.8	1,752,576	1,724,056	5,885,477	176,000	299,927	252	2.3	0.0	0.0	0	0.00	11.00		74,388	35,487				
18	0.09	1,507,500	8.4	1,753,873	1,725,426	5,885,475	176,000	304,168	252	1.9	0.0	0.0	0	0.00	10.33		28,826	42,549				
19	0.57	1,559,248	17.1	1,755,527	1,727,211	5,885,473	222,300	308,442	252	2.2	0.0	0.0	0	0.00	11.00		44,656	42,666				
20	0.56	1,610,700	9.5	1,756,157	1,727,882	5,885,473	222,300	314,626	252	2.2	0.0	0.0	0	0.00	10.58		44,432	78,525				
21	0.00	1,661,139	21.7	1,757,680	1,729,603	5,885,473	222,300	315,807	252	1.3	0.0	0.0	0	0.00	11.83		44,417	42,651				
22	0.00	1,711,255	18.0	1,759,097	1,731,135	5,885,473	226,800	315,978	252	1.1	0.0	0.0	0	0.00	12.00		74,674	42,689				
23	0.00	1,759,585	18.7	1,760,639	1,732,827	5,885,471	226,800	324,079	267	0.0	0.0	0.0	0	0.00	13.17							
24	0.00	1,807,915	19.3	1,762,180	1,734,519	5,885,469	226,800	332,179	281	0.0	0.0	0.0	0	0.00	14.33		80,777	42,700				
25	0.00	1,859,011	14.0	1,763,610	1,736,034	5,885,469	226,800	336,295	296	0.0	0.0	0.0	0	0.00	12.33		36,965	78,216				
26	0.00	1,908,407	18.9	1,764,148	1,736,321	5,885,469	226,800	340,400	341	0.0	0.0	0.0	0	0.00	11.33		37,354	77,616				
27	0.00	1,956,158	18.7	1,764,148	1,736,321	5,885,469	226,800	346,503	349	0.0	0.0	0.0	0	0.00	9.92		36,967	64,021				
28	0.28	2,005,982	16.4	1,766,986	1,739,649	5,885,469	226,800	350,837	349	0.0	0.0	0.0	0	0.00	8.25		51,475	77,368				
29	0.09	2,053,237	15.5	1,768,309	1,741,066	5,885,467	226,800	355,007	349	0.0	0.0	0.0	0	0.00	6.50		36,805	78,511				
30	0.27	2,099,809	19.8	1,769,932	1,742,831	5,885,466	226,800	359,058	369	0.0	0.0	0.0	0	0.00	5.92							
Totals	8.24										0		0			0	1,286,595	1,309,329	0	0	0	0

balance/2019/06-19ba1.xls

Notes:

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

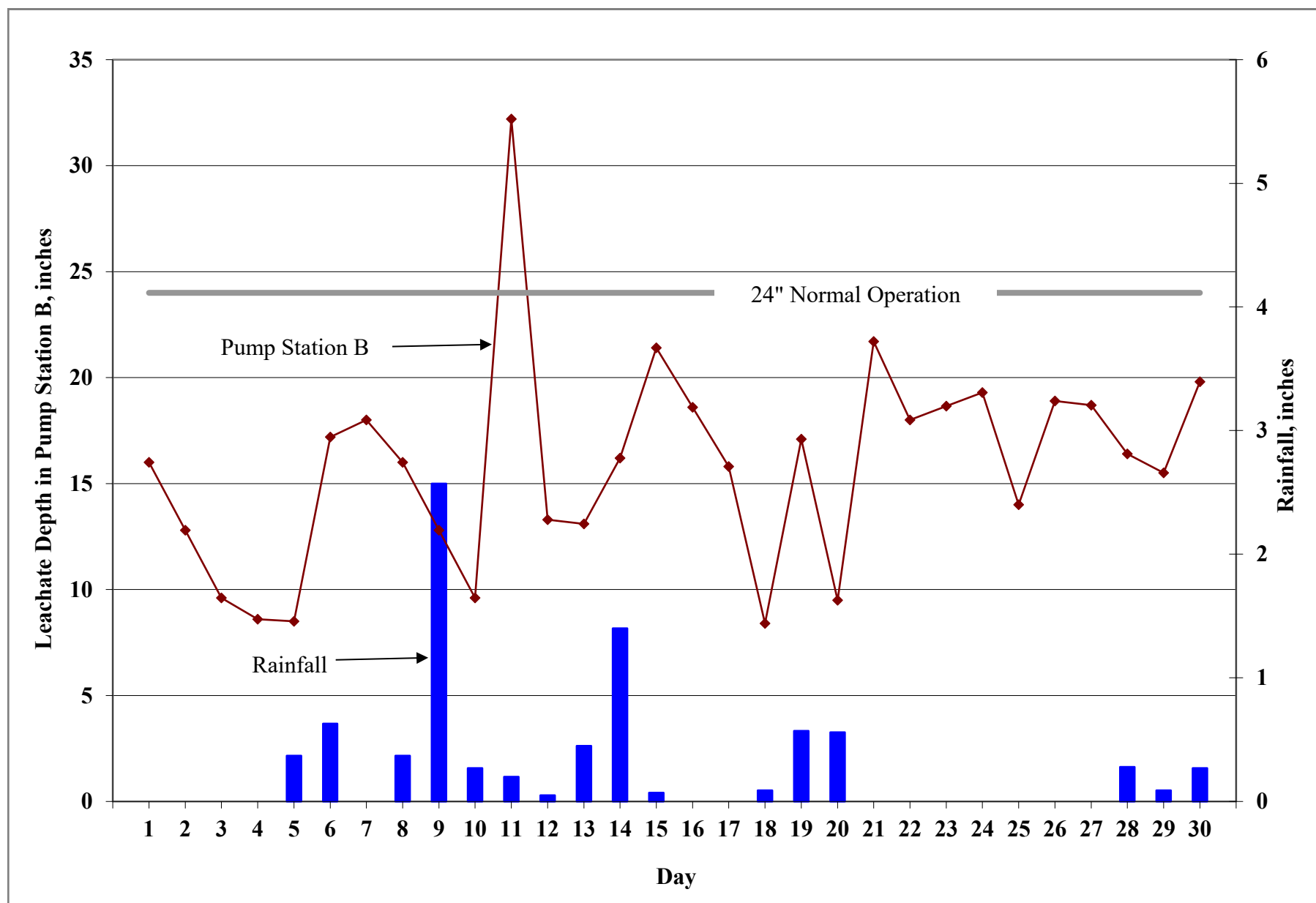


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2019.

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

Month	Rainfall (in.)	Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		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	1.93	4,894	91,489	150,765	2,229,544	0	2,151,105	0	0	0	0	0	2,476,694	2,151,105	325,589
May	3.48	4,873	85,825	138,667	2,197,558	13,400	2,180,324	0	0	0	0	0	2,440,326	2,180,324	260,002
June	8.24	6,360	82,019	139,810	2,044,338	213,400	2,595,924	0	0	0	0	0	2,485,931	2,595,924	-109,993
July															
August															
September															
October															
November															
December															
YTD Total	20.59	33,506	691,369	1,137,202	15,522,767	324,595	16,667,613	0	0	0	0	0	17,709,450	16,667,613	1,041,837

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.