

Johnson, Sabrina O

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Friday, October 11, 2019 2:22 PM
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 3 2019 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2019 Water Balance Report.pdf; 3Q2019 Waste Tire Report.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

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

October 11, 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 July 1 2019 through September 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
THIRD QUARTER 2019**

		THIRD QUARTER	Beginning Tonnage (Jul. 1, 2019)	
				601.61
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2019	222.59	73.36	147.2	10.29
Beginning Tons	601.61			
	824.20	-73.36	-147.22	-10.29
			Ending Tonnage	593.33
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Aug. 2019	197.93	267.86	87.65	8.32
Beginning Tons	593.33			
	791.26	-267.86	-87.65	-8.32
			Ending Tonnage	427.43
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Sep. 2019	196.99	0.00	83.82	12.55
Beginning Tons	427.43			
	624.42	0.00	-83.82	-12.55
			Ending Tonnage	528.05
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2019	222.59	73.36	147.22	10.29
Aug. 2019	197.93	267.86	87.65	8.32
Sep. 2019	196.99	0.00	83.82	12.55
Sub-Total	617.51	341.22	318.69	31.16
Beginning Tons	601.61			
TOTAL	1,219.12	-341.22	-318.69	-31.16
			Ending Tonnage	528.05



Department of Environmental Protection

DEP Form # 62-701.900(21)
Waste Tire Processing Facility
Form Title <u>Quarterly Report</u>
Effective Date <u>3/22/00</u>
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 7/1/19 thru 9/30/19 (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	601.61	617.51			659.91	31.16	
Other whole Tires							
Processed tires							
Processing Waste							
Other							
Total	601.61	617.51			659.91	31.16	528.05

- a. Explain all inventory adjustments. 31.16
31.16 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

10/11/19

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

October 11, 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 September 30, 2019.

The data is being submitted as separate monthly reports for July, August, and September 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
County Florida**

SOLID WASTE MANAGEMENT

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

MEMORANDUM

DATE: August 9, 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 July 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 16.8 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 1.1 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 bubbler sensor malfunction. The bubbler system was cleaned and depth measurements returned to normal. The number recorded on the twenty ninth was caused by the leachate storage tank reaching high level, after a couple of loads of leachate were hauled the measurements returned to normal. The average recorded depth of leachate in the PS-B sump was 17.9 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 75,768 gallons. A total of 2,348,809 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 621 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 319,700 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 2,668,509 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 222,521 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 393,000 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 303,400 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 3,018,581 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 56,100 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 3,324,575 gallons. Total outflow quantity from the LTRF was 3,018,581 gallons. The change in storage for the month decreased by 305,994 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 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	8.8	67,046	3	4,030	71,076	2,820	0	0	0	221,000	0	73,425	0	0	0	0	0	0	0	0
2	0.42	0.0	0.0	11.5	68,721	0	5,741	74,462	3,092	0	0	0	202,000	0	116,626	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	20.3	65,820	0	3,827	69,647	3,014	0	100	0	173,000	0	79,547	0	0	0	0	0	0	0	0
4	0.59	0.0	0.0	16.2	67,970	1	4,925	72,895	2,183	0	0	0	202,000	0	0	0	0	0	0	0	0	0	0
5	0.12	0.0	0.0	12.1	58,813	1	4,925	63,738	2,183	0	0	0	230,000	0	123,605	0	0	0	0	0	0	0	0
6	1.58	0.0	0.0	21.9	66,711	0	4,311	71,022	2,721	0	0	0	173,000	0	94,175	0	0	0	0	0	0	0	0
7	0.35	0.0	0.0	21.8	68,580	3	2,419	70,999	2,921	0	0	0	195,000	0	0	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	21.7	67,912	3	2,419	70,331	2,921	0	0	0	218,000	0	116,225	0	0	0	0	0	0	0	0
9	1.20	0.0	1.8	12.2	70,222	0	8,506	78,728	3,266	0	73,100	0	187,000	0	114,059	0	0	64,000	0	0	0	0	0
10	0.28	0.0	1.4	45.9	58,640	11	1,304	59,944	1,575	0	26,400	0	216,000	0	107,702	0	0	38,000	0	0	0	0	0
11	0.26	0.0	0.0	17.6	46,352	43	4,910	51,262	104	0	200	0	230,000	0	36,132	0	0	0	0	0	0	0	0
12	0.01	0.0	0.0	10.0	85,024	0	13,468	98,492	6,594	0	0	0	271,000	0	86,137	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	9.9	73,073	18	4,889	77,962	3,398	0	0	0	290,000	0	80,262	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	15.6	68,100	3	7,439	75,538	4,192	0	0	0	315,000	0	0	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	21.2	67,877	3	7,439	75,316	4,192	0	0	0	341,000	0	89,191	0	0	0	0	0	0	0	0
16	0.37	0.0	0.0	19.4	67,231	25	120	67,351	4,555	0	0	0	307,000	0	51,646	0	0	0	0	0	0	0	0
17	0.70	0.0	0.0	15.0	66,043	0	3,816	69,859	3,055	0	0	0	302,000	0	95,164	0	0	0	0	0	0	0	0
18	0.20	0.0	0.0	19.0	56,224	70	5,783	62,007	2,918	0	0	0	290,000	0	94,714	0	0	0	0	0	0	0	0
19	1.07	0.0	0.0	20.0	66,542	0	5,737	72,279	4,098	0	0	0	259,000	0	94,408	0	0	0	0	0	0	0	0
20	0.01	0.0	1.2	16.0	73,411	5	4,051	77,462	3,131	0	28,100	0	238,000	0	86,812	0	0	28,000	0	0	0	0	0
21	0.52	0.0	1.2	18.1	71,798	1	5,904	77,702	3,840	0	27,400	0	277,000	0	0	0	0	28,000	0	0	0	0	0
22	2.83	0.0	1.7	20.1	75,851	1	5,904	81,754	3,840	0	27,400	0	317,000	0	95,800	0	0	57,000	0	0	0	0	0
23	0.13	0.0	2.1	21.7	66,361	19	9,273	75,634	7,438	0	0	0	336,000	0	95,790	0	0	88,000	0	0	0	0	0
24	1.38	0.0	2.9	13.8	79,206	0	14,892	94,098	9,569	0	137,600	0	381,000	0	124,430	0	0	162,000	0	0	0	0	0
25	2.05	0.0	2.8	15.1	82,732	13	14,965	97,697	9,818	0	16,400	0	403,000	0	95,188	0	0	152,000	0	0	0	0	0
26	1.48	0.0	3.3	18.0	95,883	9	27,896	123,779	18,583	0	56,300	0	468,000	0	138,840	0	0	202,000	0	0	0	0	0
27	0.00	0.0	3.3	12.5	101,172	26	9,187	110,359	22,933	0	0	0	492,000	0	178,302	0	0	202,000	0	0	0	0	0
28	0.00	0.0	3.3	21.0	85,865	50	42,099	127,964	25,017	0	0	0	493,000	0	134,306	0	0	202,000	0	0	0	0	0
29	0.00	0.0	3.0	29.4	107,182	50	42,099	149,281	25,017	0	0	0	494,000	0	179,502	0	0	172,000	0	0	0	0	0
30	0.00	0.0	3.0	16.2	136,989	87	13,161	150,150	13,474	0	0	0	466,000	0	221,802	0	0	172,000	0	0	0	0	0
31	1.25	0.0	3.0	14.0	115,460	176	34,264	149,724	20,060	0	0	0	417,000	0	214,791	0	0	172,000	0	0	0	0	0
Total	16.80				2,348,809	621	319,700	2,668,509	222,521	0	393,000			0	3,018,581	0			0	0	0	0	0
Daily Average		0.0	1.1	17.9	75,768	20	10,313	86,081	7,178	0	12,677	0	303,400				0	56,100					
Mo. Average																0			0	0	0	0	0

balance/2019/07-19bal.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
JULY 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	2,150,300	8.8	1,771,285	1,744,298	5,885,465	226,800	363,088	372	0.0	0.0	0.0	0	0.00	7.67		73,425	0				
2	0.42	2,201,300	11.5	1,772,767	1,745,908	5,885,465	226,800	368,829	372	0.0	0.0	0.0	0	0.00	7.00		80,817	35,809				
3	0.00	2,250,555	20.3	1,774,204	1,747,485	5,885,463	226,900	372,656	372	0.0	0.0	0.0	0	0.00	6.00		36,821	42,726				
4	0.59	2,301,961	16.2	1,775,256	1,748,616	5,885,463	226,900	377,581	373	0.0	0.0	0.0	0	0.00	7.00							
5	0.12	2,353,366	12.1	1,776,307	1,749,747	5,885,463	226,900	382,506	374	0.0	0.0	0.0	0	0.00	8.00		80,652	42,953				
6	1.58	2,402,789	21.9	1,777,614	1,751,161	5,885,463	226,900	386,817	374	0.00	0	0.00	0	0.00	6.00		73,332	20,843				
7	0.35	2,454,081	21.8	1,779,018	1,752,678	5,885,463	226,900	389,236	377	0.0	0.0	0.0	0	0.00	6.79							
8	0.00	2,505,373	21.7	1,780,422	1,754,195	5,885,462	226,900	391,654	380	0.0	0.0	0.0	0	0.00	7.58		80,665	35,560				
9	1.20	2,554,700	12.2	1,781,982	1,755,901	5,885,461	300,000	400,160	380	1.8	0.0	0.0	0	0.00	6.50		36,781	77,278				
10	0.28	2,595,287	45.9	1,782,733	1,756,725	5,885,461	326,400	401,464	391	1.4	0	0.0	0	0.00	7.50		36,085	71,617				
11	0.26	2,637,828	17.6	1,782,784	1,756,778	5,885,461	326,600	406,374	434	0.0	0.0	0.0	0	0.00	8.00		36,132	0				
12	0.01	2,704,355	10.0	1,785,923	1,760,233	5,885,459	326,600	419,842	434	0.0	0.0	0.0	0	0.00	9.42		43,008	43,129				
13	0.00	2,758,692	9.9	1,787,540	1,762,014	5,885,456	326,600	424,731	452	0.00	0	0.00	0	0.00	10.08		80,262	0				
14	0.00	2,808,056	15.6	1,789,566	1,764,180	5,885,455	326,600	432,170	455	0.0	0.0	0.0	0	0.00	10.96							
15	0.00	2,857,420	21.2	1,791,592	1,766,346	5,885,454	326,600	439,608	458	0.0	0.0	0.0	0	0.00	11.83		89,191	0				
16	0.37	2,906,125	19.4	1,793,804	1,768,689	5,885,454	326,600	439,728	483	0.0	0.0	0.0	0	0.00	10.67		51,646	0				
17	0.70	2,954,795	15.0	1,795,265	1,770,283	5,885,454	326,600	443,544	483	0.0	0.0	0.0	0	0.00	10.50		51,784	43,380				
18	0.20	3,002,072	19.0	1,796,682	1,771,784	5,885,453	326,600	449,327	553	0.0	0.0	0.0	0	0.00	10.08		51,638	43,076				
19	1.07	3,053,139	20.0	1,798,660	1,773,904	5,885,452	326,600	455,064	553	0.0	0.0	0.0	0	0.00	9.00		51,632	42,776				
20	0.01	3,105,974	16.0	1,800,167	1,775,528	5,885,452	354,700	459,115	558	1.2	0.0	0.0	0	0.00	8.25		44,134	42,678				
21	0.52	3,157,196	18.1	1,802,004	1,777,532	5,885,452	382,100	465,019	559	1.2	0.0	0.0	0	0.00	9.63							
22	2.83	3,208,418	20.1	1,803,840	1,779,535	5,885,451	409,500	470,922	560	1.7	0.0	0.0	0	0.00	11.00		95,800	0				
23	0.13	3,263,908	21.7	1,807,413	1,783,400	5,885,452	409,500	480,195	579	2.1	0.0	0.0	0	0.00	11.67		95,790	0				
24	1.38	3,326,000	13.8	1,811,975	1,788,407	5,885,452	547,100	495,087	579	2.9	0.0	0.0	0	0.00	13.25		95,856	28,574				
25	2.05	3,390,373	15.1	1,816,687	1,793,513	5,885,452	563,500	510,052	592	2.8	0.0	0.0	0	0.00	14.00		51,844	43,344				
26	1.48	3,470,179	18.0	1,825,077	1,803,706	5,885,451	619,800	537,948	601	3.3	0.0	0.0	0	0.00	16.25		96,004	42,836				
27	0.00	3,557,570	12.5	1,835,483	1,816,233	5,885,452	619,800	547,135	627	3.3	0.0	0.0	0	0.00	17.08		135,516	42,786				
28	0.00	3,643,435	21.0	1,846,832	1,829,902	5,885,453	619,800	589,234	677	3.3	0.0	0.0	0	0.00	17.13		98,468	35,838				
29	0.00	3,729,300	29.4	1,858,180	1,843,570	5,885,454	619,800	631,333	727	3.0	0.0	0.0	0	0.00	17.17		143,522	35,980				
30	0.00	3,848,300	16.2	1,864,124	1,851,100	5,885,454	619,800	644,494	814	3.0	0.0	0.0	0	0.00	16.17		200,516	21,286				
31	1.25	3,943,100	14.0	1,873,228	1,862,056	5,885,455	619,800	678,758	990	3.0	0.0	0.0	0	0.00	14.50		179,027	35,764				
Totals	16.80										0		0			0	2,190,348	828,233	0	0	0	0

balance/2019/07-19ba.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

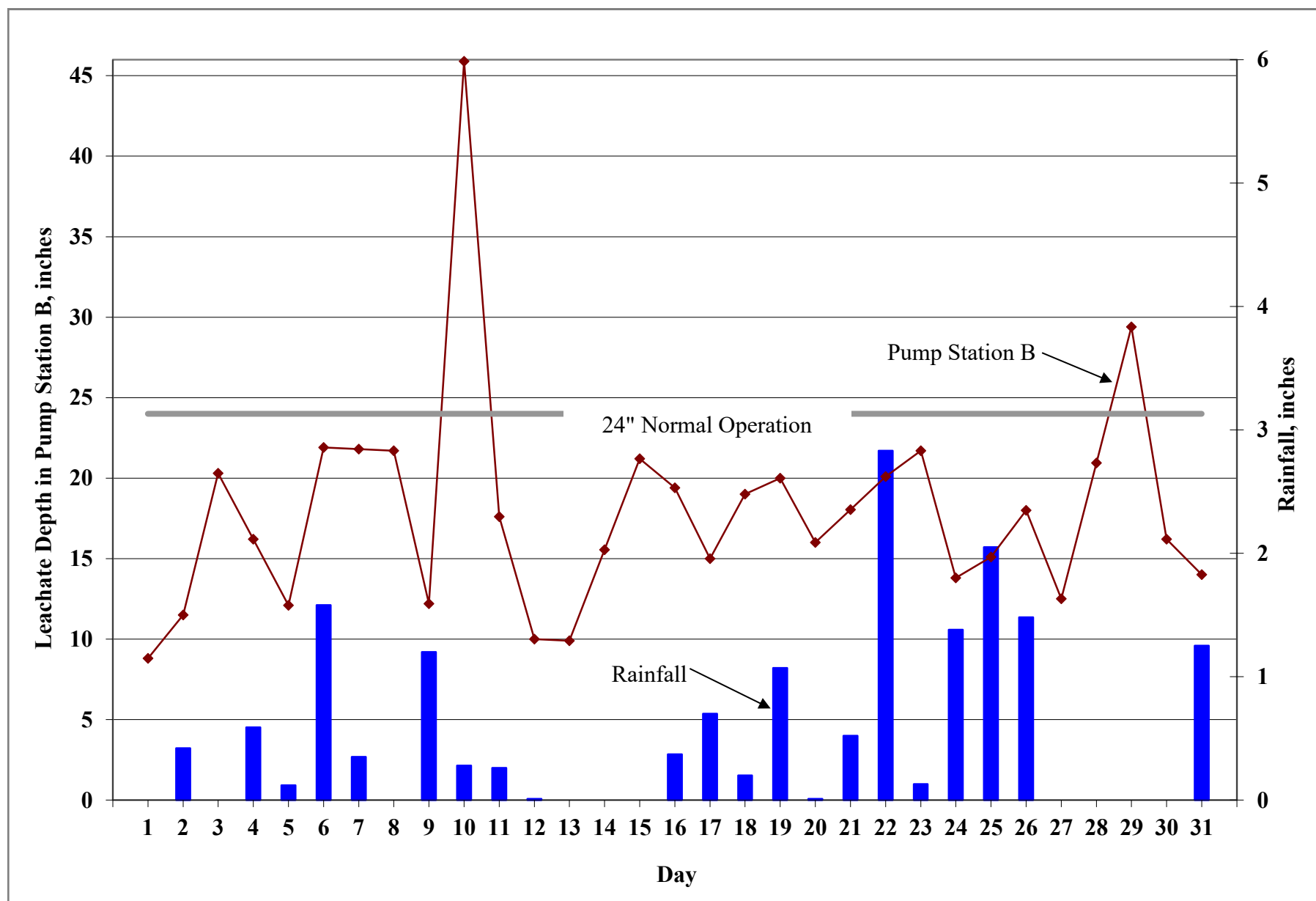


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2019.

**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	2,120,857	213,400	2,595,924	0	0	0	0	0	2,562,450	2,595,924	-33,475
July	16.80	40,540	222,521	319,700	2,348,809	393,000	3,018,581	0	0	0	0	0	3,324,575	3,018,581	305,994
August															
September															
October															
November															
December															
YTD Total	37.39	74,046	913,890	1,456,902	17,948,094	717,595	19,686,194	0	0	0	0	0	21,110,543	19,686,194	1,424,349

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: September 9, 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 August 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 10.78 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 3.4 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 seventeenth and twenty-seventh was caused by the leachate storage tank reaching high level, after a couple of loads of leachate were hauled the measurements returned to normal. The average recorded depth of leachate in the PS-B sump was 16.8 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 133,021 gallons. A total of 4,123,659 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 5,787 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 854,886 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 4,978,545 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 522,029 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 zero gallons 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 255,600 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 432,100 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 5,365,060 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 207,800 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 5,779,763 gallons. Total outflow quantity from the LTRF was 5,365,060 gallons. The change in storage for the month decreased by 414,703 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 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 MLPS (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	0.50	0.0	3.1	16.2	106,496	0	0	106,496	13,688	0	0	0	350,000		236,452	0	0	182,000	0	0	0	0	0
2	0.85	0.0	4.0	20.6	103,862	75	23,111	126,973	14,510		116,300	0	295,000		221,708	0	0	267,000	0	0	0	0	0
3	0.09	0.0	3.8	13.9	123,453	111	15,545	138,998	16,156	0	0	0	240,000		169,305	0	0	256,000	0	0	0	0	0
4	0.00	0.0	3.8	16.2	125,027	213	30,352	155,379	16,555	0	27,050	0	333,000		185,405	0	0	256,000	0	0	0	0	0
5	0.77	0.0	2.5	18.4	121,716	213	30,352	152,068	16,555	0	27,050	0	427,000		185,943	0	0	124,000	0	0	0	0	0
6	0.15	0.0	3.1	19.7	118,897	36	25,150	144,047	16,527	0	85,200	0	403,000		199,889	0	0	182,000	0	0	0	0	0
7	1.15	0.0	3.0	20.6	120,062	227	7,064	127,126	14,969	0	0	0	345,000		163,219	0	0	172,000	0	0	0	0	0
8	0.00	0.0	3.2	11.5	122,050	452	41,755	163,805	15,667	0	0	0	350,000		170,896	0	0	192,000	0	0	0	0	0
9	0.01	0.0	3.2	7.9	119,451	378	29,781	149,232	17,877	0	0	0	353,000		157,626	0	0	192,000	0	0	0	0	0
10	1.02	0.0	3.2	14.1	127,450	689	29,999	157,449	16,369	0	0	0	360,000		141,029	0	0	192,000	0	0	0	0	0
11	0.15	0.0	3.2	16.6	136,405	157	5,726	142,131	17,528	0	0	0	372,000		154,607	0	0	192,000	0	0	0	0	0
12	0.58	0.0	3.2	19.0	135,871	157	5,726	141,597	17,528	0	0	0	384,000		154,062	0	0	192,000	0	0	0	0	0
13	0.57	0.0	3.3	19.3	136,229	0	78,792	215,021	9,634	0	0	0	437,000		165,776	0	0	202,000	0	0	0	0	0
14	0.72	0.0	3.3	9.5	138,648	0	35,426	174,074	0	0	0	0	413,000		187,448	0	0	202,000	0	0	0	0	0
15	0.53	0.0	3.4	19.4	142,546	0	2,806	145,352	49,257	0	0	0	437,000		161,834	0	0	213,000	0	0	0	0	0
16	0.33	0.0	3.4	9.0	127,859	0	45,197	173,056	28,823	0	0	0	518,000		128,831	0	0	213,000	0	0	0	0	0
17	0.00	0.0	3.4	24.9	135,686	0	10,606	146,292	12,526	0	0	0	533,000		176,029	0	0	213,000	0	0	0	0	0
18	0.00	0.0	3.4	20.4	143,588	0	10,860	154,448	22,240	0	0	0	511,000		191,769	0	0	213,000	0	0	0	0	0
19	0.00	0.0	3.4	15.9	148,297	0	10,860	159,157	22,240	0	0	0	489,000		171,698	0	0	213,000	0	0	0	0	0
20	0.00	0.0	3.4	13.5	144,416	7	85,413	229,829	21,570	0	0	0	425,000		194,467	0	0	213,000	0	0	0	0	0
21	0.00	0.0	3.4	14.1	135,879	0	56,624	192,503	32,682	0	0	0	453,000		178,409	0	0	213,000	0	0	0	0	0
22	0.00	0.0	3.4	13.4	140,093	0	13,957	154,050	16,418	0	0	0	449,000		155,994	0	0	213,000	0	0	0	0	0
23	0.00	0.0	3.4	14.6	161,938	0	56,415	218,353	17,604	0	0	0	499,000		186,338	0	0	213,000	0	0	0	0	0
24	0.00	0.0	3.4	14.4	133,840	0	10,529	144,369	10,819	0	0	0	489,000		199,909	0	0	213,000	0	0	0	0	0
25	0.00	0.0	3.4	13.5	141,500	0	34,657	176,157	12,212	0	0	0	506,000		161,590	0	0	202,000	0	0	0	0	0
26	1.65	0.0	3.3	12.5	143,918	0	34,657	178,575	12,212	0	0	0	523,000		163,329	0	0	202,000	0	0	0	0	0
27	0.90	0.0	3.4	54.9	103,042	0	26,082	129,124	9,327	0	0	0	482,000		171,278	0	0	213,000	0	0	0	0	0
28	0.03	0.0	3.5	13.1	165,896	1,632	24,805	190,701	12,290	0	0	0	521,000		191,383	0	0	223,000	0	0	0	0	0
29	0.00	0.0	3.5	14.6	144,058	860	24,342	168,400	12,143	0	0	0	482,000		155,885	0	0	223,000	0	0	0	0	0
30	0.00	0.0	3.5	15.5	134,362	314	23,543	157,905	12,758	0	0	0	509,000		133,381	0	0	223,000	0	0	0	0	0
31	0.78	0.0	3.5	14.3	141,127	266	24,756	165,883	13,348	0	0	0	506,000		149,571	0	0	223,000	0	0	0	0	0
Total	10.78				4,123,659	5,787	854,886	4,978,545	522,029	0	255,600			0	5,365,060	0			0	0		0	0
Daily Average		0.0	3.4	16.8	133,021	187	27,577	160,598	16,840	0	8,245	0	432,100				0	207,800					
Mo. Average																0				0		0	0

balance/2019/08-19bal.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
AUGUST 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	0.50	4,033,862	16.2	1,879,436	1,869,536	5,885,457	619,800	705,381	1,100	3.1	0.0	0.0	0	0.00	12.17	0	193,756	42,696	0	0	0	0
2	0.85	4,120,977	20.6	1,886,082	1,877,400	5,885,452	736,100	728,492	1,175	4.0	0.0	0.0	0	0.00	10.25	0	186,022	35,686	0	0	0	0
3	0.09	4,210,713	13.9	1,892,822	1,886,816	5,885,443	736,100	744,037	1,286	3.8	0.0	0.0	0	0.00	8.33	0	140,795	28,510	0	0	0	0
4	0.00	4,302,023	16.2	1,903,230	1,892,963	5,885,448	763,150	774,389	1,499	3.8	0.0	0.0	0	0.00	11.58	0	156,849	28,556	0	0	0	0
5	0.77	4,393,333	18.4	1,913,637	1,899,110	5,885,453	790,200	804,740	1,712	2.5	0.0	0.0	0	0.00	14.83	0	164,509	21,434	0	0	0	0
6	0.15	4,483,873	19.70	1,917,870	1,911,404	5,885,454	875,400	829,890	1,748	3.1	0	0	0	0.00	14.00	0	164,308	35,581	0	0	0	0
7	1.15	4,573,149	20.6	1,923,893	1,920,350	5,885,455	875,400	836,954	1,975	3.0	0.0	0.0	0	0.00	12.00	0	141,860	21,359	0	0	0	0
8	0.00	4,663,800	11.5	1,930,923	1,928,987	5,885,453	875,400	878,709	2,427	3.2	0.0	0.0	0	0.00	12.17	0	128,094	42,802	0	0	0	0
9	0.01	4,768,994	7.9	1,938,854	1,938,933	5,885,452	875,400	908,490	2,805	3.2	0.0	0.0	0	0.00	12.25	0	118,988	38,638	0	0	0	0
10	1.02	4,868,326	14.1	1,946,143	1,948,013	5,885,452	875,400	938,489	3,494	3.2	0	0.0	0	0.00	12.50	0	97,196	43,833	0	0	0	0
11	0.15	4,976,613	16.6	1,953,822	1,957,862	5,885,453	875,400	944,215	3,651	3.2	0.0	0.0	0	0.00	12.92	0	111,227	43,380	0	0	0	0
12	0.58	5,084,900	19.0	1,961,501	1,967,710	5,885,454	875,400	949,940	3,808	3.2	0.0	0.0	0	0.00	13.33	0	111,039	43,023	0	0	0	0
13	0.57	5,193,082	19.3	1,965,687	1,973,158	5,885,455	875,400	1,028,732	3,808	3.3	0	0.00	0	0.00	15.17	0	121,205	44,571	0	0	0	0
14	0.72	5,302,583	9.5	1,965,687	1,973,158	5,885,455	875,400	1,064,158	3,808	3.3	0.0	0.0	0	0.00	14.33	0	143,821	43,627	0	0	0	0
15	0.53	5,415,577	19.4	1,987,607	2,000,495	5,885,459	875,400	1,066,964	3,808	3.4	0.0	0.0	0	0.00	15.17	0	118,965	42,869	0	0	0	0
16	0.33	5,537,551	9.0	2,000,165	2,016,760	5,885,461	875,400	1,112,161	3,808	3.4	0.0	0.0	0	0.00	18.00	0	107,244	21,587	0	0	0	0
17	0.00	5,652,758	24.9	2,005,634	2,023,817	5,885,463	875,400	1,122,767	3,808	3.4	0.0	0.0	0	0.00	18.50	0	125,354	50,675	0	0	0	0
18	0.00	5,775,867	20.4	2,015,217	2,036,474	5,885,462	875,400	1,133,627	3,808	3.4	0.0	0.0	0	0.00	17.75	0	155,543	36,226	0	0	0	0
19	0.00	5,898,976	15.9	2,024,800	2,049,130	5,885,461	875,400	1,144,487	3,808	3.4	0.0	0.0	0	0.00	17.00	0	128,929	42,769	0	0	0	0
20	0.00	6,016,300	13.5	2,033,845	2,061,655	5,885,459	875,400	1,229,900	3,815	3.4	0.0	0.0	0	0.00	14.75	0	151,502	42,965	0	0	0	0
21	0.00	6,132,352	14.1	2,047,669	2,080,513	5,885,457	875,400	1,286,524	3,815	3.4	0.0	0.0	0	0.00	15.75	0	135,303	43,106	0	0	0	0
22	0.00	6,243,500	13.4	2,054,823	2,089,777	5,885,451	875,400	1,300,481	3,815	3.4	0.0	0.0	0	0.00	15.58	0	113,027	42,967	0	0	0	0
23	0.00	6,374,103	14.6	2,062,308	2,099,896	5,885,449	875,400	1,356,896	3,815	3.4	0.0	0.0	0	0.00	17.33	0	143,376	42,962	0	0	0	0
24	0.00	6,481,762	14.4	2,066,995	2,106,028	5,885,445	875,400	1,367,425	3,815	3.4	0.0	0.0	0	0.00	17.00	0	155,561	44,348	0	0	0	0
25	0.00	6,597,081	13.5	2,072,167	2,113,068	5,885,443	875,400	1,402,082	3,815	3.4	0.0	0.0	0	0.00	17.59	0	125,513	36,077	0	0	0	0
26	1.65	6,712,400	12.5	2,077,339	2,120,108	5,885,440	875,400	1,436,739	3,815	3.3	0.0	0.0	0	0.00	18.17	0	120,476	42,853	0	0	0	0
27	0.90	6,786,435	54.9	2,081,305	2,125,469	5,885,440	875,400	1,462,821	3,815	3.4	0.0	0.0	0	0.00	16.75	0	134,944	36,334	0	0	0	0
28	0.03	6,925,000	13.1	2,086,627	2,132,437	5,885,437	875,400	1,487,626	5,447	3.5	0.0	0.0	0	0.00	18.08	0	157,326	34,057	0	0	0	0
29	0.00	7,040,869	14.6	2,091,790	2,139,417	5,885,438	875,400	1,511,968	6,307	3.5	0.0	0.0	0	0.00	16.75	0	119,808	36,077	0	0	0	0
30	0.00	7,149,019	15.5	2,096,935	2,147,030	5,885,436	875,400	1,535,511	6,621	3.5	0.0	0.0	0	0.00	17.67	0	133,381	0	0	0	0	0
31	0.78	7,265,212	14.3	2,102,111	2,155,202	5,885,436	875,400	1,560,267	6,887	3.5	0.0	0.0	0	0.00	17.58	0	106,524	43,047	0	0	0	0
Totals	10.78										0		0			0	4,212,445	1,152,615	0	0	0	0

balance\2019\08-19ba1.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

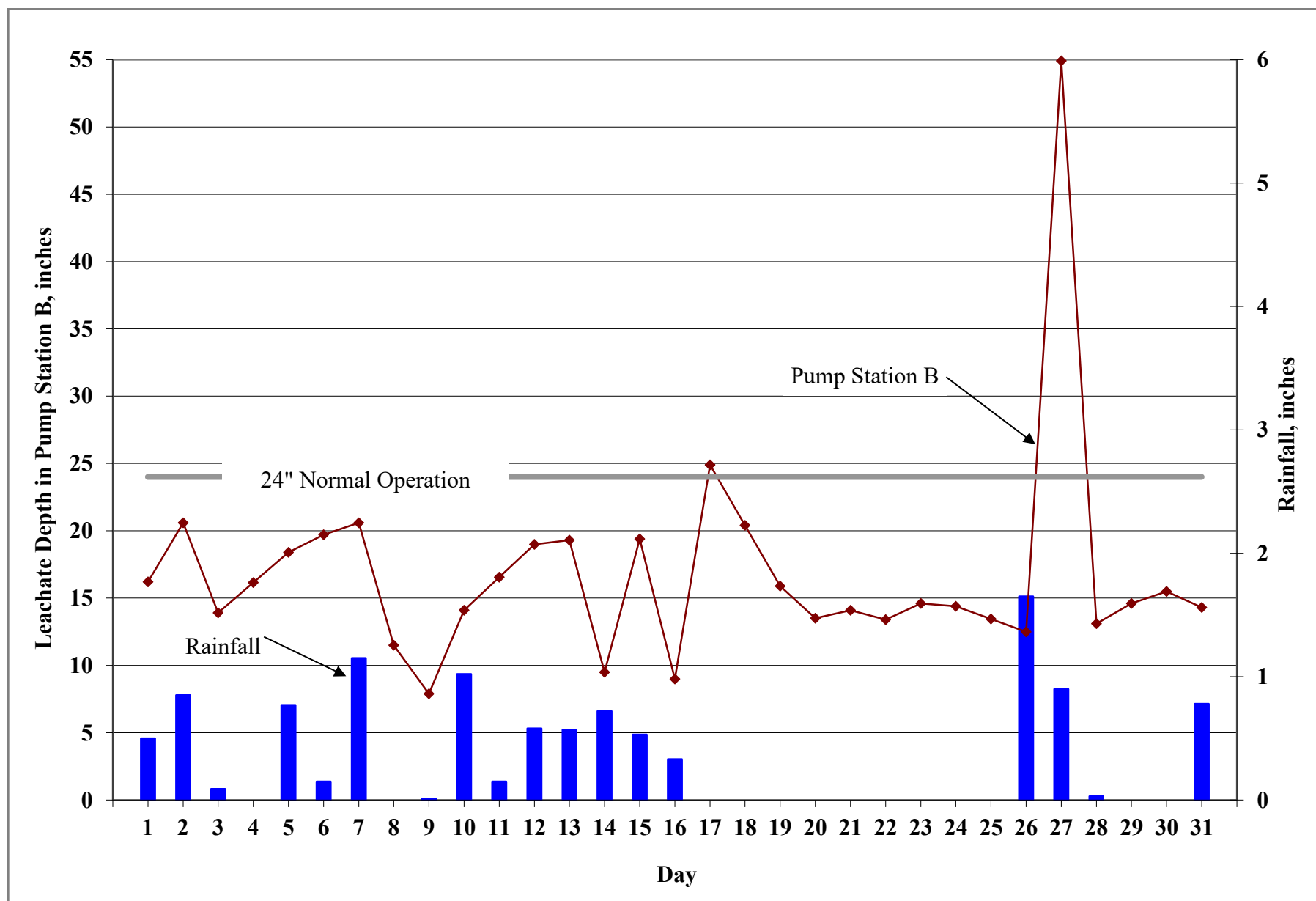


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2019.

**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	3,211,898	3,154,367	57,531
March	1.66	5,650	113,315	197,794	2,758,333	2,816	2,856,561	0	0	0	0	0	3,077,908	2,856,561	221,347
April	1.93	4,894	91,489	150,765	2,229,544	0	2,151,105	0	0	0	0	0	2,476,692	2,151,105	325,587
May	3.48	4,873	85,825	138,667	2,197,558	13,400	2,180,324	0	0	0	0	0	2,440,323	2,180,324	259,999
June	8.24	6,360	82,019	139,810	2,120,857	213,400	2,595,924	0	0	0	0	0	2,562,446	2,595,924	-33,479
July	16.80	40,540	222,521	319,700	2,348,809	393,000	3,018,581	0	0	0	0	0	3,324,570	3,018,581	305,989
August	10.78	23,589	522,029	854,886	4,123,659	255,600	5,365,060	0	0	0	0	0	5,779,763	5,365,060	414,703
September															
October															
November															
December															
YTD Total	48.17	97,635	1,435,919	2,311,788	22,071,753	973,195	25,051,254	0	0	0	0	0	26,890,290	25,051,254	1,839,036

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: October 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 September 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 1.50 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 3.0 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 level recorded on the second through the fourth was caused by the leachate storage tank reaching high level, after a couple of days of leachate hauling the level returned to normal. The level recorded on the ninth was caused by the storage tank reaching high level, after a couple of loads of leachate were hauled the measurements returned to normal the same day. The number recorded on the twelfth was caused by a pump malfunction, the contractor was notified and the level returned to normal the same day. The average recorded depth of leachate in the PS-B sump was 19.8 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 130,114 gallons. A total of 3,903,411 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 3,097 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 493,733 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 4,397,144 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 230,478 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 zero gallons 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 zero 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 an average of 192,600 gallons of leachate was 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 388,500 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, 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 4,552,505 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 171,700 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 4,631,815 gallons. Total outflow quantity from the LTRF was 4,552,505 gallons. The change in storage for the month decreased by 79,310 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 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.)
1	0.00	0.0	3.5	23.2	96,905	198	22,316	119,221	12,166	0	0	0	513,000	0	66,066	0	0	223,000	0	0	0	0	0
2	0.10	0.0	3.5	32.1	96,905	198	22,316	119,221	12,166	0	0	0	519,000	0	163,853	0	0	223,000	0	0	0	0	0
3	0.00	0.0	3.5	41.0	152,693	198	22,316	175,009	12,166	0	0	0	525,000	0	170,227	0	0	223,000	0	0	0	0	0
4	0.00	0.0	3.5	41.8	114,543	180	2,768	117,311	10,798	0	0	0	535,000	0	186,218	0	0	223,000	0	0	0	0	0
5	0.00	0.0	3.5	14.1	179,401	140	15,087	194,488	5,117	0	0	0	485,000	0	184,263	0	0	223,000	0	0	0	0	0
6	0.00	0.0	3.5	14.1	140,790	141	25,943	166,733	16,601	0	0	0	480,000	0	192,340	0	0	223,000	0	0	0	0	0
7	0.00	0.0	3.5	15.1	124,388	124	33,916	158,304	10,990	0	0	0	494,000	0	141,881	0	0	223,000	0	0	0	0	0
8	0.00	0.0	3.5	25.9	118,261	138	19,621	137,882	8,621	0	0	0	513,000	0	77,181	0	0	213,000	0	0	0	0	0
9	1.07	0.0	3.4	36.6	131,871	138	19,621	151,492	8,621	0	0	0	533,000	0	169,183	0	0	213,000	0	0	0	0	0
10	0.00	0.0	3.5	13.7	153,764	109	19,031	172,795	7,457	0	0	245,000	401,000	0	167,816	0	0	223,000	0	0	0	0	0
11	0.00	0.0	3.5	14.3	135,376	111	17,330	152,706	8,811	0	0	266,000	410,000	0	188,903	0	0	223,000	0	0	0	0	0
12	0.00	0.0	3.5	45.5	82,885	104	15,987	98,872	7,344	0	0	240,000	353,000	0	196,405	0	0	223,000	0	0	0	0	0
13	0.04	0.0	3.5	16.1	160,622	97	19,835	180,457	8,838	0	0	317,000	271,000	0	146,019	0	0	223,000	0	0	0	0	0
14	0.15	0.0	3.5	14.7	131,458	82	22,009	153,467	6,809	0	0	384,000	223,000	0	175,661	0	0	223,000	0	0	0	0	0
15	0.14	0.0	3.5	15.7	137,769	93	21,932	159,701	6,818	0	0	341,000	272,000	0	102,006	0	0	223,000	0	0	0	0	0
16	0.00	0.0	3.5	16.6	144,556	93	21,932	166,488	6,818	0	0	297,000	322,000	0	153,153	0	0	223,000	0	0	0	0	0
17	0.00	0.0	3.5	14.3	140,195	57	19,627	159,822	6,808	0	0	178,000	422,000	0	188,555	0	0	223,000	0	0	0	0	0
18	0.00	0.0	3.4	14.4	136,425	84	10,738	147,163	6,337	0	0	156,000	365,000	0	189,521	0	0	213,000	0	0	0	0	0
19	0.00	0.0	3.1	14.5	134,446	54	8,910	143,356	6,054	0	0	259,000	259,000	0	188,090	0	0	182,000	0	0	0	0	0
20	0.00	0.0	2.8	18.1	133,544	78	24,332	157,876	5,959	0	0	314,000	238,000	0	101,666	0	0	152,000	0	0	0	0	0
21	0.00	0.0	2.7	14.4	117,502	86	13,056	130,558	6,738	0	0	278,000	343,000	0	158,602	0	0	143,000	0	0	0	0	0
22	0.00	0.0	2.7	14.4	121,273	73	13,334	134,606	5,742	0	0	283,000	330,000	0	73,348	0	0	133,000	0	0	0	0	0
23	0.00	0.0	2.6	14.3	135,477	73	13,334	148,811	5,742	0	0	288,000	317,000	0	130,382	0	0	133,000	0	0	0	0	0
24	0.00	0.0	2.4	14.6	138,525	76	12,468	150,993	5,816	0	0	223,000	417,000	0	181,550	0	0	115,000	0	0	0	0	0
25	0.00	0.0	2.2	14.6	144,007	55	11,240	155,247	6,107	0	0	295,000	338,000	0	181,211	0	0	97,000	0	0	0	0	0
26	0.00	0.0	1.8	15.5	104,400	49	13,806	118,206	5,505	0	0	202,000	437,000	0	159,267	0	0	64,000	0	0	0	0	0
27	0.00	0.0	1.5	16.7	130,632	79	6,308	136,940	3,947	0	0	309,000	317,000	0	122,991	0	0	44,000	0	0	0	0	0
28	0.00	0.0	1.4	17.0	119,190	70	12,250	131,440	5,446	0	0	389,000	250,000	0	165,621	0	0	38,000	0	0	0	0	0
29	0.00	0.0	1.4	15.8	116,882	61	6,187	123,068	5,068	0	0	301,000	341,000	0	79,738	0	0	33,000	0	0	0	0	0
30	0.00	0.0	1.3	14.5	128,728	61	6,187	134,915	5,068	0	0	214,000	432,000	0	150,788	0	0	33,000	0	0	0	0	0
Total	1.50				3,903,411	3,097	493,733	4,397,144	230,478	0	0			0	4,552,505	0			0	0	0	0	0
Daily Average		0.0	3.0	19.8	130,114	103	16,458	146,571	7,683	0	0	192,600	388,500				0	171,700					
Mo. Average																0				0	0	0	0

- 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.

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TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 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 0	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	7,360,808	23.2	2,106,608	2,162,871	5,885,434	875,400	1,582,583	7,085	3.5	0.0	0.0	0	0.00	18	0	66,066	0	0	0	0	0
2	0.10	7,456,404	32.1	2,111,106	2,170,540	5,885,433	875,400	1,604,898	7,283	3.5	0.0	0.0	0	0.00	18	0	163,853	0	0	0	0	0
3	0.00	7,552,000	41.0	2,115,603	2,178,209	5,885,431	875,400	1,627,214	7,481	3.5	0.0	0.0	0	0.00	18.25	0	127,314	42,913				
4	0.00	7,639,300	41.8	2,119,400	2,185,210	5,885,427	875,400	1,629,982	7,661	3.5	0.0	0.0	0	0.00	18.58	0	143,336	42,882				
5	0.00	7,784,803	14.1	2,120,860	2,188,867	5,885,427	875,400	1,645,069	7,801	3.5	0.0	0.0	0	0.00	16.83	0	119,629	64,634				
6	0.00	7,900,500	14.1	2,126,670	2,199,658	5,885,428	875,400	1,671,012	7,942	3.5	0.0	0.0	0	0.00	16.67	0	127,951	64,389				
7	0.00	8,009,439	15.1	2,130,994	2,206,324	5,885,426	875,400	1,704,928	8,066	3.5	0.0	0.0	0	0.00	17.17	0	90,729	51,152				
8	0.00	8,112,252	26	2,134,047	2,211,892	5,885,424	875,400	1,724,549	8,204	3.5	0.0	0.0	0	0.00	18	0	69,616	7,565				
9	1.07	8,215,064	36.6	2,137,100	2,217,460	5,885,421	875,400	1,744,169	8,342	3.4	0.0	0.0	0	0.00	18.50	0	111,464	57,719				
10	0.00	8,336,000	13.7	2,139,786	2,222,231	5,885,418	875,400	1,763,200	8,451	3.5	0.0	0.0	0	8.50	13.92	0	89,174	78,642				
11	0.00	8,442,500	14.3	2,142,960	2,227,868	5,885,414	875,400	1,780,530	8,562	3.5	0.0	0.0	0	9.25	14.25	0	95,490	93,413				
12	0.00	8,495,466	45.5	2,145,746	2,232,426	5,885,412	875,400	1,796,517	8,666	3.5	0.0	0.0	0	8.33	12.25	0	117,425	78,980				
13	0.04	8,635,272	16.1	2,148,896	2,238,114	5,885,411	875,400	1,816,352	8,763	3.5	0	0	0	11.00	9.42	0	88,596	57,423				
14	0.15	8,740,974	14.7	2,151,269	2,242,550	5,885,412	875,400	1,838,361	8,845	3.5	0.0	0.0	0	13.33	7.75	0	124,834	50,827				
15	0.14	8,852,987	16	2,153,874	2,246,763	5,885,412	875,400	1,860,293	8,938	3.5	0	0	0	12	9		73,053	28,953				
16	0.00	8,965,000	16.6	2,156,479	2,250,976	5,885,412	875,400	1,882,225	9,030	3.5	0.0	0.0	0	10.33	11.17	0	81,172	71,981				
17	0.00	9,073,000	14.3	2,158,955	2,255,308	5,885,411	875,400	1,901,852	9,087	3.5	0.0	0.0	0	6.17	14.67	0	88,211	100,344				
18	0.00	9,179,000	14.4	2,161,200	2,259,400	5,885,408	875,400	1,912,590	9,171	3.4	0.0	0.0	0	5.42	12.67	0	124,752	64,769				
19	0.00	9,284,100	14.5	2,163,327	2,263,327	5,885,404	875,400	1,921,500	9,225	3.1	0.0	0.0	0	9.00	9.00	0	87,428	100,662				
20	0.00	9,388,954	18.1	2,165,768	2,266,845	5,885,401	875,400	1,945,832	9,303	2.8	0.0	0.0	0	10.92	8.25	0	87,261	14,405				
21	0.00	9,489,592	14.4	2,168,276	2,271,075	5,885,401	875,400	1,958,888	9,389	2.7	0.0	0.0	0	9.67	11.92	0	72,900	85,702				
22	0.00	9,594,001	14	2,170,322	2,274,772	5,885,400	875,400	1,972,222	9,462	3	0	0	0	10	11		73,348	0				
23	0.00	9,698,410	14.3	2,172,367	2,278,468	5,885,399	875,400	1,985,555	9,534	2.6	0.0	0.0	0	10.00	11.00	0	79,888	50,494				
24	0.00	9,802,800	14.6	2,174,635	2,282,016	5,885,398	875,400	1,998,023	9,610	2.4	0.0	0.0	0	7.75	14.50	0	88,106	93,444				
25	0.00	9,915,000	14.6	2,176,172	2,286,586	5,885,400	875,400	2,009,263	9,665	2.2	0.0	0.0	0	10.25	11.75	0	80,629	100,582				
26	0.00	19,400	15.5	2,177,356	2,290,907	5,885,400	875,400	2,023,069	9,714	1.8	0.0	0.0	0	7.00	15.17	0	72,758	86,509				
27	0.00	119,674	16.7	2,178,045	2,294,165	5,885,400	875,400	2,029,377	9,793	1.5	0.0	0.0	0	10.75	11.00	0	86,905	36,086				
28	0.00	220,950	17.0	2,178,796	2,298,860	5,885,400	875,400	2,041,627	9,863	1.4	0.0	0.0	0	13.50	8.67	0	79,032	86,589				
29	0.00	319,918	16	2,180,431	2,302,293	5,885,399	875,400	2,047,814	9,924	1	0	0	0	10	12		36,594	43,144				
30	0.00	418,885	14.5	2,182,066	2,305,725	5,885,398	875,400	2,054,000	9,984	1.3	0.0	0.0	0	7.42	15.00	0	79,065	71,723				
Totals	1.50										0		0			0	2,826,579	1,725,926	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 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

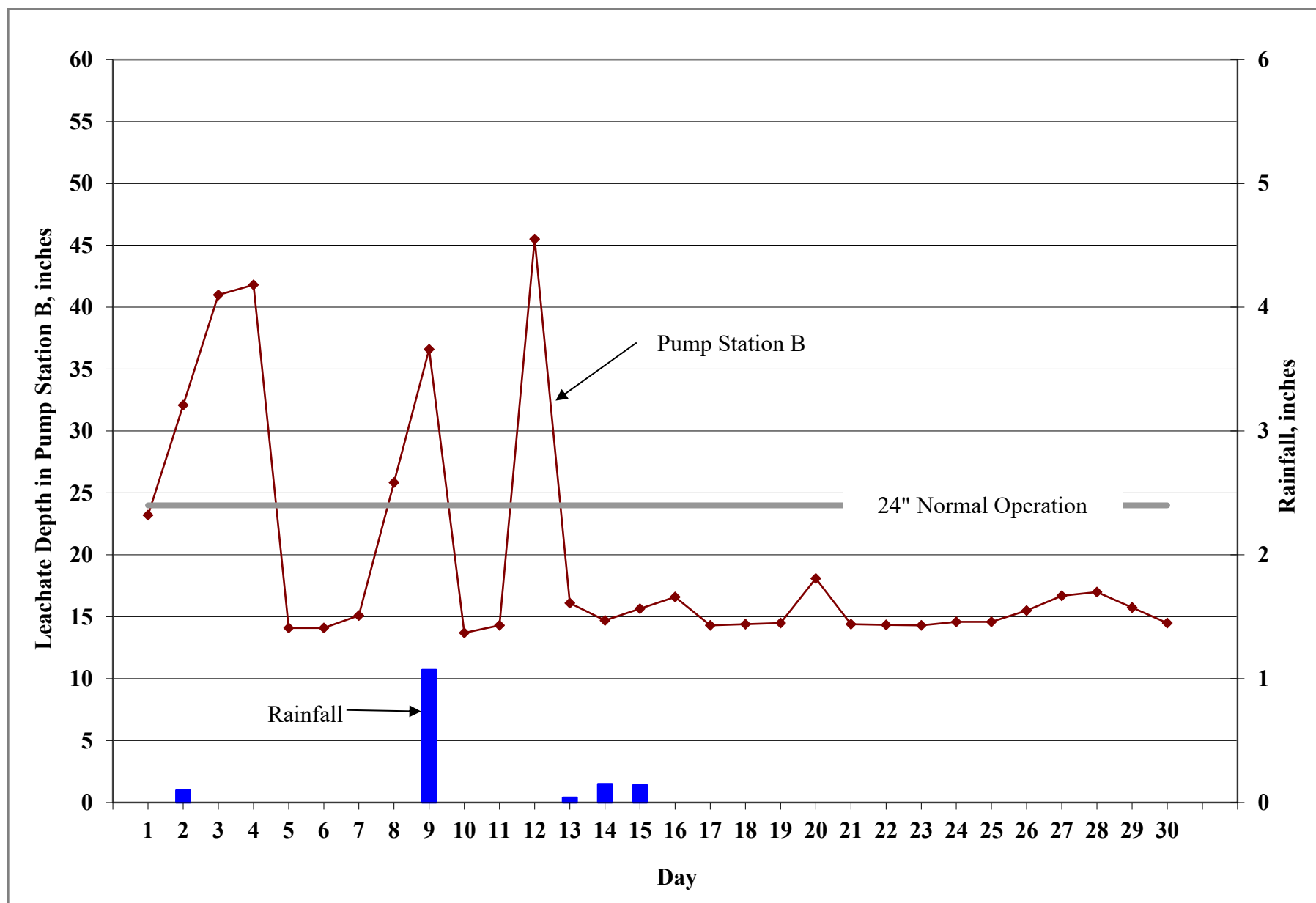


Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2019.

**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	3,211,898	3,154,367	57,531
March	1.66	5,650	113,315	197,794	2,758,333	2,816	2,856,561	0	0	0	0	0	3,077,908	2,856,561	221,347
April	1.93	4,894	91,489	150,765	2,229,544	0	2,151,105	0	0	0	0	0	2,476,692	2,151,105	325,587
May	3.48	4,873	85,825	138,667	2,197,558	13,400	2,180,324	0	0	0	0	0	2,440,323	2,180,324	259,999
June	8.24	6,360	82,019	139,810	2,120,857	213,400	2,595,924	0	0	0	0	0	2,562,446	2,595,924	-33,479
July	16.80	40,540	222,521	319,700	2,348,809	393,000	3,018,581	0	0	0	0	0	3,324,570	3,018,581	305,989
August	10.78	23,589	230,478	854,886	4,123,659	255,600	5,365,060	0	0	0	0	0	5,488,212	5,365,060	123,152
September	1.50	4,193	230,478	493,733	3,903,411	0	4,552,505	0	0	0	0	0	4,631,815	4,552,505	79,310
October															
November															
December															
YTD Total	49.67	101,828	1,374,846	2,805,521	25,975,165	973,195	29,603,759	0	0	0	0	0	31,230,555	29,603,759	1,626,796

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.