Smith, George

From: Pelley, Cindy <PelleyCA@HillsboroughCounty.ORG>
Sent: Thursday, October 11, 2018 2:33 PM
To: SWD_Waste
Cc: Morgan, Steve; Ruiz, Larry; Cope, Ronald; Byer, Kimberly; Madden, Melissa; 'Curtis, Bob'; O'Neill, Joseph; KGuilbeault@scsengineers.com
Subject: WACS ID 41193 - Qtr 3 2018 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2018 Water Balance Report.pdf; 3Q2018 Waste Tire rpt.pdf

Mr. Morgan:

The Quarterly Water Balance and Waste Tire Reports for the Southeast County Landfill are attached (WACS ID 41193). There's a revised tire report form from last quarter included (Form 62-701.900). The date has been revised.

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

Thank you,
Cindy A. Pelley
General Manager II
Solid Waste Management Division
Public Works Department

M: (813) 455-2193
P: (813) 671-7707
E: pelleyca@HCFLGov.net
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Hillsborough County
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Hillsborough County Florida

TRANSPORTATION & UTILITIES SERVICES ADMINISTRATOR
John Lyons
PO Box 1110 Tampa, FL 33601-1110
(813) 307-4754

October 10, 2018

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, 2018 through September 30, 2018.

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/cp
Attachments
xc: Ron Cope, EPC
Kimberly Byer, SWMD

Department of Environmental Protection

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

Waste Tire Processing Facility Quarterly Report

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

Quarter covered by this report 04/01/18 thru 06/30/18 (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	579.62	354.44			-377.67		
Other whole Tires							
Processed tires							
Processing Waste						-11.13	
Other							
Total	579.62	354.44			-377.67	-11.13	545.26

a. Explain all inventory adjustments. -11.13 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 Ruiz — Print Name of Authorized Agent
Larry R — Signature of Authorized Agent
10/11/18 — 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

Department of Environmental Protection

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

Waste Tire Processing Facility Quarterly Report

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

Quarter covered by this report 07/01/18 thru 09/30/18 (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	545.26	355.22			-387.37		
Other whole Tires							
Processed tires							
Processing Waste						-6.78	
Other							
Total	545.26	355.22			-387.37	-6.78	506.33

a. Explain all inventory adjustments. -6.78 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 Ruiz — Print Name of Authorized Agent
Larry R. — Signature of Authorized Agent
10/11/18 — 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

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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

WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
THIRD QUARTER 2018

		THIRD QUARTER	Beginning Tonnage (Jul. 1, 2018)	545.26
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2018	85.70	81.87	90.0	
Beginning Tons	545.26			
	630.96	-81.87	-89.95	0.00
			Ending Tonnage	459.14
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Aug. 2018	115.23	77.68	30.79	6.78
Beginning Tons	459.14			
	574.37	-77.68	-30.79	-6.78
			Ending Tonnage	459.12
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Sep. 2018	154.29	0.00	107.08	0.00
Beginning Tons	459.12			
	613.41	0.00	-107.08	0.00
			Ending Tonnage	506.33
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2018	85.70	81.87	89.95	0.00
Aug. 2018	115.23	77.68	30.79	6.78
Sep. 2018	154.29	0.00	107.08	0.00
Sub-Total	355.22	159.55	227.82	6.78
Beginning Tons	545.26			
TOTAL	900.48	-159.55	-227.82	-6.78
			Ending Tonnage	506.33

Hillsborough County Florida

TRANSPORTATION & UTILITIES SERVICES ADMINISTRATOR
John Lyons
PO Box 1110 Tampa, FL 33601-1110
(813) 307-4754

October 10, 2018

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, 2018.

The data is being submitted as separate monthly reports for July, August, and September 2018. 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/cp
Attachment
xc: Ken Guilbeault, SCS
Ron Cope, EPC

Hillsborough County Florida

PUBLIC WORKS
PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: August 6, 2018

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for July 2018
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 2018 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 11.14 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 the daily average depth of effluent stored in Pond A was 1.5 feet.

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 stored in Pond B was 1.1.

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. This month PS-B was below the normal operation level. There were 3 days when readings were not recorded due to a meter failure. The average recorded depth of leachate in the PS-B sump was 14.6 inches.

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

Column VIII 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 111,778 gallons. A total of 3,465,128 gallons of leachate was pumped this month.

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

Column IX 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 4,716 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 X 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 IX). This month a total of 644,684 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column XI 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 4,109,812 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column XII 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 377,068 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XIII 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 102 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 345,327 gallons of leachate was removed from the compost area and pumped to the LTRF.

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

Column XV 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 345,900 gallons of leachate was stored in the tank.

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

Column XVI 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. 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 309,900 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 671,506 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 4,873,090 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XIX 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 XX 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 a daily average of 49,300 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XXI 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; however during July leachate from the compost pad and ash storage area (259,101 gallons) was stored in Pond B. This month a daily average of 39,800 gallons of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XXII 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 XXVI. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXIII 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 XXIV 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 XXV 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 XXVI 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 0 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 4,870,871 gallons. Total outflow quantity from the LTRF was 5,544,596 gallons. The change in storage for the month decreased by 673,725 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 2018
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	0.07	*2.8*	*1.7*	*15.5*	*105,598*	*75*	*21,695*	*127,293*	*13,032*	*0*	*9,064*	*385,000*	*406,000*	*28,341*	0	0	*98,000*	*51,000*	0	0	0	0	0
2	2.02	2.8	1.5	10.2	106,097	75	21,695	127,792	13,032	*0*	9,064	432,000	403,000	28,342	234,708	0	98,000	44,000	0	0	0	0	0
3	0.13	3.0	1.5	15.1	108,847	102	19,647	128,494	17,247	*0*	10,768	415,000	353,000	21,783	248,951	0	108,000	44,000	0	0	0	0	0
4	0.01	*3.0*	*2.0*	*14.1*	*117,422*	*149*	*3,465*	*120,887*	*18,756*	*0*	*36,060*	*359,000*	*332,000*	*21,783*	270,984	0	*108,000*	*72,000*	0	0	0	0	0
5	0.47	3.0	2.4	13.0	116,582	149	3,465	120,047	18,756	*0*	36,060	302,000	312,000	21,783	240,943	0	108,000	115,000	0	0	0	0	0
6	0.05	3.0	2.5	13.6	121,822	181	53,776	175,598	15,917	*0*	26,064	259,000	288,000	21,786	246,964	0	108,000	124,000	0	0	0	0	0
7	0.00	3.0	2.1	19.3	119,606	317	13,511	133,117	13,666	56	1,918	309,000	257,000	22,473	166,963	0	108,000	88,000	0	0	0	0	0
8	0.00	*2.9*	*2.1*	*15.7*	*109,037*	*389*	*31,622*	*140,659*	*12,431*	*0*	*3*	*356,000*	*265,000*	*20,959*	0	0	*103,000*	*80,000*	0	0	0	0	0
9	0.01	2.7	2.0	12.0	110,394	389	31,622	142,016	12,431	*0*	3	403,000	274,000	23,481	175,906	0	93,000	80,000	0	0	0	0	0
10	0.00	2.7	1.4	16.0	114,370	338	5,933	120,303	11,211	*0*	18	295,000	381,000	21,836	168,895	0	93,000	38,000	0	0	0	0	0
11	0.43	2.0	1.1	11.5	114,065	222	35,293	149,358	9,936	*0*	0	314,000	365,000	21,836	161,969	0	61,000	23,000	0	0	0	0	0
12	0.00	2.0	0.0	11.4	111,235	230	22,690	133,925	10,304	*0*	0	345,000	367,000	20,994	175,658	0	61,000	0	0	0	0	0	0
13	0.01	0.0	0.0	11.8	105,545	211	21,037	126,582	7,637	*0*	0	288,000	343,000	22,681	167,588	0	0	0	0	0	0	0	0
14	0.78	0.0	0.0	10.2	98,918	187	513	99,431	8,321	*0*	0	240,000	338,000	20,124	210,584	0	0	0	0	0	0	0	0
15	0.00	*0.0*	*0.0*	*13.4*	*100,239*	*167*	*26,846*	*127,085*	*8,398*	*0*	*2*	*285,000*	*341,000*	*20,585*	0	0	*0*	*0*	0	0	0	0	0
16	0.00	0.0	0.0	16.6	81,917	167	26,846	108,762	8,398	*0*	2	331,000	343,000	20,699	176,133	0	0	0	0	0	0	0	0
17	0.27	0.0	0.0	18.1	97,623	172	10,297	107,920	7,119	0	0	276,000	309,000	18,961	168,380	0	0	0	0	0	0	0	0
18	0.06	0.0	0.6	18.2	115,292	156	18,524	133,816	7,445	0	15,809	240,000	288,000	16,587	169,322	0	0	7,000	0	0	0	0	0
19	1.00	0.0	0.0	16.0	110,670	124	6,390	117,060	7,986	0	0	288,000	259,000	17,141	125,598	0	0	0	0	0	0	0	0
20	0.57	0.8	0.0	19.3	109,531	91	25,646	135,177	5,379	0	0	317,000	240,000	21,833	169,451	0	17,000	0	0	0	0	0	0
21	0.52	0.9	0.0	16.6	109,681	99	17,704	127,385	7,406	0	21,874	309,000	202,000	21,630	130,538	0	21,000	0	0	0	0	0	0
22	1.07	*1.1*	*0.7*	**NR**	*94,709*	*81*	*20,423*	*115,132*	*9,938*	*0*	*8,521*	*330,000*	*234,000*	*21,630*	0	0	*24,000*	*7,000*	0	0	0	0	0
23	0.65	1.2	1.3	**NR**	95,598	81	20,423	116,021	9,938	0	8,521	350,000	266,000	21,630	161,341	0	32,000	33,000	0	0	0	0	0
24	0.30	1.2	1.2	**NR**	138,387	70	22,493	160,880	22,419	0	85,428	415,000	245,000	22,428	176,000	0	32,000	28,000	0	0	0	0	0
25	0.48	1.2	1.6	13.9	127,446	71	8,283	135,729	11,726	46	1,463	369,000	341,000	23,291	131,722	0	32,000	51,000	0	0	0	0	0
26	0.25	1.2	1.6	13.3	122,505	51	35,441	157,946	14,055	*0*	10,171	379,000	389,000	20,423	175,570	0	32,000	51,000	0	0	0	0	0
27	0.00	1.3	1.2	17.3	123,412	66	5,421	128,833	12,637	*0*	5,347	398,000	367,000	21,014	204,718	0	36,000	28,000	0	0	0	0	0
28	0.98	1.3	1.5	10.0	110,928	63	39,718	150,646	16,073	*0*	25,199	422,000	288,000	21,846	175,836	0	36,000	44,000	0	0	0	0	0
29	0.17	*1.5*	*1.6*	*15.1*	*106,800*	*42*	*24,469*	*131,269*	*14,120*	*0*	*0*	*441,000*	*233,000*	*21,846*	86,376	0	*40,000*	*51,000*	0	0	0	0	0
30	0.42	1.5	2.1	19.1	126,430	73	26,341	152,771	17,203	*0*	33,931	453,000	283,000	21,848	175,782	0	40,000	88,000	0	0	0	0	0
31	0.42	1.5	2.1	11.8	134,427	132	23,457	157,884	14,153	*0*	40	417,000	295,000	19,912	176,210	0	40,000	88,000	0	0	0	0	0
Total	11.14				3,465,128	4,716	644,684	4,109,812	377,068	102	345,327			671,506	4,873,090	0			0	0	0	0	0
Daily Average		1.5	1.1	14.6	111,778	152	20,796	132,575	12,163	3	11,140	345,900	309,900				49,300	39,800					
Mo. Average																0				0	0	0	0

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

TABLE 2. FIELD DATA ENTRY FORM
JULY 2018
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
											Pond B		Effluent				Leachate Hauled		Leachate	Effluent Hauled		Effluent
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Effluent Sprayed (gal)	Pond A Depth (ft.)	Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal)
1	0.07	*2,171,580*	*15.5*	*602,025*	*588,182*	*5,848,423*	*733,230*	*6,538,430*	*63,037*	*1.7*	*0.0*	*2.8*	0	*13.38*	*14.09*	*28,341*	0	0				
2	2.02	2,253,700	10.2	608,545	594,693	5,848,421	742,293	6,560,125	63,111	1.5	0.0	2.8	0	15.00	14.00	28,342	198,940	35,768				
3	0.13	2,338,860	15.1	617,211	603,274	5,848,417	753,061	6,579,772	63,213	1.5	0.0	3.0	0	14.42	12.25	21,783	205,762	43,189				
4	0.01	*2,432,595*	*14.1*	*626,611*	*612,630*	*5,848,415*	*789,121*	*6,583,237*	*63,362*	*2.0*	*0.0*	*3.0*	0	*12.46*	*11.54*	*21,783*	206,073	64,911				
5	0.47	2,526,330	13.0	636,011	621,986	5,848,413	825,181	6,586,701	63,510	2.4	0.0	3.0	0	10.50	10.83	21,783	212,307	28,636				
6	0.05	2,623,545	13.60	644,539	629,375	5,848,411	851,245	6,640,477	63,691	2.5	0	3	0	9.00	10.00	21,786	204,375	42,589				
7	0.00	2,723,243	19.3	651,385	636,195	5,848,467	853,163	6,653,988	64,008	2.1	0.0	3.0	0	10.75	8.92	22,473	124,393	42,570				
8	0.00	*2,812,372*	*15.7*	*657,608*	*642,403*	*5,848,465*	*853,166*	*6,685,610*	*64,397*	*2.1*	*0.0*	*2.9*	0	*12.38*	*9.21*	*20,959*	0	0				
9	0.01	2,901,500	12.0	663,831	648,611	5,848,462	853,168	6,717,232	64,786	2.0	0.0	2.7	0	14.00	9.50	23,481	175,906	0				
10	0.00	2,989,500	16.0	669,424	654,229	5,848,460	853,186	6,723,165	65,124	1.4	0	2.7	0	10.25	13.25	21,836	168,895	0				
11	0.43	3,077,200	11.5	674,388	659,201	5,848,458	853,186	6,758,458	65,346	1.1	0.0	2.0	0	10.92	12.67	21,836	161,969	0				
12	0.00	3,163,800	11.4	679,484	664,409	5,848,456	853,186	6,781,148	65,576	0.0	0.0	2.0	0	12.00	12.75	20,994	175,658	0				
13	0.01	3,244,090	11.8	683,291	668,239	5,848,454	853,186	6,802,185	65,787	0.00	0	0.00	0	10.00	11.92	22,681	167,588	0				
14	0.78	3,322,354	10.2	687,405	672,446	5,848,453	853,186	6,802,698	65,974	0.0	0.0	0.0	0	8.33	11.75	20,124	167,310	43,274				
15	0.00	*3,401,940*	*13.4*	*691,561*	*676,688*	*5,848,451*	*853,188*	*6,829,544*	*66,141*	*0.0*	*0.0*	*0.0*	0	*9.92*	*11.84*	*20,585*	0	0				
16	0.00	3,481,525	16.6	695,717	680,929	5,848,449	853,189	6,856,389	66,307	0.0	0.0	0.0	0	11.50	11.92	20,699	176,133	0				
17	0.27	3,567,611	18.1	699,252	684,513	5,848,449	853,189	6,866,686	66,479	0.0	0.0	0.0	0	9.58	10.75	18,961	168,380	0				
18	0.06	3,654,488	18.2	702,927	688,283	5,848,449	868,998	6,885,210	66,635	0.6	0.0	0.0	0	8.33	10.00	16,587	169,322	0				
19	1.00	3,737,937	16.0	706,853	692,343	5,848,449	868,998	6,891,600	66,759	0.0	0.0	0.0	0	10.00	9.00	17,141	125,598	0				
20	0.57	3,820,206	19.3	709,479	695,096	5,848,449	868,998	6,917,246	66,850	0.0	0.0	0.8	0	11.00	8.33	21,833	126,388	43,063				
21	0.52	3,903,344	16.6	713,119	698,862	5,848,449	890,872	6,934,950	66,949	0.0	0.0	0.9	0	10.75	7.00	21,630	87,806	42,732				
22	1.07	*3,971,510*	***NR***	*718,766*	*703,154*	*5,848,449*	*899,393*	*6,955,373*	*67,030*	*0.7*	*0.0*	*1.1*	0	*11.46*	*8.13*	*21,630*	0	0				
23	0.65	4,039,676	**NR**	724,412	707,445	5,848,449	907,914	6,975,796	67,110	1.3	0.0	1.2	0	12.17	9.25	21,630	161,341	0				
24	0.30	4,150,738	**NR**	744,462	709,814	5,848,449	993,342	6,998,289	67,180	1.2	0.0	1.2	0	14.42	8.50	22,428	176,000	0				
25	0.48	4,251,500	13.9	750,545	715,457	5,848,495	994,805	7,006,572	67,251	1.6	0.0	1.2	0	12.83	11.83	23,291	131,722	0				
26	0.25	4,347,216	13.3	757,428	722,629	5,848,494	1,004,976	7,042,013	67,302	1.6	0.0	1.2	0	13.17	13.50	20,423	175,570	0				
27	0.00	4,444,819	17.3	763,597	729,097	5,848,492	1,010,323	7,047,434	67,368	1.2	0.0	1.3	0	13.83	12.75	21,014	204,718	0				
28	0.98	4,541,522	10.0	771,448	737,319	5,848,489	1,035,522	7,087,152	67,431	1.5	0.0	1.3	0	14.67	10.00	21,846	175,836	0				
29	0.17	*4,634,097*	*15.1*	*778,361*	*744,526*	*5,848,486*	*1,035,522*	*7,111,621*	*67,473*	*1.6*	*0.0*	*1.5*	0	*15.33*	*8.08*	*21,846*	86,376	0				
30	0.42	4,733,013	19.1	786,819	753,271	5,848,480	1,069,453	7,137,962	67,546	2.1	0.0	1.5	0	15.75	9.83	21,848	175,782	0				
31	0.42	4,835,691	11.8	793,743	760,500	5,848,475	1,069,493	7,161,419	67,678	2.1	0.0	1.5	0	14.50	10.25	19,912	176,210	0				
Totals	11.14										0		0			671,506	4,486,358	386,732	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 I and L include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
6. Columns M and O 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

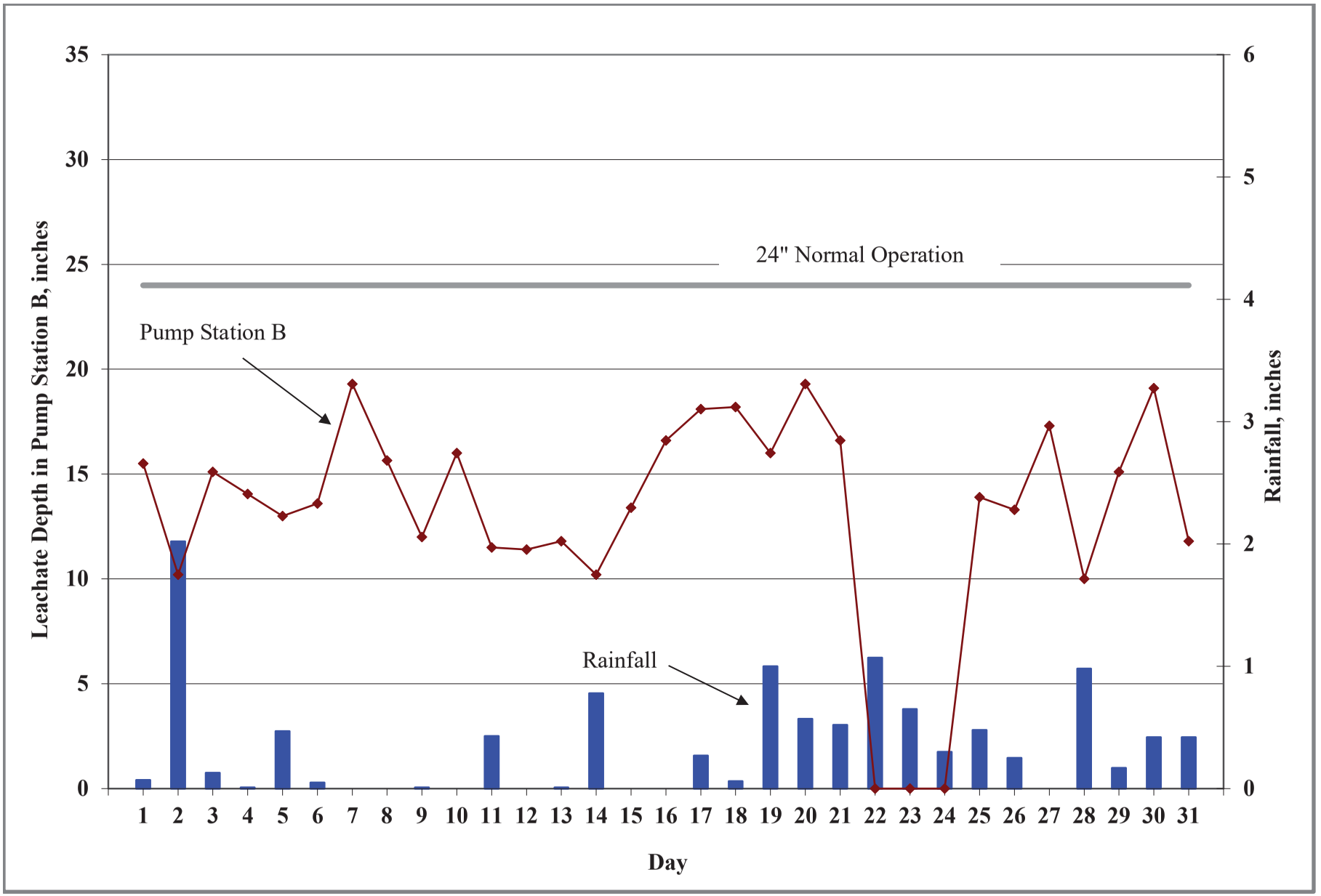

Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2018.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2018

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.63	986	136,192	132,787	2,699,895	0	2,278,282	9,334	728,100	249,302	0	410,330	2,969,860	3,015,716	-45,856
February	0.82	1,707	102,640	20,127	2,194,846	62,685	1,716,430	1,584	518,000	136,771	0	357,793	2,382,005	2,236,014	145,991
March	1.06	4,700	73,738	74,047	2,123,174	23,840	1,495,682	9,695	814,870	311,813	0	336,300	2,299,499	2,320,247	-20,748
April	2.70	4,147	75,436	237,863	2,064,425	3,295	1,683,678	3,216	567,800	155,769	0	340,297	2,385,166	2,254,694	130,472
May	13.66	7,387	154,146	242,640	2,213,290	398,577	3,496,465	0	316,811	165,637	0	149,558	3,016,040	3,813,276	-797,236
June	9.85	7,268	247,237	344,735	2,618,410	235,469	3,133,577	0	589,200	0	0	10,310	3,453,119	3,722,777	-269,659
July	11.14	38,562	377,170	644,684	3,465,128	345,327	4,873,090	0	671,506	0	0	0	4,870,871	5,544,596	-673,725
August															
September															
October															
November															
December															
YTD Total	42.86	64,757	1,166,559	1,696,883	17,379,167	1,069,193	18,677,204	23,829	4,206,287	1,019,292	0	1,604,588	21,376,559	22,907,320	-1,530,761

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

PUBLIC WORKS
PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: September 13, 2018

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for August 2018
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 2018 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 10.75 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 the daily average depth of effluent stored in Pond A was 2.1 feet.

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 stored in Pond B was 2.2.

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. This month PS-B was below the normal operation level. The average recorded depth of leachate in the PS-B sump was 15.8 inches.

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

Column VIII 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 136,320 gallons. A total of 4,225,908 gallons of leachate was pumped this month.

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

Column IX 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 8,470 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 X 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 IX). This month a total of 664,397 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column XI 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 4,890,305 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column XII 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 441,569 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XIII 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 468 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 423,745 gallons of leachate was removed from the compost area and pumped to the LTRF.

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

Column XV 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 392,100 gallons of leachate was stored in the tank.

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

Column XVI 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. 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 326,800 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 305,100 gallons of leachate was treated at the plant. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections.

Total Leachate Hauled (Column XVI)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 6,331,834 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XIX 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 XX 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 a daily average of 64,000 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XXI 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; however during August leachate from the compost pad and ash storage area (211,286 gallons) was stored in Pond B. This month a daily average of 99,300 gallons of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XXII 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 XXVI. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXIII 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 XXIV 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 XXV 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 XXVI 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 0 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 5,845,573 gallons. Total outflow quantity from the LTRF was 6,636,934 gallons. The change in storage for the month decreased by 791,361 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 2018
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	0.73	1.6	2.1	12.8	135,869	134	1,571	137,440	15,808	3	3,107	394,000	309,000	32,100	168,968	0	44,000	88,000	0	0	0	0	0
2	1.17	1.7	2.2	11.5	132,005	172	39,220	171,225	15,700	**0**	20,367	413,000	317,000	32,100	177,230	0	48,000	97,000	0	0	0	0	0
3	0.00	1.9	2.8	19.4	137,343	0	16,479	153,822	21,603	**0**	58,393	458,000	331,000	32,100	188,651	0	57,000	152,000	0	0	0	0	0
4	0.00	1.9	3.0	12.0	147,150	1,102	38,060	185,210	26,756	54	44,422	396,000	439,000	7,400	219,359	0	57,000	172,000	0	0	0	0	0
5	0.07	1.9	2.9	19.1	152,173	287	20,971	173,144	22,215	**0**	13,548	417,000	437,000	7,400	181,182	0	57,000	162,000	0	0	0	0	0
6	0.00	1.8	2.8	17.0	148,233	398	35,622	183,855	17,725	**0**	**0**	432,000	453,000	7,400	217,754	0	52,000	152,000	0	0	0	0	0
7	0.00	1.8	2.8	16.7	148,288	523	25,990	174,278	15,904	0	**0**	417,000	413,000	7,400	252,144	0	52,000	152,000	0	0	0	0	0
8	0.72	1.8	2.3	17.0	147,084	555	3,498	150,582	12,493	63	**0**	417,000	374,000	16,400	255,193	0	52,000	106,000	0	0	0	0	0
9	0.20	1.9	2.3	19.4	143,292	524	39,002	182,294	12,398	**0**	0	398,000	329,000	17,800	255,848	0	57,000	106,000	0	0	0	0	0
10	0.67	1.9	2.5	14.2	139,172	342	26,003	165,175	11,081	**0**	0	341,000	312,000	21,800	249,383	0	57,000	124,000	0	0	0	0	0
11	0.22	2.0	2.5	13.9	139,112	375	22,308	161,420	12,556	0	0	355,000	283,000	25,200	161,149	0	61,000	124,000	0	0	0	0	0
12	0.37	2.0	2.5	17.5	141,224	435	21,466	162,690	11,291	62	0	398,000	264,000	25,200	66,768	0	61,000	124,000	0	0	0	0	0
13	0.04	2.0	2.5	14.0	137,030	275	23,051	160,081	12,227	**0**	0	468,000	283,000	25,200	240,531	0	61,000	124,000	0	0	0	0	0
14	0.00	2.0	2.5	17.3	140,367	231	6,617	146,984	11,797	**0**	47,004	336,000	341,000	25,200	210,601	0	61,000	124,000	0	0	0	0	0
15	0.06	2.0	2.2	12.7	136,598	216	31,301	167,899	11,636	**0**	251	245,000	417,000	22,400	213,492	0	61,000	97,000	0	0	0	0	0
16	0.48	2.0	1.5	17.6	101,923	173	20,922	122,845	10,297	**0**	**0**	281,000	381,000	0	185,506	0	61,000	44,000	0	0	0	0	0
17	0.00	2.0	1.2	12.9	137,101	220	20,113	157,214	12,239	**0**	**0**	432,000	345,000	0	206,902	0	61,000	28,000	0	0	0	0	0
18	0.00	2.0	1.3	11.9	133,382	168	17,867	151,249	9,194	0	0	444,000	324,000	0	211,048	0	61,000	33,000	0	0	0	0	0
19	1.32	2.0	1.3	16.6	102,724	173	20,030	122,754	10,081	**0**	0	367,000	309,000	0	108,424	0	61,000	33,000	0	0	0	0	0
20	0.00	2.1	1.4	13.4	103,586	199	18,712	122,298	8,258	0	103	437,000	302,000	0	211,150	0	65,000	38,000	0	0	0	0	0
21	0.68	2.1	1.9	16.1	139,125	141	21,969	161,094	12,378	**0**	23,182	489,000	259,000	0	219,990	0	65,000	72,000	0	0	0	0	0
22	0.03	2.3	2.5	15.5	144,105	163	16,564	160,669	11,803	**0**	46,620	425,000	283,000	0	245,715	0	74,000	124,000	0	0	0	0	0
23	0.06	2.3	2.5	13.8	143,032	173	18,726	161,758	13,480	**0**	56,389	381,000	314,000	0	235,930	0	74,000	124,000	0	0	0	0	0
24	0.77	2.3	1.4	20.0	145,363	92	19,863	165,226	13,638	**0**	**0**	451,000	245,000	0	238,414	0	74,000	38,000	0	0	0	0	0
25	0.47	2.4	1.5	18.7	57,569	143	3,121	60,690	13,543	**0**	0	384,000	266,000	0	134,019	0	79,000	44,000	0	0	0	0	0
26	0.12	2.4	1.6	17.4	166,534	191	20,841	187,375	14,370	**0**	2,322	439,000	228,000	0	103,167	0	79,000	51,000	0	0	0	0	0
27	0.45	2.4	1.7	14.0	127,807	166	25,263	153,070	13,560	**0**	1	485,000	233,000	0	214,634	0	79,000	57,000	0	0	0	0	0
28	0.35	2.5	2.4	16.0	161,940	240	29,733	191,673	15,034	**0**	63,050	317,000	369,000	0	241,209	0	83,000	115,000	0	0	0	0	0
29	1.25	2.5	2.5	17.6	149,531	203	4,685	154,216	14,341	**0**	34,079	394,000	259,000	0	231,779	0	83,000	124,000	0	0	0	0	0
30	0.17	2.3	2.4	16.1	141,004	298	37,533	178,537	19,009	**0**	**0**	288,000	348,000	0	241,503	0	74,000	115,000	0	0	0	0	0
31	0.35	2.3	2.6	19.1	146,242	158	17,296	163,538	19,154	286	10,907	257,000	365,000	0	244,191	0	74,000	133,000	0	0	0	0	0
Total	10.75				4,225,908	8,470	664,397	4,890,305	441,569	468	423,745			305,100	6,331,834	0			0	0	0	0	0
Daily Average		2.1	2.2	15.8	136,320	273	21,432	157,752	14,244	15	13,669	392,100	326,800				64,000	99,300					
Mo. Average																0				0	0	0	

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

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 2018
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	0.73	4940302	12.8	801,459	768,592	5,848,478	1,072,600	7,162,990	67,812	2.1	0.0	1.6	0	13.67	10.75	32,122	168,968	0				
2	1.17	5,041,000	11.5	809,057	776,694	5,848,468	1,092,967	7,202,210	67,984	2.2	0.0	1.7	0	14.33	11.00	32,122	177,230	0				
3	0.00	5,146,101	19.4	819,552	787,802	5,848,461	1,151,360	7,218,689	67,984	2.8	0.0	1.9	0	15.92	11.50	32,124	152,955	35,696				
4	0.00	5,258,940	12.0	832,450	801,660	5,848,515	1,195,782	7,256,749	69,086	3.0	0.0	1.9	0	13.75	15.25	7,367	176,279	43,080				
5	0.07	5,376,328	19.1	843,271	813,054	5,848,506	1,209,330	7,277,720	69,373	2.9	0.0	1.9	0	14.50	15.17	7,367	159,191	21,991				
6	0.00	5,488,783	17	851,890	822,160	5,848,498	1,209,302	7,313,342	69,771	2.8	0	1.8	0	15.00	15.75	7,367	203,508	14,246				
7	0.00	5,601,321	16.7	859669	830,285	5,848,498	1,209,206	7,339,332	70,294	2.8	0.0	1.8	0	14.50	14.33	7,370	202,083	50,061				
8	0.72	5,712,268	17.0	865,732	836,715	5,848,561	1,209,195	7,342,830	70,849	2.3	0.0	1.8	0	14.50	13.00	16,440	205,235	49,958				
9	0.20	5,820,031	19.4	871,712	843,133	5,848,557	1,209,195	7,381,832	71,373	2.3	0.0	1.9	0	13.83	11.42	17,811	212,734	43,114				
10	0.67	5,922,499	14.2	877,137	848,789	5,848,556	1,209,195	7,407,835	71,715	2.5	0	1.9	0	11.83	10.83	21,758	206,712	42,671				
11	0.22	6,025,331	13.9	883,335	855,147	5,848,556	1,209,195	7,430,143	72,090	2.5	0.0	2.0	0	12.33	9.83	25,157	118,436	42,713				
12	0.37	6,129,805	17.5	888,764	861,009	5,848,618	1,209,195	7,451,609	72,525	2.5	0.0	2.0	0	13.83	9.17	25,157	66,768					
13	0.04	6,229,800	14	894,738	867,262	5,848,613	1,209,195	7,474,660	72,800	2.5	0	2.00	0	16.25	9.83	25,157	197,857	42,674				
14	0.00	6,334,152	17.3	900535	873,262	5,848,610	1,256,199	7,481,277	73,031	2.5	0.0	2.0	0	11.67	11.83	25,158	168,001	42,600				
15	0.06	6,434,200	12.7	906,232	879,201	5,848,601	1,256,450	7,512,578	73,247	2.2	0.0	2.0	0	8.50	14.50	22,376	170,091	43,401				
16	0.48	6,534,142	17.6	911,211	884,519	5,848,596	1,256,218	7,533,500	73,420	1.5	0.0	2.0	0	9.75	13.25		152,537	32,969				
17	0.00	6,634,999	12.9	917,135	890,834	5,848,594	1,256,184	7,553,613	73,640	1.2	0.0	2.0	0	15.00	12.00		164,085	42,817				
18	0.00	6,731,812	11.9	921,647	895,516	5,848,594	1,256,184	7,571,480	73,808	1.3	0.0	2.0	0	15.42	11.25		167,621	43,427				
19	1.32	6,832,789	16.6	926,548	900,696	5,848,593	1,256,184	7,591,510	73,981	1.3	0.0	2.0	0	12.75	10.75		108,424	0				
20	0.00	6,934,725	13.4	930,524	904,978	5,848,593	1,256,287	7,610,222	74,180	1.4	0.0	2.1	0	15.17	10.50		168,398	42,752				
21	0.68	7,036,310	16.1	936,569	911,311	5,848,592	1,279,469	7,632,191	74,321	1.9	0.0	2.1	0	17.00	9.00		177,266	42,724				
22	0.03	7,142,847	15.5	942,385	917,298	5,848,588	1,326,089	7,648,755	74,484	2.5	0.0	2.3	0	14.75	9.83		209,983	35,732				
23	0.06	7,248,145	13.8	948,901	924,262	5,848,889	1,382,478	7,667,481	74,657	2.5	0.0	2.3	0	13.25	10.92		207,514	28,416				
24	0.77	7,354,440	20.0	955,458	931,343	5,848,882	1,374,353	7,687,344	74,749	1.4	0.0	2.3	0	15.67	8.50		195,706	42,708				
25	0.47	7,388,703	*18.7*	962,160	938,184	5,848,881	1,374,353	7,690,465	74,892	1.5	0.0	2.4	0	13.33	9.25		119,369	14,650				
26	0.12	7,525,864	17.4	969,146	945,568	5,848,879	1,376,675	7,711,306	75,083	1.6	0.0	2.4	0	15.25	7.92		103,167	0				
27	0.45	7,614,700	14.0	975,680	952,594	5,848,877	1,376,676	7,736,569	75,249	1.7	0.0	2.4	0	16.83	8.08		171,894	42,740				
28	0.35	7,737,900	16.0	983,018	960,290	5,848,869	1,439,726	7,766,302	75,489	2.4	0.0	2.5	0	11.00	12.83		205,723	35,486				
29	1.25	7,847,611	17.6	990,008	967,641	5,848,836	1,473,805	7,770,987	75,692	2.5	0.0	2.5	0	13.67	9.00		196,212	35,567				
30	0.17	7,949,962	16.1	999,239	977,419	5,848,827	1,473,726	7,808,520	75,990	2.4	0.0	2.3	0	10.00	12.08		205,970	35,533				
31	0.35	8,061,928	19.1	1,008,516	987,296	5,849,113	1,484,633	7,825,816	76,148	2.6	0.0	2.3	0	8.92	12.67		208,625	35,566				
Totals	10.75										0		0			304,853	5,348,542	983,292	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 I and L include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
6. Columns M and O 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

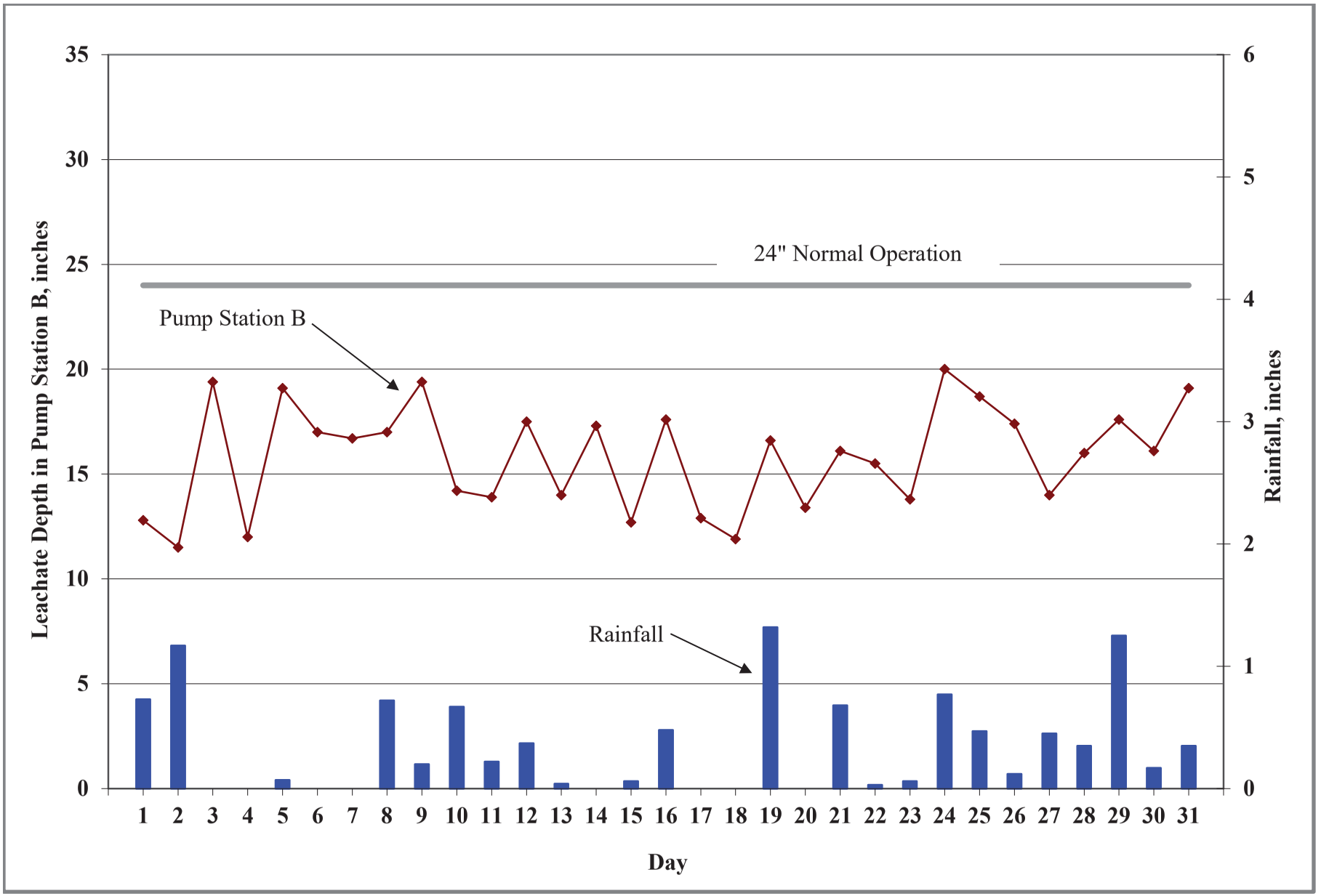

Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2018.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2018

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.63	986	136,192	132,787	2,699,895	0	2,278,282	9,334	728,100	249,302	0	410,330	2,969,860	3,015,716	-45,856
February	0.82	1,707	102,640	20,127	2,194,846	62,685	1,716,430	1,584	518,000	136,771	0	357,793	2,382,005	2,236,014	145,991
March	1.06	4,700	73,738	74,047	2,123,174	23,840	1,495,682	9,695	814,870	311,813	0	336,300	2,299,499	2,320,247	-20,748
April	2.70	4,147	75,436	237,863	2,064,425	3,295	1,683,678	3,216	567,800	155,769	0	340,297	2,385,166	2,254,694	130,472
May	13.66	7,387	154,146	242,640	2,213,290	398,577	3,496,465	0	316,811	165,637	0	149,558	3,016,040	3,813,276	-797,236
June	9.85	7,268	247,237	344,735	2,618,410	235,469	3,133,577	0	589,200	0	0	10,310	3,453,119	3,722,777	-269,659
July	11.14	38,562	377,170	644,684	3,465,128	345,327	4,873,090	0	671,506	0	0	0	4,870,871	5,544,596	-673,725
August	10.75	89,486	442,037	664,397	4,225,908	423,745	6,331,834	0	305,100	0	0	0	5,845,573	6,636,934	-791,361
September															
October															
November															
December															
YTD Total	53.61	154,243	1,608,596	2,361,280	21,605,075	1,492,938	25,009,038	23,829	4,511,387	1,019,292	0	1,604,588	27,222,132	29,544,254	-2,322,122

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

PUBLIC WORKS
PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: October 10, 2018

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for September 2018
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 2018 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 5.05 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 the daily average depth of effluent stored in Pond A was 1.0 feet.

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 stored in Pond B was 1.3.

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. This month PS-B was below the normal operation level. The average recorded depth of leachate in the PS-B sump was 15.8 inches.

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

Column VIII 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 147,752 gallons. A total of 4,432,570 gallons of leachate was pumped this month.

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

Column IX 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 5,194 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 X 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 IX). This month a total of 555,721 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

Column XI 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 4,988,291 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

Column XII 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 333,659 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

Column XIII 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 857 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 169,431 gallons of leachate was removed from the compost area and pumped to the LTRF.

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

Column XV 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 403,200 gallons of leachate was stored in the tank.

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

Column XVI 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. 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 336,700 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XIIV 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 XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 5,450,760 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

Column XIX 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 1,610 gallons of leachate was used for dust control.

Pond A Storage (Column XVIII)

Column XX 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 a daily average of 32,400 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XXI 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; however during September leachate from the compost pad and ash storage area (123,623 gallons) was stored in Pond B. This month a daily average of 40,000 gallons of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

Column XXII 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 XXVI. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXI)

Column XXIII 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 XXIV 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 XXV 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 XXVI 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 1,300 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 5,523,157 gallons. Total outflow quantity from the LTRF was 5,452,370 gallons. The change in storage for the month increased by 70,787 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 2018
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	0.04	2.4	2.4	10.7	138,187	0	30,340	168,527	19,374	0	11,043	441,000	185,000	0	202,342	0	79,000	115,000	0	0	0	0	0
2	0.01	2.0	2.2	18.1	160,591	273	28,001	188,592	19,491	559	9,115	374,000	225,000	0	102,483	0	61,000	97,000	0	0	0	0	0
3	0.55	*2.1*	*2.1*	*13.3*	*158,022*	*174*	*24,066*	*182,087*	*15,197*	*0*	*42*	*403,000*	*285,000*	0	164,795	0	*65,000*	*80,000*	0	0	0	0	0
4	0.12	2.1	1.9	8.5	156,930	174	24,066	180,995	15,197	0	42	432,000	345,000	0	202,647	0	65,000	72,000	0	0	0	0	0
5	0.01	2.2	2.1	13.3	155,594	189	23,827	179,421	15,464	0	66,725	425,000	369,000	0	214,673	0	70,000	88,000	0	0	0	0	0
6	0.05	2.3	1.5	16.4	155,760	192	21,918	177,678	13,792	0	256	403,000	403,000	0	210,575	0	74,000	44,000	0	0	0	0	0
7	0.00	2.4	1.5	16.1	157,463	215	23,135	180,598	15,256	0	0	394,000	374,000	0	213,292	0	79,000	44,000	0	0	0	0	0
8	0.82	2.4	1.3	15.5	156,820	313	21,163	177,983	12,022	0	0	391,000	381,000	0	210,330	0	79,000	33,000	0	0	0	0	0
9	0.27	2.0	1.4	17.8	155,423	403	20,864	176,287	10,813	0	0	439,000	367,000	0	165,568	0	61,000	38,000	0	0	0	0	0
10	0.62	2.0	1.4	11.3	152,729	317	19,265	171,994	11,694	0	0	480,000	365,000	0	210,574	0	61,000	38,000	0	0	0	0	0
11	0.00	2.0	1.7	18.2	152,147	265	20,738	172,885	11,186	0	37,546	451,000	350,000	0	216,891	0	61,000	57,000	0	0	0	0	0
12	0.53	2.2	1.4	20.0	158,166	402	19,065	177,231	11,841	0	9,688	396,000	403,000	0	161,100	0	70,000	38,000	0	0	0	0	0
13	0.01	2.3	1.0	16.1	156,628	276	20,711	177,339	11,898	298	60	403,000	432,000	0	205,692	0	74,000	19,000	0	0	0	0	0
14	0.17	2.3	1.0	9.4	160,054	288	18,412	178,466	12,057	0	14,727	439,000	417,000	0	213,779	0	74,000	19,000	0	0	0	0	0
15	0.00	0.0	1.6	12.7	156,606	137	18,296	174,902	10,524	0	0	466,000	408,000	0	203,965	0	0	51,000	0	0	0	0	0
16	0.00	0.0	1.6	11.2	124,445	133	18,218	142,663	12,553	0	0	473,000	408,000	0	164,336	0	0	51,000	0	0	0	0	0
17	0.00	0.0	1.6	15.5	162,415	152	18,207	180,622	10,035	0	6,918	473,000	362,000	0	207,599	0	0	51,000	0	0	0	0	0
18	0.00	0.0	1.3	18.2	112,334	139	16,232	128,566	10,756	0	0	441,000	389,000	0	209,073	0	0	33,000	0	0	0	0	0
19	0.00	0.0	1.3	20.3	125,891	98	16,885	142,776	11,455	0	0	415,000	374,000	0	216,504	0	0	33,000	0	0	0	0	0
20	0.04	0.0	1.3	18.3	153,232	111	16,824	170,056	8,238	0	0	367,000	365,000	0	214,518	0	0	33,000	0	0	0	0	0
21	0.01	0.0	1.3	15.2	156,984	84	14,643	171,627	13,787	0	0	396,000	288,000	0	201,724	0	0	33,000	0	0	0	0	0
22	0.00	0.0	1.3	21.2	147,594	98	16,110	163,704	4,521	0	0	396,000	245,000	0	202,711	0	0	33,000	0	0	0	0	0
23	0.00	0.0	1.3	20.0	148,429	104	13,714	162,143	7,280	0	0	365,000	252,000	0	134,508	0	0	33,000	0	0	0	0	0
24	0.20	0.0	1.2	19.1	145,268	66	15,544	160,812	8,726	0	0	386,000	245,000	0	212,289	0	0	28,000	0	0	0	0	0
25	0.00	0.0	0.9	16.4	142,015	127	12,771	154,786	5,863	0	0	336,000	281,000	0	151,713	0	0	15,000	0	0	0	0	0
26	1.07	0.0	0.8	16.2	138,803	70	12,463	151,266	7,700	0	0	369,000	250,000	0	151,837	0	0	12,000	0	0	0	0	0
27	0.52	0.0	0.8	20.3	137,093	103	13,545	150,638	7,458	0	2	384,000	266,000	0	140,343	0	0	12,000	0	0	0	0	0
28	0.01	0.0	0.0	14.4	140,614	122	11,535	152,149	5,546	0	3,983	345,000	331,000	0	176,434	1,610	0	0	0	0	0	0	1,300
29	0.00	0.0	0.0	16.7	133,830	90	13,587	147,417	7,551	0	9,285	281,000	362,000	0	168,465	0	0	0	0	0	0	0	0
30	0.00	*0.0*	*0.0*	*14.8*	*132,504*	*80*	*11,577*	*144,081*	*6,384*	0	0	*332,000*	*375,000*	0	0	0	0	0	*0*	0	0	0	0
Total	5.05				4,432,570	5,194	555,721	4,988,291	333,659	857	169,431			0	5,450,760	1,610			0	0	0	0	1,300
Daily Average		1.0	1.3	15.8	147,752	173	18,524	166,276	11,122	29	5,648	403,200	336,700				32,400	40,000					
Mo. Average																100				0	0	0	40

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

TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 2018
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	0.04	8,180,752	10.7	1,017,908	997,278	5,849,082	1,495,676	7,856,156	76,148	2.4	0.0	2.4	0	15.33	6.42		166,776	35,566	0	0	0	0
2	0.01	8,298,339	18.1	1,027,311	1,007,366	5,849,641	1,504,791	7,884,157	76,421	2.2	0.0	2.0	0	13.00	7.83		102,483	0	0	0	0	0
3	0.55	*8,413,357*	*13*	*1,034,728*	*1,015,146*	*5,849,621*	*1,504,833*	*7,908,223*	*76,595*	*2*	*0*	*2*	*0*	*14*	*10*		122,099	42,696	0	0	0	0
4	0.12	8,528,374	8.5	1,042,145	1,022,926	5,849,601	1,504,874	7,932,288	76,768	1.9	0.0	2.1	0	15.00	12.00		174,465	28,182	0	0	0	0
5	0.01	8,641,800	13.3	1,049,620	1,030,915	5,849,500	1,571,599	7,956,115	76,957	2.1	0.0	2.2	0	14.75	12.83		173,427	41,246	0	0	0	0
6	0.05	8,755,048	16.4	1,056,242	1,038,085	5,850,133	1,571,855	7,978,033	77,149	1.5	0	2.3	0	14	14		167,837	42,738	0	0	0	0
7	0.00	8,869,966	16.1	1,063,663	1,045,920	5,850,363	1,570,173	8,001,168	77,364	1.5	0.0	2.4	0	13.67	13.00		170,213	43,079	0	0	0	0
8	0.82	8,983,320	15.5	1,069,521	1,052,084	5,850,356	1,570,173	8,022,331	77,677	1.3	0.0	2.4	0	13.58	13.25		167,224	43,106	0	0	0	0
9	0.27	9,095,686	17.8	1,074,768	1,057,650	5,850,350	1,570,173	8,043,195	78,080	1.4	0.0	2.0	0	15.25	12.75		165,568	0	0	0	0	0
10	0.62	9,205,600	11.3	1,080,483	1,063,629	5,850,342	1,569,583	8,062,460	78,397	1.4	0	2.0	0	16.67	12.67		174,961	35,613	0	0	0	0
11	0.00	9,315,056	18.2	1,085,955	1,069,343	5,850,333	1,607,129	8,083,198	78,662	1.7	0.0	2.0	0	15.67	12.17		174,272	42,619	0	0	0	0
12	0.53	9,430,418	20.0	1,091,719	1,075,420	5,850,317	1,616,817	8,102,263	79,064	1.4	0.0	2.2	0	13.75	14.00		126,622	34,478	0	0	0	0
13	0.01	9,543,562	16.1	1,097,537	1,081,500	5,850,615	1,616,877	8,122,974	79,340	1	0	2.3	0	14	15		170,134	35,558	0	0	0	0
14	0.17	9,659,888	9.4	1,103,445	1,087,649	5,850,600	1,631,604	8,141,386	79,628	1.0	0.0	2.3	0	15.25	14.50		170,707	43,072	0	0	0	0
15	0.00	9,772,082	12.7	1,108,599	1,093,019	5,850,593	1,631,604	8,159,682	79,765	1.6	0.0	0.0	0	16.17	14.17		160,920	43,045	0	0	0	0
16	0.00	9,886,278	11.2	1,114,722	1,099,449	5,850,584	1,631,604	8,177,900	79,898	1.6	0.0	0.0	0	16.42	14.17		164,336	0	0	0	0	0
17	0.00	9,997,370	15.5	1,119,699	1,104,507	5,850,573	1,638,522	8,196,107	80,050	1.6	0.0	0.0	0	16.42	12.58		171,923	35,676	0	0	0	0
18	0.00	109,704	18.2	1,124,945	1,110,017	5,850,563	1,638,404	8,212,339	80,189	1.3	0.0	0.0	0	15.33	13.50		173,527	35,546	0	0	0	0
19	0.00	221,914	20.3	1,130,602	1,115,815	5,850,797	1,636,112	8,229,224	80,287	1.3	0.0	0.0	0	14.42	13.00		173,887	42,617	0	0	0	0
20	0.04	328,044	18.3	1,134,651	1,120,004	5,850,794	1,634,953	8,246,048	80,398	1.3	0.0	0.0	0	12.75	12.67		173,353	41,165	0	0	0	0
21	0.01	441,144	15.2	1,144,792	1,123,650	5,850,763	1,634,493	8,260,691	80,482	1.3	0.0	0.0	0	13.75	10.00		173,195	28,529	0	0	0	0
22	0.00	545,367	21.2	1,147,231	1,125,732	5,851,047	1,634,493	8,276,801	80,580	1.3	0.0	0.0	0	13.75	8.50		167,127	35,584	0	0	0	0
23	0.00	649,314	20.0	1,150,800	1,129,443	5,851,047	1,634,493	8,290,515	80,684	1.3	0.0	0.0	0	12.67	8.75		134,508	0	0	0	0	0
24	0.20	754,717	19.1	1,155,112	1,133,857	5,851,047	1,634,279	8,306,059	80,750	1.2	0.0	0.0	0	13.42	8.50		176,789	35,500	0	0	0	0
25	0.00	854,637	16.4	1,157,996	1,136,836	5,851,047	1,634,278	8,318,830	80,877	0.9	0.0	0.0	0	11.67	9.75		130,426	21,287	0	0	0	0
26	1.07	954,100	16.2	1,161,778	1,140,754	5,851,047	1,634,278	8,331,293	80,947	0.8	0.0	0.0	0	12.83	8.67		109,949	41,888	0	0	0	0
27	0.52	1,054,736	20.3	1,165,420	1,144,570	5,851,047	1,634,280	8,344,838	81,050	0.8	0.0	0.0	0	13.33	9.25		111,654	28,689	0	0	0	0
28	0.01	1,159,127	14.4	1,168,143	1,147,393	5,851,047	1,638,263	8,356,373	81,172	0.0	0.0	0.0	0	12.00	11.50		133,624	42,810	1,610	0	0	0
29	0.00	1,261,486	16.7	1,171,874	1,151,213	5,851,047	1,647,548	8,369,960	81,262	0.0	0.0	0.0	0	9.75	12.58		125,385	43,080	0	0	0	0
30	0.00	*1,362,519*	*15*	*1,175,028*	*1,154,444*	*5,851,047*	*1,647,383*	*8,381,537*	*81,342*	*0*	*0*	*0*	*0*	*12*	*13*		0	0	0	0	0	0
Totals	5.05										0		0			0	4,507,391	943,369	1,610	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 I and L include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
6. Columns M and O 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

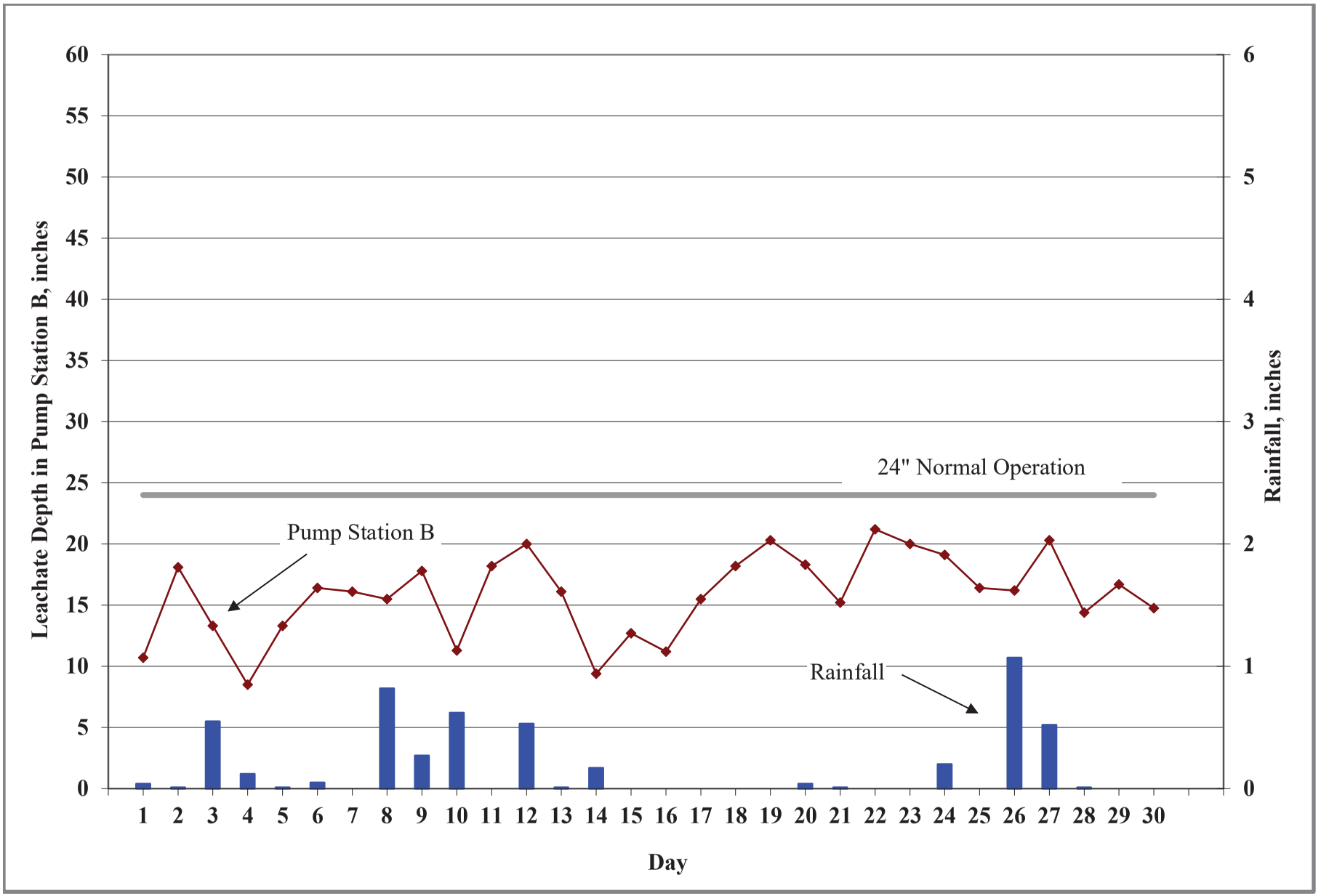

Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2018.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2018

		Leachate Arriving at LTRF					Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage[3] (gal.)
January	3.63	986	136,192	132,787	2,699,895	0	2,278,282	9,334	728,100	249,302	0	410,330	2,969,860	3,015,716	-45,856
February	0.82	1,707	102,640	20,127	2,194,846	62,685	1,716,430	1,584	518,000	136,771	0	357,793	2,382,005	2,236,014	145,991
March	1.06	4,700	73,738	74,047	2,123,174	23,840	1,495,682	9,695	814,870	311,813	0	336,300	2,299,499	2,320,247	-20,748
April	2.70	4,147	75,436	237,863	2,064,425	3,295	1,683,678	3,216	567,800	155,769	0	340,297	2,385,166	2,254,694	130,472
May	13.66	7,387	154,146	242,640	2,213,290	398,577	3,496,465	0	316,811	165,637	0	149,558	3,016,040	3,813,276	-797,236
June	9.85	7,268	247,237	344,735	2,618,410	235,469	3,133,577	0	589,200	0	0	10,310	3,453,119	3,722,777	-269,659
July	11.14	38,562	377,170	644,684	3,465,128	345,327	4,873,090	0	671,506	0	0	0	4,870,871	5,544,596	-673,725
August	10.75	89,486	442,037	664,397	4,225,908	423,745	6,331,834	0	305,100	0	0	0	5,845,573	6,636,934	-791,361
September	5.05	30,919	334,516	555,721	4,432,570	169,431	5,450,760	1,610	0	0	0	0	5,523,157	5,452,370	70,787
October															
November															
December															
YTD Total	58.66	185,162	1,943,112	2,917,001	26,037,645	1,662,369	30,459,798	25,439	4,511,387	1,019,292	0	1,604,588	32,745,288	34,996,624	-2,251,336

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.