Johnson, Sabrina O

From: Pelley, Cindy <PelleyCA@HillsboroughCounty.ORG>
Sent: Friday, April 13, 2018 3:31 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 1 2018 Water Balance & Waste Tire Report for Southeast County
Attachments: 1Q2018 Water Balance Report.pdf; 1Q2018 Waste Tire rpt.pdf

Mr. Morgan:

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

Please note, revisions have been made to the Phases I – VI condensate line data originally reported in Tables I & II for the months of January and February 2018 leachate balance. Leachate totals being obtained from the condensate lines is tracked by 2 separate methods; a flow meter, and individual counters at each pump. It was determined that the flow meter was installed incorrectly and was not capturing the entire flow being collected. Both sets of data were reported for those months however the final leachate balance has been revised to show the corrected values per the pumps counters.

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

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Hillsborough County Florida

PUBLIC WORKS
PO Box 1110 Tampa, FL 33601-1110
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April 12, 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 March 31, 2018.

The data is being submitted as separate monthly reports for January, February, and March 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: February 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 January 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 3.63 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 2.5 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 effluent stored in Pond B was 1.9.

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 except January 4th, 23rd, 27th, 28th and 30th due to power outages and pump malfunctions. The average recorded depth of leachate in the PS-B sump was 18.1 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from the Phases I-VI condensate line and pumped to Pump Station A (PS-A). The average daily amount of leachate pumped from the Phases I-VI condensate line was 22,965 gallons. A total of 711,920 gallons of leachate was pumped this month.

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

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 temporary pump stations TPS-2B and PS-2. The average daily amount of leachate pumped from PS-A was 87,093 gallons. A total of 2,699,895 gallons of leachate was pumped this month.

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

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 a total of 125 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 132,787 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column X)

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 2,832,682 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

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 136,192 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

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 a leachate was not removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month there was no leachate from the compost area pumped to the LTRF.

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

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 302,600 gallons of leachate was stored in the tank.

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

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 amount of effluent stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 366,100 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 728,100 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,278,282 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

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 a total of 9,334 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

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 70,500 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

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 January the storage pond was empty and then filled with effluent. This month a daily average of 72,000 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

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 a total of 100,548 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

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 a total of 410,330 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIII)

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 XXIV)

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 a total of 249,302 gallons was hauled off site.

Total Evaporation (Column XXV)

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 340,700 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,969,860 gallons. Total outflow quantity from the LTRF was 3,015,716 gallons. The change in storage for the month decreased by 45,856 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 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	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate (gal.)	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	0.03	*3.2*	*1.9*	*14.7*	*27,093*	*103,552*	*0*	*4,362*	*107,914*	*6,224*	0	0	*421,000*	*353,000*	*27,000*	0	0	*118,000*	*64,000*	0	0	0	0	0
2	0.01	3.1	1.8	14.3	7,144	103,847	0	4,362	108,208	6,224	0	0	475,000	355,000	27,000	131,990	0	113,000	64,000	0	0	0	0	0
3	0.67	3.1	1.9	16.8	15,680	101,379	0	5,173	106,552	0	0	0	415,000	365,000	27,000	161,290	0	113,000	72,000	0	0	0	0	0
4	0.01	3.1	1.9	42.2	7,025	63,761	0	2,683	66,444	0	0	0	322,000	374,000	18,800	131,899	0	113,000	72,000	0	23,871	0	7,813	19,100
5	0.00	3.4	1.9	13.3	7,004	100,482	0	134	100,616	0	0	0	259,000	367,000	20,300	103,287	0	129,000	72,000	93,586	24,092	0	21,339	24,000
6	0.00	3.0	1.9	13.0	12,847	78,991	0	10,360	89,351	723	0	0	221,000	369,000	27,400	70,859	0	0	72,000	0	31,599	0	0	25,300
7	0.00	2.4	1.9	16.0	*12,847*	*83,791*	0	5,008	88,799	1,560	0	0	216,000	391,000	27,400	0	0	0	72,000	0	26,159	0	0	20,900
8	0.00	1.9	1.9	14.7	28,113	111,077	0	5,068	116,145	1,787	0	0	283,000	415,000	27,400	81,135	0	0	72,000	0	23,309	0	0	18,600
9	0.58	2.4	1.9	13.8	635	76,915	4	252	77,167	2,380	0	0	293,000	396,000	17,700	59,682	0	0	72,000	0	0	0	0	0
10	0.00	2.9	1.9	12.5	4	81,600	0	4,725	86,325	2,477	0	0	293,000	398,000	35,100	124,592	0	103,000	72,000	0	0	0	0	0
11	0.28	3.1	1.0	18.1	23,744	120,160	0	9,400	129,560	2,296	0	0	238,000	403,000	25,000	7,532	0	113,000	19,000	0	0	0	67,177	0
12	0.00	3.4	2.0	11.9	28,131	110,640	0	5,715	116,355	2,889	0	0	324,000	345,000	26,800	116,728	0	129,000	80,000	6,962	0	0	14,901	300
13	0.00	3.4	2.0	11.3	29,815	97,448	83	768	98,216	2,896	0	0	302,000	343,000	20,300	49,709	0	129,000	80,000	0	16,167	0	0	12,900
14	0.00	*3.3*	*2.0*	*12.0*	*29,815*	*81,878*	*14*	*4,806*	*86,683*	*38,432*	0	0	*342,000*	*362,000*	*20,300*	0	0	*123,000*	*80,000*	0	0	0	0	0
15	0.00	3.1	2.0	12.6	29,815	83,345	14	4,806	88,151	38,432	0	0	381,000	381,000	20,300	87,707	6,233	113,000	80,000	0	52,199	0	0	46,700
16	0.00	2.0	2.0	11.2	6,598	57,479	7	4,249	61,728	0	0	0	355,000	403,000	20,300	81,400	0	61,000	80,000	0	0	0	0	0
17	0.00	2.4	2.0	18.6	22,803	101,526	0	3,037	104,563	0	0	0	317,000	401,000	19,200	116,867	0	79,000	80,000	0	0	0	7,308	0
18	0.00	2.8	2.0	18.2	27,913	84,494	0	331	84,825	0	0	0	269,000	391,000	17,500	124,316	0	98,000	80,000	0	33,404	0	0	26,700
19	0.00	2.7	2.0	9.8	28,551	62,600	0	7,543	70,143	1,201	0	0	209,000	381,000	21,500	29,169	0	93,000	80,000	0	0	0	58,508	0
20	0.00	2.7	2.0	12.3	30,106	65,573	4	5,860	71,433	1,703	0	0	221,000	329,000	21,200	42,471	0	93,000	80,000	0	49,590	0	0	39,700
21	0.00	*2.3*	*2.0*	*14.0*	*30,106*	*92,958*	*0*	*4,759*	*97,717*	*2,282*	0	0	*290,000*	*344,000*	*21,200*	0	0	*74,000*	*80,000*	0	0	0	0	0
22	0.00	1.8	2.0	15.7	31,156	92,328	0	4,759	97,087	2,282	0	0	360,000	360,000	21,200	89,349	0	0	80,000	0	42,590	0	0	34,100
23	0.00	1.5	2.0	50.1	30,293	51,389	0	3,366	54,755	2,322	0	0	309,000	353,000	21,900	81,985	0	0	80,000	0	0	0	0	0
24	0.00	1.7	2.0	13.9	27,673	94,698	0	3,703	98,401	2,543	0	0	309,000	367,000	21,100	131,941	0	48,000	80,000	0	0	0	0	0
25	0.00	2.3	2.0	10.1	30,289	67,872	0	6,348	74,220	1,925	0	0	235,000	348,000	20,100	72,842	0	74,000	80,000	0	33,281	0	43,651	26,600
26	0.00	1.7	2.0	18.8	30,469	93,973	0	454	94,427	2,595	0	0	218,000	302,000	25,300	72,271	0	48,000	80,000	0	0	0	7,303	0
27	0.00	1.8	2.0	40.1	29,807	58,996	0	324	59,320	2,466	0	0	158,000	322,000	27,000	21,242	0	52,000	80,000	0	54,069	0	21,302	43,300
28	1.80	*1.6*	*1.7*	*29.3*	*29,807*	*105,943*	*0*	*1,289*	*107,232*	*2,510*	0	0	*256,000*	*337,000*	*27,000*	0	0	*44,000*	*51,000*	0	0	0	0	0
29	0.20	1.4	1.3	18.5	31,715	104,688	0	1,289	105,977	2,510	0	0	353,000	353,000	27,000	87,402	0	36,000	33,000	0	0	0	0	0
30	0.05	1.4	1.9	28.4	32,527	88,626	0	9,169	97,795	2,652	0	0	386,000	372,000	22,700	81,278	0	36,000	72,000	0	0	0	0	0
31	0.00	1.8	1.9	14.2	32,398	77,887	0	8,688	86,575	2,881	0	0	350,000	369,000	26,100	119,339	3,101	52,000	72,000	0	0	0	0	2,500
Total	3.63				711,920	2,699,895	125	132,787	2,832,682	136,192	0	0			728,100	2,278,282	9,334			100,548	410,330	0	249,302	340,700
Daily Average		2.5	1.9	18.1	22,965	87,093	4	4,283	91,377	4,393	0	0	302,600	366,100				70,500	72,000					
Mo. Average																	300				13,200	0	8,000	10,990

balance\2018\01-18bal.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 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
JANUARY 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	X
Day	Rainfall (in.)	Phases I - VI Condensate (gal.)	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	0.03	*27,093*	*1,722,889*	*14.70*	*182,596*	*213,555*	*5,846,333*	*157*	*5,466,223*	*51,696*	*1.85*	0.00	*3.15*	0	*14.64*	*12.28*	*27,013*	*0*	0	0	0	0	0
2	0.01	7,144	1,795,148	14.30	185,741	216,633	5,846,333	157	5,470,584	51,696	1.80	0.0	3.10	0	16.50	12.33	27,013	45,275	86,715	0	0		
3	0.67	15,680	1,865,000	16.80	185,741	216,633	5,846,333	157	5,475,757	51,696	1.90	0.0	3.10	0	14.42	12.67	26,965	82,405	78,885	0	0		
4	0.01	7,025	1,916,146	42.20	185,741	216,633	5,846,333	157	5,478,440	51,696	1.90	0.0	3.10	23,871	11.17	13.00	18,790	67,124	64,775	3,225	0	7,813	
5	0.00	7,004	2,000,298	13.30	185,741	216,633	5,846,333	157	5,478,574	51,696	1.90	93586.0	3.40	24,092	9.00	12.75	20,272	82,066	21,221	0	0	21,339	
6	0.00	12,847	2,067,266	13.00	186,383	216,714	5,846,333	157	5,488,934	51,696	1.90	0	3.00	31,599	7.67	12.83	27,375	0	70,859	0	0		
7	0.00	*12,847*	2,135,895	16.00	187,617	217,040	5,846,333	157	5,493,942	51,696	1.90	0.0	2.40	26,159	7.50	13.58	27,375	0	0	0	0		
8	0.00	28,113	2,210,668	14.70	188,476	217,968	5,846,333	157	5,499,010	51,696	1.90	0.0	1.90	23,309	9.83	14.42	*27,376*	*37,143*	43,992	0	0		
9	0.58	635	2,287,500	13.80	190,277	218,547	5,846,333	157	5,499,262	51,700	1.90	0.0	2.40	0	10.17	13.75	17,747	52,361	7,321	0	0		
10	0.00	4	2,369,100	12.50	192,259	219,042	5,846,333	157	5,503,987	51,700	1.90	0	2.90	0	10.17	13.83	35,085	82,160	42,432	0	0		
11	0.28	23,744	2,451,846	18.10	194,191	219,406	5,846,333	157	5,513,387	51,700	1.00	0.0	3.10	0	8.25	14.00	25,024	7,532		0	67,177		
12	0.00	28,131	2,530,260	11.90	196,238	220,248	5,846,333	157	5,519,102	51,700	2.00	6962.0	3.40	0	11.25	12.00	26,771	67,021	49,707	0	14,901		
13	0.00	29,815	2,602,719	11.30	198,450	220,932	5,846,333	157	5,519,870	51,783	2.00	0	3.40	16,167	10.50	11.92	20,271	0	49,709	0	0		
14	0.00	*29,815*	*2,659,608*	*11.95*	*203,741*	*254,073*	*5,846,333*	*157*	*5,524,676*	*51,797*	*2.00*	0	*3.25*	0	*11.88*	*12.59*	*20,271*	0	0	0	0		
15	0.00	29,815	2,716,497	12.60	209,032	287,214	5,846,333	157	5,529,481	51,810	2.00	0.0	3.10	52,199	13.25	13.25	*20,271*	45,340	42,367	0	0		
16	0.00	6,598	2,773,773	11.20	209,032	287,214	5,846,333	157	5,533,730	51,817	2.00	0.0	2.00	0	12.33	14.00	20,271	37,423	43,977	0	0		
17	0.00	22,803	2,842,468	18.60	209,032	287,214	5,846,333	157	5,536,767	51,817	2.00	0.0	2.40	0	11.00	13.92	19,174	37,567	79,300	0	0	7,308	
18	0.00	27,913	2,907,084	18.20	209,032	287,214	5,846,333	157	5,537,098	51,817	2.00	0.0	2.80	33,404	9.33	13.58	17,473	45,059	79,257	0	0		
19	0.00	28,551	2,967,991	9.80	209,590	287,857	5,846,333	157	5,544,641	51,817	2.00	0.0	2.70	0	7.25	13.25	21,510	15,039	14,130	0	30,211	28,297	
20	0.00	30,106	3,031,806	12.30	210,441	288,709	5,846,333	157	5,550,501	51,821	2.00	0.0	2.70	49,590	7.67	11.42	21,243	0	42,471	0	0		
21	0.00	*30,106*	*3,096,244*	*14.00*	*212,250*	*289,183*	*5,846,333*	*157*	*5,555,260*	*51,821*	*2.00*	0	*2.25*	0	*10.09*	*11.96*	*21,243*	0	0	0	0		
22	0.00	31,156	3,160,682	15.70	214,058	289,656	5,846,333	157	5,560,019	51,821	2.00	0.0	1.80	42,590	12.50	12.50	21,243	45,368	43,981	0	0		
23	0.00	30,293	3,188,782	50.10	214,835	291,201	5,846,333	157	5,563,385	51,821	2.00	0.0	1.50	0	10.75	12.25	21,911	45,300	36,685	0	0		
24	0.00	27,673	3,281,785	13.90	216,904	291,675	5,846,333	157	5,567,088	51,821	2.00	0.0	1.70	0	10.75	12.75	21,138	45,305	86,636	0	0		
25	0.00	30,289	3,349,421	10.10	218,010	292,494	5,846,333	157	5,573,436	51,821	2.00	0.0	2.30	33,281	8.17	12.08	20,145	29,861	42,981	0	7,407	36,244	
26	0.00	30,469	3,414,352	18.80	220,231	292,868	5,846,333	157	5,573,890	51,821	2.00	0.0	1.70	0	7.58	10.50	25,287	36,788	35,483	0	0	7,303	
27	0.00	29,807	3,446,573	40.10	222,534	293,031	5,846,333	157	5,574,214	51,821	2.00	0.0	1.80	54,069	5.50	11.17	26,982	0	21,242	0	0	21,302	
28	1.80	*29,807*	*3,525,741*	*29.30*	*224,172*	*293,903*	*5,846,332*	*157*	*5,575,503*	*51,821*	*1.65*	*0*	*1.60*	0	*8.88*	*11.71*	*26,982*	0		0	0		
29	0.20	31,715	3,604,909	18.50	225,810	294,775	5,846,331	157	5,576,791	51,821	1.3	0.0	1.40	0	12.25	12.25	26,982	37,589	49,813	0	0		
30	0.05	32,527	3,669,295	28.4	227,658	295,579	5,846,331	157	5,585,960	51,821	1.9	0.0	1.40	0	13.42	12.92	22,744	37,415	43,863	0	0		
31	0.00	32,398	3,725,600	14.2	229,109	297,009	5,846,331	157	5,594,648	51,821	1.9		1.80		12.17	12.83	26,145	75,308	44,031	0	0		
Totals	3.63											100,548		410,330			728,092	1,056,449	1,221,833	3,225	119,696	129,606	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

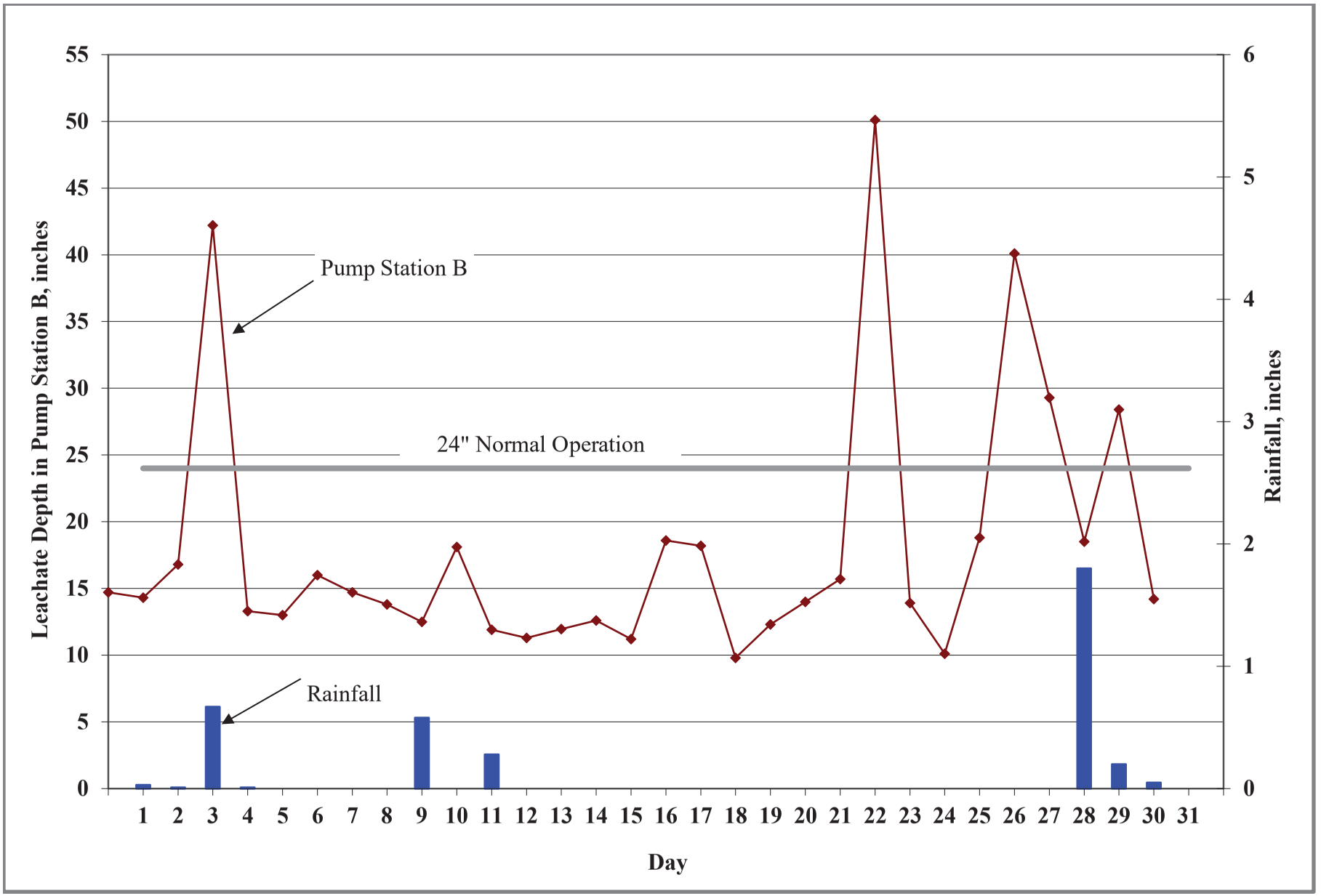

Figure 1. Leachate Levels in Pump Station B and Rainfall for January 2018.

Hillsborough County Florida

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

MEMORANDUM

DATE: March 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 February 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 0.82 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 1.7 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 effluent 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 17.8 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from the Phases I-VI condensate line and pumped to Pump Station A (PS-A). The average daily amount of leachate pumped from the Phases I-VI condensate line was 8,597 gallons. A total of 240,723 gallons of leachate was pumped this month.

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

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 78,387 gallons. A total of 2,194,846 gallons of leachate was pumped this month.

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

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 a total of 1,561 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 20,127 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column X)

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 2,214,973 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

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 102,640 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

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 leachate was not removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 62,685 gallons of leachate was removed from the compost area and pumped to the LTRF.

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

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 323,300 gallons of leachate was stored in the tank.

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

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 amount of effluent stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 329,500 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 518,100 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 1,716,430 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

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 a total of 1,584 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

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 20,500 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

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 February leachate from the compost pad was stored in Pond B. This month a daily average of 40,800 gallons of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

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 a total of 87,976 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

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 a total of 357,793 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIII)

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 XXIV)

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 a total of 136,771 gallons was hauled off site.

Total Evaporation (Column XXV)

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 292,000 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,382,005 gallons. Total outflow quantity from the LTRF was 2,236,014 gallons. The change in storage for the month increased by 145,991 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
FEBRUARY 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	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate (gal.)	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	2.3	1.9	14.2	17,962	84,518	436	6,625	91,143	2,723	0	0	295,000	372,000	26,200	141,226	0	74,000	72,000	76,072	0	0	7,107	3,800
2	0.00	2.4	1.9	16.0	19,197	86,594	0	3,529	90,123	3,150	0	0	214,000	374,000	25,900	51,824	0	79,000	72,000	0	0	0	43,149	0
3	0.00	2.5	2.0	16.0	18,518	82,260	0	3,640	85,900	2,310	0	62,685	230,000	358,000	27,500	21,504	0	83,000	80,000	0	72,860	0	0	58,300
4	0.82	*1.7*	*1.8*	*16.3*	*15,377*	*85,538*	*0*	*240*	*85,778*	*2,906*	*0*	*0*	*303,000*	*381,000*	*27,500*	0	0	*48,000*	*64,000*	0	0	0	0	0
5	0.00	0.9	1.6	16.6	18,306	82,713	0	240	82,953	2,906	0	0	377,000	405,000	27,500	51,560	0	0	51,000	0	0	0	0	0
6	0.00	1.3	1.6	19.3	10,794	56,663	0	196	56,859	1,763	0	0	377,000	417,000	26,400	44,027	0	0	51,000	0	0	0	0	0
7	0.00	1.6	1.6	19.3	15,109	83,621	0	252	83,873	2,994	0	0	374,000	427,000	25,800	65,064	0	0	51,000	0	0	0	14,399	0
8	0.00	2.1	1.6	18.8	14,513	85,677	22	225	85,902	2,379	0	0	365,000	408,000	29,600	94,262	0	0	51,000	0	23,920	0	14,199	19,100
9	0.00	1.9	1.6	18.8	13,788	78,902	0	224	79,126	2,621	0	0	341,000	394,000	5,700	79,949	0	0	51,000	0	0	0	0	0
10	0.00	2.4	1.6	19.3	13,888	81,421	0	229	81,650	3,279	*0*	0	358,000	369,000	2,000	49,780	0	0	51,000	0	45,310	0	0	36,200
11	0.00	*2.0*	*1.6*	*19.3*	*13,888*	*80,301*	*522*	*616*	*80,916*	*2,727*	*0*	*0*	*409,000*	*361,000*	*0*	0	0	*0*	51,000	*0*	0	0	0	0
12	0.00	1.6	1.6	19.3	14,781	82,759	522	616	83,374	2,727	0	0	461,000	353,000	0	132,646	0	0	51,000	0	12,122	0	0	9,700
13	0.00	1.5	1.6	18.5	14,956	74,260	0	222	74,482	2,706	0	0	405,000	348,000	0	51,865	0	0	51,000	0	12,835	0	43,714	10,300
14	0.00	1.2	1.6	16.1	844	69,875	0	220	70,095	3,973	0	0	398,000	305,000	0	153,436	0	0	51,000	0	21,335	0	0	17,100
15	0.00	1.8	1.6	17.3	3,874	77,827	48	140	77,967	5,162	0	0	317,000	264,000	0	144,767	0	0	51,000	0	0	0	0	0
16	0.00	1.8	1.6	16.1	513	83,439	12	600	84,039	7,136	*0*	0	230,000	266,000	4,200	117,298	1,584	0	51,000	11,904	42,861	0	14,203	36,200
17	0.00	0.8	1.6	17.2	542	80,308	0	236	80,544	3,549	0	0	197,000	261,000	21,800	49,646	0	0	51,000	0	23,980	0	0	19,200
18	0.00	*0.7*	*1.6*	*17.3*	*538*	*77,420*	*0*	*223*	*77,643*	*0*	*0*	*0*	*229,000*	*276,000*	*21,800*	0	0	*0*	*51,000*	0	0	0	0	0
19	0.00	0.6	1.6	17.3	2,391	76,914	0	223	77,137	0	0	0	261,000	290,000	21,800	28,371	0	0	51,000	0	0	0	0	0
20	0.00	0.6	1.6	18.2	3,666	74,772	0	193	74,965	9,396	0	0	269,000	271,000	21,800	35,507	0	0	51,000	0	6,621	0	0	5,300
21	0.00	2.5	1.0	15.9	3,609	74,531	0	249	74,780	15,539	0	0	309,000	245,000	18,800	78,934	0	0	19,000	0	17,911	0	0	14,300
22	0.00	2.1	1.0	19.4	3,452	71,869	0	237	72,106	6,802	0	0	283,000	259,000	18,700	79,420	0	0	19,000	0	14,746	0	0	11,800
23	0.00	2.2	0.0	21.3	3,569	73,098	0	198	73,296	2,772	0	0	302,000	261,000	25,800	49,731	0	70,000	0	0	28,083	0	0	22,500
24	0.00	*1.7*	0.0	19.4	3,735	75,853	0	163	76,016	2,272	*0*	0	300,000	278,000	27,400	42,627	0	48,000	0	0	33,207	0	0	26,600
25	0.00	1.3	*0.0*	*19.5*	*3,735*	*80,291*	*0*	*156*	*80,447*	*2,725*	*0*	*0*	*334,000*	*306,000*	*27,400*	0	0	*32,000*	*0*	0	0	0	0	0
26	0.00	0.8	0.0	19.6	3,780	80,840	0	156	80,996	2,725	*0*	0	367,000	333,000	27,400	43,944	0	17,000	0	0	2,002	0	0	1,600
27	0.00	2.0	0.0	15.1	1,600	76,176	0	137	76,313	2,424	*0*	0	372,000	312,000	29,500	36,637	0	61,000	0	0	0	0	0	0
28	0.00	2.0	0.0	16.7	3,799	76,408	0	143	76,551	2,977	*0*	0	374,000	333,000	27,500	72,405	0	61,000	0	0	0	0	0	0
Total	0.82				240,723	2,194,846	1,561	20,127	2,214,973	102,640	0	62,685			518,000	1,716,430	1,584			87,976	357,793	0	136,771	292,000
Daily Average		1.7	1.3	17.8	8,597	78,387	56	719	79,106	3,666	0	2,239	323,300	329,500				20,500	40,800					
Mo. Average																	100				12,800	0	4,900	10,430

balance\2018\02-18bal.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 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
FEBRUARY 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	X
Day	Rainfall (in.)	Phases I - VI Condensate (gal.)	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	17,962	3,784,879	14.2	231,610	297,231	5,846,331	157	5,601,273	52,257	1.9	76,072.0	2.3	0	10.25	12.92	26,151	76,150	65,076			7,107	
2	0.00	19,197	3,846,900	16.0	233,212	298,779	5,846,331	157	5,604,802	52,257	1.9	0.0	2.4	0	7.42	13.00	25,868	30,084	21,740		14,541	28,608	
3	0.00	18,518	3,904,732	16.0	234,184	300,117	5,846,331	62,842	5,608,442	52,257	2.0	0.0	2.5	72,860	8.00	12.42	27,453		21,504				
4	*0.82*	*15,377*	*3,965,842*	*16.3*	*236,296*	*300,911*	*5,846,331*	*62,842*	*5,608,682*	*52,257*	*1.8*	*0.0*	*1.7*		*10.54*	*13.25*	*27,453*						
5	0.00	18,306	4,026,951	16.6	238,408	301,704	5,846,331	62,842	5,608,922	52,257	1.6	0.0	0.9	0	13.08	14.08	27,454		51,560				
6	0.00	10,794	4,081,190	19	239,686	302,189	5,846,332	62,842	5,609,118	52,257	2	0	1	0	13.08	14.50	26,366		44,027				
7	0.00	15,109	4,144,166	19.3	241,776	303,093	5,846,332	62,842	5,609,370	52,257	1.6	0.0	1.6	0	13.00	14.83	25,796		65,064			14,399	
8	0.00	14,513	4,207,295	18.8	243,807	303,441	5,846,332	62,842	5,609,595	52,279	1.6	0.0	2.1	23,920	12.67	14.17	29,592	37,411	56,851			14,199	
9	0.00	13,788	4,263,085	18.8	246,223	303,646	5,846,332	62,842	5,609,819	52,279	1.6	0.0	1.9	0	11.83	13.67	5,660	30,166	49,783				
10	0.00	13,888	4,323,285	19.3	248,657	304,491	5,846,331	62,842	5,610,048	52,279	1.6	0	2.4	45,310	12.42	12.83	2,040		49,780				
11	*0.00*	*13,888*	*4,382,365*	*19.3*	*250,399*	*305,476*	*5,846,331*	*62,842*	*5,610,664*	*52,801*	*1.6*	*0.0*	*2.0*		*14.21*	*12.54*	*0*						
12	0.00	14,781	4,441,444	19.3	252,140	306,461	5,846,331	62,842	5,611,279	53,322	1.6	0.0	1.6	12,122	16.00	12.25	0	82,482	50,164				
13	0.00	14,956	4,494,487	19	254,247	307,060	5,846,331	62,842	5,611,501	53,322	2	0	2	12,835	14	12	0	37,641	14,224		29,682	14,032	
14	0.00	844	4,543,102	16.1	257,204	308,076	5,846,331	62,842	5,611,721	53,322	1.6	0.0	1.2	21,335	13.83	10.58	0	75,267	78,169				
15	0.00	3,874	4,598,343	17.3	261,517	308,925	5,846,331	62,842	5,611,861	53,370	1.6	0.0	1.8	0	11.00	9.17	0	66,716	78,051				
16	0.00	513	4,659,380	16.1	268,087	309,491	5,846,327	62,842	5,612,461	53,382	1.6	11904.0	1.8	42,861	8.00	9.25	4,186	88,927	28,371			14,203	
17	0.00	542	4,717,512	17.2	271,499	309,628	5,846,327	62,842	5,612,697	53,382	1.6	0.0	0.8	23,980	6.83	9.08	21,806		49,646				
18	*0.00*	*538*	*4,772,756*	*17.3*	*271,499*	*309,628*	*5,846,327*	*62,842*	*5,612,920*	*53,382*	*1.6*		*0.7*		*7.96*	*9.58*	*21,806*						
19	0.00	2,391	4,828,000	17.3	271,499	309,628	5,846,327	62,842	5,613,143	53,382	1.6	0.0	0.6	0	9.08	10.08	21,806		28,371				
20	0.00	3,666	4,881,962	18.2	271,516	319,007	5,846,327	62,842	5,613,336	53,382	1.6	0.0	0.6	6,621	9.33	9.42	21,806		35,507				
21	0.00	3,609	4,935,680	15.9	272,299	333,763	5,846,327	62,842	5,613,585	53,382	1.0	0.0	2.5	17,911	10.75	8.50	18,835		78,934				
22	0.00	3,452	4,986,545	19.4	274,650	338,214	5,846,326	62,842	5,613,822	53,382	1.0	0.0	2.1	14,746	9.83	9.00	18,739		79,420				
23	0.00	3,569	5,039,416	21.3	277,397	338,239	5,846,326	62,842	5,614,020	53,382	0.0	0.0	2.2	28,083	10.50	9.08	25,833		49,731				
24	0.00	3,735	5,094,203	19.4	279,663	338,245	5,846,325	62,842	5,614,183	53,382	0.0	0.0	1.7	33,207	10.42	9.67	27,377		42,627				
25	*0.00*	*3,735*	*5,153,428*	*19.5*	*282,334*	*338,299*	*5,846,324*	*62,842*	*5,614,339*	*53,382*	*0.0*		*1.3*		*11.59*	*10.63*	*27,377*						
26	0.00	3,780	5,212,653	19.6	285,004	338,353	5,846,323	62,842	5,614,495	53,382	0.0	0.0	0.8	2,002	12.75	11.58	27,377		43,944				
27	0.00	1,600	5,267,500	15.1	287,422	338,359	5,846,322	62,842	5,614,632	53,382	0.0	0.0	2.0	0	12.92	10.83	29,507		36,637				
28	0.00	3,799	5,322,000	16.7	290,363	338,395	5,846,320	62,842	5,614,775	53,382	0.0	0.0	2.0	0	13.00	11.58	27,542		72,405				
Totals	0.82											87,976		357,793			517,830	524,844	1,191,586	0	44,223	92,548	0

balance\2018\02-18bal.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 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

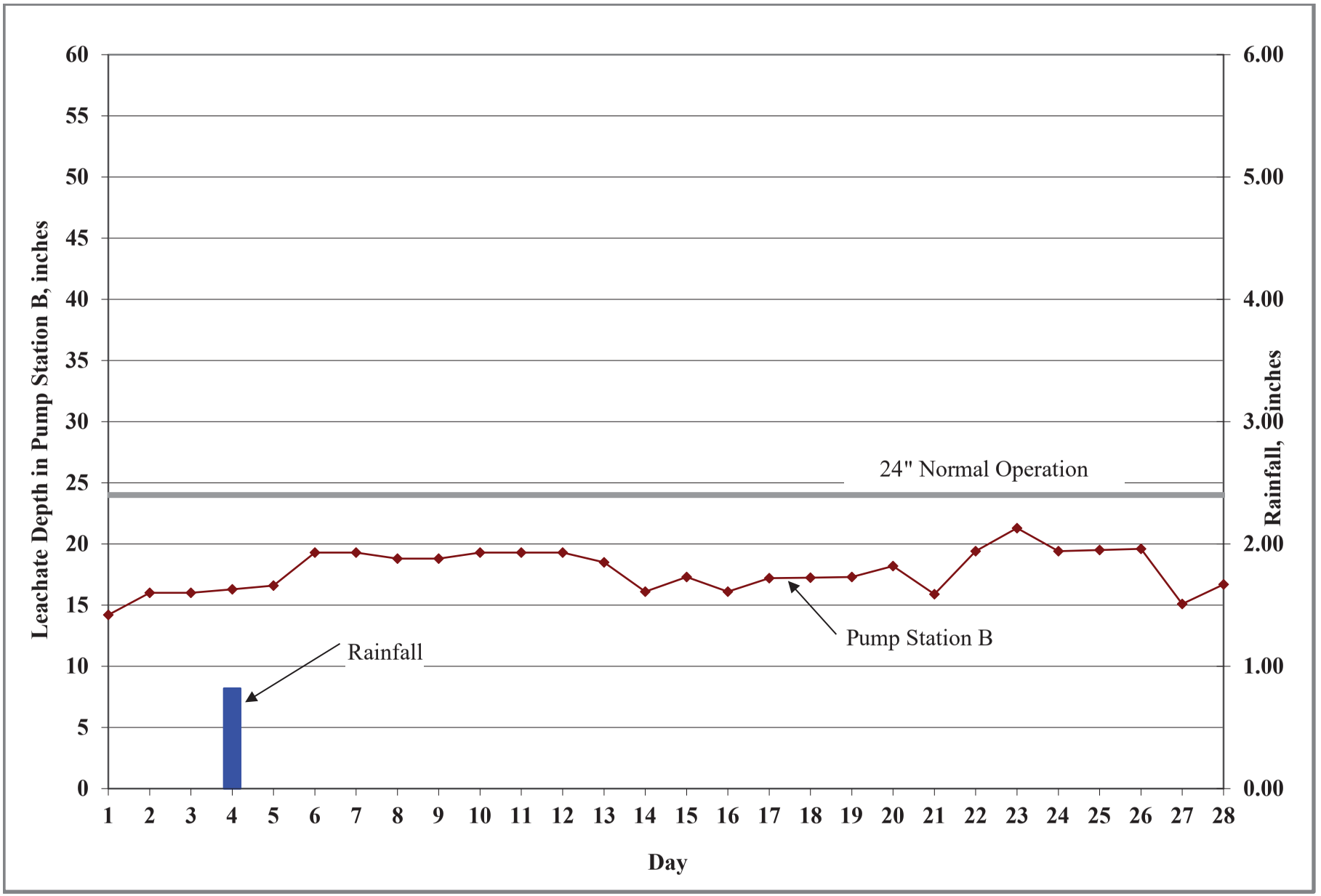

Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2018.

Hillsborough County Florida

PUBLIC WORKS
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MEMORANDUM

DATE: April 12, 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 March 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 1.06 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 2.8 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 effluent stored in Pond B was 0.7.

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 17.1 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate in gallons, pumped to Pump Station A (PS-A), collected from the Phases I-VI condensate line. The average daily amount of leachate pumped from the Phases I-VI condensate was 2,102 gallons. A total of 65,160 gallons of leachate was pumped this month.

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

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 68,489 gallons. A total of 2,123,174 gallons of leachate was pumped this month.

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

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 leachate was not removed from the leak detection system of Sections 7-8.

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

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 74,047 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column X)

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 2,197,221 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

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 73,738 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

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 leachate was not removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 23,840 gallons of leachate was removed from the compost area and pumped to the LTRF.

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

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 288,600 gallons of leachate was stored in the tank.

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

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 amount of effluent stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 367,800 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 814,870 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 1,495,682 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

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 a total of 9,695 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

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 96,500 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

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 March leachate from the compost pad was stored in Pond B. This month a daily average of 14,100 gallons of leachate was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

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 XXII)

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 a total of 336,300 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIII)

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 XXIV)

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 a total of 311,813 gallons was hauled off site.

Total Evaporation (Column XXV)

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 276,800 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,299,499 gallons. Total outflow quantity from the LTRF was 2,320,247 gallons. The change in storage for the month decreased by 20,748 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 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	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate (gal.)	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 Stonge (gal)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	2.7	0.0	19.6	2,983	59,592	0	144	59,736	2,335	0	0	350,000	326,000	33,253	79,442	0	93,000	0	0	0	0	0	0
2	0.00	3.4	0.0	20.9	3,612	83,299	0	129	83,428	2,582	0	0	302,000	317,000	30,764	49,737	0	129,000	0	0	23,932	0	0	19,100
3	0.00	3.1	0.0	15.3	3,332	67,516	0	134	67,650	2,718	0	0	331,000	331,000	27,902	49,762	0	113,000	0	0	57,791	0	0	46,200
4	*0.00*	*2.9*	*0.0*	*16.2*	*3,332*	*65,928*	*0*	*147*	*66,074*	*4,250*	0	0	*345,000*	*335,000*	*27,902*	0	0	*103,000*	*0*	0	0	0	0	0
5	0.00	2.7	0.0	17.1	706	59,547	0	147	59,693	4,250	0	0	360,000	338,000	27,902	43,973	0	93,000	0	0	0	0	0	0
6	0.00	2.8	0.0	15.1	2,255	68,718	0	81	68,799	8,847	0	0	360,000	362,000	30,489	43,958	0	98,000	0	0	18,098	0	0	14,500
7	0.00	2.4	0.0	14.0	3,079	91,267	0	163	91,430	897	0	0	358,000	389,000	28,194	78,483	0	79,000	0	0	0	0	0	0
8	0.00	3.3	0.0	16.8	389	86,462	0	158	86,620	0	0	0	322,000	367,000	28,220	86,524	4,893	123,000	0	0	0	0	0	3,900
9	0.00	3.4	1.0	16.8	514	73,228	0	118	73,346	0	0	0	274,000	345,000	19,093	36,133	0	129,000	19,000	0	3,273	0	0	2,600
10	0.00	3.4	1.0	20.6	2,530	72,596	0	196	72,792	895	0	0	288,000	362,000	32,662	43,872	0	129,000	19,000	0	0	0	0	0
11	*0.00*	*3.4*	*1.0*	*18.2*	*2,530*	*79,690*	*0*	*136*	*79,825*	*1,947*	0	0	*314,000*	*386,000*	*32,663*	0	0	*129,000*	*19,000*	0	0	0	0	0
12	0.00	3.4	1.0	15.8	2,984	79,285	0	136	79,420	1,947	0	0	341,000	410,000	32,663	52,561	0	129,000	19,000	0	0	0	29,251	0
13	0.00	3.4	1.0	13.9	3,890	73,685	0	264	73,949	1,969	0	0	341,000	398,000	24,504	45,201	0	129,000	19,000	0	0	0	36,534	0
14	0.00	3.4	1.0	16.1	4,112	66,598	0	305	66,903	2,362	0	0	333,000	386,000	28,674	80,727	0	129,000	19,000	0	0	0	36,558	0
15	0.00	3.2	1.0	18.8	3,284	66,295	0	322	66,617	2,001	0	0	288,000	374,000	28,033	94,827	0	118,000	19,000	0	40,207	0	36,532	32,200
16	0.00	2.6	1.0	14.2	3,904	50,020	0	297	50,317	3,022	0	0	238,000	369,000	26,196	44,467	0	88,000	19,000	0	0	0	28,415	0
17	0.00	2.6	1.0	16.6	3,446	70,713	0	232	70,945	2,591	0	0	245,000	362,000	26,910	42,584	0	88,000	19,000	0	47,471	0	0	38,000
18	*0.00*	*2.2*	*1.0*	*17.3*	*3,446*	*74,263*	*0*	*201*	*74,464*	*7,569*	0	0	*274,000*	*386,000*	*26,910*	0	0	*70,000*	*19,000*	0	0	0	0	0
19	0.00	1.7	1.0	17.9	2,255	56,563	0	201	56,764	7,569	0	0	302,000	410,000	26,910	89,083	0	48,000	19,000	0	18,705	0	0	15,000
20	1.06	2.3	1.0	16.2	418	61,285	0	332	61,617	165	0	0	281,000	386,000	27,869	43,662	0	74,000	19,000	0	0	0	0	0
21	0.00	2.4	1.0	15.8	3,172	75,649	0	487	76,136	0	0	22,530	290,000	410,000	15,996	72,040	0	79,000	19,000	0	3,198	0	0	2,600
22	0.00	2.4	1.0	18.8	1,921	61,489	0	449	61,938	0	0	0	245,000	430,000	31,736	86,361	0	79,000	19,000	0	33,757	0	0	27,000
23	0.00	2.6	1.0	18.6	2,089	57,713	0	287	58,000	486	0	0	199,000	410,000	22,708	7,014	4,802	88,000	19,000	0	15,372	0	35,423	16,100
24	0.00	2.4	1.0	17.4	298	61,931	0	238	62,169	1,884	0	0	230,000	386,000	22,203	42,431	0	79,000	19,000	0	32,748	0	7,110	26,200
25	*0.00*	*2.3*	*1.0*	*16.8*	*298*	*66,390*	*0*	*476*	*66,866*	*1,728*	0	0	*248,000*	*391,000*	*23,203*	0	0	*74,000*	*19,000*	0	0	0	0	0
26	0.00	2.2	1.0	16.1	1,052	65,546	0	476	66,022	1,728	0	0	266,000	396,000	23,205	81,645	0	70,000	19,000	0	28,624	0	7,306	22,900
27	0.00	2.6	1.0	16.8	568	61,852	0	788	62,640	1,564	0	0	230,000	360,000	22,441	7,518	0	88,000	19,000	0	0	0	72,778	0
28	0.00	2.6	1.0	16.6	1,199	63,743	0	660	64,403	2,174	0	0	261,000	307,000	22,812	74,168	0	88,000	19,000	0	0	0	14,798	0
29	0.00	2.6	1.0	18.2	48	69,327	0	519	69,846	1,780	0	0	235,000	312,000	22,113	74,386	0	88,000	19,000	0	327	0	7,108	300
30	0.00	2.6	1.0	20.5	535	65,750	0	333	66,083	2,758	0	0	214,000	324,000	17,280	45,123	0	88,000	19,000	0	12,797	0	0	10,200
31	0.00	2.4	1.0	16.0	983	67,238	0	65,493	132,731	1,722	0	1,310	281,000	336,000	23,460	0	0	79,000	19,000	0	0	0	0	0
Total	1.06				65,160	2,123,174	0	74,047	2,197,221	73,738	0	23,840			814,870	1,495,682	9,695			0	336,300	0	311,813	276,800
Daily Average		2.8	0.7	17.1	2,102	68,489	0	2,389	70,878	2,379	0	769	288,600	367,800				96,500	14,100					
Mo. Average																	300				10,800	0	10,100	8,930

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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
MARCH 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	X
Day	Rainfall (in.)	Phases I - VI Condensate (gal.)	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	2,983	5,381,000	19.6	292,678	338,415	5,846,320	62,842	5,614,919	53,382	0.0	0.0	2.7	0	12.17	11.33	33,253		79,442				
2	0.00	3,612	5,447,400	20.9	295,211	338,464	5,846,319	62,842	5,615,048	53,382	0.0	0.0	3.4	23,932	10.50	11.00	30,764		49,737				
3	0.00	3,332	5,508,535	15.3	297,920	338,473	5,846,319	62,842	5,615,182	53,382	0.0	0.0	3.1	57,791	11.50	11.50	27,902		49,762				
4	0.00	*3,332*	*5,568,082*	*16.2*	*302,111*	*338,533*	*5,846,318*	*62,842*	*5,615,329*	*53,382*	*0.0*	*0.0*	*2.9*	*0*	*12.0*	*11.63*	27,902						
5	0.00	706	5,627,628	17.1	306,301	338,592	5,846,317	62,842	5,615,475	53,382	0.0	0.0	2.7	0	12.50	11.75	27,902		43,973				
6	0.00	2,255	5,691,036	15.10	315,017	338,723	5,846,316	62,842	5,615,556	53,382	0.00	0	2.80	18,098	12.50	12.58	30,489		43,958				
7	0.00	3,079	5,763,200	14.0	315,913	338,724	5,846,316	62,842	5,615,719	53,382	0.0	0.0	2.4	0	12.42	13.50	28,194		78,483				
8	0.00	389	5,827,732	16.8	315,913	338,724	5,846,316	62,842	5,615,877	53,382	0.0	0.0	3.3	0	11.17	12.75	28,220		86,524	4,893			
9	0.00	514	5,879,800	16.8	315,913	338,724	5,846,316	62,842	5,615,995	53,382	1.0	0.0	3.4	3,273	9.50	12.00	19,093		36,133				
10	0.00	2,530	5,931,171	20.6	316,800	338,732	5,846,315	62,842	5,616,191	53,382	1.0	0	3.4	0	10.00	12.58	32,662		43,872				
11	0.00	*2,530*	*5,989,636*	*18.2*	*318,743*	*338,736*	*5,846,315*	*62,842*	*5,616,327*	*53,382*	*1.0*	0.0	*3.4*	0	*10.92*	*13.42*	32,663						
12	0.00	2,984	6,048,100	15.8	320,685	338,740	5,846,314	62,842	5,616,462	53,382	1.0	0.0	3.4	0	11.83	14.25	32,663	45,248	7,313			29,251	
13	0.00	3,890	6,102,600	13.90	322,647	338,747	5,846,313	62,842	5,616,726	53,382	1.00	0	3.40	0	11.83	13.83	24,504	45,201				36,534	
14	0.00	4,112	6,150,250	16.1	325,005	338,751	5,846,313	62,842	5,617,031	53,382	1.0	0.0	3.4	0	11.58	13.42	28,674	45,211	35,516			36,558	
15	0.00	3,284	6,197,629	18.8	326,997	338,760	5,846,312	62,842	5,617,353	53,382	1.0	0.0	3.2	40,207	10.00	13.00	28,033	45,119	49,708			36,532	
16	0.00	3,904	6,245,630	14.2	329,992	338,787	5,846,311	62,842	5,617,650	53,382	1.0	0.0	2.6	0	8.25	12.83	26,196	30,082	14,385			28,415	
17	0.00	3,446	6,296,500	16.6	332,579	338,791	5,846,311	62,842	5,617,882	53,382	1.0	0.0	2.6	47,471	8.50	12.58	26,910		42,584				
18	0.00	*3,446*	*6,350,920*	*17.3*	*340,108*	*338,831*	*5,846,309*	*62,842*	*5,618,083*	*53,382*	*1.0*	0.0	*2.2*	0	*9.50*	*13.42*	26,910						
19	0.00	2,255	6,405,340	17.9	347,637	338,870	5,846,307	62,842	5,618,284	53,382	1.0	0.0	1.7	18,705	10.50	14.25	26,910	45,215	43,868				
20	1.06	418	6,464,525	16.2	347,801	338,871	5,846,307	62,842	5,618,616	53,382	1.0	0.0	2.3	0	9.75	13.42	27,869		43,662				
21	0.00	3,172	6,521,900	15.8	347,801	338,871	5,846,307	85,372	5,619,103	53,382	1.0	0.0	2.4	3,198	10.08	14.25	15,996		72,040				
22	0.00	1,921	6,566,942	18.8	347,801	338,871	5,846,307	85,372	5,619,552	53,382	1.0	0.0	2.4	33,757	8.50	14.92	31,736		86,361				
23	0.00	2,089	6,607,808	18.6	348,287	338,871	5,846,307	85,372	5,619,839	53,382	1.0	0.0	2.6	15,372	6.92	14.25	22,708		7,014	4,802		35,423	
24	0.00	298	6,651,766	17.4	350,166	338,876	5,846,307	85,372	5,620,077	53,382	1.0	0.0	2.4	32,748	8.00	13.42	22,203		42,431			7,110	
25	0.00	*298*	***6,700,183***	***16.8***	***351,892***	***338,879***	***5,846,306***	***85,372***	***5,620,553***	***53,382***	***1.0***	0.0	***2.3***	0	***8.63***	***13.59***	23,203						
26	0.00	1,052	6,748,600	16.1	353,617	338,881	5,846,305	85,372	5,621,029	53,382	1.0	0.0	2.2	28,624	9.25	13.75	23,205	45,116	36,529			7,306	
27	0.00	568	6,793,731	16.8	355,180	338,882	5,846,305	85,372	5,621,817	53,382	1.0	0.0	2.6	0	8.00	12.50	22,441	7,518			37,145	35,633	
28	0.00	1,199	6,839,510	16.6	357,352	338,884	5,846,305	85,372	5,622,477	53,382	1.0	0.0	2.6	0	9.08	10.67	22,812	37,648	36,520		7,487	7,311	
29	0.00	48	6,891,062	18.2	359,129	338,887	5,846,304	85,372	5,622,996	53,382	1.0	0.0	2.6	327	8.17	10.83	22,113	45,159	29,227			7,108	
30	0.00	535	6,942,847	20.5	361,884	338,890	5,846,303	85,372	5,623,329	53,382	1.0	0.0	2.6	12,797	7.42	11.25	17,280	45,123					
31	0.00	983	6,992,885	16.0	363,605	338,891	5,846,303	86,682	5,688,822	53,382	1.0	0.0	2.4	0	9.75	11.67	23,460						
Totals	1.06											0		336,300			814,870	436,640	1,059,042	9,695	44,632	267,181	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

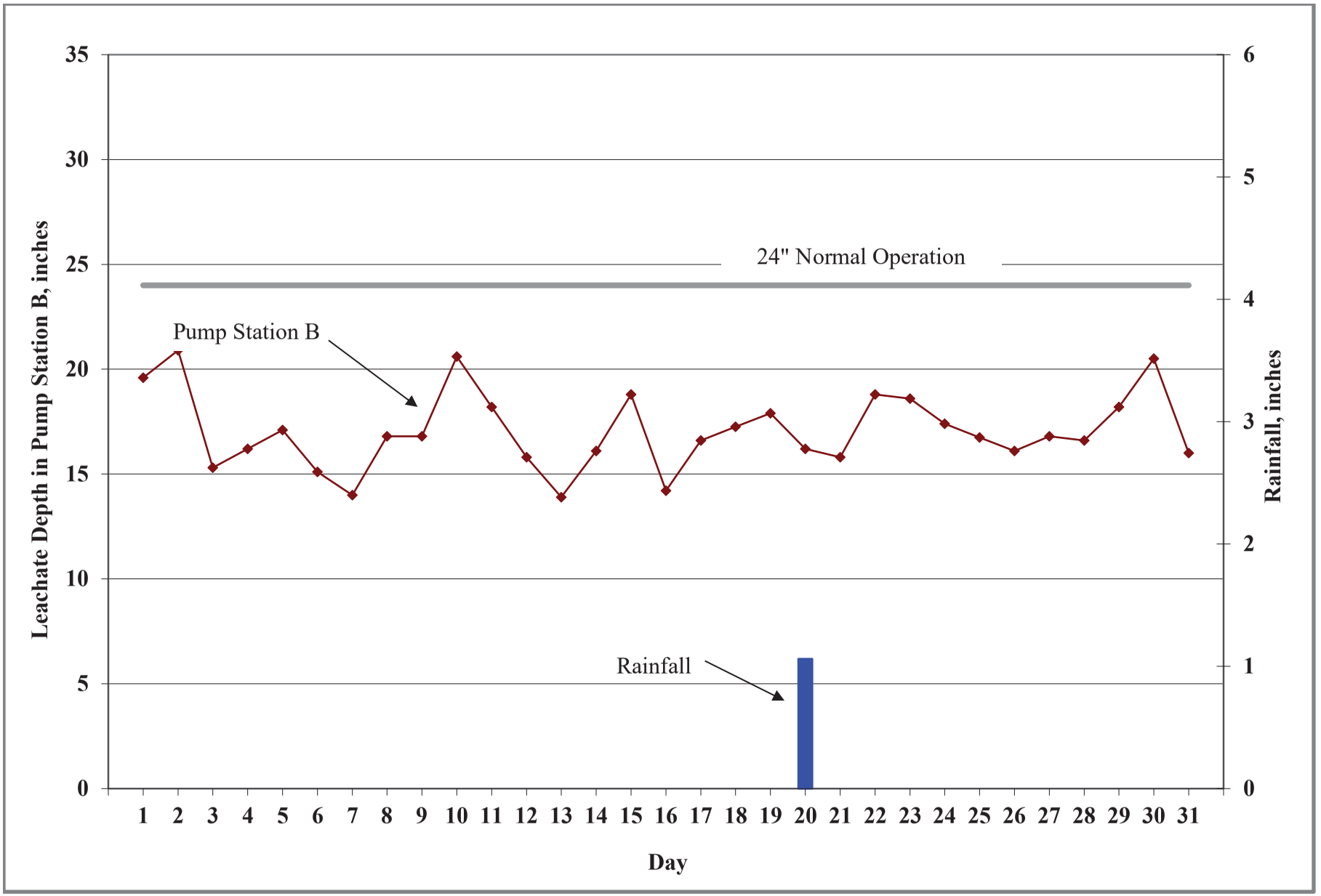

Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2018.

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															
May															
June															
July															
August															
September															
October															
November															
December															
YTD Total	5.51	7,393	312,570	226,961	7,017,915	86,525	5,490,394	20,613	2,060,970	697,886	0	1,104,423	7,651,364	7,571,977	79,387

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

April 12, 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 January 1, 2018 through March 31, 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
Public Works Department

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 01/01/18 thru 03/31/18 (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	699.33	302.74			-395.32		
Other whole Tires							
Processed tires							
Processing Waste						-27.13	
Other							
Total	699.33	302.74			-395.32	-27.13	579.62

a. Explain all inventory adjustments. -27.13 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 E. Ruiz	Larry E. Ruiz	4/12/18
Print Name of Authorized Agent	Signature of Authorized Agent	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

WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
FIRST QUARTER 2018

		FIRST QUARTER	Beginning Tonnage (Jan. 1, 2018)	699.33
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2018	113.78	25.91	27.01	10.92
Beginning Tons	699.33			
	813.11	-25.91	-27.01	-10.92
			Ending Tonnage	749.27

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Feb. 2018	84.90	68.38	115.25	4.44
Beginning Tons	749.27			
	834.17	-68.38	-115.25	-4.44
			Ending Tonnage	646.10

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Mar. 2018	104.06	84.82	73.95	11.77
Beginning Tons	646.10			
	750.16	-84.82	-73.95	-11.77
			Ending Tonnage	579.62

Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2018	113.78	25.91	27.01	10.92
Feb. 2018	84.90	68.38	115.25	4.44
Mar. 2018	104.06	84.82	73.95	11.77
Sub-Total	302.74	179.11	216.21	27.13
Beginning Tons	699.33			
TOTAL	1,002.07	-179.11	-216.21	-27.13
			Ending Tonnage	579.62