



Public Works

January 12, 2016

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Interim Internal Auditor

Peggy Caskey

County Attorney

Chip Fletcher

Public Works

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

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. 35435-022-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 December 31, 2015.

The data is being submitted as separate monthly reports for October, November, and December 2015. The attached reports include the leachate level in Pump Station B (PS-B). This quarter PS-B was above the normal operation level of 24-inches for most of the quarter due to excessive rain and the planned shutdown of the Leachate Treatment Facility for the permit required tank inspections and maintenance.

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: Bruce Clark, SCS
Ron Cope, EPC



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DATE: November 23, 2015

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 October 2015
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 2015 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 1.80 inches of rainfall 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 effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent was not stored in Pond B.

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 above the normal operation level of 24 inches for the month due to pump maintenance, and the Leachate Treatment and Reclamation Facility (LTRF) being offline for maintenance activities following the permit required tank inspection. The average recorded depth of leachate in the PS-B sump was 32.1 inches.

Leachate Pumped to PS-B from TPS-6 (Column VI)

Column VI has been removed.

The SWMD took TPS-6 off line on September 24, 2014 (details were included in the September 2014 Leachate Balance Report).

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

Column VII 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. The average daily amount of leachate pumped from PS-A was 69,103 gallons. A total of 2,142,199 gallons of leachate was pumped this month.

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

Column VIII 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 5,806 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 IX 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 VIII). This month a total of 201,539 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 2,343,738 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

Column XI 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 76,558 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

Column XII 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 only 14 gallons of leachate was measured as removed from the leak detection system due to the flow meter malfunction. The meter was removed and sent to the manufacturer for repairs.

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

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank at the LTRF. The amount of leachate stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month the leachate tank was empty for permit required tank inspection.

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

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. The treatment plant is down due to the permit required tank inspection. As such, on October 16, 2014, the SWMD began storing leachate in the effluent tank until the inspection of the leachate tank is completed. This month an average of 334,300 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month leachate was not treated at the plant. The plant was taken off line on October 16, 2014, for the permit required tank inspection.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,301,430 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

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

Pond A Storage (Column XVIII)

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

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent was not stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

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

Effluent Dust Control Sprayed (Column XXII)

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

Total Effluent Hauled (Column XXIII)

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

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. There was no evaporation rate estimated for this month.

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 2,424,799 gallons. Total outflow quantity from the LTRF was 2,301,430 gallons. The change in storage for the month increased by 123,369 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
OCTOBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

I	II	III	IV	V	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.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)	
1	0.00	0.0	0.0	32.9	115,600	0	6,000	121,600	2,695	1	0	381,000	0	109,729	0	0	0	0	0	0	0	0	
2	0.00	0.0	0.0	34.0	116,070	0	6,000	122,070	3,668	3	0	384,000	0	115,745	0	0	0	0	0	0	0	0	
3	0.00	0.0	0.0	33.6	71,722	0	6,000	77,722	3,280	3	0	350,000	0	81,359	0	0	0	0	0	0	0	0	
4	0.25	0.0	0.0	33.7	45,103	0	6,000	51,103	2,631	1	0	326,000	0	0	0	0	0	0	0	0	0	0	
5	0.00	0.0	0.0	33.7	45,103	0	6,000	51,103	2,631	1	0	302,000	0	79,053	0	0	0	0	0	0	0	0	
6	0.00	0.0	0.0	33.8	45,103	0	6,000	51,103	2,631	1	0	355,000	0	115,967	0	0	0	0	0	0	0	0	
7	0.00	0.0	0.0	34.0	112,400	156	15,018	127,418	3,221	2	0	372,000	0	96,736	0	0	0	0	0	0	0	0	
8	0.00	0.0	0.0	31.2	115,808	161	11,074	126,882	3,079	1	0	403,000	0	96,758	0	0	0	0	0	0	0	0	
9	0.54	0.0	0.0	33.6	46,694	170	6,898	53,592	2,099	1	0	360,000	0	102,909	0	0	0	0	0	0	0	0	
10	0.20	0.0	0.0	33.2	43,528	193	6,780	50,308	2,681	0	0	309,000	0	73,750	0	0	0	0	0	0	0	0	
11	0.00	0.0	0.0	30.6	20,006	199	1,813	21,819	1,403	0	0	296,000	0	0	0	0	0	0	0	0	0	0	
12	0.00	0.0	0.0	27.9	20,006	199	1,813	21,819	1,403	0	0	283,000	0	109,622	0	0	0	0	0	0	0	0	
13	0.00	0.0	0.0	27.2	113,459	209	5,838	119,297	4,969	0	0	283,000	0	109,700	0	0	0	0	0	0	0	0	
14	0.00	0.0	0.0	25.2	105,500	220	0	105,500	2,556	0	0	286,000	0	109,760	0	0	0	0	0	0	0	0	
15	0.00	0.0	0.0	24.4	125,800	227	21,088	146,888	3,267	0	0	309,000	0	102,692	0	0	0	0	0	0	0	0	
16	0.00	0.0	0.0	33.6	25,156	225	7,823	32,979	529	0	0	238,000	0	81,698	0	0	0	0	0	0	0	0	
17	0.00	0.0	0.0	34.6	46,726	217	8,012	54,738	5	0	0	230,000	0	46,082	0	0	0	0	0	0	0	0	
18	0.00	0.0	0.0	32.8	17,596	244	5,749	23,344	6	0	0	229,000	0	0	0	0	0	0	0	0	0	0	
19	0.00	0.0	0.0	31.0	17,596	244	5,749	23,344	6	0	0	228,000	0	42,854	0	0	0	0	0	0	0	0	
20	0.00	0.0	0.0	34.0	148,027	254	7,180	155,207	7,208	0	0	300,000	0	42,800	0	0	0	0	0	0	0	0	
21	0.00	0.0	0.0	33.6	77,716	256	6,883	84,599	14	0	0	367,000	0	57,108	0	0	0	0	0	0	0	0	
22	0.00	0.0	0.0	33.4	116,705	13	3,100	119,805	5	0	0	425,000	0	71,419	0	0	0	0	0	0	0	0	
23	0.00	0.0	0.0	32.6	49,118	0	5,666	54,784	32	0	0	410,000	0	50,179	0	0	0	0	0	0	0	0	
24	0.00	0.0	0.0	32.6	49,630	276	7,090	56,720	13	0	0	417,000	0	42,956	0	0	0	0	0	0	0	0	
25	0.00	0.0	0.0	33.3	23,940	330	5,542	29,482	6	0	0	416,000	0	0	0	0	0	0	0	0	0	0	
26	0.00	0.0	0.0	33.9	23,940	330	5,542	29,482	6	0	0	415,000	0	117,147	0	0	0	0	0	0	0	0	
27	0.13	0.0	0.0	32.8	50,022	341	5,934	55,956	16,755	0	0	365,000	0	116,937	0	0	0	0	0	0	0	0	
28	0.68	0.0	0.0	33.7	113,613	327	6,516	120,129	4,506	0	0	374,000	0	121,986	0	0	0	0	0	0	0	0	
29	0.00	0.0	0.0	33.1	70,026	342	5,722	75,748	3,383	0	0	331,000	0	95,866	0	0	0	0	0	0	0	0	
30	0.00	0.0	0.0	32.1	66,934	332	5,580	72,514	1,868	0	0	302,000	0	110,618	0	0	0	0	0	0	0	0	
31	0.00	0.0	0.0	29.7	103,555	341	3,130	106,685	2	0	0	317,000	0	0	0	0	0	0	0	0	0	0	
Total	1.80				2,142,199	5,806	201,539	2,343,738	76,558	14			0	2,301,430	0					0	0	0	
Daily Average		0.0	0.0	32.1	69,103	187	6,501	75,604	2,470	0	0	334,300											
Mo. Average																							0

projects/balance\2015\10-15bal.xls (DS 10/31/15)

- 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. Column V, PPS-B sensor reading plus 9 inches.
 8. Columns VIII & IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
 9. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
 10. Columns VI-XII, XV-XVII, and XX-XXIII, quantities from flow meters.
 11. Column XXIV includes 80% of the daily values from Columns XVII, XXI, and XXII plus 5% of the daily values from column XX.

**TABLE 2. FIELD DATA ENTRY FORM
OCTOBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A Day	B Rainfall (in.)	D Flow Meter Pump Sta. A (gal.)	E Reading PS-B (in.)	F Section 9 Pump 1 (gal.)	G Section 9 Pump 2 (gal.)	H Section 9 LDS (gal.)	I Sections 7-8 Pump (gal.)	J Sections 7-8 LDS (gal.)	K Pond B Depth (ft.)	L Pond B Effluent Sprayed (gal.)	M Pond A Depth (ft.)	N Effluent Spray Irrigation (gal.)	O Depth in 575K Tank Leachate (ft.)	P Depth in 575K Tank Effluent (ft.)	Q Leachate Treated at LTRF (gal.)	R Leachate Hauled		T Leachate Dust Control (Sprayed) (gal.)	U Effluent Hauled		W Effluent Dust Control (Sprayed) (gal.)
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	6,115,400	23.9	2,887,249	639,527	12,729	9,923,340	114,690	0.0	0.0	0.0	0	0.00	13.25	0	81,306	28,423	0	0	0	0
2	0.00	6,231,470	25.0	2,890,329	640,115	12,732	9,929,340	114,690	0.0	0.0	0.0	0	0.00	13.33	0	81,349	34,396	0	0	0	0
3	0.00	6,303,192	24.6	2,891,526	642,198	12,735	9,935,340	114,690	0.0	0.0	0.0	0	0.00	12.17	0	81,359	0	0	0	0	0
4	0.25	6,348,295	25	2,892,467	643,888	12,736	9,941,340	114,690	0.0	0.0	0.0	0	0.00	11.34	0	0	0	0	0	0	0
5	0.00	6,393,397	25	2,893,409	645,578	12,737	9,947,340	114,690	0.0	0.0	0.0	0	0.00	10.50	0	50,631	28,422	0	0	0	0
6	0.00	6,438,500	24.8	2,894,350	647,268	12,738	9,953,340	114,690	0.0	0.0	0.0	0	0.00	12.33	0	81,369	34,598	0	0	0	0
7	0.00	6,550,900	25.0	2,895,365	649,474	12,740	9,968,358	114,846	0.0	0.0	0.0	0	0.00	12.92	0	96,736	0	0	0	0	0
8	0.00	6,666,708	22.2	2,896,352	651,566	12,741	9,979,432	115,007	0.0	0.0	0.0	0	0.00	14.00	0	96,758	0	0	0	0	0
9	0.54	6,713,402	24.6	2,897,359	652,658	12,742	9,986,330	115,177	0.0	0.0	0.0	0	9.960	12.50	0	74,331	28,578	0	0	0	0
10	0.20	6,756,930	24.2	2,898,333	654,365	12,742	9,993,110	115,370	0.0	0.0	0.0	0	0.00	10.75	0	73,750	0	0	0	0	0
11	0.00	6,776,936	21.6	2,898,794	655,308	12,742	9,994,923	115,569	0.0	0.0	0.0	0	0.00	10.29	0	0	0	0	0	0	0
12	0.00	6,796,941	18.9	2,899,254	656,250	12,742	9,996,736	115,768	0.0	0.0	0.0	0	0.00	9.83	0	81,197	28,425	0	0	0	0
13	0.00	6,910,400	18.2	2,901,424	659,049	NA	2,574	115,977	0.0	0.0	0.0	0	0.00	9.83	0	81,286	28,414	0	0	0	0
14	0.00	7,015,900	16.2	2,903,426	659,603	NA	2,574	116,197	0.0	0.0	0.0	0	0.00	9.92	0	81,343	28,417	0	0	0	0
15	0.00	7,141,700	15.4	2,905,469	660,827	NA	23,662	116,424	0.0	0.0	0.0	0	0.00	10.75	0	81,379	21,313	0	0	0	0
16	0.00	7,166,856	24.6	2,905,475	661,350	NA	31,485	116,649	0.0	0.0	0.0	0	0.00	8.25	0	67,491	14,207	0	0	0	0
17	0.00	7,213,582	25.6	2,905,478	661,352	NA	39,497	116,866	0.0	0.0	0.0	0	0.00	8.00	0	46,082	0	0	0	0	0
18	0.00	7,231,178	23.8	2,905,483	661,354	NA	45,246	117,110	0.0	0.0	0.0	0	0.00	7.96	0	0	0	0	0	0	0
19	0.00	7,248,773	22.0	2,905,487	661,355	NA	50,994	117,354	0.0	0.0	0.0	0	0.00	7.92	0	14,330	28,524	0	0	0	0
20	0.00	7,396,800	25.0	2,907,365	666,685	NA	58,174	117,608	0.0	0.0	0.0	0	0.00	10.42	0	21,487	21,313	0	0	0	0
21	0.00	7,474,516	24.6	2,907,371	666,693	NA	65,057	117,864	0.0	0.0	0.0	0	0.00	12.75	0	28,645	28,463	0	0	0	0
22	0.00	7,591,221	24.4	2,907,374	666,695	NA	68,157	117,877	0.0	0.0	0.0	0	0.00	14.75	0	42,979	28,440	0	0	0	0
23	0.00	7,640,339	23.6	2,907,379	666,722	NA	73,823	117,876	0.0	0.0	0.0	0	0.00	14.25	0	50,179	0	0	0	0	0
24	0.00	7,689,969	23.6	2,907,386	666,728	NA	80,913	118,152	0.0	0.0	0.0	0	0.00	14.50	0	42,956	0	0	0	0	0
25	0.00	7,713,909	24.3	2,907,390	666,730	NA	86,455	118,482	0.0	0.0	0.0	0	0.00	14.46	0	0	0	0	0	0	0
26	0.00	7,737,849	24.9	2,907,393	666,732	NA	91,997	118,812	0.0	0.0	0.0	0	0.00	14.42	0	88,638	28,509	0	0	0	0
27	0.13	7,787,871	23.8	2,916,292	674,588	NA	97,931	119,153	0.0	0.0	0.0	0	0.00	12.67	0	88,481	28,456	0	0	0	0
28	0.68	7,901,484	24.7	2,919,258	676,128	NA	104,447	119,480	0.0	0.0	0.0	0	0.00	13.00	0	88,616	33,370	0	0	0	0
29	0.00	7,971,510	24.1	2,921,207	677,562	NA	110,169	119,822	0.0	0.0	0.0	0	0.00	11.50	0	95,866	0	0	0	0	0
30	0.00	8,038,444	23.1	2,922,065	678,572	NA	115,749	120,154	0.0	0.0	0.0	0	0.00	10.50	0	89,157	21,461	0	0	0	0
31	0.00	8,141,999	20.7	2,922,065	678,574	NA	118,879	120,495	0.0	0.0	0.0	0	0.00	11.00	0	0	0	0	0	0	0
Totals	1.80									0		0			0	1,807,701	493,729	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. Column IV includes quantities from leak detection system.

4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	5	0	0
Intermediate	134.4	19.3	15
Final	23	0	0
Not Opened	0	0	0

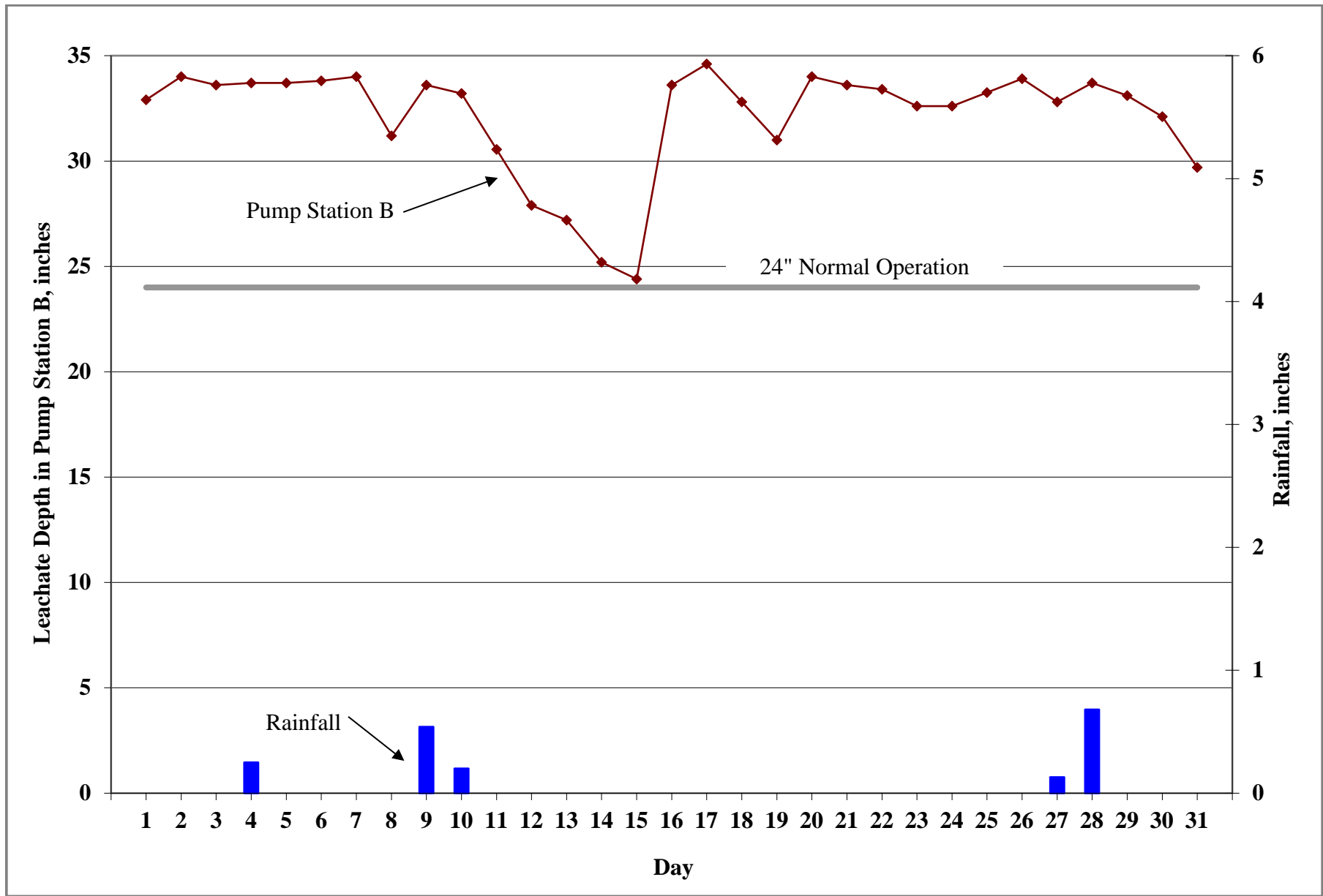


Figure 1. Leachate Levels in Pump Station B and Rainfall for October 2015.



Public Works

Board of County Commissioners

Kevin Beckner
Victor D. Crist
Ken Hagan
Al Higginbotham
Lesley "Les" Miller, Jr.
Sandra L. Murman
Stacy R. White

County Administrator Michael S. Merrill

County Administrator Executive Team Lucia E. Garsys Carl S. Harness Gregory S. Horwedel Ramin Kouzehkanani Liana Lopez Bonnie M. Wise

Interim Internal Auditor Peggy Caskey

County Attorney Chip Fletcher

Public Works
PO Box 1110
Tampa, FL 33601-1110
Phone: (813) 272-5912
Fax: (813) 272-5811

DATE: December 21, 2015

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 November 2015
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 2015 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 2.18 inches of rainfall 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 effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent was not stored in Pond B.

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 above the normal operation level of 24 inches for the month due to pump maintenance, and the Leachate Treatment and Reclamation Facility (LTRF) being offline for maintenance activities following the permit required tank inspection. The average recorded depth of leachate in the PS-B sump was 33.6 inches.

Leachate Pumped to PS-B from TPS-6 (Column VI)

Column VI has been removed.

The SWMD took TPS-6 off line on September 24, 2014 (details were included in the September 2014 Leachate Balance Report).

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

Column VII 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. The average daily amount of leachate pumped from PS-A was 61,933 gallons. A total of 1,858,001 gallons of leachate was pumped this month.

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

Column VIII 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 10,311 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 IX 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 VIII). This month a total of 134,165 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 1,992,166 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

Column XI 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 70,009 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

Column XII 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. Repairs to the flow meter were completed. This month a total of 16,852 gallons of leachate was removed from the leak detection system.

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

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank at the LTRF. The amount of leachate stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month the leachate tank was empty for permit required tank inspection.

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

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. The treatment plant is down due to the permit required tank inspection. As such, on October 16, 2014, the SWMD began storing leachate in the effluent tank until the inspection of the leachate tank is completed. This month an average of 346,000 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month leachate was not treated at the plant. The plant was taken off line on October 16, 2014, for the permit required tank inspection.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,172,658 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

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

Pond A Storage (Column XVIII)

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

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent was not stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

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

Effluent Dust Control Sprayed (Column XXII)

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

Total Effluent Hauled (Column XXIII)

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

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. There was no evaporation rate estimated for this month.

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 2,083,097 gallons. Total outflow quantity from the LTRF was 2,172,658 gallons. The change in storage for the month decreased by -89,561 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
NOVEMBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

I	II	III	IV	V	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.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	0.0	0.0	<i>31.4</i>	26,851	<i>347</i>	5,411	32,261	6	0	0	342,000	0	0	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	33.0	26,851	347	5,411	32,261	6	0	0	367,000	0	82,963	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	33.2	127,350	341	5,906	133,256	8,285	0	0	403,000	0	116,590	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	33.0	121,850	328	6,320	128,170	3,825	0	0	422,000	0	110,505	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	33.2	126,800	348	3,405	130,205	2,731	0	0	432,000	0	104,470	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	33.4	107,489	345	5,946	113,435	4,541	0	0	437,000	0	113,609	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	33.4	91,981	346	3,022	95,003	3,155	0	0	432,000	0	81,658	0	0	0	0	0	0	0	0
8	0.20	0.0	0.0	33.8	25,315	348	5,617	30,932	3,545	0	0	425,000	0	46,020	0	0	0	0	0	0	0	0
9	0.10	0.0	0.0	34.1	25,315	348	5,617	30,932	3,545	0	0	417,000	0	81,314	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	33.7	110,226	348	3,171	113,397	3	0	0	437,000	0	110,695	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	34.1	109,474	346	6,096	115,570	7	0	0	441,000	0	89,080	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	33.7	106,700	343	3,185	109,885	6	0	0	458,000	0	88,925	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	32.9	44,608	363	5,625	50,233	1	0	0	410,000	0	88,975	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	34.0	40,944	332	3,122	44,066	8	0	0	369,000	0	43,024	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	34.1	22,067	349	5,165	27,232	6	0	0	350,000	0	0	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	34.1	22,067	349	5,165	27,232	6	0	0	331,000	0	110,880	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	33.8	51,614	347	3,092	54,706	8	0	0	266,000	0	110,582	0	0	0	0	0	0	0	0
18	0.38	0.0	0.0	34.3	117,700	343	6,300	124,000	9,763	0	0	288,000	0	94,904	0	0	0	0	0	0	0	0
19	0.38	0.0	0.0	34.5	21,431	346	2,488	23,919	2,583	0	0	223,000	0	58,320	0	0	0	0	0	0	0	0
20	0.01	0.0	0.0	34.1	41,969	349	5,355	47,324	3,098	0	0	221,000	0	49,938	0	0	0	0	0	0	0	0
21	0.93	0.0	0.0	34.0	32,032	343	3,422	35,454	2,447	0	0	209,000	0	7,689	0	0	0	0	0	0	0	0
22	0.18	0.0	0.0	33.9	24,534	348	4,653	29,187	2,495	0	0	217,000	0	0	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	33.7	24,534	348	4,653	29,187	2,495	0	0	225,000	0	95,875	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	33.5	49,288	347	4,117	53,405	2,751	0	0	202,000	0	109,488	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	33.6	100,012	310	3,159	103,171	2,888	0	0	259,000	0	108,663	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	33.9	43,978	337	3,672	47,650	2,753	0	0	294,000	0	0	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	34.1	43,978	337	3,672	47,650	2,753	0	0	329,000	0	81,091	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	34.0	85,269	346	3,317	88,586	3,845	16,730	0	348,000	3,317	81,286	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	33.5	42,888	342	4,042	46,930	1,230	61	0	391,000	0	0	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	33.0	42,888	342	4,042	46,930	1,230	61	0	434,000	0	109,114	0	0	0	0	0	0	0	0
Total	2.18				1,858,001	10,311	134,165	1,992,166	70,009	16,852			0	2,172,658	0		0	0	0	0	0	0
Daily Average		0.0	0.0	33.6	61,933	344	4,472	66,406	2,334	562	0	346,000				0	0					
Mo. Average															0				0	0	0	0

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Notes:

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

**TABLE 2. FIELD DATA ENTRY FORM
NOVEMBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

85776

A Day	B Rainfall (in.)	D Flow Meter Pump Sta. A (gal.)	E Reading PS-B (in.)	F Section 9 Pump 1 (gal.)	G Section 9 Pump 2 (gal.)	H Section 9 LDS (gal.)	I Sections 7-8 Pump (gal.)	J Sections 7-8 LDS (gal.)	K Pond B Depth (ft.)	L Pond B Effluent Sprayed (gal.)	M Pond A Depth (ft.)	N Effluent Spray Irrigation (gal.)	O Depth in 575K Tank Leachate (ft.)	P Depth in 575K Tank Effluent (ft.)	Q Leachate Treated at LTRF (gal.)	R Leachate Hauled		S Leachate Dust Control (Sprayed) (gal.)	T Effluent Hauled		U Effluent Dust Control (Sprayed) (gal.)	
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)		
1	0.00	8,168,850	22.4	2,922,067	678,578	N/A	124,290	120,842	0.0	0.0	0.0	0	0.00	11.88	0	0	0	0	0	0	0	0
2	0.00	8,195,700	24.0	2,922,069	678,581	N/A	129,700	121,188	0.0	0.0	0.0	0	0.00	12.75	0	53,735	29,228	0	0	0	0	0
3	0.00	8,323,050	24.2	2,925,074	683,861	N/A	135,606	121,529	0.0	0.0	0.0	0	0.00	14.00	0	81,263	35,327	0	0	0	0	0
4	0.00	8,444,900	24.0	2,926,132	686,628	N/A	141,926	121,857	0.0	0.0	0.0	0	0.00	14.67	0	81,272	29,233	0	0	0	0	0
5	0.00	8,571,700	24.2	2,928,042	687,449	N/A	145,331	122,205	0.0	0.0	0.0	0	0.00	15.00	0	78,341	26,129	0	0	0	0	0
6	0.00	8,679,189	24.4	2,929,852	690,180	N/A	151,277	122,550	0.0	0.0	0.0	0	0.00	15.17	0	74,142	36,467	0	0	0	0	0
7	0.00	8,771,170	24.4	2,931,734	691,453	N/A	154,299	122,896	0.0	0.0	0.0	0	0.00	15.00	0	81,658	0	0	0	0	0	0
8	0.20	8,796,485	24.8	2,932,313	694,419	<i>N/A</i>	159,916	123,244	0.0	0.0	0.0	0	0.00	14.75	0	46,020	0	0	0	0	0	0
9	0.10	8,821,800	25.1	2,932,892	697,384	N/A	165,533	123,592	0.0	0.0	0.0	0	0.00	14.50	0	81,314	0	0	0	0	0	0
10	0.00	8,932,026	24.7	2,932,894	697,385	N/A	168,704	123,940	0.0	0.0	0.0	0	0.00	15.17	0	81,454	29,241	0	0	0	0	0
11	0.00	9,041,500	25.1	2,932,898	697,388	N/A	174,800	124,286	0.0	0.0	0.0	0	0.00	15.33	0	89,080	0	0	0	0	0	0
12	0.00	9,148,200	24.7	2,932,902	697,390	N/A	177,985	124,629	0.0	0.0	0.0	0	0.00	15.92	0	88,925	0	0	0	0	0	0
13	0.00	9,192,808	23.9	2,932,903	697,390	N/A	183,610	124,992	0.0	0.0	0.0	0	0.00	14.25	0	88,975	0	0	0	0	0	0
14	0.00	9,233,752	25.0	2,932,904	697,397	N/A	186,732	125,324	0.0	0.0	0.0	0	0.00	12.83	0	43,024	0	0	0	0	0	0
15	0.00	9,255,819	25.1	2,932,907	697,400	<i>N/A</i>	191,897	125,673	0.0	0.0	0.0	0	0.00	12.17	0	0	0	0	0	0	0	0
16	0.00	9,277,886	25.1	2,932,909	697,403	N/A	197,062	126,021	0.0	0.0	0.0	0	0.00	11.50	0	81,361	29,519	0	0	0	0	0
17	0.00	9,329,500	24.8	2,932,912	697,408	N/A	200,154	126,368	0.0	0.0	0.0	0	0.00	9.25	0	81,360	29,222	0	0	0	0	0
18	0.38	9,447,200	25.3	2,935,696	704,387	N/A	206,454	126,711	0.0	0.0	0.0	0	0.00	10.00	0	67,066	27,838	0	0	0	0	0
19	0.38	9,468,631	25.5	2,937,582	705,084	N/A	208,942	127,057	0.0	0.0	0.0	0	0.00	7.75	0	36,805	21,515	0	0	0	0	0
20	0.01	9,510,600	25.1	2,939,107	706,657	N/A	214,297	127,406	0.0	0.0	0.0	0	0.00	7.67	0	21,506	28,432	0	0	0	0	0
21	0.93	9,542,632	25.0	2,940,916	707,295	N/A	217,719	127,749	0.0	0.0	0.0	0	0.00	7.25	0	7,689	0	0	0	0	0	0
22	0.18	9,567,166	24.9	2,941,384	709,322	<i>N/A</i>	222,372	128,097	0.0	0.0	0.0	0	0.00	7.54	0	0	0	0	0	0	0	0
23	0.00	9,591,700	24.7	2,941,851	711,349	N/A	227,024	128,445	0.0	0.0	0.0	0	0.00	7.83	0	74,737	21,138	0	0	0	0	0
24	0.00	9,640,988	24.5	2,941,856	714,095	N/A	231,141	128,792	0.0	0.0	0.0	0	0.00	7.00	0	80,762	28,726	0	0	0	0	0
25	0.00	9,741,000	24.6	2,941,861	716,978	N/A	234,300	129,102	0.0	0.0	0.0	0	0.00	9.00	0	80,182	28,481	0	0	0	0	0
26	0.00	9,784,978	24.9	2,942,833	718,759	<i>N/A</i>	237,972	129,439	0.0	0.0	0.0	0	0.00	10.21	0	0	0	0	0	0	0	0
27	0.00	9,828,955	25.1	2,943,805	720,539	2,332,376	241,644	129,776	0.0	0.0	0.0	0	0.00	11.42	0	81,091	0	0	0	0	0	0
28	0.00	9,914,224	25.0	2,946,161	722,028	2,349,106	244,961	130,122	0.0	0.0	0.0	0	0.00	12.08	0	81,286	0	0	0	0	0	0
29	0.00	9,957,112	24.5	2,947,306	722,113	2,349,167	249,003	130,464	0.0	0.0	0.0	0	0.00	13.58	0	0	0	0	0	0	0	0
30	0.00	39,160	24.0	2,948,451	722,197	2,349,228	253,044	130,806	0.0	0.0	0.0	0	0.00	15.08	0	80,679	28,435	0	0	0	0	0
Totals	2.18									0		0			0	1,743,727	428,931	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. Column IV includes quantities from leak detection system.

4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	5	0	0
Intermediate	134.4	19.3	15
Final	23	0	0
Not Opened	0	0	0

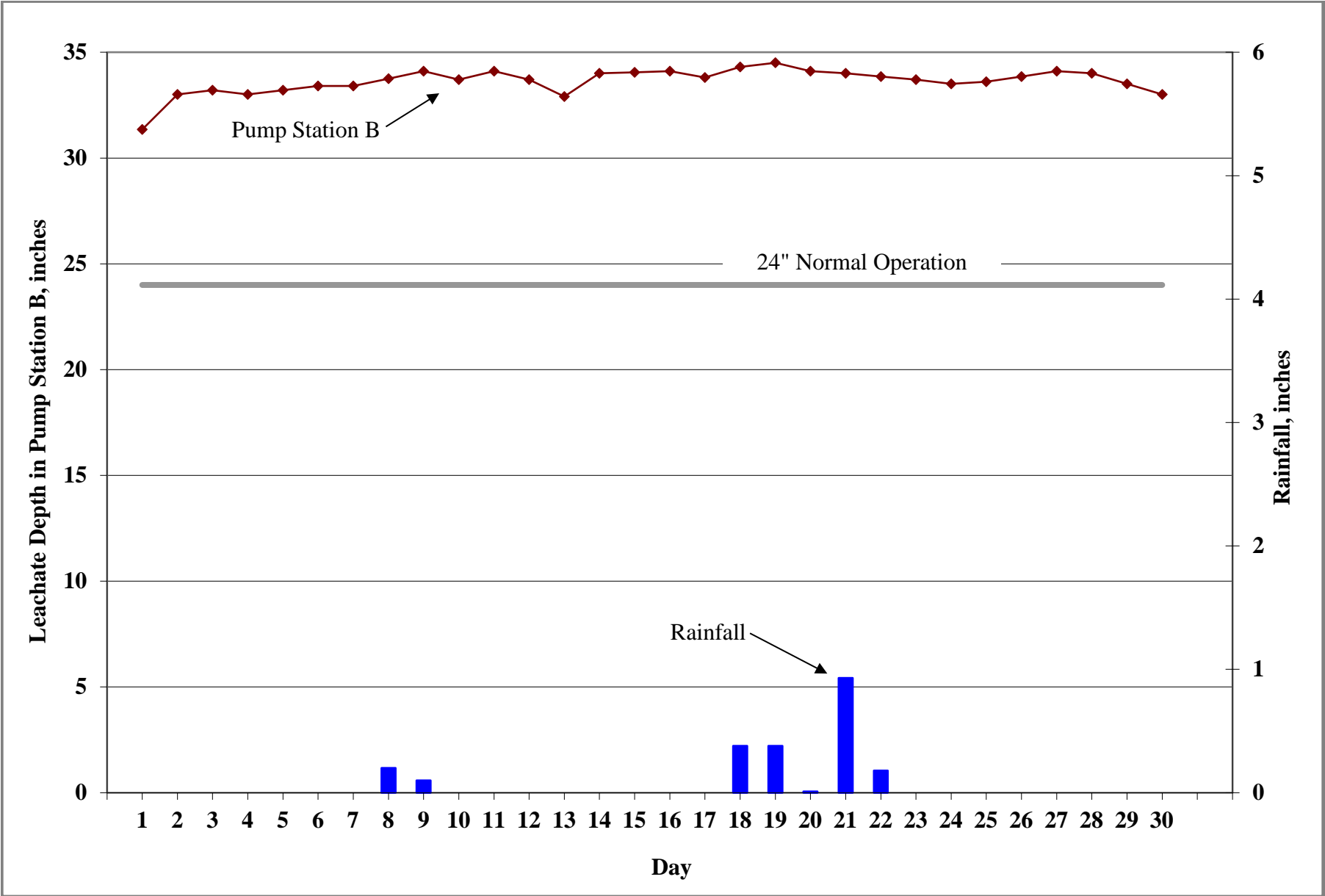


Figure 1. Leachate Levels in Pump Station B and Rainfall for November 2015.



Public Works

Board of County Commissioners

Kevin Beckner
Victor D. Crist
Ken Hagan
Al Higginbotham
Lesley "Les" Miller, Jr.
Sandra L. Murman
Stacy R. White

County Administrator

Michael S. Merrill

County Administrator Executive Team

Lucia E. Garsys
Carl S. Harness
Gregory S. Horwedel
Ramin Kouzehkanani
Liana Lopez
Bonnie M. Wise

Interim Internal Auditor

Peggy Caskey

County Attorney

Chip Fletcher

Public Works

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

DATE: January 4, 2016

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 December 2015
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 2015 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 1.15 inches of rainfall 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 effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent was not stored in Pond B.

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 above the normal operation level of 24 inches for the month due to pump maintenance, and the Leachate Treatment and Reclamation Facility (LTRF) being offline for maintenance activities following the permit required tank inspection. The average recorded depth of leachate in the PS-B sump was 32.1 inches.

Leachate Pumped to PS-B from TPS-6 (Column VI)

Column VI has been removed.

The SWMD took TPS-6 off line on September 24, 2014 (details were included in the September 2014 Leachate Balance Report).

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

Column VII 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. The average daily amount of leachate pumped from PS-A was 80,546 gallons. A total of 2,496,940 gallons of leachate was pumped this month.

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

Column VIII 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 4,141 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 IX 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 VIII). This month a total of 100,555 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 2,394,805 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

Column XI 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 12,808 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

Column XII 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 total of 306 gallons of leachate was removed from the leak detection system.

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

Column XIII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank at the LTRF. The amount of leachate stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month the leachate tank was empty for permit required tank inspection.

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

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. The treatment plant is down due to the permit required tank inspection. As such, on October 16, 2014, the SWMD began storing leachate in the effluent tank until the inspection of the leachate tank is completed. This month an average of 481,400 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month leachate was not treated at the plant. The plant was taken off line on October 16, 2014, for the permit required tank inspection.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,572,864 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

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

Pond A Storage (Column XVIII)

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

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent was not stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

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

Effluent Dust Control Sprayed (Column XXII)

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

Total Effluent Hauled (Column XXIII)

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

Total Evaporation (Column XXIV)

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. There was no evaporation rate estimated for this month.

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 2,614,578 gallons. Total outflow quantity from the LTRF was 2,572,864 gallons. The change in storage for the month increased by 41,714 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
DECEMBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

I	II	III	IV	V	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.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	0.0	0.0	33.4	108,240	348	3,856	112,096	814	22	0	480,000	0	109,188	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	33.3	108,200	125	3,702	111,902	8	22	0	494,000	0	95,479	0	0	0	0	0	0	0	0
3	0.43	0.0	0.0	32.5	76,276	346	4,523	80,799	7	0	0	502,000	0	107,533	0	0	0	0	0	0	0	0
4	0.07	0.0	0.0	33.6	68,090	351	3,054	71,144	10	11	0	504,000	0	109,378	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	33.5	56,044	330	41	56,085	5	0	0	497,000	0	89,203	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	33.2	44,970	346	3,685	48,655	11	2	0	494,000	0	0	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	32.9	44,970	346	3,685	48,655	11	2	0	492,000	0	110,849	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	33.5	105,650	32	5,820	111,470	4,131	14	0	485,000	0	110,541	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	33.4	109,620	297	6,550	116,170	2,082	13	0	511,000	0	110,533	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	33.7	85,015	139	2,429	87,444	2,269	188	0	453,000	0	103,627	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	33.2	98,357	0	958	99,315	1,475	10	0	446,000	0	103,396	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	33.4	103,485	35	7,482	110,967	1,525	17	0	451,000	0	67,063	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	33.0	55,107	48	2,968	58,075	182	1	0	468,000	0	0	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	32.6	55,107	48	2,968	58,075	182	1	0	485,000	0	102,857	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	33.3	101,609	92	5,445	107,054	4	0	0	477,000	0	117,789	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	34.3	99,400	336	2,450	101,850	5	0	0	463,000	0	102,559	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	30.0	101,200	113	4,260	105,460	11	1	0	456,000	0	110,499	0	0	0	0	0	0	0	0
18	0.50	0.0	0.0	29.6	100,495	4	3,622	104,117	6	0	0	456,000	0	110,057	0	0	0	0	0	0	0	0
19	0.01	0.0	0.0	33.0	75,950	133	1,731	77,681	8	0	0	417,000	0	74,482	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	33.1	79,678	0	3,789	83,466	6	1	0	456,000	0	0	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	33.2	79,678	0	3,789	83,466	6	1	0	494,000	0	96,152	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	32.3	100,700	115	2,650	103,350	2	0	0	497,000	0	95,958	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	32.8	101,500	12	0	0	0	0	0	497,000	0	97,758	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	32.5	101,190	180	0	0	7	0	0	504,000	0	96,090	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	29.9	46,843	3	563	47,406	3	0	0	500,000	0	0	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	27.3	46,843	3	563	47,406	3	0	0	497,000	0	67,530	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	30.1	36,305	0	10	36,315	8	1	0	498,000	0	0	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	32.9	36,305	0	10	36,315	8	1	0	499,000	0	67,810	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	29.3	70,116	265	10,292	80,408	6	0	0	494,000	0	110,365	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	23.1	100,100	0	5,986	106,086	8	0	0	485,000	0	110,522	0	0	0	0	0	0	0	0
31	0.14	0.0	0.0	33.6	99,900	96	3,675	103,575	8	0	0	470,000	0	95,646	0	0	0	0	0	0	0	0
Total	1.15				2,496,940	4,141	100,555	2,394,805	12,808	306			0	2,572,864	0			0	0	0	0	0
Daily Average		0.0	0.0	32.1	80,546	134	3,244	77,252	413	10	0	481,400				0	0					
Mo. Average															0				0	0	0	0

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Notes:

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

**TABLE 2. FIELD DATA ENTRY FORM
DECEMBER 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A Day	B Rainfall (in.)	D Flow Meter Pump Sta. A (gal.)	E Reading PS-B (in.)	F Section 9 Pump 1 (gal.)	G Section 9 Pump 2 (gal.)	H Section 9 LDS (gal.)	I Sections 7-8 Pump (gal.)	J Sections 7-8 LDS (gal.)	K Pond B Depth (ft.)	L Pond B Effluent Sprayed (gal)	M Pond A Depth (ft.)	N Effluent Spray Irrigation (gal.)	O Depth in 575K Tank Leachate (ft.)	P Depth in 575K Tank Effluent (ft.)	Q Leachate Treated at LTRF (gal.)	R Leachate Hauled		S Leachate Dust Control (Sprayed) (gal.)	T Effluent Hauled		U Effluent Dust Control (Sprayed) (gal.)
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	147,400	24.4	2,948,840	722,622	2,349,250	256,900	131,154	0.0	0.0	0.0	0	0.00	16.67	0	80,750	28,438	0	0	0	0
2	0.00	255,600	24.3	2,948,842	722,628	2,349,272	260,602	131,279	0.0	0.0	0.0	0	0.00	17.17	0	81,028	14,451	0	0	0	0
3	0.43	331,876	23.5	2,948,846	722,631	2,349,272	265,125	131,625	0.0	0.0	0.0	0	0.00	17.42	0	80,636	26,897	0	0	0	0
4	0.07	399,966	24.6	2,948,852	722,635	2,349,283	268,179	131,976	0.0	0.0	0.0	0	0.00	17.50	0	72,976	36,402	0	0	0	0
5	0.00	456,010	24.5	2,948,855	722,637	2,349,283	268,220	132,306	0.0	0.0	0.0	0	0.00	17.25	0	89,203	0	0	0	0	0
6	0.00	500,980	24.2	2,948,859	722,644	2,349,285	271,905	132,652	0.0	0.0	0.0	0	0.00	17.17	0	0	0	0	0	0	0
7	0.00	545,950	23.9	2,948,863	722,650	2,349,287	275,590	132,997	0.0	0.0	0.0	0	0.00	17.08	0	81,648	29,201	0	0	0	0
8	0.00	651,600	24.5	2,951,818	723,826	2,349,301	281,410	133,029	0.0	0.0	0.0	0	0.00	16.83	0	81,382	29,159	0	0	0	0
9	0.00	761,220	24.4	2,953,897	723,829	2,349,314	287,960	133,326	0.0	0.0	0.0	0	0.00	17.75	0	81,350	29,183	0	0	0	0
10	0.00	846,235	24.7	2,956,163	723,832	2,349,502	290,389	133,465	0.0	0.0	0.0	0	0.00	15.75	0	89,019	14,608	0	0	0	0
11	0.00	944,592	24.2	2,957,634	723,836	2,349,512	291,347	133,465	0.0	0.0	0.0	0	0.00	15.50	0	74,232	29,164	0	0	0	0
12	0.00	1,048,077	24.4	2,959,156	723,839	2,349,529	298,829	133,500	0.0	0.0	0.0	0	0.00	15.67	0	67,063	0	0	0	0	0
13	0.00	1,103,184	24.0	2,959,334	723,843	2,349,530	301,797	133,548	0.0	0.0	0.0	0	0.00	16.25	0	0	0	0	0	0	0
14	0.00	1,158,291	23.6	2,959,511	723,847	2,349,531	304,765	133,595	0.0	0.0	0.0	0	0.00	16.83	0	73,570	29,287	0	0	0	0
15	0.00	1,259,900	24.3	2,959,513	723,849	2,349,531	310,210	133,687	0.0	0.0	0.0	0	0.00	16.58	0	81,313	36,476	0	0	0	0
16	0.00	1,359,300	25.3	2,959,514	723,853	2,349,531	312,660	134,023	0.0	0.0	0.0	0	0.00	16.08	0	81,291	21,268	0	0	0	0
17	0.00	1,460,500	21.0	2,959,522	723,856	2,349,532	316,920	134,136	0.0	0.0	0.0	0	0.00	15.83	0	81,344	29,155	0	0	0	0
18	0.50	1,560,995	20.6	2,959,525	723,859	2,349,532	320,542	134,140	0.0	0.0	0.0	0	0.00	15.83	0	81,370	28,687	0	0	0	0
19	0.01	1,636,945	24.0	2,959,531	723,861	2,349,532	322,273	134,273	0.0	0.0	0.0	0	0.00	14.50	0	74,482	0	0	0	0	0
20	0.00	1,716,623	24.1	2,959,535	723,863	2,349,533	326,062	134,273	0.0	0.0	0.0	0	0.00	15.84	0	0	0	0	0	0	0
21	0.00	1,796,300	24.2	2,959,538	723,865	2,349,533	329,850	134,273	0.0	0.0	0.0	0	0.00	17.17	0	96,152	0	0	0	0	0
22	0.00	1,897,000	23.3	2,959,539	723,866	2,349,533	332,500	134,388	0.0	0.0	0.0	0	0.00	17.25	0	95,958	0	0	0	0	0
23	0.00	1,998,500	23.8	2,959,539	723,866	2,349,533	332,500	134,400	0.0	0.0	0.0	0	0.00	17.25	0	97,758	0	0	0	0	0
24	0.00	2,099,690	23.5	2,959,541	723,871	2,349,533	339,141	134,580	0.0	0.0	0.0	0	0.00	17.50	0	96,090	0	0	0	0	0
25	0.00	2,146,533	20.9	2,959,542	723,874	2,349,533	339,704	134,583	0.0	0.0	0.0	0	0.00	17.38	0	0	0	0	0	0	0
26	0.00	2,193,375	18.3	2,959,542	723,876	2,349,533	340,267	134,586	0.0	0.0	0.0	0	0.00	17.25	0	67,530	0	0	0	0	0
27	0.00	2,229,680	21.1	2,959,546	723,881	2,349,534	340,277	134,586	0.0	0.0	0.0	0	0.00	17.29	0	0	0	0	0	0	0
28	0.00	2,265,984	23.9	2,959,549	723,885	2,349,534	340,287	134,586	0.0	0.0	0.0	0	0.00	17.33	0	38,370	29,440	0	0	0	0
29	0.00	2,336,100	20.3	2,959,551	723,889	2,349,534	350,579	134,851	0.0	0.0	0.0	0	0.00	17.17	0	81,255	29,110	0	0	0	0
30	0.00	2,436,200	14.1	2,959,556	723,892	2,349,534	356,565	134,851	0.0	0.0	0.0	0	0.00	16.83	0	74,148	36,374	0	0	0	0
31	0.14	2,536,100	24.6	2,959,561	723,895	2,349,534	360,240	134,947	0.0	0.0	0.0	0	0.00	16.33	0	66,554	29,092	0	0	0	0
Totals	1.15									0		0			0	2,066,472	506,392	0	0	0	0

projects\balance\2015\12-15bal.xls (ds 12/30/15)

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. Column IV includes quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	5	0	0
Intermediate	134.4	19.3	15
Final	23	0	0
Not Opened	0	0	0

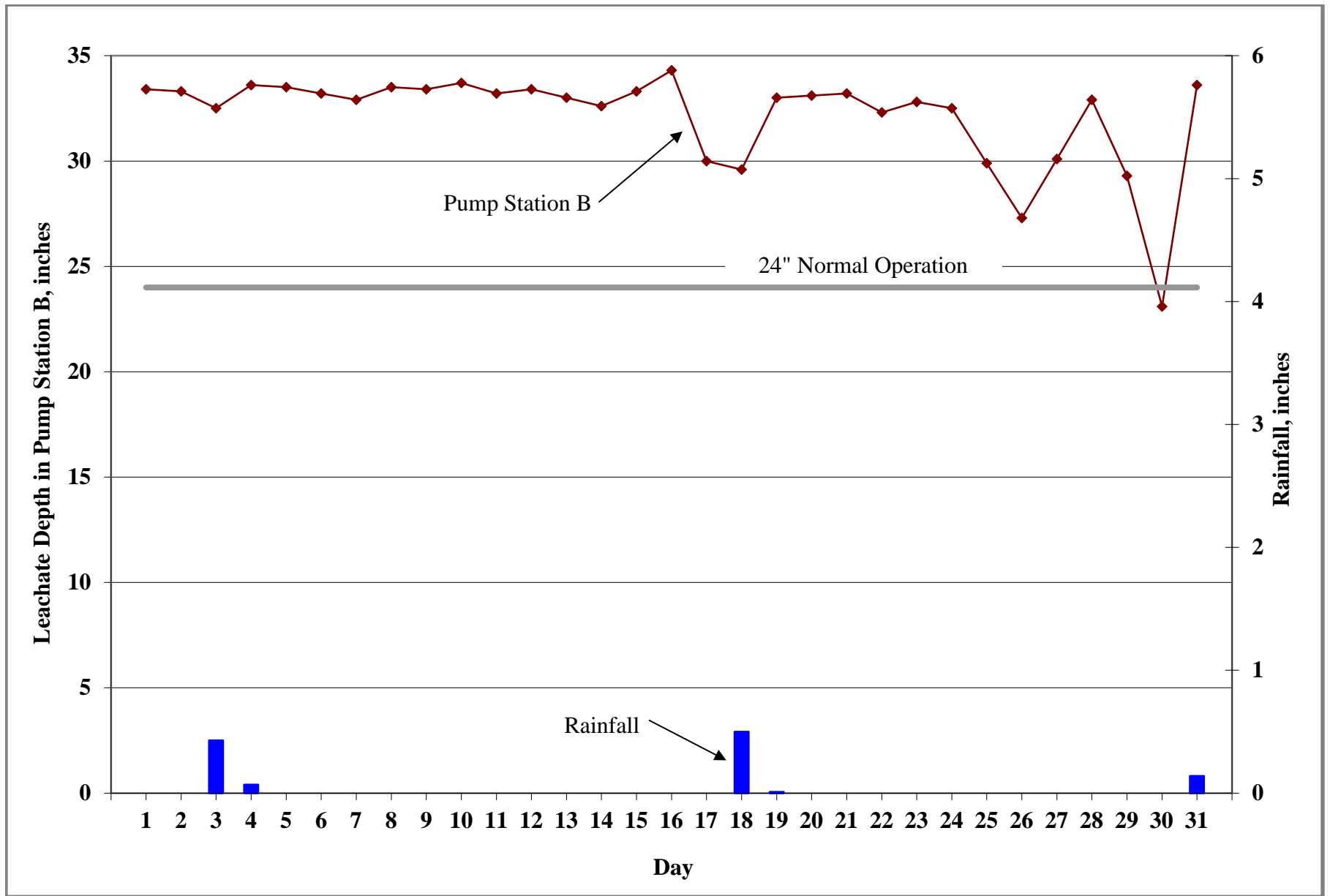


Figure 1. Leachate Levels in Pump Station B and Rainfall for December 2015.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2015**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG System (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.)	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	1.15	7,214	44,572	197,166	2,213,468	2,259,648	0	0	0	0	0	2,462,420	2,259,648	202,772
February	5.40	9,440	29,182	93,449	1,970,261	1,915,340	0	0	0	0	0	2,102,332	1,915,340	186,992
March	1.04	6,628	52,240	149,624	1,890,785	2,073,947	0	0	0	0	0	2,099,277	2,073,947	25,330
April	2.64	6,338	48,907	81,686	1,899,702	1,851,028	0	0	0	0	0	2,036,633	1,851,028	185,605
May	1.67	5,420	33,765	80,827	1,547,741	1,561,683	0	0	0	0	0	1,667,753	1,561,683	106,070
June	7.35	7,875	29,965	72,452	1,198,801	1,449,630	7,242	0	0	0	0	1,309,093	1,456,872	-147,779
July	16.30	6,795	129,369	233,620	1,293,059	1,541,731	0	0	0	0	0	1,662,843	1,541,731	121,112
August	11.06	5,678	361,148	606,144	1,554,520	2,409,427	0	0	0	0	0	2,527,490	2,409,427	118,063
September	3.48	3,987	120,029	260,430	2,079,020	2,479,187	0	0	0	0	0	2,463,466	2,479,187	-15,721
October	1.80	4,489	76,572	201,539	2,142,199	2,301,430	0	0	0	0	0	2,424,799	2,301,430	123,369
November	2.18	4,070	86,861	134,165	1,858,001	2,172,658	0	0	0	0	0	2,083,097	2,172,658	-89,561
December	1.15	3,969	13,107	100,555	2,496,940	2,572,866	0	0	0	0	0	2,614,571	2,572,866	41,705
YTD Total	55.22	71,903	1,025,717	2,211,657	22,144,497	24,588,575	7,242	0	0	0	0	25,453,774	24,595,817	857,957

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. Leachate from the Hillsborough Heights and Taylor Road landfills is being hauled to the Faulkenburg Road Wastewater Treatment Facility.
3. Change in storage represents total inflow to LTRF minus total outflow from LTRF.