



Public Works

October 13, 2015

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County Administrator

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Liana Lopez
Bonnie M. Wise

Interim Internal Auditor

Peggy Caskey

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Public Works

PO Box 1110
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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 September 30, 2015.

The data is being submitted as separate monthly reports for July, August, and September 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: August 7, 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 July 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 16.30 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 most of the month due to Pump B being removed for maintenance. The average recorded depth of leachate in the PS-B sump was 33.1 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 41,712 gallons. A total of 1,293,059 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 1,188 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 233,620 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 1,526,679 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 129,351 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 18 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 352,300 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 1,541,731 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 1,662,843 gallons. Total outflow quantity from the LTRF was 1,541,731 gallons. The change in storage for the month increased by 121,112 gallons.

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

**TABLE I. LEACHATE WATER BALANCE REPORT FORM
JULY 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Leachate Pumped to PS-B from TPS-6 (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.)	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	0.67	0.0	0.0	33.8	0	31,657	0	3,096	34,753	1,040	1	0	274,000	0	64,971	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	33.6	0	49,692	57	6,138	55,830	1,161	0	0	254,000	0	71,536	0	0	0	0	0	0	0	0
3	0.70	0.0	0.0	33.7	0	46,970	0	3,140	50,110	1,158	0	0	238,000	0	35,871	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	33.9	0	15,521	27	3,025	18,547	1,031	0	0	249,000	0	0	0	0	0	0	0	0	0	0
5	1.40	0.0	0.0	32.5	0	10,348	37	3,023	13,370	1,000	0	0	279,000	0	0	0	0	0	0	0	0	0	0
6	0.17	0.0	0.0	34.3	0	20,695	17	3,028	23,723	1,063	0	0	271,000	0	35,798	0	0	0	0	0	0	0	0
7	0.07	0.0	0.0	29.6	0	106,716	58	3,018	109,734	937	0	0	341,000	0	42,947	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	34.3	0	46,700	0	6,062	52,762	1,038	0	0	345,000	0	42,950	0	0	0	0	0	0	0	0
9	0.25	0.0	0.0	34.0	0	4,272	56	2,986	7,258	1,098	0	0	312,000	0	42,975	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	33.9	0	62,888	0	6,028	68,916	1,234	0	0	338,000	0	43,018	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	33.9	0	42,923	58	6,154	49,077	874	0	0	336,000	0	43,022	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	34.1	0	17,909	30	4,560	22,469	1,689	1	0	340,000	0	0	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	34.3	0	17,909	30	4,560	22,469	1,689	1	0	343,000	0	43,110	0	0	0	0	0	0	0	0
14	0.95	0.0	0.0	33.8	0	37,600	0	3,004	40,604	954	0	0	338,000	0	42,986	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	34.0	0	28,700	58	3,114	31,814	1,034	0	0	329,000	0	42,989	0	0	0	0	0	0	0	0
16	0.32	0.0	0.0	33.8	0	48,982	0	6,074	55,056	1,333	0	0	341,000	0	42,949	0	0	0	0	0	0	0	0
17	0.35	0.0	0.0	34.0	0	43,291	60	3,096	46,387	1,080	1	0	343,000	0	42,979	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	33.9	0	44,078	59	3,064	47,142	1,160	0	0	350,000	0	43,121	0	0	0	0	0	0	0	0
19	0.20	0.0	0.0	33.9	0	22,264	30	4,631	26,895	1,008	0	0	354,000	0	0	0	0	0	0	0	0	0	0
20	0.75	0.0	0.0	33.8	0	22,264	30	4,631	26,895	1,008	0	0	358,000	0	79,083	0	0	0	0	0	0	0	0
21	0.30	0.0	0.0	33.8	0	49,322	0	3,068	52,390	1,124	1	0	336,000	0	43,016	0	0	0	0	0	0	0	0
22	0.56	0.0	0.0	33.8	0	47,334	61	6,234	53,568	1,538	0	0	345,000	0	72,407	0	0	0	0	0	0	0	0
23	0.01	0.0	0.0	33.8	0	98,966	60	7,654	106,620	2,547	1	0	377,000	0	79,610	0	0	0	0	0	0	0	0
24	1.27	0.0	0.0	30.6	0	103,260	0	7,612	110,872	3,280	0	0	410,000	0	72,487	0	0	0	0	0	0	0	0
25	1.33	0.0	0.0	24.0	0	100,560	60	8,296	108,856	5,249	0	0	453,000	0	43,180	0	0	0	0	0	0	0	0
26	1.12	0.0	0.0	28.9	0	19,815	37	16,931	36,746	9,074	1	0	479,000	0	0	0	0	0	0	0	0	0	0
27	0.57	0.0	0.0	33.7	0	19,815	37	16,931	36,746	9,074	1	0	504,000	0	66,794	0	0	0	0	0	0	0	0
28	0.02	0.0	0.0	33.7	0	10,450	50	21,944	32,394	19,870	2	0	482,000	0	117,262	0	0	0	0	0	0	0	0
29	0.19	0.0	0.0	33.7	0	45,250	66	20,832	66,082	15,878	4	0	439,000	0	110,271	0	0	0	0	0	0	0	0
30	4.88	0.0	0.0	33.5	0	42,449	94	17,734	60,183	10,617	1	0	401,000	0	109,514	0	0	0	0	0	0	0	0
31	0.22	0.0	0.0	33.7	0	34,461	118	23,952	58,413	28,513	3	0	362,000	0	66,885	0	0	0	0	0	0	0	0
Total	16.30				0	1,293,059	1,188	233,620	1,526,679	129,351	18			0	1,541,731	0			0	0	0	0	0
Daily Average		0.0	0.0	33.1	0	41,712	38	7,536	49,248	4,173	1	0	352,300				0	0					0
Mo. Average																0				0			0

projects/balance/2015/07-15bal.xls (D&S/01/15)

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
JULY 2015
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Day	Rainfall (in.)	Flow Meter TPS-6 (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.)	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	0.67	0	1,104,858	24.8	2,766,179	140,159	12,447	8,808,188	108,634	0.0	0.0	0.0	0	0.00	9.50	0	35,764	29,207	0	0	0	0
2	0.00	0	1,154,550	24.6	2,766,185	141,314	12,447	8,814,326	108,691	0.0	0.0	0.0	0	0.00	8.83	0	35,539	35,997	0	0	0	0
3	0.70	0	1,201,520	24.7	2,766,188	142,469	12,447	8,817,466	108,691	0.0	0.0	0.0	0	0.00	8.25	0	35,871	0	0	0	0	0
4	0.00	0	1,217,041	24.9	2,766,842	142,846	12,447	8,820,491	108,718	0.0	0.0	0.0	0	0.00	8.64	0	0	0	0	0	0	0
5	1.40	0	1,227,389	23.5	2,767,279	143,409	12,448	8,823,514	108,755	0.0	0.0	0.0	0	0.00	9.70	0	0	0	0	0	0	0
6	0.17	0	1,248,084	25.3	2,768,151	143,600	12,448	8,826,542	108,772	0.0	0.0	0.0	0	0.00	9.42	0	35,798	0	0	0	0	0
7	0.07	0	1,354,800	20.6	2,768,152	144,536	12,448	8,829,560	108,830	0.0	0.0	0.0	0	0.00	11.83	0	42,947	0	0	0	0	0
8	0.00	0	1,401,500	25.3	2,768,837	144,889	12,448	8,835,622	108,830	0.0	0.0	0.0	0	0.00	12.00	0	42,950	0	0	0	0	0
9	0.25	0	1,405,772	25.0	2,769,627	145,197	12,448	8,838,608	108,886	0.0	0.0	0.0	0	0.00	10.83	0	42,975	0	0	0	0	0
10	0.00	0	1,468,660	24.9	2,770,574	145,484	12,448	8,844,636	108,886	0.0	0.0	0.0	0	0.00	11.75	0	43,018	0	0	0	0	0
11	0.00	0	1,511,583	24.9	2,771,441	145,491	12,448	8,850,790	108,944	0.0	0.0	0.0	0	0.00	11.67	0	43,022	0	0	0	0	0
12	0.00	0	1,529,492	25.1	2,772,007	146,614	12,449	8,855,350	108,974	0.0	0.0	0.0	0	0.00	11.80	0	0	0	0	0	0	0
13	0.00	0	1,547,400	25.3	2,772,572	147,737	12,449	8,859,910	109,003	0.0	0.0	0.0	0	0.00	11.92	0	43,110	0	0	0	0	0
14	0.95	0	1,585,000	24.8	2,772,577	148,686	12,449	8,862,914	109,003	0.0	0.0	0.0	0	0.00	11.75	0	42,986	0	0	0	0	0
15	0.00	0	1,613,700	25.0	2,773,608	148,689	12,449	8,866,028	109,061	0.0	0.0	0.0	0	0.00	11.42	0	35,964	7,025	0	0	0	0
16	0.32	0	1,662,682	24.8	2,773,611	150,019	12,449	8,872,102	109,061	0.0	0.0	0.0	0	0.00	11.83	0	42,949	0	0	0	0	0
17	0.35	0	1,705,973	25.0	2,773,615	151,095	12,450	8,875,198	109,121	0.0	0.0	0.0	0	0.00	11.92	0	42,979	0	0	0	0	0
18	0.00	0	1,750,051	24.9	2,773,617	152,253	12,450	8,878,262	109,180	0.0	0.0	0.0	0	0.00	12.17	0	43,121	0	0	0	0	0
19	0.20	0	1,772,315	24.9	2,774,069	152,810	12,450	8,882,893	109,210	0.0	0.0	0.0	0	0.00	12.30	0	0	0	0	0	0	0
20	0.75	0	1,794,578	24.8	2,774,520	153,366	12,450	8,887,524	109,240	0.0	0.0	0.0	0	0.00	12.42	0	42,980	36,103	0	0	0	0
21	0.30	0	1,843,900	24.8	2,774,981	154,029	12,451	8,890,592	109,240	0.0	0.0	0.0	0	0.00	11.67	0	43,016	0	0	0	0	0
22	0.56	0	1,891,234	24.8	2,775,186	155,362	12,451	8,896,826	109,301	0.0	0.0	0.0	0	0.00	12.00	0	43,135	29,272	0	0	0	0
23	0.01	0	1,990,200	24.8	2,777,241	155,854	12,452	8,904,480	109,361	0.0	0.0	0.0	0	0.00	13.08	0	43,063	36,547	0	0	0	0
24	1.27	0	2,093,460	21.6	2,779,241	157,134	12,452	8,912,092	109,361	0.0	0.0	0.0	0	0.00	14.25	0	35,872	36,615	0	0	0	0
25	1.33	0	2,194,020	15.0	2,779,242	162,382	12,452	8,920,388	109,421	0.0	0.0	0.0	0	0.00	15.75	0	43,180	0	0	0	0	0
26	1.12	0	2,213,835	19.9	2,783,156	167,542	12,453	8,937,319	109,458	0.0	0.0	0.0	0	0.00	16.63	0	0	0	0	0	0	0
27	0.57	0	2,233,650	24.7	2,787,070	172,701	12,454	8,954,250	109,494	0.0	0.0	0.0	0	0.00	17.50	0	30,185	36,609	0	0	0	0
28	0.02	0	2,244,100	24.7	2,796,352	183,289	12,456	8,976,194	109,544	0.0	0.0	0.0	0	0.00	16.75	0	80,733	36,529	0	0	0	0
29	0.19	0	2,289,350	24.7	2,805,541	189,978	12,460	8,997,026	109,610	0.0	0.0	0.0	0	0.00	15.25	0	81,027	29,244	0	0	0	0
30	4.88	0	2,331,799	24.5	2,810,274	195,862	12,461	9,014,760	109,704	0.0	0.0	0.0	0	0.00	13.92	0	72,932	36,582	0	0	0	0
31	0.22	0	2,366,260	24.7	2,829,450	205,199	12,464	9,038,712	109,822	0.0	0.0	0.0	0	0.00	12.58	0	30,698	36,187	0	0	0	0
Totals	16.30										0	0	0			0	1,155,814	385,917	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	0	0	5
Intermediate	139.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

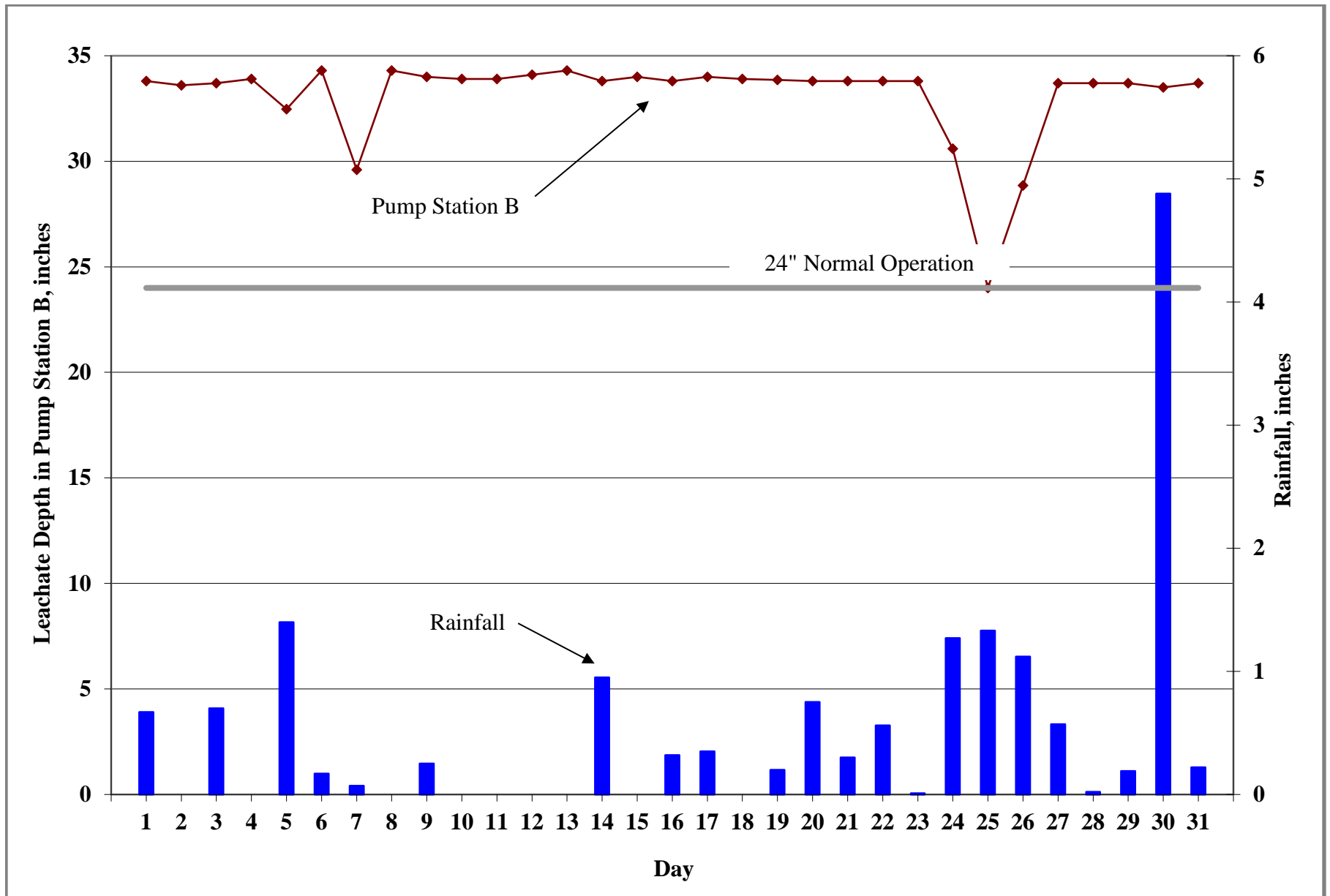


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2014.



Public Works

Board of County Commissioners

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

County Administrator Michael S. Merrill

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DATE: September 18, 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 August 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 11.06 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 most of the month due to the electric pump at Pump Station B being removed for 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 33.8 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 50,146 gallons. A total of 1,554,520 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 943 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 606,144 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 2,160,664 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 360,961 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 187 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 496,300 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 2,409,427 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 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 2,527,490 gallons. Total outflow quantity from the LTRF was 2,409,427 gallons. The change in storage for the month increased by 118,063 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 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	2.00	0.0	0.0	34.1	126,510	22	32,908	159,418	26,224	8	0	473,000	0	23,018	0	0	0	0	0	0	0	0
2	0.33	0.0	0.0	34.0	721	0	5,534	6,255	3,722	2	0	492,000	0	0	0	0	0	0	0	0	0	0
3	0.38	0.0	0.0	33.9	721	0	5,534	6,255	3,722	2	0	511,000	0	57,146	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	33.8	21,370	0	45,326	66,696	1,885	1	0	504,000	0	86,719	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	33.8	21,084	263	36,686	57,770	25,476	1	0	504,000	0	78,242	0	0	0	0	0	0	0	0
6	0.53	0.0	0.0	34.0	16,322	266	30,884	47,206	19,734	2	0	489,000	0	103,043	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	33.7	39,545	229	32,866	72,411	31,036	4	0	487,000	0	117,710	0	0	0	0	0	0	0	0
8	0.72	0.0	0.0	33.7	58,672	146	31,560	90,232	27,962	15	0	497,000	0	73,549	0	0	0	0	0	0	0	0
9	1.48	0.0	0.0	33.7	25,573	8	10,215	33,788	9,640	6	0	497,000	0	0	0	0	0	0	0	0	0	0
10	0.42	0.0	0.0	33.7	23,573	8	10,215	33,788	9,640	6	0	497,000	0	110,150	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	33.9	33,900	0	39,310	73,210	21,181	10	0	492,000	0	110,234	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	33.6	61,661	0	28,436	90,097	21,039	15	0	489,000	0	110,646	0	0	0	0	0	0	0	0
13	0.26	0.0	0.0	33.5	70,362	0	26,260	96,622	20,038	10	0	497,000	0	110,096	0	0	0	0	0	0	0	0
14	0.22	0.0	0.0	34.1	75,718	0	24,102	99,820	13,193	7	0	497,000	0	102,617	0	0	0	0	0	0	0	0
15	0.27	0.0	0.0	34.3	75,399	1	20,922	96,321	10,370	8	0	497,000	0	81,462	0	0	0	0	0	0	0	0
16	0.30	0.0	0.0	34.3	30,623	0	7,256	37,879	3,253	3	0	500,000	0	0	0	0	0	0	0	0	0	0
17	0.05	0.0	0.0	34.2	30,623	0	7,256	37,879	3,253	3	0	504,000	0	101,902	0	0	0	0	0	0	0	0
18	1.93	0.0	0.0	33.8	61,732	0	29,402	91,134	14,204	11	0	499,000	0	95,490	0	0	0	0	0	0	0	0
19	0.00	0.0	0.0	34.1	75,467	0	15,244	90,711	10,543	4	0	497,000	0	102,202	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	33.6	91,448	0	2	91,450	13,587	17	0	499,000	0	102,032	0	0	0	0	0	0	0	0
21	0.01	0.0	0.0	33.5	103,626	1	24	103,650	11,025	9	0	497,000	0	102,582	0	0	0	0	0	0	0	0
22	0.28	0.0	0.0	33.5	52,068	0	32,930	84,998	5,617	4	0	504,000	0	45,520	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	33.5	7,673	0	10,701	18,374	4,056	3	0	500,000	0	0	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	33.5	7,673	0	10,701	18,374	4,056	3	0	497,000	0	95,478	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	33.6	58,790	0	32,118	90,908	14,047	11	0	492,000	0	94,398	0	0	0	0	0	0	0	0
26	1.02	0.0	0.0	33.5	70,417	0	26,072	96,489	9,789	7	0	497,000	0	109,613	0	0	0	0	0	0	0	0
27	0.37	0.0	0.0	33.7	81,312	0	17,544	98,856	5,980	5	0	497,000	0	102,274	0	0	0	0	0	0	0	0
28	0.25	0.0	0.0	33.5	83,637	0	13,562	97,199	6,105	5	0	499,000	0	109,360	0	0	0	0	0	0	0	0
29	0.22	0.0	0.0	33.5	87,940	0	13,627	101,567	6,533	4	0	497,000	0	73,764	0	0	0	0	0	0	0	0
30	0.01	0.0	0.0	33.6	31,182	0	4,474	35,655	2,027	2	0	493,000	0	0	0	0	0	0	0	0	0	0
31	0.01	0.0	0.0	33.7	31,182	0	4,474	35,655	2,027	2	0	489,000	0	110,180	0	0	0	0	0	0	0	0
Total	11.06				1,554,520	943	606,144	2,160,664	360,961	187				2,409,427								
Daily Average		0.0	0.0	33.8	50,146	30	19,553	69,699	11,644	6	0	496,300				0	0					
Mo. Average																0						0

- 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.

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**TABLE 2. FIELD DATA ENTRY FORM
AUGUST 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.)	U Effluent Hauled		V Effluent Dust Control (Sprayed) (gal.)	
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)		
1	2.00	2,492,770	25.1	2,840,023	220,850	12,472	9,071,620	109,844	0.0	0.0	0.0	0	0.00	16.42	0	23,018	0	0	0	0	0	0
2	0.33	2,493,491	25.0	2,840,222	224,373	12,474	9,077,154	109,844	0.0	0.0	0.0	0	0.00	17.09	0	0	0	0	0	0	0	0
3	0.38	2,494,211	24.9	2,840,420	227,896	12,476	9,082,688	109,844	0.0	0.0	0.0	0	0.00	17.75	0	43,063	14,083	0	0	0	0	0
4	0.00	2,515,581	24.8	2,840,824	229,377	12,477	9,128,014	109,844	0.0	0.0	0.0	0	0.00	17.50	0	35,929	50,790	0	0	0	0	0
5	0.00	2,536,665	24.8	2,840,988	254,689	12,478	9,164,700	110,107	0.0	0.0	0.0	0	0.00	17.50	0	42,996	35,246	0	0	0	0	0
6	0.53	2,552,987	25.0	2,841,392	274,019	12,480	9,195,584	110,373	0.0	0.0	0.0	0	0.00	17.00	0	74,020	29,023	0	0	0	0	0
7	0.00	2,592,532	24.7	2,841,518	304,929	12,484	9,228,450	110,602	0.0	0.0	0.0	0	0.00	16.92	0	81,141	36,569	0	0	0	0	0
8	0.72	2,651,204	24.7	2,842,743	331,666	12,499	9,260,010	110,748	0.0	0.0	0.0	0	0.00	17.25	0	73,549	0	0	0	0	0	0
9	1.48	2,674,777	24.7	2,842,900	341,150	12,505	9,270,225	110,756	0.0	0.0	0.0	0	0.00	17.25	0	0	0	0	0	0	0	0
10	0.42	2,698,350	24.7	2,843,056	350,633	12,510	9,280,440	110,763	0.0	0.0	0.0	0	0.00	17.25	0	73,971	36,179	0	0	0	0	0
11	0.00	2,732,250	24.9	2,843,170	371,700	12,520	9,319,750	110,763	0.0	0.0	0.0	0	0.00	17.08	0	73,667	36,567	0	0	0	0	0
12	0.00	2,793,911	24.6	2,843,474	392,435	12,535	9,348,186	110,763	0.0	0.0	0.0	0	0.00	17.00	0	74,053	36,593	0	0	0	0	0
13	0.26	2,864,273	24.5	2,844,339	411,608	12,545	9,374,446	110,763	0.0	0.0	0.0	0	0.00	17.25	0	81,453	28,643	0	0	0	0	0
14	0.22	2,939,991	25.1	2,845,314	423,826	12,552	9,398,548	110,763	0.0	0.0	0.0	0	0.00	17.25	0	73,645	28,972	0	0	0	0	0
15	0.27	3,015,390	25.3	2,846,070	433,440	12,560	9,419,470	110,764	0.0	0.0	0.0	0	0.00	17.25	0	81,462	0	0	0	0	0	0
16	0.30	3,046,013	25.3	2,846,109	436,654	12,563	9,426,726	110,764	0.0	0.0	0.0	0	0.00	17.38	0	0	0	0	0	0	0	0
17	0.05	3,076,635	25.2	2,846,148	439,867	12,565	9,433,982	110,764	0.0	0.0	0.0	0	0.00	17.50	0	66,460	35,442	0	0	0	0	0
18	1.93	3,138,367	24.8	2,846,816	453,403	12,576	9,463,384	110,764	0.0	0.0	0.0	0	0.00	17.33	0	73,748	21,742	0	0	0	0	0
19	0.00	3,213,834	25.1	2,847,431	463,331	12,580	9,478,628	110,764	0.0	0.0	0.0	0	0.00	17.25	0	73,644	28,558	0	0	0	0	0
20	0.00	3,305,282	24.6	2,849,312	475,037	12,597	9,478,630	110,764	0.0	0.0	0.0	0	0.00	17.33	0	73,598	28,434	0	0	0	0	0
21	0.01	3,408,908	24.5	2,850,614	484,760	12,606	9,478,654	110,765	0.0	0.0	0.0	0	0.00	17.25	0	74,154	28,428	0	0	0	0	0
22	0.28	3,460,976	24.5	2,851,231	489,760	12,610	9,511,584	110,765	0.0	0.0	0.0	0	0.00	17.50	0	45,520	0	0	0	0	0	0
23	0.00	3,468,649	24.5	2,851,247	493,800	12,613	9,522,285	110,765	0.0	0.0	0.0	0	0.00	17.38	0	0	0	0	0	0	0	0
24	0.00	3,476,321	24.5	2,851,263	497,839	12,616	9,532,986	110,765	0.0	0.0	0.0	0	0.00	17.25	0	66,924	28,554	0	0	0	0	0
25	0.00	3,535,111	24.6	2,851,769	511,380	12,627	9,565,104	110,765	0.0	0.0	0.0	0	0.00	17.08	0	65,878	28,520	0	0	0	0	0
26	1.02	3,605,528	24.5	2,851,876	521,062	12,634	9,591,176	110,765	0.0	0.0	0.0	0	0.00	17.25	0	81,187	28,426	0	0	0	0	0
27	0.37	3,686,840	24.7	2,852,118	526,800	12,639	9,608,720	110,765	0.0	0.0	0.0	0	0.00	17.25	0	73,644	28,630	0	0	0	0	0
28	0.25	3,770,477	24.5	2,852,122	532,901	12,644	9,622,282	110,765	0.0	0.0	0.0	0	0.00	17.33	0	80,936	28,424	0	0	0	0	0
29	0.22	3,858,417	24.5	2,852,765	538,791	12,648	9,635,909	110,765	0.0	0.0	0.0	0	0.00	17.25	0	73,764	0	0	0	0	0	0
30	0.01	3,889,599	24.6	2,852,810	540,773	12,650	9,640,383	110,765	0.0	0.0	0.0	0	0.00	17.13	0	0	0	0	0	0	0	0
31	0.01	3,920,780	24.7	2,852,855	542,755	12,651	9,644,856	110,765	0.0	0.0	0.0	0	0.00	17.00	0	81,146	29,034	0	0	0	0	0
Totals	11.06											0			0	1,762,570	646,857	0	0	0	0	0

projects\balance\2015\08-15bal.xls (ds 8/30/15)

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	Sections 7-8 acres	Section 9 acres
Open	0	5
Intermediate	19.3	10
Final	0	0
Not Opened	0	0

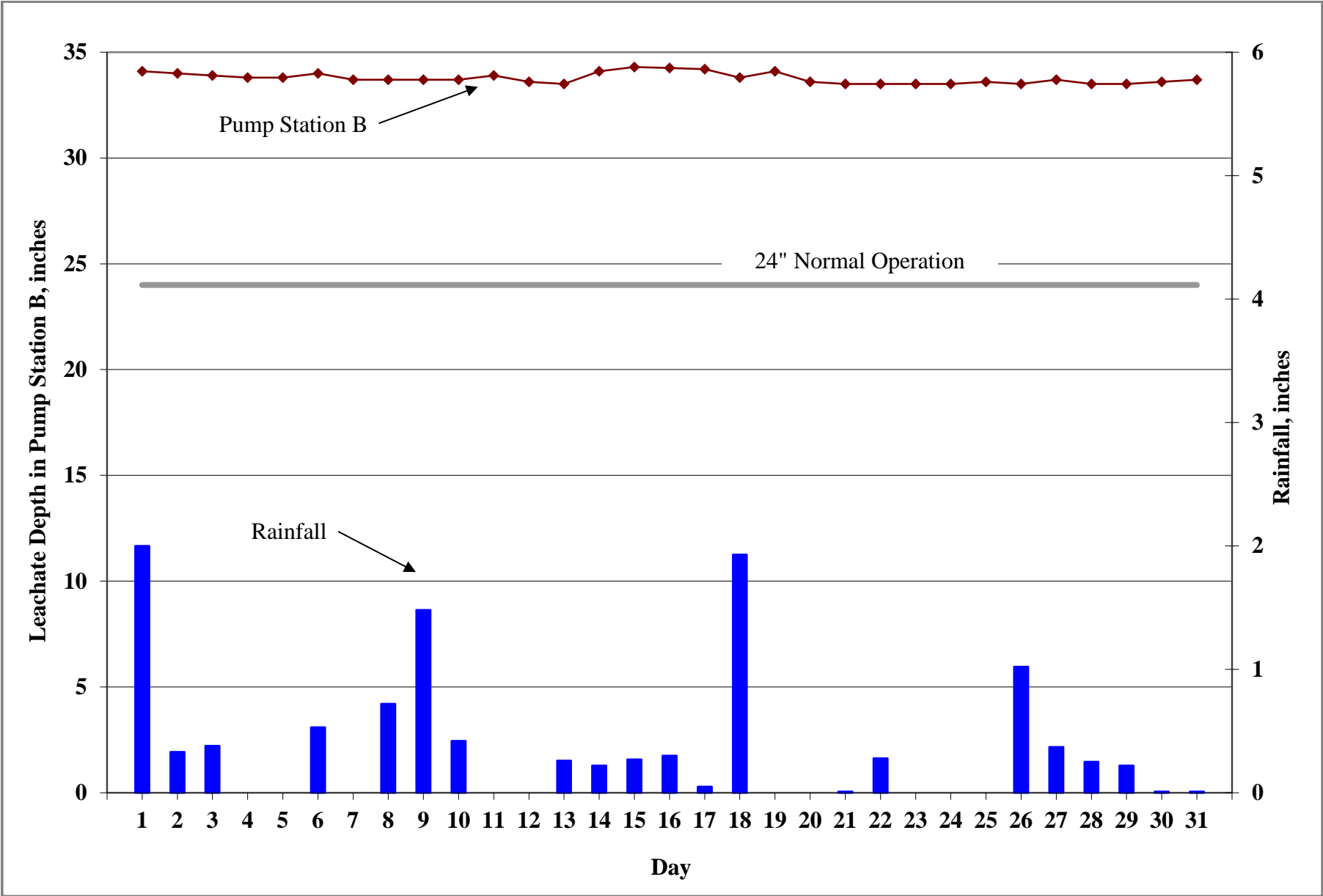


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2015.



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

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DATE: October 8, 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 September 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 3.48 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 69,301 gallons. A total of 2,079,020 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 3,925 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 260,430 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 2,339,450 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 119,953 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 76 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 477,600 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 2,479,187 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 2,463,466 gallons. Total outflow quantity from the LTRF was 2,479,187 gallons. The change in storage for the month decreased by 15,721 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 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	33.8	87,087	0	24,800	111,887	11,633	8	0	494,000	0	86,890	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	33.5	78,205	135	11,834	90,039	4,736	3	0	494,000	0	110,647	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	33.7	89,881	62	15,326	105,207	6,196	5	0	494,000	0	102,945	0	0	0	0	0	0	0	0
4	0.53	0.0	0.0	33.8	85,017	1	11,110	96,127	4,601	3	0	494,000	0	81,544	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	34.0	70,159	9	8,074	78,233	4,892	4	0	497,000	0	66,295	0	0	0	0	0	0	0	0
6	0.32	0.0	0.0	33.8	19,162	131	4,500	23,662	1,059	1	0	484,000	0	0	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	33.7	12,775	87	3,000	15,775	706	1	0	475,000	0	38,342	0	0	0	0	0	0	0	0
8	0.10	0.0	0.0	33.4	25,550	174	6,000	31,550	1,412	2	0	458,000	0	101,798	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	34.0	109,884	207	27,000	136,884	5	0	0	494,000	0	88,453	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	33.9	71,614	194	9,094	80,708	14,333	9	0	497,000	0	109,752	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	34.0	99,088	201	14,252	113,340	7,773	6	0	497,000	0	101,891	0	0	0	0	0	0	0	0
12	0.07	0.0	0.0	34.6	87,195	209	8,766	95,961	4,530	4	0	497,000	0	73,670	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	34.1	32,297	53	4,206	36,503	1,919	2	0	500,000	0	0	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	33.6	32,297	53	4,206	36,503	1,919	2	0	504,000	0	81,065	0	0	0	0	0	0	0	0
15	0.12	0.0	0.0	33.7	68,643	0	15,188	83,831	7,506	4	0	497,000	0	94,343	0	0	0	0	0	0	0	0
16	0.01	0.0	0.0	33.6	83,167	114	12,080	95,247	4,371	3	0	497,000	0	109,713	0	0	0	0	0	0	0	0
17	0.45	0.0	0.0	33.5	98,214	197	11,408	109,622	5,257	4	0	497,000	0	94,424	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	33.5	81,763	214	11,688	93,451	3,780	2	0	502,000	0	93,754	0	0	0	0	0	0	0	0
19	0.12	0.0	0.0	33.1	75,670	233	11,664	87,334	4,032	1	0	499,000	0	81,334	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	33.3	37,648	257	3,669	41,317	1,665	1	0	501,000	0	0	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	33.5	37,648	257	3,669	41,317	1,665	1	0	504,000	0	95,385	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	33.6	84,105	264	17,112	101,217	6,896	3	0	497,000	0	103,602	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	33.6	92,563	262	11,272	103,835	4,141	2	0	492,000	0	117,802	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	33.2	11,864	245	896	12,760	3,844	2	0	403,000	0	102,858	0	0	0	0	0	0	0	0
25	0.77	0.0	0.0	34.0	112,076	257	9,616	121,692	3,637	3	0	410,000	0	117,873	0	0	0	0	0	0	0	0
26	0.07	0.0	0.0	33.2	117,349	110	0	117,349	3,246	1	0	417,000	0	89,095	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	33.4	82,548	0	0	82,548	2,100	0	0	456,000	0	0	0	0	0	0	0	0	0	0
28	0.10	0.0	0.0	33.5	82,548	0	0	82,548	2,100	0	0	494,000	0	109,156	0	0	0	0	0	0	0	0
29	0.82	0.0	0.0	33.2	13,546	0	0	13,546	0	0	0	398,000	0	109,711	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	33.2	99,459	0	0	99,459	0	0	0	384,000	0	116,845	0	0	0	0	0	0	0	0
Total	3.48				2,079,020	3,925	260,430	2,339,450	119,953	76			0	2,479,187				0	0	0	0	0
Daily Average		0.0	0.0	33.6	69,301	131	8,681	77,982	3,998	3	0	477,600			0	0	0					
Mo. Average															0				0	0	0	0

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. 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. Columns 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.

projects\balance\2015\09-15bal.xls (DS 9/30/15)

**TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 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	4,007,867	24.8	2,853,861	553,382	12,659	9,669,656	110,765	0.0	0.0	0.0	0	0.00	17.17	0	79,590	7,300	0	0	0	0
2	0.00	4,086,072	24.5	2,855,864	556,115	12,662	9,681,490	110,900	0.0	0.0	0.0	0	0.00	17.17	0	81,409	29,238	0	0	0	0
3	0.00	4,175,953	24.7	2,856,650	561,525	12,667	9,696,816	110,962	0.0	0.0	0.0	0	0.00	17.17	0	81,436	21,509	0	0	0	0
4	0.53	4,260,970	24.8	2,858,019	564,757	12,670	9,707,926	110,963	0.0	0.0	0.0	0	0.00	17.17	0	81,544	0	0	0	0	0
5	0.00	4,331,129	25.0	2,859,398	568,270	12,674	9,716,000	110,972	0.0	0.0	0.0	0	0.00	17.25	0	66,295	0	0	0	0	0
6	0.32	4,350,291	24.8	2,859,493	569,235	12,675	9,720,500	111,103	0.0	0.0	0.0	0	0.00	16.81	0	0	0	0	0	0	0
7	0.00	4,363,066	24.7	2,859,556	569,878	12,676	9,723,500	111,190	0.0	0.0	0.0	0	0.00	16.51	0	38,342	0	0	0	0	0
8	0.10	4,388,616	24.4	2,859,682	571,164	12,678	9,729,500	111,364	0.0	0.0	0.0	0	0.00	15.92	0	73,253	28,545	0	0	0	0
9	0.00	4,498,500	25.0	2,859,682	571,169	12,678	9,756,500	111,571	0.0	0.0	0.0	0	0.00	17.17	0	59,891	28,562	0	0	0	0
10	0.00	4,570,114	24.9	2,861,626	583,558	12,687	9,765,594	111,765	0.0	0.0	0.0	0	0.00	17.25	0	81,345	28,407	0	0	0	0
11	0.00	4,669,202	25.0	2,861,943	591,014	12,693	9,779,846	111,966	0.0	0.0	0.0	0	0.00	17.25	0	73,688	28,203	0	0	0	0
12	0.07	4,756,397	25.6	2,862,653	594,834	12,697	9,788,612	112,175	0.0	0.0	0.0	0	0.00	17.25	0	73,670	0	0	0	0	0
13	0.00	4,788,694	25.1	2,863,036	596,370	12,699	9,792,818	112,228	0.0	0.0	0.0	0	0.00	17.38	0	0	0	0	0	0	0
14	0.00	4,820,990	24.6	2,863,418	597,906	12,700	9,797,024	112,280	0.0	0.0	0.0	0	0.00	17.50	0	52,582	28,483	0	0	0	0
15	0.12	4,889,633	24.7	2,863,519	605,311	12,704	9,812,212	112,280	0.0	0.0	0.0	0	0.00	17.25	0	65,913	28,430	0	0	0	0
16	0.01	4,972,800	24.6	2,864,224	608,977	12,707	9,824,292	112,394	0.0	0.0	0.0	0	0.00	17.25	0	81,194	28,519	0	0	0	0
17	0.45	5,071,014	24.5	2,864,820	613,638	12,711	9,835,700	112,591	0.0	0.0	0.0	0	0.00	17.25	0	66,003	28,421	0	0	0	0
18	0.00	5,152,777	24.5	2,865,659	616,579	12,713	9,847,388	112,805	0.0	0.0	0.0	0	0.00	17.42	0	58,856	34,898	0	0	0	0
19	0.12	5,228,447	24.1	2,867,082	619,188	12,714	9,859,052	113,038	0.0	0.0	0.0	0	0.00	17.33	0	81,334	0	0	0	0	0
20	0.00	5,266,095	24.3	2,867,293	620,642	12,715	9,862,721	113,295	0.0	0.0	0.0	0	0.00	17.42	0	0	0	0	0	0	0
21	0.00	5,303,742	24.5	2,867,504	622,095	12,716	9,866,390	113,552	0.0	0.0	0.0	0	0.00	17.50	0	66,294	29,091	0	0	0	0
22	0.00	5,387,847	24.6	2,868,627	627,868	12,719	9,883,502	113,816	0.0	0.0	0.0	0	0.00	17.25	0	103,602	0	0	0	0	0
23	0.00	5,480,410	24.6	2,870,430	630,206	12,721	9,894,774	114,078	0.0	0.0	0.0	0	0.00	17.08	0	81,255	36,547	0	0	0	0
24	0.00	5,492,274	24.2	2,871,488	632,992	12,723	9,895,670	114,323	0.0	0.0	0.0	0	0.00	14.00	0	73,638	29,220	0	0	0	0
25	0.77	5,604,350	25.0	2,873,461	634,656	12,726	9,905,286	114,580	0.0	0.0	0.0	0	0.00	14.25	0	81,351	36,522	0	0	0	0
26	0.07	5,721,699	24.2	2,875,404	635,959	12,727	NA	114,690	0.0	0.0	0.0	0	0.00	14.50	0	89,095	0	0	0	0	0
27	0.00	5,804,247	24.4	2,877,502	635,961	12,727	NA	114,690	0.0	0.0	0.0	0	0.00	15.84	0	0	0	0	0	0	0
28	0.10	5,886,795	24.5	2,879,600	635,963	12,727	NA	114,690	0.0	0.0	0.0	0	0.00	17.17	0	80,532	28,624	0	0	0	0
29	0.82	5,900,341	24.2	NA	NA	NA	NA	114,690	0.0	0.0	0.0	0	0.00	13.83	0	81,298	28,413	0	0	0	0
30	0.00	5,999,800	24.2	2,885,059	639,022	12,728	NA	114,690	0.0	0.0	0.0	0	0.00	13.33	0	81,313	35,532	0	0	0	0
Totals	3.48											0				1,934,723	544,464	0	0	0	0

projects/balance/2015/09-15ba.xls (DS 9/30/15)

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	Sections 7-8 acres	Section 9 acres
Open	0	5
Intermediate	19.3	10
Final	0	0
Not Opened	0	0

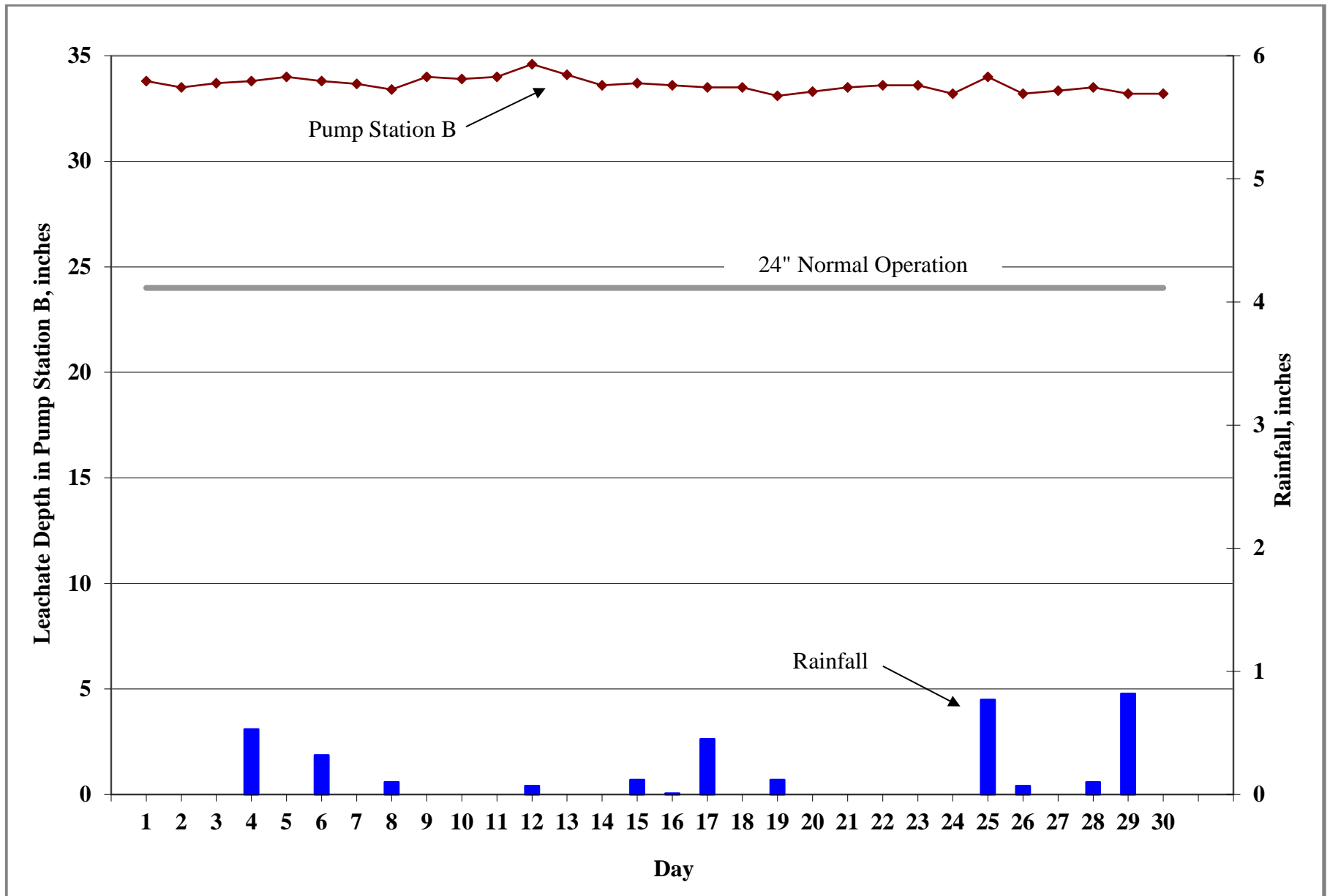


Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2015.

**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														
November														
December														
YTD Total	50.09	59,375	849,177	1,775,398	15,647,357	17,541,621	7,242	0	0	0	0	18,331,307	17,548,863	782,444

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.