Hillsborough County
Florida
Office of the Interim County Administrator
Michael S. Merrill

January 14, 2011

Ms. Susan J. Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – Leachate Data Quarterly Report

Dear Ms. Pelz:

In accordance with Specific Condition No. 8 of Permit No. 35435-014-SO, the Solid Waste Management Department (SWMD) is submitting the quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending January 15, 2011.

The data is being submitted as separate monthly reports for October, November, and December 2010. The information includes the leachate level in Pump Station B (PS-B). PS-B was below the 24-inch normal operation level during this quarter except for October 19, 23 and 24, due to bubbler malfunctions. These malfunctions were immediately corrected.

Also attached is the top of the phosphatic clay liner elevation at the Pump Station B Sump.

Please advise should you have any questions concerning the attached submittal.

Sincerely,

Patricia V. Berry
Landfill and Environmental Services Section Manager
Solid Waste Management Division
Public Utilities Department

Attachment
xc: Larry Ruiz, SWMD
Cindy Pelley, SWMD
Rich Siemering, HDR
Ron Cope, EPC
Paul Schipfer, EPC

Hillsborough County
Florida
Office of the Interim County Administrator
Michael S. Merrill

November 22, 2010

Ms. Susan J. Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – October 2010 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Department's (SWMD) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMD is providing the Landfill's Water Balance Report for the month of October 2010. In addition, the SWMD is providing the October 2010 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (FDEP) and the Hillsborough County Environmental Protection Commission as part of the quarterly Leachate Water Balance report on the Landfill leachate management efforts in accordance with Permit No. 35435-014-SO, Specific Condition No. 8.

As initiated with the April 1996 report, the Landfill leachate information for October 2010 includes an evaluation by SWMD staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches except for October 19, 23, and 24 due to bubbler malfunctions. The average depth of leachate in the PS-B sump for the recorded days in October 2010 was 21.4 inches.

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

Sincerely,

Patricia V. Berry
Landfill and Environmental Services Section Manager
Solid Waste Management Division

Attachments

glfs/lea1010.dep

Hillsborough County
Florida
Office of the Interim County Administrator
Michael S. Merrill

MEMORANDUM

DATE: November 18, 2010

TO: Patricia Berry, Section Manager, Solid Waste Management Division

FROM: Larry Ruiz, General Manager III, Solid Waste Management Division
Raymond Graves, Sr. Eng. Tech., Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for October
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 2010 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 no 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 the daily average depth of effluent stored in Pond A was 1.6 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month 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 below the normal operation level of 24-inches except for October 19, 23, and 24 due to bubbler malfunctions. The average recorded depth of leachate in the PS-B sump was 21.4 inches.

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

Column VI presents the quantity of leachate from Phase IV pumped to PS-B by Temporary Pump Station-6 (TPS-6). The quantity of leachate removed by TPS-6 is measured in gallons by an in-line flow meter and is included in the quantity of leachate pumped to the Main Leachate Pump Station (MLPS) from Phases I-VI (Column VII). The average daily amount of leachate pumped from TPS-6 was 17,195 gallons. A total of 533,030 gallons of leachate was pumped this month.

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 quantity in column VII also includes the daily amount of leachate, in gallons, pumped from TPS-6. The average daily amount of leachate pumped from PS-A was 28,480 gallons. A total of 882,872 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 588 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 57,253 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 940,232 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 40,822 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 108 gallons of leachate were 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 an average of 238,900 gallons of leachate was stored in the tank.

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. This month an average of 216,700 gallons of effluent 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 a total of 762,300 gallons of leachate was treated.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 271,013 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 a daily average of 45,500 gallons of effluent was 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 a total of 761,234 gallons of effluent were 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 a total of 6,004 gallons of effluent were 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. The total evaporation estimated for this month was 609,000 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 981,054 gallons. Total outflow quantity from the LTRF was 1,033,313 gallons. The change in storage for the month decreased by 52,259 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
OCTOBER 2010
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	0.00	2.0	0.0	22.1	25,290	38,777	22	1	38,778	0	0	278,000	259,000	32,200	0	0	61,000	0	0	36,905	0	0	29,500
2	0.00	1.6	0.0	22.7	18,600	27,218	22	3,643	30,862	5,495	1	278,000	261,000	22,000	0	0	44,000	0	0	16,142	0	0	12,900
3	0.00	1.8	0.0	22.8	11,265	19,819	19	1,880	21,707	1,732	8	278,000	264,000	27,060	0	0	52,000	0	0	0	0	0	0
4	0.00	2.0	0.0	22.8	11,265	19,819	19	1,880	21,707	1,732	8	278,000	266,000	22,000	0	0	61,000	0	0	44,204	0	0	35,400
5	0.00	1.5	0.0	22.2	15,980	26,900	28	4,139	31,040	1,584	1	286,000	266,000	24,400	0	0	40,000	0	0	46,550	0	0	37,200
6	0.00	1.5	0.0	22.6	17,990	28,815	19	0	28,815	455	0	293,000	245,000	24,800	6,016	0	40,000	0	0	42,741	0	0	34,200
7	0.00	1.6	0.0	22.2	13,005	20,201	13	4,343	24,545	714	1	278,000	221,000	27,300	12,033	0	44,000	0	0	35,085	0	6,004	28,100
8	0.00	1.6	0.0	21.5	21,835	31,233	22	0	31,233	1,098	0	281,000	204,000	25,100	12,032	0	44,000	0	0	49,080	0	0	39,300
9	0.00	1.6	0.0	22.6	21,980	34,717	23	0	34,719	3,466	2	281,000	180,000	24,600	0	0	44,000	0	0	17,822	0	0	14,300
10	0.00	1.4	0.0	22.8	21,210	32,891	27	0	32,891	2,147	0	287,000	205,000	24,600	0	0	36,090	0	0	0	0	0	0
11	0.00	1.1	0.0	22.9	21,210	31,891	27	0	31,891	2,147	0	293,000	230,000	24,700	18,048	0	28,000	0	0	0	0	0	0
12	0.00	2.2	0.0	22.2	23,670	34,935	20	0	34,935	317	0	293,000	202,000	26,900	18,051	0	70,000	0	0	58,584	0	0	47,100
13	0.00	1.8	0.0	18.9	26,440	34,840	10	0	34,840	0	0	278,000	185,000	24,300	18,047	0	52,000	0	0	0	0	0	0
14	0.00	2.3	0.0	23.5	24,460	33,413	1	0	33,413	0	0	266,000	182,000	24,700	18,046	0	74,000	0	0	31,883	0	0	25,900
15	0.00	1.7	0.0	23.1	10,550	17,499	34	0	17,512	3,638	13	245,000	204,000	25,100	12,031	0	48,000	0	0	28,289	0	0	22,600
16	0.00	1.8	0.0	21.7	6,350	9,939	44	0	9,941	0	2	223,000	189,000	24,300	0	0	52,000	0	0	28,529	0	0	22,800
17	0.00	1.5	0.0	19.9	19,795	34,464	20	0	34,473	2,334	9	255,000	212,000	25,000	0	0	40,000	0	0	0	0	0	0
18	0.00	1.2	0.0	18.1	19,705	34,464	20	0	34,473	2,334	9	247,000	235,000	24,100	0	0	32,000	0	0	0	0	0	0
19	0.00	2.0	0.0	32.0	5,470	9,469	18	0	9,475	0	6	230,000	216,000	21,400	18,061	0	61,000	0	0	55,447	0	0	44,400
20	0.00	2.0	0.0	16.3	10,775	19,039	14	0	19,039	0	0	206,000	192,000	24,000	18,061	0	61,000	0	0	55,513	0	0	44,400
21	0.00	1.5	0.0	17.4	2,035	2,061	14	0	2,065	3,255	4	163,000	185,000	23,400	18,106	0	40,000	0	0	0	0	0	0
22	0.00	2.0	0.0	17.6	21,200	56,264	9	0	56,270	305	6	178,000	185,000	23,200	18,107	0	61,000	0	0	52,003	0	0	41,600
23	0.00	1.4	0.0	33.1	24,460	47,385	8	0	47,385	0	0	189,000	182,000	24,800	0	0	36,000	0	0	0	0	0	0
24	0.00	1.3	0.0	24.3	1,520	25,468	23	0	25,468	1,801	6	189,000	207,000	24,900	0	0	36,000	0	0	0	0	0	0
25	0.00	1.3	0.0	15.8	1,520	25,468	23	0	25,468	1,801	6	189,000	233,000	24,300	18,121	0	36,000	0	0	0	0	0	0
26	0.00	1.3	0.0	22.4	18,180	31,030	31	25,002	56,032	0	0	209,000	259,000	26,400	18,077	0	36,000	0	0	39,623	0	0	31,700
27	0.00	1.2	0.0	22.1	24,600	35,356	9	4,583	39,939	0	0	202,000	230,000	23,300	18,047	0	32,000	0	0	53,881	0	0	43,100
28	0.00	1.2	0.0	21.4	27,140	33,871	19	3,390	37,265	2,160	4	197,000	214,000	25,000	12,034	0	32,000	0	0	26,630	0	0	21,300
29	0.00	1.6	0.0	21.8	19,500	27,262	15	3,351	30,626	1,196	13	187,000	199,000	24,400	18,095	0	44,000	0	0	42,025	0	0	33,600
30	0.00	1.3	0.0	9.0	22,020	29,270	11	3,305	32,575	0	0	182,000	192,000	24,900	0	0	36,000	0	0	0	0	0	0
31	0.00	1.3	0.0	25.3	24,100	38,108	5	1,736	39,855	1,133	10	187,000	215,000	24,200	0	0	36,000	0	0	0	0	0	0
Total	0.00				533,030	882,872	588	57,253	940,232	40,822	108			762,300	271,013	0			0	761,234	0	6,004	609,000
Daily Average		1.6	0.0	21.4	17,195	28,480	19	1,847	30,330	1,317	3	238,900	216,700				45,900	0					
Mo. Average																0				24,600	0	200	19,650

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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
OCTOBER 2010
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	0.00	21,295,970	5,238,831	13.1	1,796,649	1,322,258	1,341	2,516,635	210	0.0	0.0	2.0	36,905	9.67	9.00	32,180	0	0	0	0	0	0
2	0.00	21,314,570	5,266,049	13.7	1,796,649	1,327,751	1,342	2,520,278	232	0.0	0.0	1.6	16,142	9.67	9.08	21,973	0	0	0	0	0	0
3	0.00	*21,325,835*	*5,285,868*	*13.8*	*1,797,650*	*1,328,476*	*1,350*	*2,522,758*	*253*	0.0	0.0	*1.8*	0	*9.7*	*9.2*	*21,973*	0	0	0	0	0	0
4	0.00	21,337,100	5,305,686	13.8	1,798,663	1,329,201	1,358	2,524,038	270	0.0	0.0	2.0	44,204	9.67	9.25	21,974	0	0	0	0	0	0
5	0.00	21,353,080	5,332,586	13.2	1,798,663	1,330,785	1,359	2,528,177	298	0.0	0.0	1.5	46,550	9.92	9.25	24,379	0	0	0	0	0	0
6	0.00	21,371,070	5,361,401	13.6	1,798,663	1,331,240	1,359	2,528,177	317	0.0	0.0	1.5	42,741	10.17	8.50	24,793	0	6,016	0	0	0	0
7	0.00	21,384,075	5,381,602	13.2	1,798,663	1,331,954	1,360	2,532,520	330	0.0	0.0	1.6	35,085	9.67	7.67	27,320	0	12,033	0	0	6,004	0
8	0.00	21,405,910	5,412,835	12.5	1,798,663	1,333,052	1,360	2,532,520	352	0.0	0.0	1.6	49,080	9.75	7.08	25,100	0	12,032	0	0	0	0
9	0.00	21,427,890	5,447,552	13.6	1,798,663	1,336,498	1,362	2,532,520	375	0.0	0.0	1.6	17,822	9.75	6.25	24,610	0	0	0	0	0	0
10	0.00	*21,449,100*	*5,479,443*	*13.8*	*1,799,681*	*1,337,628*	*1,362*	*2,532,520*	*402*	0.0	0.0	*1.4*	0	*10.0*	*7.1*	*24,622*	0	0	0	0	0	0
11	0.00	21,470,310	5,511,334	13.9	1,800,698	1,338,757	1,362	2,532,520	428	0.0	0.0	1.1	0	10.17	8.00	24,680	0	18,048	0	0	0	0
12	0.00	21,493,980	5,546,269	13.2	1,800,710	1,339,062	1,362	2,532,520	448	0.0	0.0	2.2	58,884	10.17	7.00	26,900	0	18,051	0	0	0	0
13	0.00	21,520,420	5,581,109	9.0	1,800,710	1,339,062	1,362	2,532,520	458	0.0	0.0	1.8	0	9.67	6.42	24,325	0	18,047	0	0	0	0
14	0.00	21,544,880	5,614,520	14.5	1,800,710	1,339,062	1,362	2,532,520	459	0.0	0.0	2.3	31,883	9.25	6.33	24,652	0	18,046	0	0	0	0
15	0.00	21,555,430	5,632,019	14.1	1,804,130	1,339,280	1,375	2,532,520	493	0.0	0.0	1.7	28,289	8.50	7.08	25,100	0	12,031	0	0	0	0
16	0.00	21,561,780	5,641,958	12.7	1,804,130	1,339,280	1,377	2,532,520	537	0.0	0.0	1.8	28,529	7.75	6.58	24,347	0	0	0	0	0	0
17	0.00	*21,581,485*	*5,676,422*	*10.9*	*1,804,940*	*1,340,804*	*1,386*	*2,532,520*	*557*	0.0	0.0	*1.5*	0	*8.2*	*7.4*	*25,022*	0	0	0	0	0	0
18	0.00	21,601,190	5,710,886	9.1	1,805,750	1,342,327	1,395	2,532,520	577	0.0	0.0	1.2	0	8.58	8.17	24,115	0	0	0	0	0	0
19	0.00	21,606,660	5,720,355	23.0	1,805,750	1,342,327	1,401	2,532,520	595	0.0	0.0	2.0	55,447	8.00	7.50	21,391	0	18,061	0	0	0	0
20	0.00	21,617,435	5,739,394	7.3	1,805,750	1,342,327	1,401	2,532,520	609	0.0	0.0	2.0	55,513	7.17	6.67	24,019	0	18,061	0	0	0	0
21	0.00	21,619,470	5,741,455	8.4	1,805,750	1,345,582	1,405	2,532,520	623	0.0	0.0	1.5	0	5.67	6.42	23,358	0	18,106	0	0	0	0
22	0.00	21,640,670	5,797,719	8.8	1,805,750	1,345,887	1,411	2,532,520	632	0.0	0.0	2.0	52,003	6.17	6.42	23,237	0	18,107	0	0	0	0
23	0.00	21,665,130	5,845,104	24.1	1,805,750	1,345,887	1,411	2,532,520	640	0.0	0.0	1.4	0	6.58	6.33	24,753	0	0	0	0	0	0
24	0.00	*21,666,650*	*5,870,567*	*15.5*	*1,805,750*	*1,347,688*	*1,417*	*2,532,520*	*663*	0.0	0.0	*1.4*	0	*6.6*	*7.2*	*24,920*	0	0	0	0	0	0
25	0.00	21,668,170	5,896,029	6.8	1,805,750	1,349,488	1,422	2,532,520	686	0.0	0.0	1.3	0	6.58	8.08	24,258	0	18,121	0	0	0	0
26	0.00	21,686,350	5,927,059	13.4	1,805,750	1,349,488	1,422	2,557,522	717	0.0	0.0	1.3	39,623	7.25	9.00	26,380	0	18,077	0	0	0	0
27	0.00	21,710,950	5,962,415	13.1	1,805,750	1,349,488	1,422	2,562,105	726	0.0	0.0	1.2	53,881	7.00	8.00	23,306	0	18,047	0	0	0	0
28	0.00	21,738,090	5,996,286	12.4	1,807,720	1,349,678	1,426	2,565,495	745	0.0	0.0	1.2	26,630	6.83	7.42	25,026	0	12,034	0	0	0	0
29	0.00	21,757,590	6,023,548	12.8	1,808,916	1,349,678	1,439	2,568,846	760	0.0	0.0	1.6	42,023	6.50	6.92	24,400	0	18,095	0	0	0	0
30	0.00	21,779,610	6,052,818	0.0	1,808,916	1,349,678	1,447	2,572,151	771	0.0	0.0	1.3	0	6.33	6.67	24,888	0	0	0	0	0	0
31	0.00	*21,803,710*	*6,082,926*	*6.3*	*1,808,916*	*1,350,813*	*1,457*	*2,573,887*	*776*	0.0	0.0	*1.3*	0	*6.5*	*7.5*	*24,225*	0	0	0	0	0	0
Totals	0.00										0		761,234			762,226	0	271,013	0	0	6,004	0

projects\balance\2009\01-09bal.xls (jdw 11/02/10)

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

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2010

		Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (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	3.50	0	31,114	73,231	794,265	223,008	1,500	625,400	24,397	44,971	463,698	898,610	849,908	48,702
February	2.61	0	47,150	109,806	771,075	337,419	0	560,600	6,489	45,071	483,052	928,031	898,019	30,012
March	7.66	0	56,034	86,576	813,346	372,562	0	608,600	0	137,050	455,821	955,956	981,162	-25,207
April	3.04	0	57,944	71,442	812,598	337,294	0	643,200	6,011	65,856	719,336	941,984	980,494	-38,510
May	1.66	0	43,699	37,397	779,316	234,292	0	644,000	0	266,910	338,759	860,413	878,292	-17,879
June	7.43	0	60,719	20,449	740,158	318,992	0	602,600	242,614	120,108	184,585	821,326	921,592	-100,266
July	8.79	0	54,193	128,891	877,301	428,135	0	622,000	473,967	78,063	278,792	1,060,385	1,050,135	10,250
August	12.08	0	47,349	168,177	934,303	283,236	0	779,500	211,111	93,055	215,125	1,149,829	1,062,736	87,093
September	4.12	0	51,415	129,137	1,084,207	624,322	0	741,400	48,503	246,211	836,304	1,264,759	1,365,722	-100,963
October	0.00	0	40,930	57,253	882,872	271,013	0	762,300	6,004	0	761,234	981,054	1,033,313	-52,259
November														
December														
YTD Total	50.89	0	490,545	882,358	8,489,441	3,430,273	1,500	6,589,600	1,019,096	1,097,295	4,736,706	9,862,345	10,021,373	-159,028

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.

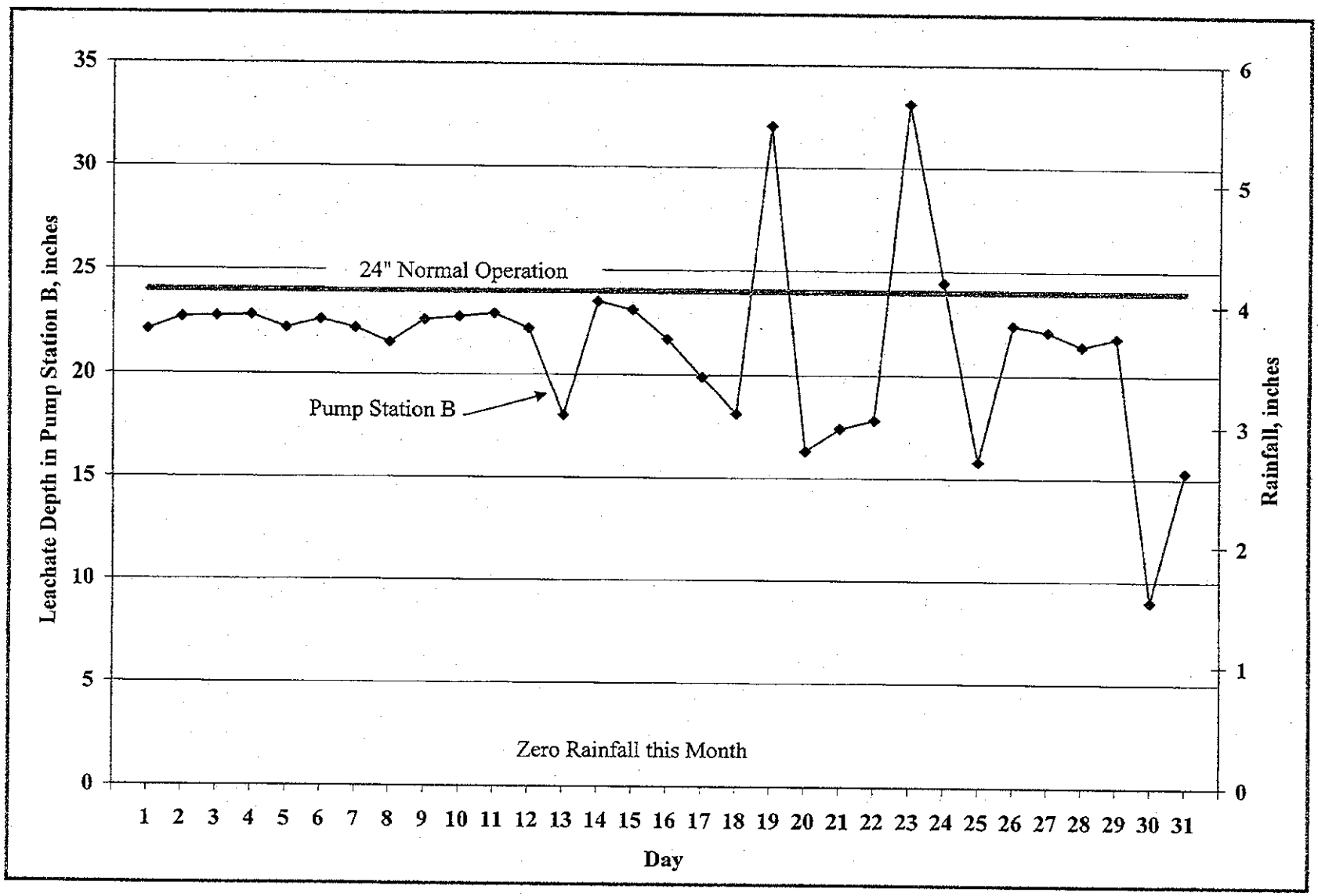

Figure 1. Leachate Levels in Pump Station B and Rainfall for October 2010.

Hillsborough County
Florida
Office of the Interim County Administrator
Michael S. Merrill

January 12, 2011

Ms. Susan J. Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – November 2010 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Department's (SWMD) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMD is providing the Landfill's Water Balance Report for the month of November 2010. In addition, the SWMD is providing the November 2010 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (FDEP) and the Hillsborough County Environmental Protection Commission as part of the quarterly Leachate Water Balance report on the Landfill leachate management efforts in accordance with Permit No. 35435-014-SO, Specific Condition No. 8.

As initiated with the April 1996 report, the Landfill leachate information for November 2010 includes an evaluation by SWMD staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches during the month of November 2010. The average depth of leachate in the PS-B sump for the recorded days in November 2010 was 22.4 inches.

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

Sincerely,

Patricia V. Berry
Landfill and Environmental Services Section Manager
Solid Waste Management Division

Attachments

glfs/lea1110.dep

Hillsborough County
Florida
Office of the County Administrator
Michael S. Merrill

MEMORANDUM

DATE: December 29, 2010

TO: Patricia Berry, Section Manager, Solid Waste Management Division

FROM: Larry Ruiz, General Manager III, Solid Waste Management Division
Raymond Graves, Sr. Eng. Tech., Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for November
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 2010 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 0.85 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 the daily average depth of effluent stored in Pond A was 2.2 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month 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 below the normal operation level of 24-inches. The average recorded depth of leachate in the PS-B sump was 22.4 inches.

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

Column VI presents the quantity of leachate from Phase IV pumped to PS-B by Temporary Pump Station-6 (TPS-6). The quantity of leachate removed by TPS-6 is measured in gallons by an in-line flow meter and is included in the quantity of leachate pumped to the Main Leachate Pump Station (MLPS) from Phases I-VI (Column VII). The average daily amount of leachate pumped from TPS-6 was 18,690 gallons. A total of 560,700 gallons of leachate was pumped this month.

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 quantity in column VII also includes the daily amount of leachate, in gallons, pumped from TPS-6. The average daily amount of leachate pumped from PS-A was 27,691 gallons. A total of 830,725 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 99 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 48,246 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 879,102 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 28,521 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 131 gallons of leachate were 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 an average of 168,300 gallons of leachate was stored in the tank.

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. This month an average of 239,400 gallons of effluent 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 a total of 732,300 gallons of leachate was treated.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 205,153 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 a daily average of 71,600 gallons of effluent was 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 a total of 701,368 gallons of effluent were 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 a total of 42,031 gallons of effluent were 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. The total evaporation estimated for this month was 561,000 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 907,623 gallons. Total outflow quantity from the LTRF was 937,453 gallons. The change in storage for the month decreased by 29,830 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
NOVEMBER 2010
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	0.00	1.3	0.0	21.6	48,200	60,216	10	3,471	63,706	2,270	19	192,000	238,000	26,400	12,076	0	36,000	0	0	24,689	0	0	19,800
2	0.33	1.7	0.0	21.5	23,600	29,183	5	0	29,183	2,923	0	187,000	216,000	24,300	6,051	0	48,000	0	0	0	0	6,004	0
3	0.17	2.5	0.0	20.5	24,940	31,277	5	4,500	35,777	41	0	197,000	202,000	24,200	0	0	83,000	0	0	27,936	0	0	22,300
4	0.10	2.0	0.0	21.1	21,640	32,499	6	1	32,500	790	0	202,000	225,000	34,300	18,083	0	61,000	0	0	0	0	0	0
5	0.00	2.0	0.0	23.3	17,330	33,720	0	4,171	37,892	1,707	1	206,000	250,000	17,200	18,051	0	61,000	0	0	0	0	0	0
6	0.00	2.5	0.0	21.7	29,630	35,765	10	1	35,766	0	0	202,000	245,000	25,100	0	0	83,000	0	0	0	0	0	0
7	0.00	*2.9*	*0.0*	*22.6*	*20,610*	*24,104*	*0*	*0*	*24,116*	*2,234*	*12*	*203,000*	*247,000*	*23,300*	0	0	103,000	0	0	0	0	0	0
8	0.00	3.3	0.0	23.4	20,610	24,104	0	0	24,116	2,234	12	204,000	250,000	23,300	18,054	0	123,000	0	0	52,698	0	0	42,200
9	0.00	2.5	0.0	23.1	24,950	31,260	0	0	31,261	0	1	192,000	250,000	22,300	18,109	0	83,000	0	0	58,756	0	0	47,000
10	0.00	1.8	0.0	23.5	24,230	30,330	0	0	30,334	0	4	180,000	254,000	24,000	12,062	0	52,000	0	0	16,634	0	0	13,300
11	0.00	2.0	0.0	23.5	23,135	28,511	0	7,182	35,702	0	9	185,000	254,000	25,200	0	0	61,000	0	0	25,805	0	0	20,600
12	0.00	2.0	0.0	22.1	12,495	17,879	1	0	17,887	2,676	8	180,000	257,000	26,100	0	0	61,000	0	0	25,612	0	0	20,500
13	0.00	1.8	0.0	23.1	20,650	26,929	0	4,573	31,502	2,447	0	187,000	259,000	24,900	0	0	52,000	0	0	20,390	0	0	16,300
14	0.00	*2.2*	*0.0*	*23.1*	*22,115*	*28,495*	*0*	*4*	*28,499*	*275*	*1*	*191,000*	*260,000*	*25,400*	0	0	70,000	0	0	0	0	0	0
15	0.00	2.5	0.0	23.0	22,115	28,495	0	4	28,499	275	1	194,000	261,000	25,400	12,071	0	83,000	0	0	51,412	0	0	41,100
16	0.25	1.9	0.0	22.0	26,230	35,784	0	0	35,788	1,291	4	189,000	264,000	24,900	18,117	0	57,000	0	0	0	0	0	0
17	0.00	2.8	0.0	23.2	12,440	22,251	0	0	22,251	0	0	168,000	242,000	33,100	18,151	0	98,000	0	0	0	0	0	0
18	0.00	3.4	0.0	22.4	11,020	22,251	0	6,487	28,741	44	3	156,000	240,000	15,900	18,118	0	129,000	0	0	55,668	0	0	44,500
19	0.00	2.3	0.0	23.3	27,830	33,277	0	0	33,280	0	3	144,000	264,000	25,000	18,093	0	74,000	0	0	49,149	0	0	39,300
20	0.00	2.3	0.0	23.7	8,320	11,044	8	4,258	15,312	187	10	130,000	245,000	24,500	0	0	74,000	0	0	50,813	0	0	40,700
21	0.00	*2.3*	*0.0*	*22.9*	*16,715*	*24,456*	*0.0*	*0*	*24,461*	*2,528*	*5*	*131,000*	*246,000*	*24,500*	0	0	74,000	0	0	0	0	0	0
22	0.00	2.3	0.0	22.1	16,715	24,456	*0.0*	0	24,461	2,528	5	132,000	247,000	24,500	0	0	74,000	0	0	51,857	0	12,010	41,500
23	0.00	2.0	0.0	22.0	15,435	23,896	5	4,050	27,947	58	1	137,000	223,000	25,100	0	0	61,000	0	0	0	0	18,012	0
24	0.00	2.6	0.0	21.4	12,375	23,611	5	0	23,619	0	8	137,000	204,000	24,900	6,037	0	88,000	0	0	49,490	0	6,005	39,600
25	0.00	2.5	0.0	21.7	11,340	25,446	9	2,186	27,644	1,971	13	137,000	206,000	24,900	0	0	83,000	0	0	0	0	0	0
26	0.00	2.3	0.0	22.0	11,340	25,446	9	2,186	27,644	1,971	13	137,000	209,000	25,100	0	0	74,000	0	0	50,561	0	0	40,400
27	0.00	2.0	0.0	21.5	11,390	26,805	6	0	26,805	0	0	144,000	202,000	24,500	0	0	61,000	0	0	20,916	0	0	16,700
28	0.00	*1.8*	*0.0*	*21.9*	*8,625*	*23,395*	*10*	*0*	*23,396*	*36*	*1*	*139,000*	*226,000*	*25,200*	0	0	52,000	0	0	0	0	0	0
29	0.00	1.6	0.0	22.2	8,625	23,395	10	0	23,396	36	1	134,000	250,000	24,800	6,043	0	44,000	0	0	30,146	0	0	24,100
30	0.00	1.6	0.0	22.6	6,050	22,447	0	5,172	27,619	0	0	132,000	247,000	14,000	6,037	0	44,000	0	0	38,836	0	0	31,100
Total	0.85				560,700	830,725	99	48,246	879,102	28,521	131			732,300	205,153	0			0	701,368	0	42,031	561,000
Daily Average		2.2	0.0	22.4	18,690	27,691	3	1,608	29,303	951	4	168,300	239,400				71,600	0					
Mo. Average																0				23,400	0	1,400	18,700

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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 2010
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
																	Leachate Hauled			Effluent Hauled		
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.)	Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.00	21,827,810	6,113,034	12.6	1,808,916	1,351,948	1,466	2,575,622	781	0.0	0.0	1.3	24,689	6.67	8.25	26,374	12,076	0	0	0	0	0
2	0.33	21,851,410	6,142,217	12.5	1,808,916	1,354,871	1,466	2,575,622	786	0.0	0.0	1.7	0	6.50	7.50	24,319	6,051	0	0	6,004	0	0
3	0.17	21,876,350	6,173,494	11.5	1,808,916	1,354,912	1,466	2,580,122	791	0.0	0.0	2.5	27,936	6.83	7.00	24,228	0	0	0	0	0	0
4	0.10	21,897,990	6,205,993	12.1	1,809,706	1,354,912	1,466	2,580,123	797	0.0	0.0	2.0	0	7.00	7.83	34,298	18,083	0	0	0	0	0
5	0.00	21,915,320	6,239,713	14.3	1,811,413	1,354,912	1,467	2,584,294	797	0.0	0.0	2.0	0	7.17	8.67	17,211	18,051	0	0	0	0	0
6	0.00	21,944,950	6,275,478	12.7	1,811,413	1,354,912	1,467	2,584,295	807	0.0	0.0	2.5	0	7.00	8.50	25,122	0	0	0	0	0	0
7	0.00	*21,965,560*	*6,299,582*	*13.6*	*1,812,125*	*1,356,434*	*1,479*	*2,584,295*	*807*	0.0	0.0	*2.9*	0	*7.0*	*8.6*	*23,298*	0	0	0	0	0	0
8	0.00	21,986,170	6,323,686	14.4	1,812,837	1,357,956	1,491	2,584,295	807	0.0	0.0	3.3	52,698	7.08	8.67	23,299	18,054	0	0	0	0	0
9	0.00	22,011,120	6,354,946	14.1	1,812,837	1,357,956	1,492	2,584,295	807	0.0	0.0	2.5	58,756	6.67	8.67	22,258	18,109	0	0	0	0	0
10	0.00	22,035,350	6,385,276	14.5	1,812,837	1,357,956	1,496	2,584,295	807	0.0	0.0	1.8	16,634	6.25	8.83	23,985	12,062	0	0	0	0	0
11	0.00	22,058,485	6,413,787	14.5	1,812,837	1,357,956	1,505	2,591,477	807	0.0	0.0	2.0	25,805	6.42	8.83	25,210	0	0	0	0	0	0
12	0.00	22,070,980	6,431,666	13.1	1,812,837	1,360,632	1,513	2,591,477	808	0.0	0.0	2.0	25,612	6.25	8.92	26,087	0	0	0	0	0	0
13	0.00	22,091,630	6,458,595	14.1	1,812,837	1,363,079	1,513	2,596,050	808	0.0	0.0	1.8	20,390	6.50	9.00	24,888	0	0	0	0	0	0
14	0.00	*22,113,745*	*6,487,090*	*14.1*	*1,812,837*	*1,363,354*	*1,514*	*2,596,054*	*808*	0.0	0.0	*2.2*	0	*6.6*	*9.0*	*25,350*	0	0	0	0	0	0
15	0.00	22,135,860	6,515,584	14.0	1,812,837	1,363,628	1,514	2,596,058	808	0.0	0.0	2.5	51,412	6.75	9.08	25,351	12,071	0	0	0	0	0
16	0.25	22,162,090	6,551,368	13.0	1,812,942	1,364,814	1,518	2,596,058	808	0.0	0.0	1.9	0	6.58	9.17	24,871	18,117	0	0	0	0	0
17	0.00	22,174,530	6,573,619	14.2	1,812,942	1,364,814	1,518	2,596,058	808	0.0	0.0	2.8	0	5.83	8.42	33,070	18,151	0	0	0	0	0
18	0.00	22,185,550	6,595,870	13.4	1,812,948	1,364,852	1,521	2,602,545	808	0.0	0.0	3.4	55,668	5.42	8.33	15,910	18,118	0	0	0	0	0
19	0.00	22,213,380	6,629,147	14.3	1,812,948	1,364,852	1,524	2,602,545	808	0.0	0.0	2.3	49,149	5.00	9.17	24,991	18,093	0	0	0	0	0
20	0.00	22,221,700	6,640,191	14.7	1,813,135	1,364,852	1,534	2,606,803	816	0.0	0.0	2.3	50,813	4.50	8.50	24,526	0	0	0	0	0	0
21	0.00	*22,238,415*	*6,664,647*	*13.9*	*1,813,806*	*1,366,710*	*1,539*	*2,606,803*	*814*	0.0	0.0	*2.3*	0	*4.5*	*8.5*	*24,526*	0	0	0	0	0	0
22	0.00	22,255,130	6,689,103	13.1	1,814,476	1,368,567	1,543	2,606,803	812	0.0	0.0	2.3	51,857	4.58	8.58	24,527	0	0	0	12,010	0	0
23	0.00	22,270,565	6,712,999	13.0	1,814,476	1,368,625	1,544	2,610,853	817	0.0	0.0	2.0	0	4.75	7.75	25,068	0	0	0	18,012	0	0
24	0.00	22,282,940	6,736,610	12.4	1,814,476	1,368,625	1,552	2,610,853	822	0.0	0.0	2.6	49,490	4.75	7.08	24,899	6,037	0	0	6,005	0	0
25	0.00	*22,294,280*	*6,762,056*	*12.7*	*1,815,068*	*1,370,004*	*1,565*	*2,613,039*	*831*	0.0	0.0	*2.5*	0	*4.8*	*7.2*	*24,922*	0	0	0	0	0	0
26	0.00	22,305,620	6,787,501	13.0	1,815,660	1,371,383	1,577	2,615,225	840	0.0	0.0	2.3	50,561	4.75	7.25	25,055	0	0	0	0	0	0
27	0.00	22,317,010	6,814,306	12.5	1,815,660	1,371,383	1,577	2,615,225	846	0.0	0.0	2.0	20,916	5.00	7.00	24,526	0	0	0	0	0	0
28	0.00	*22,325,635*	*6,837,701*	*12.9*	*1,815,660*	*1,371,419*	*1,578*	*2,615,225*	*856*	0.0	0.0	*1.8*	0	*4.8*	*7.8*	*25,200*	0	0	0	0	0	0
29	0.00	22,334,260	6,861,096	13.2	1,815,660	1,371,455	1,578	2,615,225	866	0.0	0.0	1.6	30,146	4.67	8.67	24,832	6,043	0	0	0	0	0
30	0.00	22,340,310	6,883,543	13.6	1,815,660	1,371,455	1,578	2,620,397	866	0.0	0.0	1.6	38,836	4.58	8.58	13,965	6,037	0	0	0	0	0
Totals	0.85										0		701,368			732,166	205,153	0	0	42,031	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

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2010

		Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (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	3.50	0	31,114	73,231	794,265	223,008	1,500	625,400	24,397	44,971	463,698	898,610	849,908	48,702
February	2.61	0	47,150	109,806	771,075	337,419	0	560,600	6,489	45,071	483,052	928,031	898,019	30,012
March	7.66	0	56,034	86,576	813,346	372,562	0	608,600	0	137,050	455,821	955,956	981,162	-25,207
April	3.04	0	57,944	71,442	812,598	337,294	0	643,200	6,011	65,856	719,336	941,984	980,494	-38,510
May	1.66	0	43,699	37,397	779,316	234,292	0	644,000	0	266,910	338,759	860,413	878,292	-17,879
June	7.43	0	60,719	20,449	740,158	318,992	0	602,600	242,614	120,108	184,585	821,326	921,592	-100,266
July	8.79	0	54,193	128,891	877,301	428,135	0	622,000	473,967	78,063	278,792	1,060,385	1,050,135	10,250
August	12.08	0	47,349	168,177	934,303	283,236	0	779,500	211,111	93,055	215,125	1,149,829	1,062,736	87,093
September	4.12	0	51,415	129,137	1,084,207	624,322	0	741,400	48,503	246,211	836,304	1,264,759	1,365,722	-100,963
October	0.00	0	40,930	57,253	882,872	271,013	0	762,300	6,004	0	761,234	981,054	1,033,313	-52,259
November	0.85	0	28,652	48,246	830,725	205,153	0	732,300	42,031	0	701,368	907,623	937,453	-29,830
December														
YTD Total	51.74	0	519,197	930,604	9,320,166	3,635,426	1,500	7,321,900	1,061,127	1,097,295	5,438,074	10,769,968	10,958,826	-188,858

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.

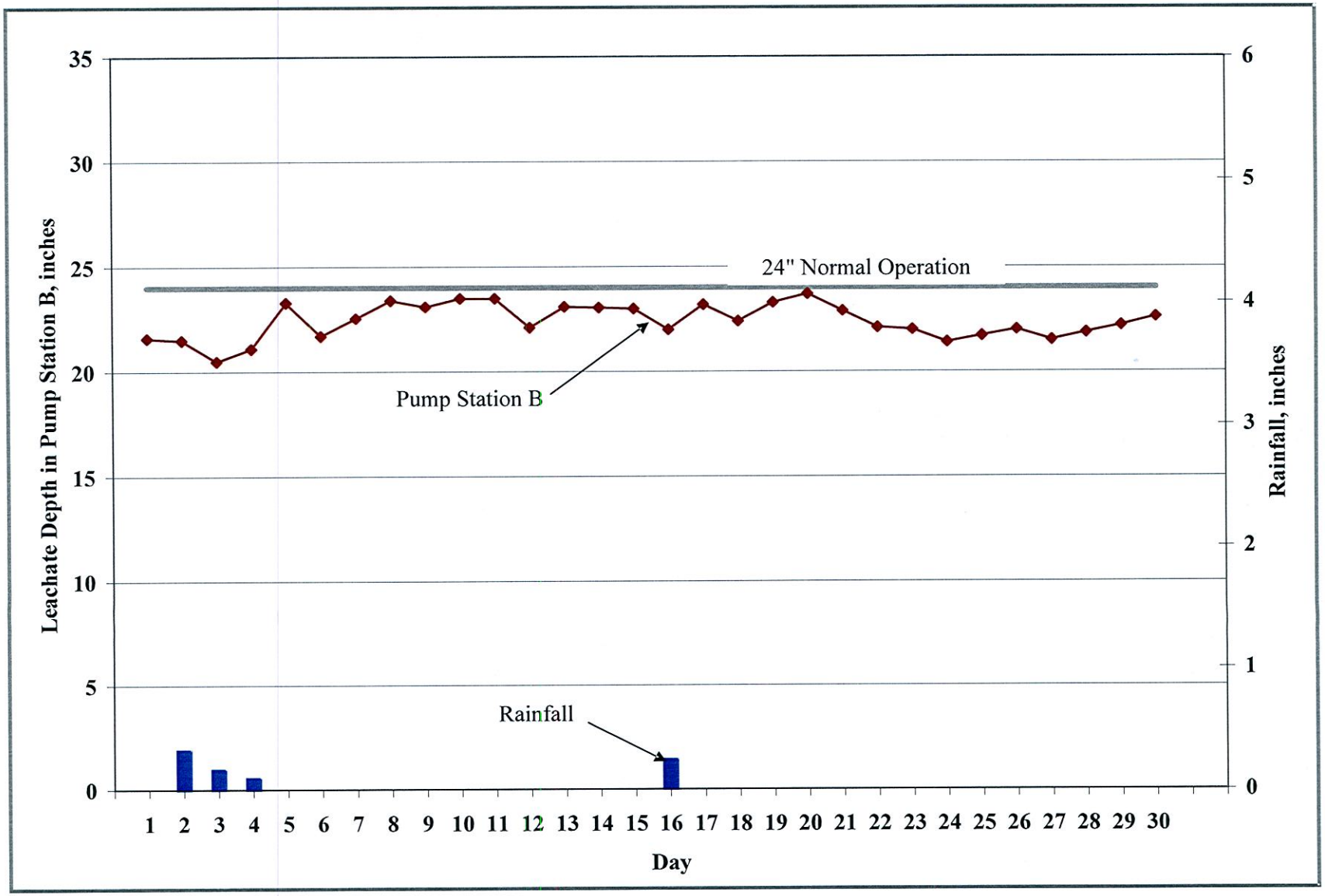

Figure 1. Leachate Levels in Pump Station B and Rainfall for November 2010.

Hillsborough County
Florida
Office of the Interim County Administrator
Michael S. Merrill

January 14, 2011

Ms. Susan J. Pelz, P.E.
Solid Waste Permitting
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – December 2010 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Department's (SWMD) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMD is providing the Landfill's Water Balance Report for the month of December 2010. In addition, the SWMD is providing the December 2010 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

This information is being provided to the Florida Department of Environmental Protection (FDEP) and the Hillsborough County Environmental Protection Commission as part of the quarterly Leachate Water Balance report on the Landfill leachate management efforts in accordance with Permit No. 35435-014-SO, Specific Condition No. 8.

As initiated with the April 1996 report, the Landfill leachate information for December 2010 includes an evaluation by SWMD staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches during the month of December 2010. The average depth of leachate in the PS-B sump for the recorded days in December 2010 was 22.2 inches.

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

Sincerely,

Patricia V. Berry
Landfill and Environmental Services Section Manager
Solid Waste Management Division

Attachments

glfs/lea1210.dep

Hillsborough County
Florida
Office of the County Administrator
Michael S. Merrill

MEMORANDUM

DATE: January 13, 2011

TO: Patricia Berry, Section Manager, Solid Waste Management Division

FROM: Larry Ruiz, General Manager III, Solid Waste Management Division
Raymond Graves, Sr. Eng. Tech., Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for December
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 2010 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 0.25 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 the daily average depth of effluent stored in Pond A was 2.0 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month 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 below the normal operation level of 24-inches. The average recorded depth of leachate in the PS-B sump was 22.2 inches.

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

Column VI presents the quantity of leachate from Phase IV pumped to PS-B by Temporary Pump Station-6 (TPS-6). The quantity of leachate removed by TPS-6 is measured in gallons by an in-line flow meter and is included in the quantity of leachate pumped to the Main Leachate Pump Station (MLPS) from Phases I-VI (Column VII). The average daily amount of leachate pumped from TPS-6 was 10,480 gallons. A total of 324,870 gallons of leachate was pumped this month.

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 quantity in column VII also includes the daily amount of leachate, in gallons, pumped from TPS-6. The average daily amount of leachate pumped from PS-A was 24,161 gallons. A total of 748,982 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 77 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 23,950 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 772,994 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 42,294 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 62 gallons of leachate were 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 an average of 127,400 gallons of leachate was stored in the tank.

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 began shut-down procedures in preparation of tankage inspection. As such, on December 1, 2010, the SWMD began storing leachate in this tank until the inspection of the leachate tank is completed. This month an average of 293,800 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. The treatment plant began shut-down procedures in preparation of tankage inspection. The plant shutdown process began on December 1, 2010 and the process was completed on December 22, 2010. This month a total of 199,600 gallons of leachate was treated.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 371,476 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 26,997 gallons of leachate were 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 a daily average of 62,900 gallons of effluent were 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, the 2,700 gallons shown is stormwater.

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 a total of 308,902 gallons of effluent were 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 a total of 41,927 gallons of effluent were 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. The total evaporation estimated for this month was 268,800 gallons.

TABLE 2

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

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 815,288 gallons. Total outflow quantity from the LTRF was 598,073 gallons. The change in storage for the month increased by 217,215 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
DECEMBER 2010
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	0.00	1.8	0.0	21.2	3,660	24,804	7	0	24,806	2,848	2	132,000	225,000	25,600	0	0	52,000	0	0	3,254	0	0	2,600
2	0.00	3.1	0.0	23.1	16,320	26,178	4	0	26,178	0	0	132,000	178,000	23,300	12,096	0	113,000	0	0	43,795	0	6,004	35,000
3	0.00	3.1	0.0	21.6	16,400	28,475	0	0	28,475	181	0	125,000	137,000	26,100	0	0	113,000	0	0	54,490	0	18,004	43,600
4	0.00	3.1	0.0	23.1	3,970	14,745	11	0	14,746	617	1	115,000	98,000	24,800	0	0	113,000	0	0	51,854	0	0	41,590
5	0.00	*3.3*	*0.0*	*22.6*	*5,155*	*25,698*	*0.5*	*0.0*	*25,702*	*1,584*	*4.0*	*118,000*	*89,000*	*30,200*	0	0	123,000	0	0	0	0	0	0
6	0.00	3.4	0.0	22.0	5,155	25,698	1	0	25,702	1,584	4	120,000	79,000	30,200	0	0	129,000	0	0	28,843	0	12,010	23,100
7	0.00	3.4	0.8	22.8	11,310	24,264	0	0	24,265	908	1	94,000	89,000	16,100	6,033	0	129,000	12,000	0	0	0	5,909	0
8	0.10	3.4	1.0	23.5	840	21,570	0	0	21,571	49	1	67,000	110,000	23,300	12,037	0	129,000	19,000	0	38,565	0	0	30,900
9	0.00	2.7	1.0	23.4	16,430	28,837	0	0	28,841	1,100	4	60,000	139,000	0	6,000	0	93,000	19,000	0	12,343	0	0	9,900
10	0.00	2.5	1.0	21.6	20,400	28,510	0	0	28,512	1,374	2	55,000	163,000	0	12,000	0	83,000	19,000	0	49,209	0	0	39,400
11	0.00	1.8	0.8	22.9	0	22,100	0	0	22,102	1,789	2	58,000	189,000	0	0	0	52,000	12,000	0	0	0	0	0
12	0.00	*1.7*	*0.4*	*22.6*	*13,075*	*29,085*	*0.0*	*0.0*	*29,085*	*0.0*	*0.5*	*58,000*	*217,000*	0	0	0	48,000	3,000	0	0	0	0	0
13	0.00	1.6	0.0	22.2	13,075	29,085	0	0	29,085	0	1	58,000	245,000	0	12,000	0	44,000	0	0	26,549	0	0	21,200
14	0.00	1.6	0.0	23.5	13,570	25,751	0	0	25,751	231	0	48,000	271,000	0	12,000	0	44,000	0	0	0	0	0	0
15	0.00	1.6	0.0	23.2	9,755	19,524	0	0	19,524	429	0	48,000	290,000	0	12,000	0	44,000	0	0	0	0	0	0
16	0.00	1.5	0.0	21.6	6,915	21,589	0	0	21,590	865	1	41,000	312,000	0	12,000	0	40,000	0	0	0	0	0	0
17	0.00	1.5	0.0	22.1	11,990	25,060	0	118	25,180	0	2	38,000	336,000	0	18,008	0	40,000	0	0	0	0	0	0
18	0.00	1.5	0.0	21.9	11,240	25,782	0	1	25,785	991	2	151,000	353,000	0	0	0	40,000	0	0	0	0	0	0
19	0.00	*1.5*	*0.0*	*22.1*	*14,070*	*27,740*	*0.0*	*0.0*	*27,745*	*2,651*	*5.5*	*164,000*	*381,000*	0	0	0	40,000	0	0	0	0	0	0
20	0.00	1.5	0.0	22.3	14,070	27,740	0	0	27,745	2,651	6	178,000	410,000	0	18,020	0	40,000	0	0	0	0	0	0
21	0.00	1.5	0.0	22.1	12,740	21,196	0	1	21,198	14,688	1	180,000	417,000	0	12,065	0	40,000	0	0	0	0	0	0
22	0.00	1.5	0.0	21.7	11,400	19,934	*0.0*	0	19,934	0	0	182,000	422,000	0	12,023	0	40,000	0	0	0	0	0	0
23	0.00	1.5	0.0	22.2	12,400	24,990	0	0	24,990	0	0	192,000	432,000	0	28,991	0	40,000	0	0	0	0	0	0
24	0.00	1.5	0.0	21.8	12,040	21,958	0	0	21,958	*0.0*	0	192,000	422,000	0	31,556	0	40,000	0	0	0	0	0	0
25	0.15	*1.5*	*0.0*	*22.2*	*13,160*	*25,550*	*0.0*	*0.0*	*25,552*	*353*	*1.3*	*192,000*	*439,000*	0	0	0	40,000	0	0	0	0	0	0
26	0.00	*1.5*	*0.0*	*22.5*	*13,160*	*25,550*	*0.0*	*0.0*	*25,552*	*353*	*1.3*	*192,000*	*456,000*	0	0	0	40,000	0	0	0	0	0	0
27	0.00	1.5	0.0	22.9	13,160	25,550	0	0	25,552	353	1	192,000	473,000	0	18,021	5,996	40,000	0	0	0	0	0	4,800
28	0.00	1.5	0.0	15.0	3,080	20,586	0	0	20,588	221	2	192,000	461,000	0	36,836	8,996	40,000	0	0	0	0	0	7,200
29	0.00	1.5	0.0	22.9	4,480	15,406	0	10	15,418	1,012	2	192,000	432,000	0	31,173	6,009	40,000	0	0	0	0	0	4,800
30	0.00	1.5	0.0	22.9	10,485	22,424	11	4,658	27,082	0	0	192,000	417,000	0	37,243	5,996	40,000	0	0	0	0	0	4,800
31	0.00	1.5	0.0	22.6	11,365	23,605	43	19,162	42,782	5,461	15	192,000	425,000	0	31,374	0	40,000	0	0	0	0	0	0
Total	0.25				324,870	748,982	77	23,950	772,994	42,294	62			199,600	371,476	26,997			0	308,902	0	41,927	268,800
Daily Average		2.0	0.2	22.2	10,480	24,161	2	773	24,935	1,364	2	127,400	293,800				62,900	2,700					
Mo. Average																900				10,000	0	1,400	8,670

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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
DECEMBER 2010
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
																	Leachate Hauled			Effluent Hauled		
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.)	Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal)
1	0.00	22,343,970	6,908,347	12.2	1,815,783	1,374,180	1,580	2,620,397	873	0.0	0.0	1.8	3,254	4.58	7.83	25,647	0	0	0	0	0	0
2	0.00	22,360,290	6,934,525	14.1	1,815,783	1,374,180	1,580	2,620,397	877	0.0	0.0	3.1	43,795	4.58	6.17	23,302	0	12,096	0	0	6,004	0
3	0.00	22,376,690	6,963,000	12.6	1,815,964	1,374,180	1,580	2,620,397	877	0.0	0.0	3.1	54,490	4.33	4.75	26,073	0	0	0	0	18,004	0
4	0.00	22,380,660	6,977,745	14.1	1,816,418	1,374,343	1,581	2,620,397	888	0.0	0.0	3.1	51,854	4.00	3.42	24,788	0	0	0	0	0	0
5	0.00	*22,385,815*	*7,003,443*	*13.6*	*1,817,309*	*1,375,036*	*1,585*	*2,620,397*	*889*	*0.0*	*0.0*	*3.3*	0	*4.1*	*3.1*	30,167	0	0	0	0	0	0
6	0.00	22,390,970	7,029,140	13.0	1,818,200	1,375,729	1,589	2,620,397	889	0.0	0.0	3.4	28,843	4.17	2.75	30,168	0	0	0	0	12,010	0
7	0.00	22,402,280	7,053,404	13.8	1,818,200	1,376,637	1,590	2,620,397	889	0.8	0.0	3.4	0	3.25	3.08	16,082	0	6,033	0	0	5,909	0
8	0.10	22,403,120	7,074,974	14.5	1,818,249	1,376,637	1,591	2,620,397	889	1.0	0.0	3.4	38,565	2.33	3.83	23,346	0	12,037	0	0	0	0
9	0.00	22,419,550	7,103,811	14.4	1,818,424	1,377,562	1,595	2,620,397	889	1.0	0.0	2.7	12,343	2.08	4.83	0	0	6,000	0	0	0	0
10	0.00	22,439,950	7,132,321	12.6	1,818,424	1,378,936	1,597	2,620,397	889	1.0	0.0	2.5	49,209	1.92	5.67	0	0	12,000	0	0	0	0
11	0.00	22,439,950	7,154,421	13.9	1,818,424	1,380,725	1,599	2,620,397	889	0.8	0.0	1.8	0	2.00	6.58	0	0	0	0	0	0	0
12	0.00	*22,453,025*	*7,183,506*	*13.6*	*1,818,424*	*1,380,725*	*1,600*	*2,620,397*	*889*	*0.4*	*0.0*	*1.7*	0	*2.0*	*7.5*	0	0	0	0	0	0	0
13	0.00	22,466,100	7,212,590	13.2	1,818,424	1,380,725	1,600	2,620,397	889	0.0	0.0	1.6	26,549	2.00	8.50	0	0	12,000	0	0	0	0
14	0.00	22,479,670	7,238,341	14.5	1,818,655	1,380,725	1,600	2,620,397	889	0.0	0.0	1.6	0	1.67	9.42	0	0	12,000	0	0	0	0
15	0.00	22,489,425	7,257,865	14.2	1,819,084	1,380,725	1,600	2,620,397	889	0.0	0.0	1.6	0	1.67	10.08	0	0	12,000	0	0	0	0
16	0.00	22,496,340	7,279,454	12.6	1,819,949	1,380,725	1,601	2,620,397	889	0.0	0.0	1.5	0	1.42	10.83	0	0	12,000	0	0	0	0
17	0.00	22,508,330	7,304,514	13.1	1,819,949	1,380,725	1,603	2,620,515	889	0.0	0.0	1.5	0	1.33	11.67	0	0	18,008	0	0	0	0
18	0.00	22,519,570	7,330,296	12.9	1,820,623	1,381,042	1,605	2,620,516	889	0.0	0.0	1.5	0	5.25	12.25	0	0	0	0	0	0	0
19	0.00	*22,533,640*	*7,358,036*	*13.1*	*1,820,975*	*1,383,341*	*1,611*	*2,620,516*	*889*	*0.0*	*0.0*	*1.5*	0	*5.7*	*13.3*	0	0	0	0	0	0	0
20	0.00	22,547,710	7,385,775	13.3	1,821,327	1,385,640	1,616	2,620,516	889	0.0	0.0	1.5	0	6.17	14.25	0	0	18,020	0	0	0	0
21	0.00	22,560,450	7,406,971	13.1	1,821,327	1,400,328	1,617	2,620,517	889	0.0	0.0	1.5	0	6.25	14.50	0	0	12,065	0	0	0	0
22	0.00	22,571,850	7,426,905	12.7	1,821,327	1,400,328	1,617	2,620,517	880	0.0	0.0	1.5	0	6.33	14.67	0	0	12,023	0	0	0	0
23	0.00	22,584,250	7,451,895	13.2	1,821,327	1,400,328	1,617	2,620,517	880	0.0	0.0	1.5	0	6.67	15.00	0	28,991	0	0	0	0	0
24	0.00	22,596,290	7,473,853	12.8	1,821,327	1,400,327	1,617	2,620,517	880	0.0	0.0	1.5	0	6.67	14.67	0	31,556	0	0	0	0	0
25	0.15	*22,609,450*	*7,499,403*	*13*	*1,821,680*	*1,400,327*	*1,618*	*2,620,517*	*880*	*0.0*	*0.0*	*1.5*	0	*6.7*	*15.3*	0	0	0	0	0	0	0
26	0.00	*22,622,610*	*7,524,954*	*14*	*1,822,033*	*1,400,328*	*1,620*	*2,620,517*	*880*	*0.0*	*0.0*	*1.5*	0	*6.7*	*15.8*	0	0	0	0	0	0	0
27	0.00	22,635,770	7,550,504	13.9	1,822,386	1,400,328	1,621	2,620,517	880	0.0	0.0	1.5	0	6.67	16.42	0	0	18,021	5,996	0	0	0
28	0.00	22,638,850	7,571,090	6.0	1,822,607	1,400,328	1,623	2,620,517	880	0.0	0.0	1.5	0	6.67	16.00	0	18,813	18,023	8,996	0	0	0
29	0.00	22,643,330	7,586,496	13.9	1,823,406	1,400,541	1,625	2,620,527	880	0.0	0.0	1.5	0	6.67	15.00	0	31,173	0	6,009	0	0	0
30	0.00	22,653,815	7,608,920	13.9	1,824,112	1,401,594	1,628	2,625,185	11	0.0	0.0	1.5	0	6.67	14.50	0	25,218	12,025	5,996	0	0	0
31	0.00	22,665,180	7,632,525	13.6	1,824,256	1,406,911	1,643	2,644,347	54	0.0	0.0	1.5	0	6.67	14.75	0	31,374	0	0	0	0	0
Totals	0.25										0		308,902			199,573	167,125	204,351	26,997	0	41,927	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	5
Intermediate	134.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2010

		Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
Month	Rainfall (in.)	Leachate Hauled to LTRF from HHLF/TRLF (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	3.50	0	31,114	73,231	794,265	223,008	1,500	625,400	24,397	44,971	463,698	898,610	849,908	48,702
February	2.61	0	47,150	109,806	771,075	337,419	0	560,600	6,489	45,071	483,052	928,031	898,019	30,012
March	7.66	0	56,034	86,576	813,346	372,562	0	608,600	0	137,050	455,821	955,956	981,162	-25,207
April	3.04	0	57,944	71,442	812,598	337,294	0	643,200	6,011	65,856	719,336	941,984	980,494	-38,510
May	1.66	0	43,699	37,397	779,316	234,292	0	644,000	0	266,910	338,759	860,413	878,292	-17,879
June	7.43	0	60,719	20,449	740,158	318,992	0	602,600	242,614	120,108	184,585	821,326	921,592	-100,266
July	8.79	0	54,193	128,891	877,301	428,135	0	622,000	473,967	78,063	278,792	1,060,385	1,050,135	10,250
August	12.08	0	47,349	168,177	934,303	283,236	0	779,500	211,111	93,055	215,125	1,149,829	1,062,736	87,093
September	4.12	0	51,415	129,137	1,084,207	624,322	0	741,400	48,503	246,211	836,304	1,264,759	1,365,722	-100,963
October	0.00	0	40,930	57,253	882,872	271,013	0	762,300	6,004	0	761,234	981,054	1,033,313	-52,259
November	0.85	0	28,652	48,246	830,725	205,153	0	732,300	42,031	0	701,368	907,623	937,453	-29,830
December	0.25	0	42,356	23,950	748,982	371,476	26,997	199,600	41,927	0	308,902	815,288	598,073	217,215
YTD Total	51.99	0	561,553	954,554	10,069,148	4,006,902	28,497	7,521,500	1,103,054	1,097,295	5,746,976	11,585,256	11,556,899	28,357

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

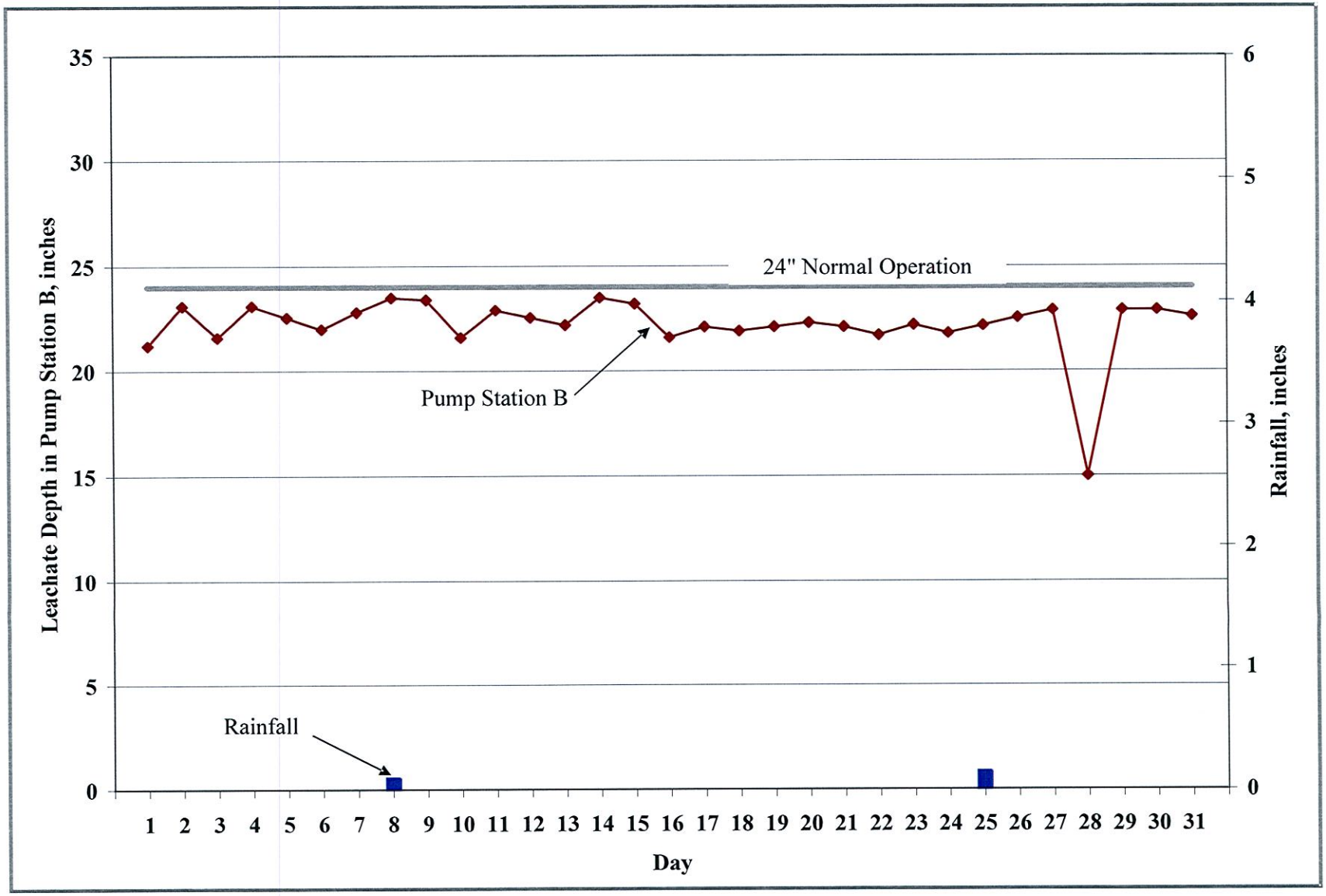

Figure 1. Leachate Levels in Pump Station B and Rainfall for December 2010.