Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

July 8, 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 Group (SWMG) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending July 15, 2011.

The data is being submitted as separate monthly reports for April, May, and June 2011. 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 April 13 due to a pump malfunction. This malfunction was immediately corrected.

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

Sincerely,

Walter Ruiz

FOR Larry E. Ruiz
General Manager III
Solid Waste Management Group
Public Utilities Department

Attachment
xc: Rich Siemering, HDR
Ron Cope, EPC
Paul Schipfer, EPC

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

MEMORANDUM

DATE: May 24, 2011

TO: Patricia Berry, Group Leader, Solid Waste Management Group

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

SUBJECT: Leachate Water Balance Report Forms for April
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Group (SWMG) 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 2011 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.7 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/stormwater stored in Pond A was 2.1 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent/leachate 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 April 13 due to a pump malfunctions. The average recorded depth of leachate in the PS-B sump was 23.1 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 18,628 gallons. A total of 558,850 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 26,229 gallons. A total of 786,859 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 869 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 98,585 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 885,444 gallons of leachate were 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 26,076 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 286 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 leachate was not stored in the tank. On February 9th the tank was emptied in preparation for 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 tankage inspection. As such, on December 1, 2010, the SWMG began storing leachate in this tank until the inspection of the leachate tank is completed. This month an average of 369,900 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 plant was shutdown on December 22, 2010 in preparation for tankage inspection. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 819,210 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 65,972 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 63,800 gallons of effluent/stormwater 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/leachate 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. The total evaporation estimated for this month was 52,700 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMG 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 911,806 gallons. Total outflow quantity from the LTRF was 885,182 gallons. The change in storage for the month increased by 26,624 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
APRIL 2011
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	2.1	0.0	23.4	21,550	26,678	21	10,569	37,247	960	2	0	324,000	0	25,771	0	65,000	0	0	0	0	0	0
2	0.00	2.1	0.0	23.3	13,900	37,124	23	6,265	43,389	710	1	0	326,000	0	32,972	0	65,000	0	0	0	0	0	0
3	0.00	*2.1*	*0.0*	*22.2*	*17,565*	*26,454*	*15*	*5,864*	*32,318*	*2,809*	*2*	0	*350,000*	0	0	0	*65,000*	0	0	0	0	0	0
4	0.00	2.1	0.0	21.0	17,565	26,454	15	5,864	32,318	2,809	2	0	374,000	0	24,664	0	65,000	0	0	0	0	0	0
5	0.97	2.1	0.0	23.3	27,110	36,010	11	5,878	41,888	0	0	0	386,000	0	37,889	0	65,000	0	0	0	0	0	0
6	0.00	2.2	0.0	23.6	12,500	19,948	10	3,884	23,832	0	0	0	389,000	0	38,105	0	70,000	0	0	0	0	0	0
7	0.00	2.2	0.0	23.7	16,350	25,576	8	3,900	29,476	0	0	0	365,000	0	38,911	0	70,000	0	0	0	0	0	0
8	0.00	2.2	0.0	23.7	16,700	26,392	8	7,509	33,901	183	4	0	374,000	0	44,439	0	70,000	0	0	0	0	0	0
9	0.00	2.2	0.0	23.5	16,310	25,712	11	6,010	31,722	459	11	0	350,000	0	27,092	0	70,000	0	0	0	0	0	0
10	0.00	*2.2*	*0.0*	*23.7*	*18,750*	*26,700*	*11*	*3,432*	*30,132*	*2,686*	*15*	0	*368,000*	0	0	0	*70,000*	0	0	0	0	0	0
11	0.00	2.2	0.0	23.8	18,750	26,700	11	3,432	30,132	2,686	15	0	386,000	0	38,049	0	70,000	0	0	0	0	0	0
12	0.00	2.2	0.0	23.5	21,760	29,008	1	1,351	30,359	0	33	0	384,000	0	33,891	0	70,000	0	0	0	0	0	0
13	0.00	2.2	0.0	24.2	19,345	28,753	15	29	28,782	0	2	0	374,000	0	27,943	0	70,000	0	0	0	0	0	0
14	0.00	2.2	0.0	23.4	20,691	27,308	24	0	27,308	357	1	0	374,000	0	39,520	0	70,000	0	0	0	0	0	0
15	0.00	2.1	0.0	23.6	18,639	27,036	5	3,046	30,082	875	11	0	365,000	0	32,921	0	65,000	0	0	0	0	0	0
16	0.00	2.1	0.0	21.6	20,125	29,454	20	3,096	32,550	1,454	20	0	365,000	0	14,063	0	65,000	0	0	0	0	0	0
17	0.00	*2.1*	*0.0*	*22.6*	*18,600*	*24,160*	*26*	*3,332*	*27,491*	*951*	*35*	0	*389,000*	0	0	0	*65,000*	0	0	0	0	0	0
18	0.00	2.1	0.0	23.5	18,600	24,160	26	3,332	27,491	951	35	0	413,000	0	32,991	0	65,000	0	0	0	0	0	0
19	0.00	2.1	0.0	23.4	14,010	21,533	30	3,598	25,131	0	10	0	396,000	0	39,656	6,008	65,000	0	0	0	0	0	4,800
20	0.00	2.0	0.0	23.1	25,090	31,230	27	3,697	34,927	0	5	0	389,000	0	39,647	9,015	61,000	0	0	0	0	0	7,200
21	0.00	2.0	0.0	22.8	9,500	13,478	30	5,811	19,289	0	5	0	360,000	0	32,541	3,005	61,000	0	0	0	0	0	2,400
22	0.00	1.9	0.0	23.1	17,070	23,468	59	2,986	26,454	667	8	0	348,000	0	38,795	6,005	57,000	0	0	0	0	0	4,800
23	0.00	1.9	0.0	21.5	19,100	25,503	48	2,309	27,812	650	8	0	345,000	0	0	3,020	57,000	0	0	0	0	0	2,400
24	0.00	*1.9*	*0.0*	*21.9*	*19,125*	*24,178*	*53*	*575*	*24,752*	*1,207*	*18*	0	*368,000*	0	0	0	*57,000*	0	0	0	0	0	0
25	0.72	1.9	0.0	22.3	19,125	24,178	53	575	24,752	1,207	18	0	391,000	0	25,477	9,281	57,000	0	0	0	0	0	7,400
26	0.00	1.9	0.0	23.8	23,910	30,604	63	842	31,446	1,652	1	0	398,000	0	32,758	0	57,000	0	0	0	0	0	0
27	0.00	1.9	0.0	23.3	22,110	28,400	57	188	28,588	2,460	7	0	401,000	0	31,299	6,004	57,000	0	0	0	0	0	4,800
28	0.00	1.9	0.0	21.6	17,090	23,827	54	1,196	25,023	125	18	0	377,000	0	50,824	8,635	57,000	0	0	0	0	0	6,900
29	0.00	1.9	0.0	23.5	19,870	26,056	85	17	26,073	219	1	0	343,000	0	38,992	8,997	57,000	0	0	0	0	0	7,200
30	0.00	1.9	0.0	23.8	18,040	20,779	53	0	20,779	0	0	0	326,000	0	0	6,002	57,000	0	0	0	0	0	4,800
Total	1.69				558,850	786,859	869	98,585	885,444	26,076	286			0	819,210	65,972			0	0	0	0	52,700
Daily Average		2.1	0.0	23.1	18,628	26,229	29	3,286	29,515	869	10	0	369,900				63,800	0					
Mo. Average																2,200				0	0	0	1,760

projects\balance\2011\04-11bal.xls (JDW 05/05/11)

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
APRIL 2011
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	23,940,150	9,707,448	14.4	1,844,313	1,456,628	4,823	2,735,277	1,176	0.0	0.0	2.1	0	0.00	11.25	0	19,768	6,003	0	0	0	0
2	0.00	23,954,050	9,744,572	14.3	1,844,733	1,456,918	4,824	2,741,542	1,199	0.0	0.0	2.1	0	0.00	11.33	0	32,972	0	0	0	0	0
3	0.00	*23,971,615*	*9,771,026*	*13.2*	*1,844,951*	*1,459,509*	*4,826*	*2,747,406*	*1,214*	0.0	0.0	*2.1*	0	0.00	*12.2*	0	0	0	0	0	0	0
4	0.00	23,989,180	9,797,480	12.0	1,845,169	1,462,100	4,827	2,753,270	1,228	0.0	0.0	2.1	0	0.00	13.00	0	6,644	18,020	0	0	0	0
5	0.97	24,016,290	9,833,490	14.3	1,845,169	1,462,100	4,827	2,759,148	1,239	0.0	0.0	2.1	0	0.00	13.42	0	19,851	18,038	0	0	0	0
6	0.00	24,028,790	9,853,438	14.6	1,845,169	1,462,100	4,827	2,763,032	1,249	0.0	0.0	2.2	0	0.00	13.50	0	19,875	18,230	0	0	0	0
7	0.00	24,045,140	9,879,014	14.7	1,845,169	1,462,100	4,827	2,766,932	1,257	0.0	0.0	2.2	0	0.00	12.67	0	20,907	18,004	0	0	0	0
8	0.00	24,061,840	9,905,406	14.7	1,845,352	1,462,100	4,831	2,774,441	1,265	0.0	0.0	2.2	0	0.00	13.00	0	26,416	18,023	0	0	0	0
9	0.00	24,078,150	9,931,118	14.5	1,845,811	1,462,100	4,842	2,780,451	1,276	0.0	0.0	2.2	0	0.00	12.17	0	27,092	0	0	0	0	0
10	0.00	*24,096,900*	*9,957,818*	*14.7*	*1,845,902*	*1,464,695*	*4,857*	*2,783,883*	*1,287*	0.0	0.0	*2.2*	0	0.00	*12.8*	0	0	0	0	0	0	0
11	0.00	24,115,650	9,984,518	14.8	1,845,993	1,467,290	4,871	2,787,315	1,297	0.0	0.0	2.2	0	0.00	13.42	0	20,041	18,008	0	0	0	0
12	0.00	24,137,410	13,526	14.5	1,845,993	1,467,290	4,904	2,788,666	1,298	0.0	0.0	2.2	0	0.00	13.33	0	33,891	0	0	0	0	0
13	0.00	24,156,755	42,279	15.2	1,845,993	1,467,290	4,906	2,788,695	1,313	0.0	0.0	2.2	0	0.00	13.00	0	27,943	0	0	0	0	0
14	0.00	24,177,446	69,587	14.4	1,846,350	1,467,290	4,907	2,788,695	1,337	0.0	0.0	2.2	0	0.00	13.00	0	27,513	12,007	0	0	0	0
15	0.00	24,196,085	96,623	14.6	1,847,225	1,467,290	4,918	2,791,741	1,342	0.0	0.0	2.1	0	0.00	12.67	0	26,917	6,004	0	0	0	0
16	0.00	24,216,210	126,077	12.6	1,848,679	1,467,290	4,938	2,794,837	1,362	0.0	0.0	2.1	0	0.00	12.67	0	14,063	0	0	0	0	0
17	0.00	*24,234,810*	*150,237*	*13.6*	*1,849,630*	*1,467,290*	*4,973*	*2,798,169*	*1,388*	0.0	0.0	*2.1*	0	0.00	*13.5*	0	0	0	0	0	0	0
18	0.00	24,253,410	174,396	14.5	1,850,580	1,467,290	5,008	2,801,500	1,413	0.0	0.0	2.1	0	0.00	14.33	0	26,978	6,013	0	0	0	0
19	0.00	24,267,420	195,929	14.4	1,850,580	1,467,290	5,018	2,805,098	1,443	0.0	0.0	2.1	0	0.00	13.75	0	33,645	6,011	6,008	0	0	0
20	0.00	24,292,510	227,159	14.1	1,850,580	1,467,290	5,023	2,808,795	1,470	0.0	0.0	2.0	0	0.00	13.50	0	34,439	5,208	9,015	0	0	0
21	0.00	24,302,010	240,637	13.8	1,850,580	1,467,290	5,028	2,814,606	1,500	0.0	0.0	2.0	0	0.00	12.50	0	20,533	12,008	3,005	0	0	0
22	0.00	24,319,080	264,105	14.1	1,851,247	1,467,290	5,036	2,817,592	1,559	0.0	0.0	1.9	0	0.00	12.08	0	20,783	18,012	6,005	0	0	0
23	0.00	24,338,180	289,608	12.5	1,851,897	1,467,290	5,044	2,819,901	1,607	0.0	0.0	1.9	0	0.00	12.00	0	0	0	3,020	0	0	0
24	0.00	*24,357,305*	*313,786*	*12.9*	*1,853,104*	*1,467,290*	*5,062*	*2,820,476*	*1,660*	0.0	0.0	*1.9*	0	0.00	*12.8*	0	0	0	0	0	0	0
25	0.72	24,376,430	337,963	13.3	1,854,311	1,467,290	5,080	2,821,050	1,712	0.0	0.0	1.9	0	0.00	13.58	0	13,474	12,003	9,281	0	0	0
26	0.00	24,400,340	368,567	14.8	1,855,963	1,467,290	5,081	2,821,892	1,775	0.0	0.0	1.9	0	0.00	13.83	0	20,745	12,013	0	0	0	0
27	0.00	24,422,450	396,967	14.3	1,858,423	1,467,290	5,088	2,822,080	1,832	0.0	0.0	1.9	0	0.00	13.92	0	13,275	18,024	6,004	0	0	0
28	0.00	24,439,540	420,794	12.6	1,858,548	1,467,290	5,106	2,823,276	1,886	0.0	0.0	1.9	0	0.00	13.08	0	20,802	30,022	8,635	0	0	0
29	0.00	24,459,410	446,850	14.5	1,858,767	1,467,290	5,107	2,823,293	1,971	0.0	0.0	1.9	0	0.00	11.92	0	20,841	18,151	8,997	0	0	0
30	0.00	24,477,450	467,629	14.8	1,858,767	1,467,290	5,107	2,823,293	2,024	0.0	0.0	1.9	0	0.00	11.33	0	0	0	6,002	0	0	0
Totals	1.69										0		0			0	549,408	269,802	65,972	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

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2011

		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	3.65	0	24,351	39,496	739,603	894,048	42,104	0	0	0	0	803,450	936,152	-132,702
February	0.76	0	23,363	20,193	624,230	759,786	13,056	0	0	0	20,035	667,786	772,842	-105,056
March	7.69	0	23,662	20,672	684,412	755,806	12,009	0	0	0	27,337	728,746	767,815	-39,069
April	1.69	0	26,362	98,585	786,859	819,210	65,972	0	0	0	0	911,806	885,182	26,624
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	13.79	0	97,738	178,946	2,835,104	3,228,850	133,141	0	0	0	47,372	3,111,788	3,361,991	-250,203

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.

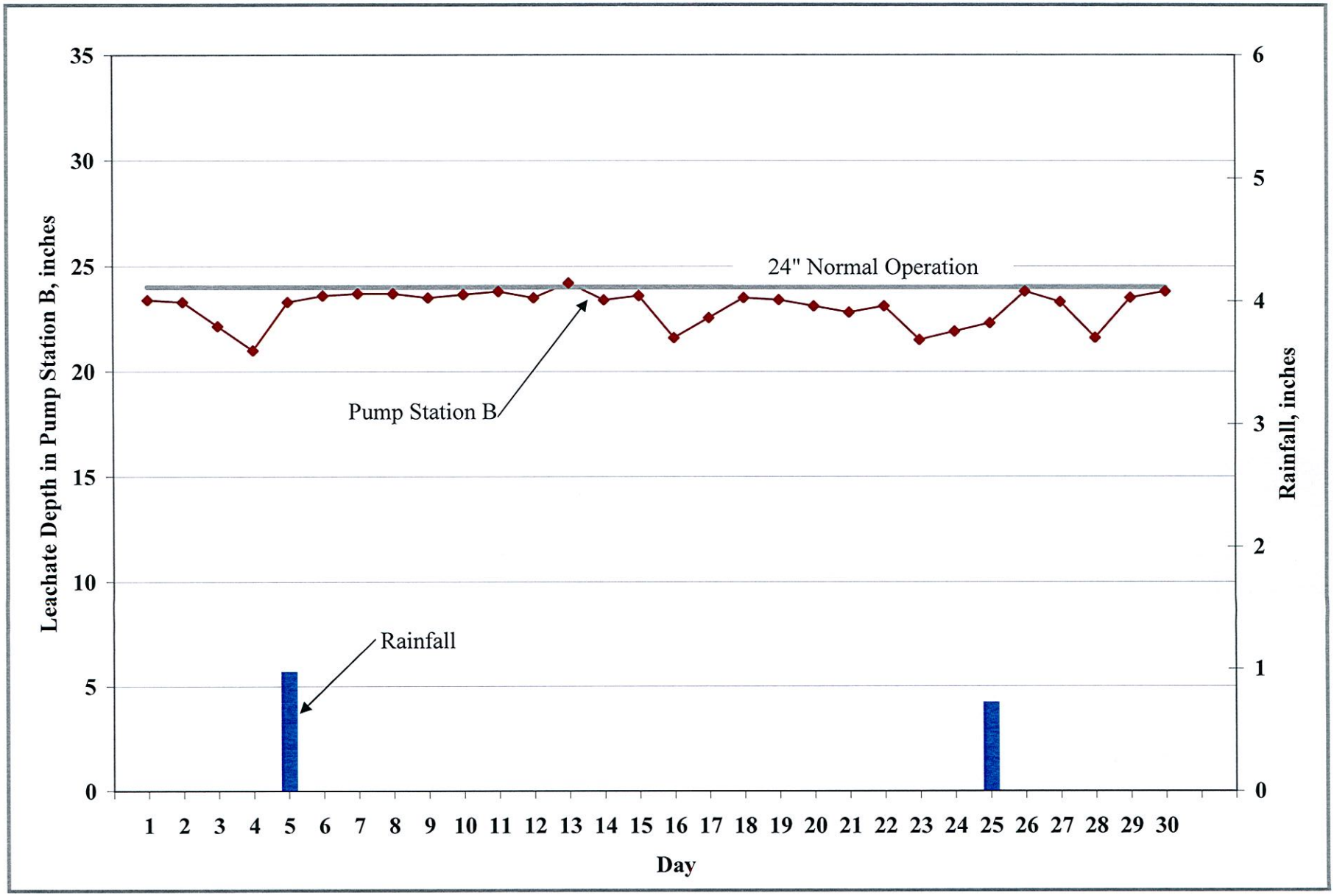

Figure 1. Leachate Levels in Pump Station B and Rainfall for April 2011.

Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

Dept. of Environmental Protection

JUL 12 2011

Southwest District

MEMORANDUM

DATE: June 9, 2011

TO: Larry Ruiz, General Manager III, Solid Waste Management Group

FROM: Cindy Pelley, Environmental Specialist II, Environmental Services
Raymond Graves, Sr. Eng. Tech., Solid Waste Management Group

SUBJECT: Leachate Water Balance Report Forms for May
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Group (SWMG) 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 2011 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.1 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/stormwater stored in Pond A was 1.8 feet.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent/leachate 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 22.8 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 17,916 gallons. A total of 555,410 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 22,774 gallons. A total of 705,995 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 803 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 48,998 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 754,983 gallons of leachate were 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 21,682 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 107 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 leachate was not stored in the tank. On February 9th the tank was emptied in preparation for 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 tankage inspection. As such, on December 1, 2010, the SWMG began storing leachate in this tank until the inspection of the leachate tank is completed. This month an average of 250,500 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 plant was shutdown on December 22, 2010 in preparation for tankage inspection. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 749,220 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 123,324 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 52,200 gallons of effluent/stormwater 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/leachate 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. The total evaporation estimated for this month was 98,700 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMG 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 776,772 gallons. Total outflow quantity from the LTRF was 872,544 gallons. The change in storage for the month decreased by 95,773 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MAY 2011
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	*1.9*	0.0	*23.7*	*18,490*	*22,667*	0	0	*22,667*	0	0	0	*355,000*	0	0	0	*57,000*	0	0	0	0	0	0
2	0.00	1.9	0.0	23.6	18,490	22,667	0	0	22,667	0	0	0	355,000	0	50,771	8,900	57,000	0	0	0	0	0	7,100
3	0.00	1.9	0.0	21.8	15,120	20,424	63	0	20,424	0	0	0	324,000	0	45,517	3,004	57,000	0	0	0	0	0	2,400
4	0.00	1.9	0.0	23.1	16,210	21,212	57	3,030	24,242	436	6	0	300,000	0	44,806	6,003	57,000	0	0	0	0	0	4,800
5	0.00	1.9	0.0	23.0	18,360	23,028	53	3,431	26,459	1,164	14	0	281,000	0	43,796	6,000	57,000	0	0	0	0	0	4,800
6	0.00	1.9	0.0	23.4	18,930	25,749	28	0	25,749	2,517	4	0	261,000	0	44,933	2,999	57,000	0	0	0	0	0	2,400
7	0.00	1.9	0.0	23.5	20,520	23,609	37	3,723	27,332	0	0	0	242,000	0	0	3,002	57,000	0	0	0	0	0	2,400
8	0.00	*1.9*	0.0	*23.5*	*17,725*	*24,823*	*39*	*2,014*	*26,836*	*2,204*	*8*	0	*260,000*	0	0	0	*57,000*	0	0	0	0	0	0
9	0.00	1.9	0.0	23.5	17,725	24,823	39	2,014	26,836	2,204	8	0	278,000	0	40,118	3,001	57,000	0	0	0	0	0	2,400
10	0.00	1.9	0.0	23.5	19,330	25,201	81	6,498	31,699	5	2	0	271,000	0	50,780	9,008	57,000	0	0	0	0	0	7,200
11	0.00	1.8	0.0	21.3	20,350	26,053	48	2,318	28,371	0	0	0	245,000	0	44,788	3,000	52,000	0	0	0	0	0	2,400
12	0.00	1.8	0.0	23.5	16,470	20,653	42	5	20,658	0	0	0	242,000	0	45,304	6,000	52,000	0	0	0	0	0	4,800
13	0.00	1.8	0.0	21.3	20,190	24,125	57	0	24,125	1,612	9	0	242,000	0	26,884	6,000	52,000	0	0	0	0	0	4,800
14	0.42	1.8	0.0	22.9	24,030	29,822	60	0	29,822	0	11	0	242,000	0	0	0	52,000	0	0	0	0	0	0
15	0.00	*1.8*	0.0	*22.2*	*20,695*	*27,251*	*58*	*1,668*	*28,919*	*0*	*0*	0	*245,000*	0	0	0	*52,000*	0	0	0	0	0	0
16	0.00	1.8	0.0	21.4	20,695	27,251	58	1,668	28,919	0	0	0	247,000	0	42,535	0	52,000	0	0	0	0	0	0
17	0.00	1.8	0.0	23.0	21,550	27,551	28	3,571	31,122	248	0	0	240,000	0	37,876	0	52,000	0	0	0	0	0	0
18	0.00	1.8	0.0	23.6	22,920	24,451	18	2,005	26,456	1,048	10	0	223,000	0	50,996	0	52,000	0	0	0	0	0	0
19	0.00	1.8	0.0	23.4	13,470	15,527	12	4,289	19,816	4,038	17	0	218,000	0	24,000	9,005	52,000	0	0	0	0	0	7,200
20	0.00	1.8	0.0	23.5	16,570	19,681	8	2,947	22,628	396	2	0	218,000	0	24,149	6,000	52,000	0	0	0	0	0	4,800
21	0.00	1.7	0.0	23.0	19,150	22,904	4	2,170	25,074	0	3	0	218,000	0	0	6,000	48,000	0	0	0	0	0	4,800
22	0.00	*1.7*	0.0	*23.1*	*14,505*	*18,416*	*1*	*1,199*	*19,615*	*0*	*0*	0	*218,000*	0	0	0	*48,000*	0	0	0	0	0	0
23	0.00	1.7	0.0	23.2	14,505	18,416	1	1,199	19,615	0	0	0	218,000	0	24,001	3,081	48,000	0	0	0	0	0	2,500
24	0.00	1.7	0.0	23.5	16,230	20,900	1	1,092	21,992	0	0	0	218,000	0	23,928	9,002	48,000	0	0	0	0	0	7,200
25	0.00	1.7	0.0	23.0	21,580	24,644	10	617	25,261	0	0	0	221,000	0	24,008	3,000	48,000	0	0	0	0	0	2,400
26	0.23	1.7	0.0	23.2	21,980	26,023	1	8	26,031	630	3	0	221,000	0	18,005	9,001	48,000	0	0	0	0	0	7,200
27	0.00	1.7	0.0	21.5	15,400	20,538	0	0	20,538	615	1	0	218,000	0	18,007	0	48,000	0	0	0	0	0	0
28	0.45	1.7	0.0	21.0	14,670	22,609	1	3,428	26,037	620	2	0	218,000	0	0	12,196	48,000	0	0	0	0	0	9,800
29	0.00	*1.7*	0.0	*21.9*	*13,625*	*19,094*	*0*	*37*	*19,131*	*578*	*6*	0	*228,000*	0	0	0	*48,000*	0	0	0	0	0	0
30	0.00	1.7	0.0	22.7	13,625	19,094	0	37	19,131	0	0	0	238,000	0	0	0	48,000	0	0	0	0	0	0
31	0.00	1.7	0.0	23.4	12,300	16,793	1	22	16,815	3,368	2	0	259,000	0	24,018	9,122	48,000	0	0	0	0	0	7,300
Total	1.10				555,410	705,995	803	48,988	754,983	21,682	107			0	749,220	123,324			0	0	0	0	98,700
Daily Average		1.8	0.0	22.8	17,916	22,774	26	1,580	24,354	699	3	0	250,500				52,200	0					
Mo. Average																4,000				0	0	0	3,180

projects\balance\2011\05-11bal.xls (jdw 06/02/11)

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
MAY 2011
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	*24,495,940*	*490,296*	*14.7*	*1,858,767*	*1,467,290*	*5,107*	*2,826,681*	*2,146*	0.0	0.0	*1.9*	0	0.00	*12.33*	0	0	0	0	0	0	0
2	0.00	24,514,430	512,962	14.6	1,858,767	1,467,290	5,107	2,826,681	2,146	0.0	0.0	1.9	0	0.00	12.33	0	20,677	30,094	8,900	0	0	0
3	0.00	24,529,550	533,386	12.8	1,858,767	1,467,290	5,107	2,826,681	2,209	0.0	0.0	1.9	0	0.00	11.25	0	20,662	24,855	3,004	0	0	0
4	0.00	24,545,760	554,598	14.1	1,859,203	1,467,290	5,113	2,829,711	2,266	0.0	0.0	1.9	0	0.00	10.42	0	20,798	24,008	6,003	0	0	0
5	0.00	24,564,120	577,626	14.0	1,859,582	1,468,075	5,127	2,833,142	2,319	0.0	0.0	1.9	0	0.00	9.75	0	13,790	30,006	6,000	0	0	0
6	0.00	24,583,050	603,375	14.4	1,859,958	1,470,216	5,131	2,833,142	2,347	0.0	0.0	1.9	0	0.00	9.08	0	20,895	24,038	2,999	0	0	0
7	0.00	24,603,570	626,984	14.5	1,859,958	1,470,216	5,131	2,836,865	2,384	0.0	0.0	1.9	0	0.00	8.42	0	0	0	3,002	0	0	0
8	0.00	*24,621,295*	*651,807*	*14.5*	*1,862,162*	*1,470,216*	*5,139*	*2,838,879*	*2,423*	*0.0*	0.0	*1.9*	0	*0.0*	*9.0*	0	0	0	0	0	0	0
9	0.00	24,639,020	676,629	14.5	1,864,365	1,470,216	5,146	2,840,892	2,461	0.0	0.0	1.9	0	0.00	9.67	0	21,151	18,967	3,001	0	0	0
10	0.00	24,658,350	701,830	14.5	1,864,370	1,470,216	5,148	2,847,390	2,542	0.0	0.0	1.9	0	0.00	9.42	0	20,776	30,004	9,008	0	0	0
11	0.00	24,678,700	727,883	12.3	1,864,370	1,470,216	5,148	2,849,708	2,590	0.0	0.0	1.8	0	0.00	8.50	0	20,786	24,002	3,000	0	0	0
12	0.00	24,695,170	748,536	14.5	1,864,370	1,470,216	5,148	2,849,713	2,632	0.0	0.0	1.8	0	0.00	8.42	0	20,600	24,704	6,000	0	0	0
13	0.00	24,715,360	772,661	12.3	1,865,982	1,470,216	5,157	2,849,713	2,689	0.0	0.0	1.8	0	0.00	8.42	0	20,883	6,001	6,000	0	0	0
14	0.42	24,739,390	802,483	13.9	1,865,982	1,470,216	5,168	2,849,713	2,749	0.0	0.0	1.8	0	0.00	8.42	0	0	0	0	0	0	0
15	0.00	*24,760,085*	*829,734*	*13.2*	*1,865,982*	*1,470,216*	*5,168*	*2,851,381*	*2,807*	*0.0*	0.0	*1.8*	0	*0.0*	*8.5*	0	0	0	0	0	0	0
16	0.00	24,780,780	856,984	12.4	1,865,982	1,470,216	5,168	2,853,049	2,864	0.0	0.0	1.8	0	0.00	8.58	0	13,902	28,633	0	0	0	0
17	0.00	24,802,330	884,535	14.0	1,866,230	1,470,216	5,168	2,856,620	2,892	0.0	0.0	1.8	0	0.00	8.33	0	13,863	24,013	0	0	0	0
18	0.00	24,825,250	908,986	14.6	1,866,503	1,470,991	5,178	2,858,625	2,910	0.0	0.0	1.8	0	0.00	7.75	0	20,984	30,012	0	0	0	0
19	0.00	24,838,720	924,513	14.4	1,866,503	1,475,029	5,195	2,862,914	2,922	0.0	0.0	1.8	0	0.00	7.58	0	0	24,000	9,005	0	0	0
20	0.00	24,855,290	944,194	14.5	1,866,503	1,475,425	5,197	2,865,861	2,930	0.0	0.0	1.8	0	0.00	7.58	0	0	24,149	6,000	0	0	0
21	0.00	24,874,440	967,098	14.0	1,866,503	1,475,425	5,200	2,868,031	2,934	0.0	0.0	1.7	0	0.00	7.58	0	0	0	6,000	0	0	0
22	0.00	*24,888,945*	*985,514*	*14.1*	*1,866,503*	*1,475,425*	*5,200*	*2,869,230*	*2,935*	*0.0*	0.0	*1.7*	0	*0.0*	*7.6*	0	0	0	0	0	0	0
23	0.00	24,903,450	1,003,930	14.2	1,866,503	1,475,425	5,200	2,870,428	2,935	0.0	0.0	1.7	0	0.00	7.58	0	0	24,001	3,081	0	0	0
24	0.00	24,919,680	1,024,830	14.5	1,866,503	1,475,425	5,200	2,871,520	2,936	0.0	0.0	1.7	0	0.00	7.58	0	0	23,928	9,002	0	0	0
25	0.00	24,941,260	1,049,474	14.0	1,866,503	1,475,425	5,200	2,872,137	2,946	0.0	0.0	1.7	0	0.00	7.67	0	0	24,008	3,000	0	0	0
26	0.23	24,963,240	1,075,497	14.2	1,867,133	1,475,425	5,203	2,872,145	2,947	0.0	0.0	1.7	0	0.00	7.67	0	0	18,005	9,001	0	0	0
27	0.00	24,978,640	1,096,035	12.5	1,867,748	1,475,425	5,204	2,872,145	2,947	0.0	0.0	1.7	0	0.00	7.58	0	0	18,007	0	0	0	0
28	0.45	24,993,310	1,118,644	12.0	1,868,368	1,475,425	5,206	2,875,573	2,948	0.0	0.0	1.7	0	0.00	7.58	0	0	0	12,196	0	0	0
29	0.00	*25,006,935*	*1,137,738*	*12.9*	*1,868,832*	*1,475,539*	*5,212*	*2,875,610*	*2,948*	*0.0*	0.0	*1.7*	0	*0.0*	*7.9*	0	0	0	0	0	0	0
30	0.00	25,020,560	1,156,831	13.7	1,869,295	1,475,653	5,218	2,875,647	2,948	0.0	0.0	1.7	0	0.00	8.25	0	0	0	0	0	0	0
31	0.00	25,032,860	1,173,624	14.4	1,869,425	1,478,891	5,220	2,875,669	2,949	0.0	0.0	1.7	0	0.00	9.00	0	0	24,018	9,122	0	0	0
Totals	1.10										0		0			0	249,767	499,453	123,324	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

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2011

		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	3.65	0	24,351	39,496	739,603	894,048	42,104	0	0	0	0	803,450	936,152	-132,702
February	0.76	0	23,363	20,193	624,230	759,786	13,056	0	0	0	20,035	667,786	772,842	-105,056
March	7.69	0	23,662	20,672	684,412	755,806	12,009	0	0	0	27,337	728,746	767,815	-39,069
April	1.69	0	26,362	98,585	786,859	819,210	65,972	0	0	0	0	911,806	885,182	26,624
May	1.10	0	21,789	48,988	705,995	749,220	123,324	0	0	0	0	776,772	872,544	-95,773
June														
July														
August														
September														
October														
November														
December														
YTD Total	14.89	0	119,527	227,934	3,541,099	3,978,070	256,465	0	0	0	47,372	3,888,560	4,234,535	-345,976

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.

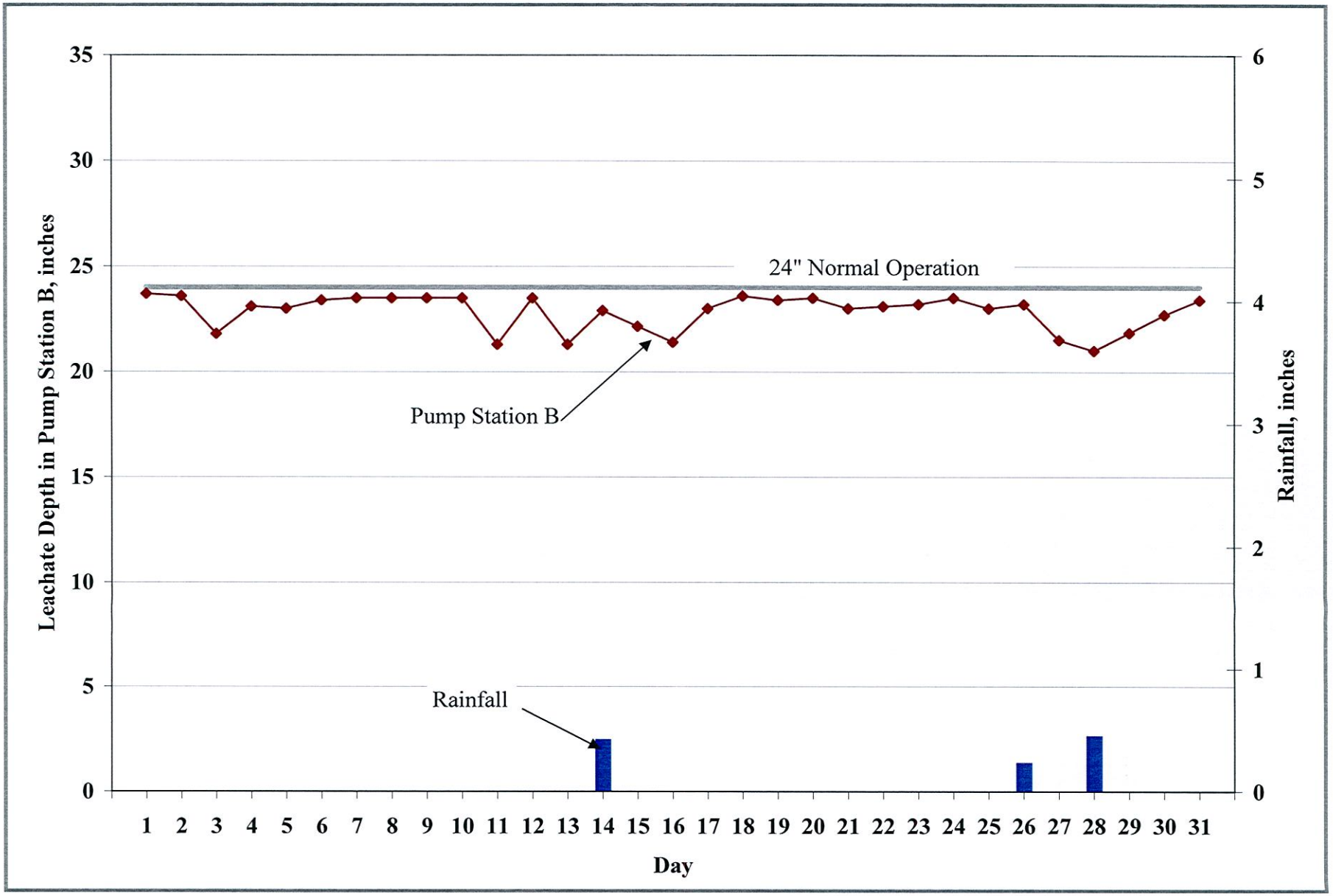

Figure 1. Leachate Levels in Pump Station B and Rainfall for May 2011.

Hillsborough County
Florida

MEMORANDUM

DATE: July 8, 2011

TO: Larry Ruiz, General Manager III, Solid Waste Management Group

FROM: Cindy Pelley, Environmental Specialist II, Environmental Services
Raymond Graves, Sr. Eng. Tech., Solid Waste Management Group

SUBJECT: Leachate Water Balance Report Forms for June
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Group (SWMG) 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 2011 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 8.04 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/stormwater 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/leachate 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 23.1 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 15,110 gallons. A total of 453,300 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 22,092 gallons. A total of 662,771 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 3,644 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 61,037 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 723,808 gallons of leachate were 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 19,565 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 104 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 leachate was not 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 is down due to tankage inspection. As such, on December 1, 2010, the SWMG began storing leachate in this tank until the inspection of the leachate tank is completed. This month an average of 270,400 gallons of ***leachate*** was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. The plant was shutdown on December 22, 2010 in preparation for tankage inspection. This month leachate was not treated at the plant.

Total Leachate Hauled (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 532,937 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 117,426 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 45,400 gallons of effluent/stormwater 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/leachate 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. The total evaporation estimated for this month was 93,900 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMG 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 743,477 gallons. Total outflow quantity from the LTRF was 650,363 gallons. The change in storage for the month increased by 93,114 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JUNE 2011
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	0.23	1.7	0.0	23.5	13,490	19,764	0	6	19,770	0	4	0	247,000	0	24,006	3,046	48,000	0	0	0	0	0	2,400
2	0.00	1.7	0.0	23.3	13,010	20,971	0	0	20,971	0	0	0	238,000	0	30,019	6,000	48,000	0	0	0	0	0	4,800
3	0.00	1.7	0.0	21.2	15,960	22,996	0	0	22,996	0	0	0	225,000	0	6,000	8,982	48,000	0	0	0	0	0	7,200
4	0.00	1.7	0.0	23.1	13,330	19,606	0	0	19,606	365	20	0	230,000	0	0	9,004	48,000	0	0	0	0	0	7,200
5	0.00	1.7	0.0	23.3	17,265	24,176	0	1,734	25,910	531	0	0	251,000	0	0	0	48,000	0	0	0	0	0	0
6	0.00	1.7	0.0	23.4	17,265	24,176	0	1,734	25,910	531	0	0	271,000	0	29,438	9,762	48,000	0	0	0	0	0	7,800
7	0.00	1.7	0.0	22.4	18,300	25,907	0	0	25,907	0	1	0	261,000	0	30,001	9,003	48,000	0	0	0	0	0	7,200
8	0.00	1.7	0.0	23.0	14,870	20,462	9	3,635	24,097	1,360	2	0	245,000	0	30,016	6,001	48,000	0	0	0	0	0	4,800
9	0.00	1.4	0.0	23.1	16,200	21,489	0	0	21,489	598	2	0	230,000	0	30,001	3,505	36,000	0	0	0	0	0	2,800
10	0.00	1.3	0.0	23.9	17,020	24,780	0	3,751	28,531	1,569	16	0	225,000	0	18,001	0	36,000	0	0	0	0	0	0
11	0.00	1.3	0.0	23.8	16,460	23,044	0	3,328	26,372	4,401	1	0	238,000	0	0	0	36,000	0	0	0	0	0	0
12	0.00	1.3	0.0	23.7	16,990	21,963	0	1,441	23,403	0	12	0	262,000	0	0	0	36,000	0	0	0	0	0	0
13	0.00	1.3	0.0	23.6	16,990	21,963	0	1,441	23,403	0	12	0	286,000	0	30,005	9,000	36,000	0	0	0	0	0	7,200
14	0.00	1.3	0.0	22.7	16,610	22,150	0	733	22,883	0	0	0	269,000	0	12,010	9,002	36,000	0	0	0	0	0	7,200
15	0.81	1.3	0.0	23.5	18,240	23,352	0	783	24,135	0	0	0	274,000	0	30,010	6,005	36,000	0	0	0	0	0	4,800
16	0.00	1.3	0.0	23.5	15,200	19,955	0	35	19,990	0	0	0	259,000	0	18,078	0	36,000	0	0	0	0	0	0
17	0.00	1.3	0.0	23.5	12,510	19,128	1	5	19,133	0	0	0	261,000	0	30,012	6,000	36,000	0	0	0	0	0	4,800
18	0.00	1.3	0.0	23.7	11,080	16,939	213	1,221	18,160	1,593	14	0	240,000	0	0	2,001	36,000	0	0	0	0	0	1,600
19	0.00	1.3	0.0	23.7	14,000	20,443	283	0	20,443	1,956	8	0	263,000	0	0	0	36,000	0	0	0	0	0	0
20	0.00	1.3	0.0	23.6	14,000	20,443	283	0	20,443	1,956	8	0	286,000	0	30,004	9,002	36,000	0	0	0	0	0	7,200
21	0.55	1.3	0.0	23.6	15,120	20,467	403	0	20,467	0	0	0	266,000	0	29,366	9,000	36,000	0	0	0	0	0	7,200
22	0.10	1.3	0.0	22.0	12,160	20,502	577	0	20,502	0	0	0	250,000	0	18,001	3,068	36,000	0	0	0	0	0	2,500
23	2.83	1.3	0.0	21.9	15,610	20,576	803	3,540	24,116	0	0	0	250,000	0	18,003	9,045	36,000	0	0	0	0	0	7,200
24	2.72	1.7	0.0	23.4	17,550	23,297	709	3,505	26,802	0	0	0	264,000	0	18,012	0	48,000	0	0	0	0	0	0
25	0.40	2.1	0.0	23.4	7,680	22,504	86	7,910	30,414	906	1	0	288,000	0	0	0	65,000	0	0	0	0	0	0
26	0.00	2.1	0.0	23.3	14,270	24,505	67	6,408	30,913	1,900	3	0	320,000	0	0	0	65,000	0	0	0	0	0	0
27	0.00	2.1	0.0	23.1	14,270	24,505	67	6,408	30,913	1,900	3	0	353,000	0	23,932	0	65,000	0	0	0	0	0	0
28	0.13	2.1	0.0	21.7	13,870	22,751	47	2,983	25,734	0	0	0	353,000	0	30,009	0	65,000	0	0	0	0	0	0
29	0.00	2.1	0.0	22.9	16,720	23,924	49	6,759	30,683	0	0	0	355,000	0	30,011	0	65,000	0	0	0	0	0	0
30	0.27	2.1	0.0	21.6	17,260	26,036	47	3,679	29,715	0	0	0	353,000	0	18,002	0	65,000	0	0	0	0	0	0
Total	8.04				453,300	662,771	3,644	61,037	723,808	19,565	104			0	532,937	117,426			0	0	0	0	93,900
Daily Average		1.6	0.0	23.1	15,110	22,092	121	2,035	24,127	652	3	0	270,400				45,400	0					
Mo. Average																3,900				0	0	0	3,130

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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
JUNE 2011
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	0.23	25,046,350	1,193,388	14.5	1,869,425	1,478,891	5,224	2,875,675	2,949	0.0	0.0	1.7	0	0.00	8.58	0	0	24,006	3,046	0	0	0
2	0.00	25,059,360	1,214,359	14.3	1,869,425	1,478,891	5,224	2,875,675	2,949	0.0	0.0	1.7	0	0.00	8.25	0	0	30,019	6,000	0	0	0
3	0.00	25,075,320	1,237,355	12.2	1,869,425	1,478,891	5,224	2,875,675	2,949	0.0	0.0	1.7	0	0.00	7.83	0	0	6,000	8,982	0	0	0
4	0.00	25,088,650	1,256,961	14.1	1,869,751	1,478,930	5,244	2,875,675	2,949	0.0	0.0	1.7	0	0.00	8.00	0	0	0	9,004	0	0	0
5	0.00	*25,105,915*	*1,281,137*	*14.3*	*1,870,282*	*1,478,930*	*5,244*	*2,877,409*	*2,949*	*0*	0.0	*1.7*	0	0.00	*8.71*	0	0	0	0	0	0	0
6	0.00	25,123,180	1,305,313	14.4	1,870,813	1,478,930	5,244	2,879,142	2,949	0.0	0.0	1.7	0	0.00	9.42	0	0	29,438	9,762	0	0	0
7	0.00	25,141,480	1,331,220	13.4	1,870,813	1,478,930	5,245	2,879,142	2,949	0.0	0.0	1.7	0	0.00	9.08	0	0	30,001	9,003	0	0	0
8	0.00	25,156,350	1,351,682	14.0	1,872,146	1,478,957	5,247	2,882,777	2,958	0.0	0.0	1.7	0	0.00	8.50	0	0	30,016	6,001	0	0	0
9	0.00	25,172,550	1,373,171	14.1	1,872,525	1,479,176	5,249	2,882,777	2,958	0.0	0.0	1.4	0	0.00	8.00	0	0	30,001	3,505	0	0	0
10	0.00	25,189,570	1,397,951	14.9	1,872,525	1,480,745	5,265	2,886,528	2,958	0.0	0.0	1.3	0	0.00	7.83	0	0	18,001	0	0	0	0
11	0.00	25,206,030	1,420,995	14.8	1,872,525	1,485,146	5,266	2,889,856	2,958	0.0	0.0	1.3	0	0.00	8.25	0	0	0	0	0	0	0
12	0.00	*25,223,020*	*1,442,958*	*14.7*	*1,872,525*	*1,485,146*	*5,278*	*2,891,297*	*2,958*	0.0	0.0	*1.3*	0	0.00	*9.09*	0	0	0	0	0	0	0
13	0.00	25,240,010	1,464,920	14.6	1,872,525	1,485,146	5,289	2,892,737	2,958	0.0	0.0	1.3	0	0.00	9.92	0	0	30,005	9,000	0	0	0
14	0.00	25,256,620	1,487,070	13.7	1,872,525	1,485,146	5,289	2,893,470	2,958	0.0	0.0	1.3	0	0.00	9.33	0	0	12,010	9,002	0	0	0
15	0.81	25,274,860	1,510,422	14.5	1,872,525	1,485,146	5,289	2,894,253	2,958	0.0	0.0	1.3	0	0.00	9.50	0	0	30,010	6,005	0	0	0
16	0.00	25,290,060	1,530,377	14.5	1,872,525	1,485,146	5,289	2,894,288	2,958	0.0	0.0	1.3	0	0.00	9.00	0	0	18,078	0	0	0	0
17	0.00	25,302,570	1,549,505	14.5	1,872,525	1,485,146	5,289	2,894,293	2,959	0.0	0.0	1.3	0	0.00	9.08	0	0	30,012	6,000	0	0	0
18	0.00	25,313,650	1,566,444	14.7	1,872,942	1,486,322	5,303	2,895,514	3,172	0.0	0.0	1.3	0	0.00	8.33	0	0	0	2,001	0	0	0
19	0.00	*25,327,650*	*1,586,887*	*14.7*	*1,872,942*	*1,488,278*	*5,311*	*2,895,514*	*3,455*	0.0	0.0	*1.3*	0	0.00	*9.13*	0	0	0	0	0	0	0
20	0.00	25,341,650	1,607,329	14.6	1,872,942	1,490,234	5,318	2,895,514	3,738	0.0	0.0	1.3	0	0.00	9.92	0	0	30,004	9,002	0	0	0
21	0.55	25,356,770	1,627,796	14.6	1,872,942	1,490,234	5,318	2,895,514	4,141	0.0	0.0	1.3	0	0.00	9.25	0	0	29,366	9,000	0	0	0
22	0.10	25,368,930	1,648,298	13.0	1,872,942	1,490,234	5,318	2,895,514	4,718	0.0	0.0	1.3	0	0.00	8.67	0	0	18,001	3,068	0	0	0
23	2.83	25,384,540	1,668,874	12.9	1,872,942	1,490,234	5,318	2,899,054	5,521	0.0	0.0	1.3	0	0.00	8.67	0	0	18,003	9,045	0	0	0
24	2.72	25,402,090	1,692,171	14.4	1,872,942	1,490,234	5,318	2,902,559	6,230	0.0	0.0	1.7	0	0.00	9.17	0	0	18,012	0	0	0	0
25	0.40	25,409,770	1,714,675	14.4	1,873,360	1,490,722	5,319	2,910,469	6,316	0.0	0.0	2.1	0	0.00	10.00	0	0	0	0	0	0	0
26	0.00	*25,424,040*	*1,739,180*	*14.3*	*1,873,360*	*1,492,622*	*5,322*	*2,916,877*	*6,383*	0.0	0.0	*2.1*	0	0.00	*11.13*	0	0	0	0	0	0	0
27	0.00	25,438,310	1,763,684	14.1	1,873,360	1,494,521	5,324	2,923,285	6,450	0.0	0.0	2.1	0	0.00	12.25	0	0	23,932	0	0	0	0
28	0.13	25,452,180	1,786,435	12.7	1,873,360	1,494,521	5,324	2,926,268	6,497	0.0	0.0	2.1	0	0.00	12.25	0	0	30,009	0	0	0	0
29	0.00	25,468,900	1,810,359	13.9	1,873,360	1,494,521	5,324	2,933,027	6,546	0.0	0.0	2.1	0	0.00	12.33	0	0	30,011	0	0	0	0
30	0.27	25,486,160	1,836,395	12.6	1,873,360	1,494,521	5,324	2,936,706	6,593	0.0	0.0	2.1	0	0.00	12.25	0	0	18,002	0	0	0	0
Totals	8.04										0		0			0	0	532,937	117,426	0	0	0

projects\balance\2011\06-11bal.xls (rg 7/01/11)

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-2011

		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	3.65	0	24,351	39,496	739,603	894,048	42,104	0	0	0	0	803,450	936,152	-132,702
February	0.76	0	23,363	20,193	624,230	759,786	13,056	0	0	0	20,035	667,786	772,842	-105,056
March	7.69	0	23,662	20,672	684,412	755,806	12,009	0	0	0	27,337	728,746	767,815	-39,069
April	1.69	0	26,362	98,585	786,859	819,210	65,972	0	0	0	0	911,806	885,182	26,624
May	1.10	0	21,789	48,988	705,995	749,220	123,324	0	0	0	0	776,772	872,544	-95,773
June	8.04	0	19,669	61,037	662,771	532,937	117,426	0	0	0	0	743,477	650,363	93,114
July														
August														
September														
October														
November														
December														
YTD Total	22.93	0	139,196	288,971	4,203,870	4,511,007	373,891	0	0	0	47,372	4,632,037	4,884,898	-252,862

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.

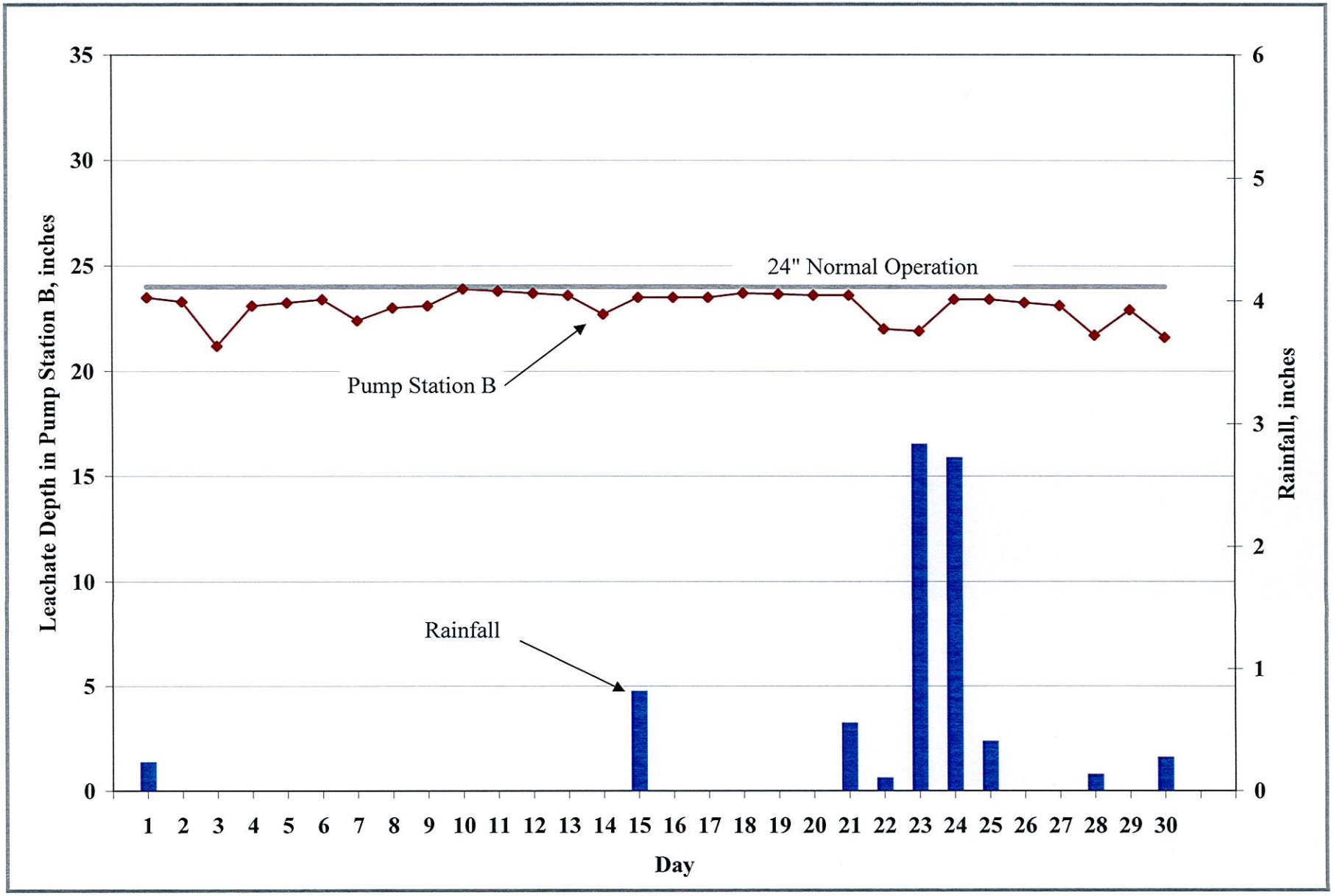

Figure 1. Leachate Levels in Pump Station B and Rainfall for June 2011.