Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

April 11, 2012

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

Dept. Of Environmental Protection
APR 17 2012
Southwest District

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 April 15, 2012.

The data is being submitted as separate monthly reports for January, February, and March 2012. 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.

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,

Larry E. Ruiz, SC
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: February 10, 2012

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

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

SUBJECT: Leachate Water Balance Report Forms for January
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 1.07 inches of rainfall at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent/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 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 5,938 gallons. A total of 184,070 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 26,232 gallons. A total of 813,178 gallons of leachate was pumped this month.

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

Column VIII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month a total of 1,637 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 70,007 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 883,185 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 23,462 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 38 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 419,800 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 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 699,589 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 106,160 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 effluent was not stored in Pond A.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent/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 84,900 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 906,685 gallons. Total outflow quantity from the LTRF was 805,749 gallons. The change in storage for the month increased by 100,936 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 2012
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	*0.0*	*0.0*	*22.0*	*7,880*	*25,056*	*53*	*0*	*25,056*	*0*	*0*	*0*	*402,000*	0	0	0	0	0	0	0	0	0	0
2	0.10	0.0	0.0	22.4	7,880	25,056	53	0	25,056	0	0	0	422,000	0	27,520	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	21.8	8,230	25,286	54	0	25,286	509	1	0	420,000	0	51,114	5,998	0	0	0	0	0	0	4,800
4	0.00	0.0	0.0	22.5	16,450	23,882	54	0	23,882	1,180	2	0	386,000	0	44,840	9,001	0	0	0	0	0	0	7,200
5	0.00	0.0	0.0	9.0	9,000	2,092	55	0	2,092	2,370	1	0	336,000	0	44,034	8,013	0	0	0	0	0	0	6,400
6	0.00	0.0	0.0	9.0	1,810	3,227	55	12,572	15,799	0	0	0	307,000	0	24,001	8,115	0	0	0	0	0	0	6,500
7	0.00	0.0	0.0	21.5	1,440	53,217	50	8,193	61,410	0	0	0	333,000	0	0	3,997	0	0	0	0	0	0	3,200
8	0.00	*0.0*	*0.0*	*22.1*	*0*	*30,083*	*55*	*3,353*	*33,435*	*0*	*0*	*0*	*366,000*	0	0	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	22.7	0	30,083	55	3,353	33,435	0	0	0	398,000	0	24,020	8,001	0	0	0	0	0	0	6,400
10	0.00	0.0	0.0	23.2	0	31,547	50	2,932	34,479	0	0	0	398,000	0	29,721	6,003	0	0	0	0	0	0	4,800
11	0.25	0.0	0.0	23.6	890	33,946	54	2,890	36,836	0	1	0	394,000	0	30,418	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	23.3	11,960	39,555	50	2,893	42,448	3	0	0	408,000	0	18,184	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	23.4	9,295	29,870	52	0	29,870	1,160	3	0	420,000	0	24,006	12,003	0	0	0	0	0	0	9,600
14	0.00	0.0	0.0	20.9	8,150	22,046	54	3,047	25,093	1,364	2	0	408,000	0	0	0	0	0	0	0	0	0	0
15	0.00	*0.0*	*0.0*	*21.9*	*0*	*18,007*	*56*	*1,690*	*19,697*	*3,312*	*4*	*0*	*426,000*	0	0	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	22.8	0	18,007	56	1,690	19,697	3,312	4	0	444,000	0	24,411	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	21.7	0	23,670	52	0	23,670	0	0	0	446,000	0	18,000	0	0	0	0	0	0	0	0
18	0.52	0.0	0.0	21.0	0	29,396	52	3,575	32,971	0	0	0	451,000	0	18,018	15,974	0	0	0	0	0	0	12,800
19	0.00	0.0	0.0	21.9	9,785	34,344	54	2,886	37,230	0	0	0	466,000	0	24,265	4,005	0	0	0	0	0	0	3,200
20	0.00	0.0	0.0	23.2	8,320	26,970	55	0	26,970	0	0	0	463,000	0	24,040	8,029	0	0	0	0	0	0	6,400
21	0.00	0.0	0.0	21.6	16,310	30,194	56	3,291	33,485	0	0	0	444,000	0	69,610	0	0	0	0	0	0	0	0
22	0.00	*0.0*	*0.0*	*21.0*	*5,860*	*27,464*	*51*	*1,446*	*28,910*	*0*	*0*	*0*	*441,000*	0	0	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	20.3	5,860	27,464	51	1,446	28,910	0	0	0	439,000	0	51,586	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	23.2	11,670	27,938	51	3,650	31,588	1,485	13	0	430,000	0	24,014	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	23.5	11,355	26,756	39	2,143	28,899	0	0	0	432,000	0	30,010	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	22.1	10,495	27,808	84	0	27,808	1,644	3	0	430,000	0	30,041	0	0	0	0	0	0	0	0
27	0.20	0.0	0.0	23.1	12,470	31,196	47	2,963	34,159	4,276	4	0	437,000	0	12,014	4,000	0	0	0	0	0	0	3,200
28	0.00	0.0	0.0	21.6	8,960	27,590	49	3,026	30,616	0	0	0	446,000	0	0	7,010	0	0	0	0	0	0	5,600
29	0.00	*0.0*	*0.0*	*22.2*	*0*	*20,814*	*48*	*1,486*	*22,300*	*0*	*0*	*0*	*465,000*	0	0	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	22.8	0	20,814	48	1,486	22,300	0	0	0	485,000	0	30,713	3,004	0	0	0	0	0	0	2,400
31	0.00	0.0	0.0	22.3	0	19,802	47	0	19,802	2,848	1	0	470,000	0	25,009	3,007	0	0	0	0	0	0	2,400
Total	1.07				184,070	813,178	1,637	70,007	883,185	23,462	38			0	699,589	106,160			0	0	0	0	84,900
Daily Average		0.0	0.0	21.4	5,938	26,232	53	2,258	28,490	757	1	0	419,800				0	0					
Mo. Average																3,400				0	0	0	2,740

projects\balance\2009\01-09bal.xls (JDW 2/02/12)

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
JANUARY 2012
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
											Pond B		Effluent	Depth in	Depth in	Leachate	Leachate Hauled		Leachate	Effluent Hauled		Effluent
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.)	Effluent Sprayed (gal)	Pond A Depth (ft.)	Spray Irrigation (gal.)	575K Tank Leachate (ft.)	575K Tank Effluent (ft.)	Treated at LTRF (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal.)	Contractor (gal.)	County (gal.)	Dust Control (Sprayed) (gal)
1	0.00	*28,470,550*	*8,046,778*	*13.0*	*1,892,298*	*1,596,478*	*5,558*	*3,601,796*	*1,006*	0.0	0.0	0.0	0	0.00	*13.96*	0	0	0	0	0	0	0
2	0.10	28,478,430	8,071,833	13.4	1,892,298	1,596,478	5,558	3,601,796	1,059	0.0	0.0	0.0	0	0.00	14.67	0	27,520	0	0	0	0	0
3	0.00	28,486,660	8,097,119	12.8	1,892,298	1,596,987	5,559	3,601,796	1,113	0.0	0.0	0.0	0	0.00	14.58	0	27,776	23,338	5,998	0	0	0
4	0.00	28,503,110	8,121,001	13.5	1,892,301	1,598,164	5,561	3,601,796	1,167	0.0	0.0	0.0	0	0.00	13.42	0	20,838	24,002	9,001	0	0	0
5	0.00	28,512,110	8,123,093	0.0	1,892,301	1,600,534	5,562	3,601,796	1,222	0.0	0.0	0.0	0	0.00	11.67	0	20,029	24,005	8,013	0	0	0
6	0.00	28,513,920	8,126,320	0.0	1,892,301	1,600,534	5,562	3,614,368	1,277	0.0	0.0	0.0	0	0.00	10.67	0	0	24,001	8,115	0	0	0
7	0.00	28,515,360	8,179,537	12.5	1,892,301	1,600,534	5,562	3,622,561	1,327	0.0	0.0	0.0	0	0.00	11.58	0	0	0	3,997	0	0	0
8	0.00	*28,515,360*	*8,209,620*	*13.1*	*1,892,301*	*1,600,534*	*5,562*	*3,625,914*	*1,382*	0.0	0.0	0.0	0	0.00	*12.7*	0	0	0	0	0	0	0
9	0.00	28,515,360	8,239,702	13.7	1,892,301	1,600,534	5,562	3,629,266	1,436	0.0	0.0	0.0	0	0.00	13.83	0	0	24,020	8,001	0	0	0
10	0.00	28,515,360	8,271,249	14.2	1,892,301	1,600,534	5,562	3,632,198	1,486	0.0	0.0	0.0	0	0.00	13.83	0	0	29,721	6,003	0	0	0
11	0.25	28,516,250	8,305,195	14.6	1,892,301	1,600,534	5,563	3,635,088	1,540	0.0	0.0	0.0	0	0.00	13.67	0	0	30,418	0	0	0	0
12	0.00	28,528,210	8,344,750	14.3	1,892,301	1,600,537	5,563	3,637,981	1,590	0.0	0.0	0.0	0	0.00	14.17	0	0	18,184	0	0	0	0
13	0.00	28,537,505	8,374,620	14.4	1,892,309	1,601,689	5,566	3,637,981	1,642	0.0	0.0	0.0	0	0.00	14.58	0	0	24,006	12,003	0	0	0
14	0.00	28,545,655	8,396,666	11.9	1,892,309	1,603,053	5,568	3,641,028	1,696	0.0	0.0	0.0	0	0.00	14.17	0	0	0	0	0	0	0
15	0.00	*28,545,655*	*8,414,673*	*12.9*	*1,892,309*	*1,606,365*	*5,572*	*3,642,718*	*1,752*	0.0	0.0	0.0	0	0.00	*14.8*	0	0	0	0	0	0	0
16	0.00	28,545,655	8,432,680	13.8	1,892,309	1,609,676	5,575	3,644,407	1,807	0.0	0.0	0.0	0	0.00	15.42	0	0	24,411	0	0	0	0
17	0.00	28,545,655	8,456,350	12.7	1,892,309	1,609,676	5,575	3,644,407	1,859	0.0	0.0	0.0	0	0.00	15.50	0	0	18,000	0	0	0	0
18	0.52	28,545,655	8,485,746	12.0	1,892,309	1,609,676	5,575	3,647,982	1,911	0.0	0.0	0.0	0	0.00	15.67	0	0	18,018	15,974	0	0	0
19	0.00	28,555,440	8,520,090	12.9	1,892,309	1,609,676	5,575	3,650,868	1,965	0.0	0.0	0.0	0	0.00	16.17	0	0	24,265	4,005	0	0	0
20	0.00	28,563,760	8,547,060	14.2	1,892,309	1,609,676	5,575	3,650,868	2,020	0.0	0.0	0.0	0	0.00	16.08	0	0	24,040	8,029	0	0	0
21	0.00	28,580,070	8,577,254	12.6	1,892,309	1,609,676	5,575	3,654,159	2,076	0.0	0.0	0.0	0	0.00	15.42	0	69,610	0	0	0	0	0
22	0.00	*28,585,930*	*8,604,718*	*12.0*	*1,892,309*	*1,609,676*	*5,575*	*3,655,605*	*2,127*	0.0	0.0	0.0	0	0.00	*15.3*	0	0	0	0	0	0	0
23	0.00	28,591,790	8,632,182	11.3	1,892,309	1,609,676	5,575	3,657,050	2,177	0.0	0.0	0.0	0	0.00	15.25	0	20,844	30,742	0	0	0	0
24	0.00	28,603,460	8,660,120	14.2	1,892,309	1,611,161	5,588	3,660,700	2,228	0.0	0.0	0.0	0	0.00	14.92	0	0	24,014	0	0	0	0
25	0.00	28,614,815	8,686,876	14.5	1,892,309	1,611,161	5,588	3,662,843	2,267	0.0	0.0	0.0	0	0.00	15.00	0	0	30,010	0	0	0	0
26	0.00	28,625,310	8,714,684	13.1	1,892,309	1,612,805	5,591	3,662,843	2,351	0.0	0.0	0.0	0	0.00	14.92	0	0	30,041	0	0	0	0
27	0.20	28,637,780	8,745,880	14.1	1,892,309	1,617,081	5,595	3,665,806	2,398	0.0	0.0	0.0	0	0.00	15.17	0	0	12,014	4,000	0	0	0
28	0.00	28,646,740	8,773,470	12.6	1,892,309	1,617,081	5,595	3,668,832	2,447	0.0	0.0	0.0	0	0.00	15.50	0	0	0	7,010	0	0	0
29	0.00	*28,646,740*	*8,794,284*	*13.2*	*1,892,309*	*1,617,081*	*5,595*	*3,670,318*	*2,495*	0.0	0.0	0.0	0	0.00	*16.2*	0	0	0	0	0	0	0
30	0.00	28,646,740	8,815,098	13.8	1,892,309	1,617,081	5,595	3,671,803	2,543	0.0	0.0	0.0	0	0.00	16.83	0	0	30,713	3,004	0	0	0
31	0.00	28,646,740	8,834,900	13.3	1,892,309	1,619,929	5,596	3,671,803	2,590	0.0	0.0	0.0	0	0.00	16.33	0	1,000	24,009	3,007	0	0	0
Totals	1.07										0		0			0	187,617	511,972	106,160	0	0	0

projects\balance\2009\01-09bal.xls (JDW 2/02/12)

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Column IV includes quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	0	0	5
Intermediate	139.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

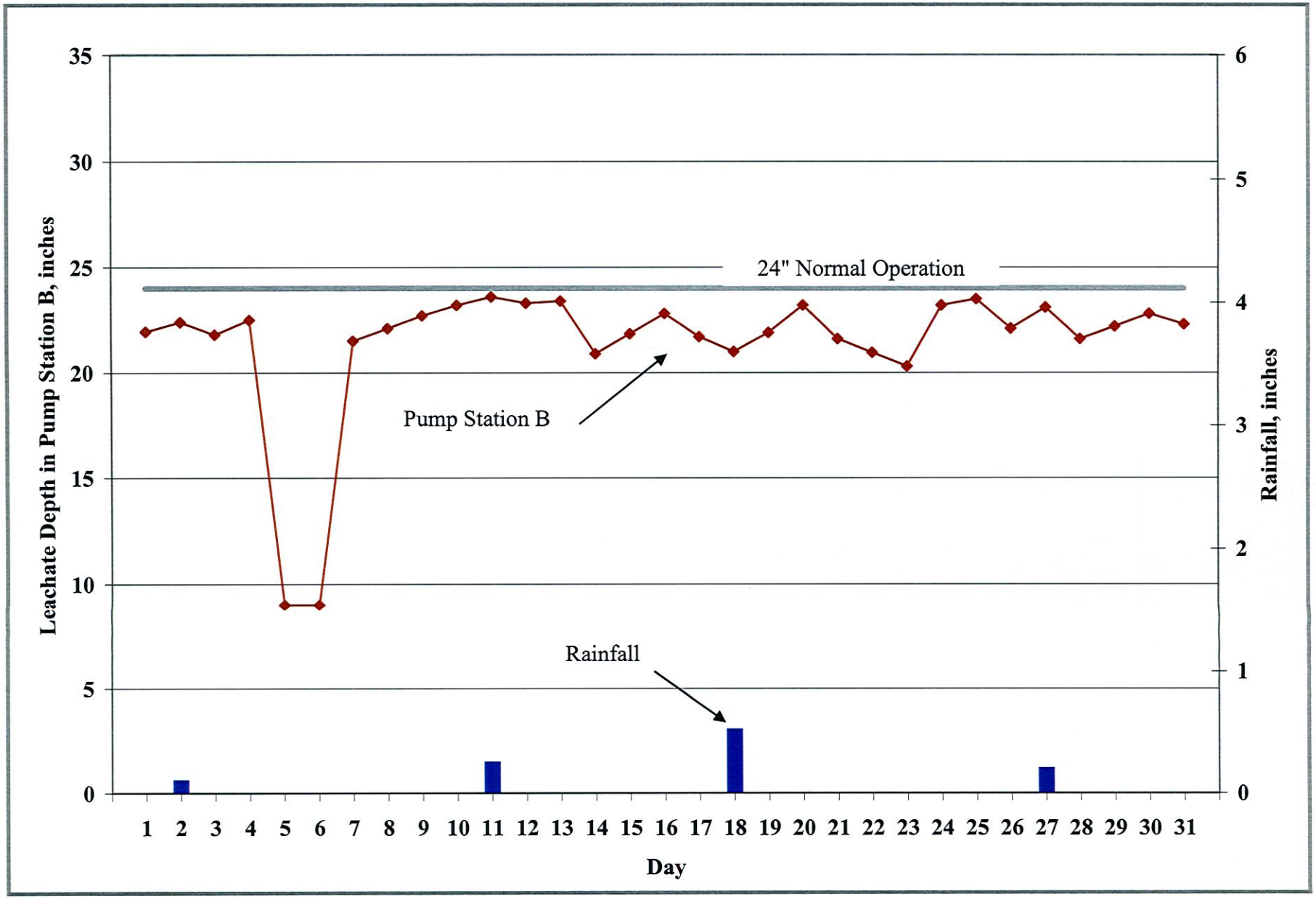

Figure 1. Leachate Levels in Pump Station B and Rainfall for January 2012.

Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

MEMORANDUM

DATE: March 14, 2012

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

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

SUBJECT: Leachate Water Balance Report Forms for February
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 0.73 inches of rainfall at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent/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 21.8 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 15,570 gallons. A total of 451,520 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 24,548 gallons. A total of 711,900 gallons of leachate was pumped this month.

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

Column VIII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month a total of 1,246 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 44,187 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 756,087 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 355,265 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 144 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. Completed inspection and repairs and resumed leachate storage on February 3, 2012. This month an average of 285,500 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 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 333,400 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 729,481 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 3,015 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 effluent was not stored in Pond A.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent/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 2,400 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 1,111,496 gallons. Total outflow quantity from the LTRF was 732,496 gallons. The change in storage for the month increased by 379,000 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
FEBRUARY 2012
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	0.0	0.0	19.8	7,750	25,062	50	3,017	28,079	55,258	6	0	473,000	0	30,033	3,015	0	0	0	0	0	0	2,400
2	0.00	0.0	0.0	20.4	17,750	29,734	42	4,840	34,574	0	0	0	473,000	0	30,053	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	22.8	18,420	30,086	47	104	30,190	92	5	0	475,000	0	24,002	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	21.3	19,750	28,098	47	42	28,140	0	0	58,000	463,000	0	0	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	*22.0*	*6,360*	*27,829*	*44*	*64*	*27,893*	*0*	*0*	*86,000*	*461,000*	0	0	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	22.7	6,360	27,829	44	64	27,893	0	0	115,000	458,000	0	30,013	0	0	0	0	0	0	0	0
7	0.15	0.0	0.0	21.1	19,460	30,334	41	2	30,336	0	0	149,000	422,000	0	36,131	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	20.7	20,630	29,746	41	1	29,747	0	0	178,000	391,000	0	36,127	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	21.6	19,850	28,030	41	4	28,034	0	0	202,000	353,000	0	30,148	0	0	0	0	0	0	0	0
10	0.38	0.0	0.0	21.4	18,630	26,252	43	13	26,265	104	1	225,000	329,000	0	12,000	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	23.5	19,590	31,492	44	3,006	34,498	0	0	266,000	317,000	0	0	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	*22.3*	*7,830*	*19,597*	*41*	*1,566*	*21,163*	*0*	*0*	*282,000*	*317,000*	0	0	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	21.0	7,830	19,597	41	1,566	21,163	0	0	297,000	317,000	0	24,026	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	23.0	19,590	28,604	40	0	28,604	0	0	324,000	297,000	0	30,018	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	22.6	19,740	28,074	63	3,204	31,278	0	0	355,000	295,000	0	30,012	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	23.3	18,740	25,830	22	2,931	28,761	0	0	381,000	276,000	0	36,126	0	0	0	0	0	0	0	0
17	0.20	0.0	0.0	21.8	18,240	27,334	41	0	27,334	0	2	377,000	274,000	0	30,267	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	21.6	17,510	28,198	42	3,066	31,264	85,276	5	386,000	274,000	0	0	0	0	0	0	0	0	0	0
19	0.00	0.0	0.0	*22.5*	*8,795*	*28,360*	*42*	*1,937*	*30,297*	*105,087*	*7*	*413,000*	*275,000*	0	0	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	23.3	8,795	28,360	42	1,937	30,297	105,087	7	439,000	276,000	0	6,365	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	15.1	18,920	18,400	46	0	18,400	1,050	4	449,000	274,000	0	54,853	0	0	0	0	0	0	0	0
22	0.00	0.0	0.0	20.5	18,620	17,556	44	2,930	20,486	102	1	422,000	274,000	0	60,548	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	21.0	19,940	8,778	43	628	9,406	476	24	394,000	274,000	0	63,341	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	23.4	18,910	8,778	42	2,966	11,744	492	0	389,000	274,000	0	51,725	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	23.4	17,760	24,822	42	0	24,822	472	1	389,000	274,000	0	0	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	*22.2*	*8,705*	*17,779*	*43*	*3,079*	*20,858*	*468*	*1*	*410,000*	*274,000*	0	0	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	20.9	8,705	17,779	43	3,079	20,858	468	1	432,000	274,000	0	18,096	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	23.0	18,010	23,810	44	0	23,810	429	1	432,000	269,000	0	43,988	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	23.1	20,330	25,752	42	4,143	29,895	404	80	430,000	266,000	0	51,609	0	0	0	0	0	0	0	0
Total	0.73				451,520	711,900	1,246	44,187	756,087	355,265	144			0	729,481	3,015			0	0	0	0	2,400
Daily Average		0.0	0.0	21.8	15,570	24,548	43	1,524	26,072	12,251	5	285,500	333,400				0	0					
Mo. Average																100					0	0	0	80

projects\balance\2009\01-09bal.xls (JDW 03/06/12)

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
FEBRUARY 2012
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		Leachate Dust Control	Effluent Hauled		Effluent Dust Control
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.)	(Sprayed) (gal.)	Contractor (gal.)	County (gal.)	(Sprayed) (gal)
1	0.00	28,654,490	8,859,962	10.8	1,892,309	1,675,187	5,602	3,674,820	2,640	0.0	0.0	0.0	0	0.00	16.42	0	0	30,033	3,015	0	0	0
2	0.00	28,672,240	8,889,696	11.4	1,892,309	1,675,187	5,602	3,679,660	2,682	0.0	0.0	0.0	0	0.00	16.42	0	0	30,053	0	0	0	0
3	0.00	28,690,660	8,919,782	13.8	1,892,309	1,675,279	5,607	3,679,764	2,729	0.0	0.0	0.0	0	0.00	16.50	0	0	24,002	0	0	0	0
4	0.00	28,710,410	8,947,880	12.3	1,892,309	1,675,279	5,607	3,679,806	2,776	0.0	0.0	0.0	0	2.00	16.08	0	0	0	0	0	0	0
5	0.00	*28,716,770*	*8,975,709*	*13.0*	*1,892,309*	*1,675,279*	*5,607*	*3,679,870*	*2,820*	0.0	0.0	0.0	0	*3.0*	*16.0*	0	0	0	0	0	0	0
6	0.00	28,723,130	9,003,538	13.7	1,892,309	1,675,279	5,607	3,679,934	2,863	0.0	0.0	0.0	0	4.00	15.92	0	0	30,013	0	0	0	0
7	0.15	28,742,590	9,033,872	12.1	1,892,309	1,675,279	5,607	3,679,936	2,904	0.0	0.0	0.0	0	5.17	14.67	0	0	36,131	0	0	0	0
8	0.00	28,763,220	9,063,618	11.7	1,892,309	1,675,279	5,607	3,679,937	2,945	0.0	0.0	0.0	0	6.17	13.58	0	0	36,127	0	0	0	0
9	0.00	28,783,070	9,091,648	12.6	1,892,309	1,675,279	5,607	3,679,941	2,986	0.0	0.0	0.0	0	7.00	12.25	0	0	30,148	0	0	0	0
10	0.38	28,801,700	9,117,900	12.4	1,892,309	1,675,383	5,608	3,679,954	3,029	0.0	0.0	0.0	0	7.83	11.42	0	0	12,000	0	0	0	0
11	0.00	28,821,290	9,149,392	14.5	1,892,309	1,675,383	5,608	3,682,960	3,073	0.0	0.0	0.0	0	9.25	11.00	0	0	0	0	0	0	0
12	0.00	*28,829,120*	*9,168,989*	*13.3*	*1,892,309*	*1,675,383*	*5,608*	*3,684,526*	*3,114*	0.0	0.0	0.0	0	*9.8*	*11.0*	0	0	0	0	0	0	0
13	0.00	28,836,950	9,188,586	12.0	1,892,309	1,675,383	5,608	3,686,091	3,155	0.0	0.0	0.0	0	10.33	11.00	0	0	24,026	0	0	0	0
14	0.00	28,856,540	9,217,190	14.0	1,892,309	1,675,383	5,608	3,686,091	3,195	0.0	0.0	0.0	0	11.25	10.33	0	0	30,018	0	0	0	0
15	0.00	28,876,280	9,245,264	13.6	1,892,309	1,675,383	5,608	3,689,295	3,258	0.0	0.0	0.0	0	12.33	10.25	0	0	30,012	0	0	0	0
16	0.00	28,895,020	9,271,094	14.3	1,892,309	1,675,383	5,608	3,692,226	3,280	0.0	0.0	0.0	0	13.25	9.58	0	0	36,126	0	0	0	0
17	0.20	28,913,260	9,298,428	12.8	1,892,309	1,675,383	5,610	3,692,226	3,321	0.0	0.0	0.0	0	13.08	9.50	0	0	30,267	0	0	0	0
18	0.00	28,930,770	9,326,626	12.6	1,892,309	1,760,659	5,615	3,695,292	3,363	0.0	0.0	0.0	0	13.42	9.50	0	0	0	0	0	0	0
19	0.00	*28,939,565*	*9,354,986*	*13.5*	*1,892,309*	*1,865,746*	*5,622*	*3,697,229*	*3,405*	0.0	0.0	0.0	0	*14.3*	*9.5*	0	0	0	0	0	0	0
20	0.00	28,948,360	9,383,346	14.3	1,892,309	1,970,833	5,628	3,699,165	3,447	0.0	0.0	0.0	0	15.25	9.58	0	0	6,365	0	0	0	0
21	0.00	28,967,280	9,401,746	6.1	1,892,309	1,971,883	5,632	3,699,165	3,493	0.0	0.0	0.0	0	15.58	9.50	0	31,614	23,239	0	0	0	0
22	0.00	28,985,900	*9,419,302*	11.5	1,892,309	1,971,985	5,633	3,702,095	3,537	0.0	0.0	0.0	0	14.67	9.50	0	30,510	30,038	0	0	0	0
23	0.00	29,005,840	*9,428,080*	12.0	1,892,309	1,972,461	5,657	3,702,723	3,580	0.0	0.0	0.0	0	13.67	9.50	0	33,225	30,116	0	0	0	0
24	0.00	29,024,750	9,436,858	14.4	1,892,309	1,972,953	5,657	3,705,689	3,622	0.0	0.0	0.0	0	13.50	9.50	0	27,626	24,099	0	0	0	0
25	0.00	29,042,510	9,461,680	14.4	1,892,309	1,973,425	5,658	3,705,689	3,664	0.0	0.0	0.0	0	13.50	9.50	0	0	0	0	0	0	0
26	0.00	*29,051,215*	*9,479,459*	*13.2*	*1,892,309*	*1,973,893*	*5,659*	*3,708,768*	*3,707*	0.0	0.0	0.0	0	*14.3*	*9.5*	0	0	0	0	0	0	0
27	0.00	29,059,920	9,497,238	11.9	1,892,309	1,974,361	5,659	3,711,847	3,750	0.0	0.0	0.0	0	15.00	9.50	0	0	18,096	0	0	0	0
28	0.00	29,077,930	9,521,048	14.0	1,892,309	1,974,790	5,660	3,711,847	3,794	0.0	0.0	0.0	0	15.00	9.33	0	19,855	24,133	0	0	0	0
29	0.00	29,098,260	9,546,800	14.1	1,892,309	1,975,194	5,740	3,715,990	3,836	0.0	0.0	0.0	0	14.92	9.25	0	27,402	24,207	0	0	0	0
Totals	0.73										0		0			0	170,232	559,249	3,015	0	0	0

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Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3 Column IV includes quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	0	0	5
Intermediate	139.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

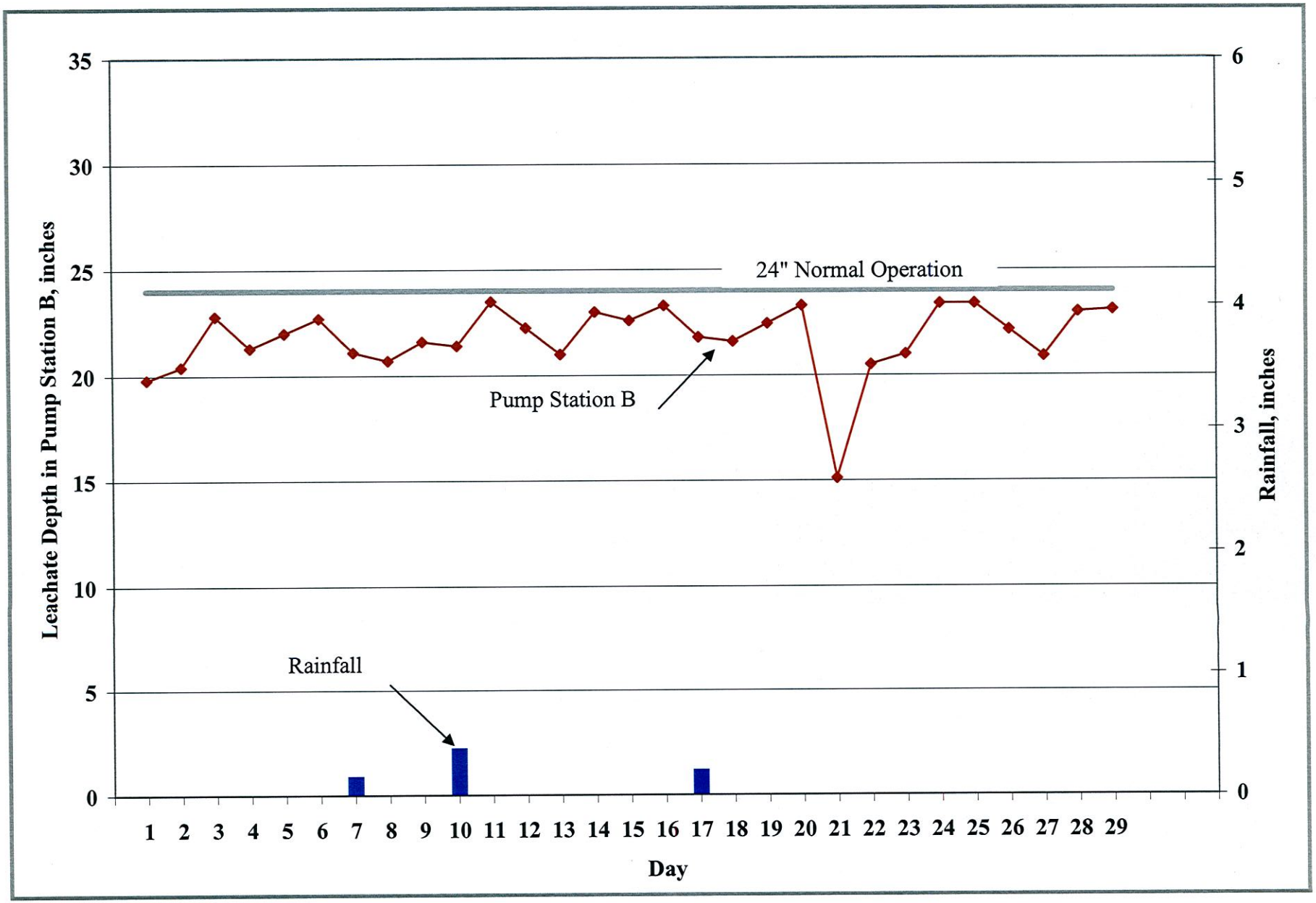

Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2012.

Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

MEMORANDUM

DATE: April 11, 2012

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

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

SUBJECT: Leachate Water Balance Report Forms for March
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 1.34 inches of rainfall at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month effluent was not stored in Pond A.

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month effluent/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 22.2 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 15,963 gallons. A total of 494,860 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 24,378 gallons. A total of 755,703 gallons of leachate was pumped this month.

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

Column VIII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month a total of 1,377 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 40,857 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 796,560 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 14,439 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 15 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 357,800 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 was down from December 1, 2010 through March 19, 2012 for tank inspection and repairs. The SWMG was storing ***leachate*** in this tank from March 1st through March 6th, with a six day daily average of 181,333 gallons of leachate. After the inspection was completed, the SWMG began storing ***effluent*** in this tank on March 23rd through March 31st, with a nine day daily average of 134,667 gallons of effluent.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. The plant was shutdown from December 22, 2010 through March 19, 2012 for tank inspections. The plant resumed operation on March 20, 2012. This month a total of 249,900 gallons of leachate was 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 731,676 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVII)

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

Pond A Storage (Column XVIII)

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

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month effluent/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 zero.

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 810,573 gallons. Total outflow quantity from the LTRF was 981,576 gallons. The change in storage for the month decreased by 171,003 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 2012
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	0.0	0.0	20.8	18,920	26,616	40	91	26,707	436	1	434,000	266,000	0	85,069	0	0	0	0	0	0	0	0
2	0.00	0.0	0.0	21.2	20,090	28,036	43	11	28,047	702	1	420,000	180,000	0	75,568	0	0	0	0	0	0	0	0
3	0.00	0.0	0.0	22.3	18,570	29,560	43	0	29,560	426	1	441,000	180,000	0	0	0	0	0	0	0	0	0	0
4	0.00	0.0	0.0	*22.9*	*8,710*	*23,472*	*45*	*0*	*23,472*	*595*	*1*	*464,000*	*164,000*	*0*	0	0	0	0	0	0	0	0	0
5	0.00	0.0	0.0	23.5	8,710	23,472	45	0	23,472	595	1	487,000	149,000	0	43,611	0	0	0	0	0	0	0	0
6	0.00	0.0	0.0	22.2	19,420	22,236	38	0	22,236	187	1	449,000	149,000	0	48,585	0	0	0	0	0	0	0	0
7	0.00	0.0	0.0	22.4	17,840	20,050	45	0	20,050	426	1	422,000	0	0	38,088	0	0	0	0	0	0	0	0
8	0.00	0.0	0.0	22.3	16,490	20,880	46	3,000	23,880	399	0	401,000	0	0	49,653	0	0	0	0	0	0	0	0
9	0.00	0.0	0.0	22.7	17,370	24,734	43	86	24,820	395	0	358,000	0	0	35,884	0	0	0	0	0	0	0	0
10	0.00	0.0	0.0	22.7	18,590	26,292	44	4,015	30,307	425	1	348,000	0	0	0	0	0	0	0	0	0	0	0
11	0.00	0.0	0.0	*21.9*	*9,420*	*19,683*	*44*	*0.0*	*19,683*	*408*	*0*	*365,000*	*0*	*0*	0	0	0	0	0	0	0	0	0
12	0.00	0.0	0.0	21.0	9,420	19,683	44	*0.0*	19,683	408	0	381,000	0	0	30,079	0	0	0	0	0	0	0	0
13	0.00	0.0	0.0	23.0	19,810	24,614	41	4,546	29,160	395	0	324,000	0	0	30,104	0	0	0	0	0	0	0	0
14	0.00	0.0	0.0	23.3	16,720	24,426	43	836	25,262	422	0	333,000	0	0	6,031	0	0	0	0	0	0	0	0
15	0.00	0.0	0.0	22.4	18,990	24,148	44	250	24,398	519	1	336,000	0	0	0	0	0	0	0	0	0	0	0
16	0.00	0.0	0.0	22.4	19,030	25,056	44	914	25,970	430	0	345,000	0	0	18,104	0	0	0	0	0	0	0	0
17	0.00	0.0	0.0	22.4	19,050	24,228	45	1,206	25,434	413	1	345,000	0	0	0	0	0	0	0	0	0	0	0
18	0.00	0.0	0.0	*22.5*	*8,820*	*20,544*	*46*	*5,469*	*26,013*	*641*	*1*	*370,000*	*0*	*0*	0	0	0	0	0	0	0	0	0
19	0.00	0.0	0.0	22.6	8,820	20,544	46	5,469	26,013	641	1	394,000	0	0	30,466	0	0	0	0	0	0	0	0
20	0.00	0.0	0.0	21.4	18,540	26,979	46	1	26,980	415	0	389,000	0	0	24,206	0	0	0	0	0	0	0	0
21	0.00	0.0	0.0	22.3	19,480	27,962	47	0	27,962	422	0	394,000	0	0	30,416	0	0	0	0	0	0	0	0
22	1.07	0.0	0.0	21.2	17,970	23,855	39	0	23,855	456	1	362,000	0	2,300	30,134	0	0	0	0	0	0	0	0
23	0.00	0.0	0.0	23.0	18,170	24,333	45	1,274	25,607	477	0	333,000	34,000	31,100	12,043	0	0	0	0	0	0	0	0
24	0.00	0.0	0.0	23.2	17,250	29,815	44	116	29,931	467	1	324,000	58,000	27,600	0	0	0	0	0	0	0	0	0
25	0.00	0.0	0.0	*22.5*	*8,450*	*26,294*	*46*	*3,878*	*30,172*	*646*	*0*	*327,000*	*84,000*	*29,000*	0	0	0	0	0	0	0	0	0
26	0.00	0.0	0.0	21.7	8,450	26,294	46	3,878	30,172	646	0	331,000	110,000	28,100	30,102	0	0	0	0	0	0	0	0
27	0.00	0.0	0.0	22.8	17,370	25,350	47	*0.0*	25,350	426	0	302,000	134,000	28,000	30,081	0	0	0	0	0	0	0	0
28	0.00	0.0	0.0	23.0	17,220	21,088	49	2,928	24,016	353	0	271,000	156,000	22,300	30,066	0	0	0	0	0	0	0	0
29	0.00	0.0	0.0	22.0	18,800	23,831	47	*0.0*	23,831	432	1	240,000	187,000	26,800	29,324	0	0	0	0	0	0	0	0
30	0.00	0.0	0.0	20.8	19,260	25,731	47	2,877	28,608	441	0	214,000	214,000	28,100	24,062	0	0	0	0	0	0	0	0
31	0.27	0.0	0.0	21.2	19,110	25,897	47	13	25,910	398	0	187,000	235,000	26,600	0	0	0	0	0	0	0	0	0
Total	1.34				494,860	755,703	1,377	40,857	796,560	14,439	15			249,900	731,676	0			0	0	0	0	0
Daily Average		0.0	0.0	22.2	15,963	24,378	44	1,318	25,695	466	0	357,800					0	0					
Mo. Average																0				0	0	0	0

projects\balance\2009\01-09bal.xls (JDW 04/03/12)

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
MARCH 2012
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	29,117,180	9,573,416	11.8	1,892,309	1,975,630	5,741	3,716,081	3,876	0.0	0.0	0.0	0	15.08	9.25	0	54,912	30,157	0	0	0	0
2	0.00	29,137,270	9,601,452	12.2	1,892,309	1,976,332	5,742	3,716,092	3,919	0.0	0.0	0.0	0	14.58	6.25	0	69,529	6,039	0	0	0	0
3	0.00	29,155,840	9,631,012	13.3	1,892,309	1,976,758	5,743	3,716,092	3,962	0.0	0.0	0.0	0	15.33	6.25	0	0	0	0	0	0	0
4	0.00	*29,164,550*	*9,654,484*	*13.9*	*1,892,309*	*1,977,353*	*5,744*	*3,716,092*	*4,007*	0.0	0.0	0.0	0	*16.1*	*5.7*	0	0	0	0	0	0	0
5	0.00	29,173,260	9,677,956	14.5	1,892,309	1,977,948	5,745	3,716,092	4,052	0.0	0.0	0.0	0	16.92	5.17	0	25,475	18,136	0	0	0	0
6	0.00	29,192,680	9,700,192	13.2	1,892,309	1,978,135	5,746	3,716,092	4,090	0.0	0.0	0.0	0	15.58	5.17	0	18,444	30,141	0	0	0	0
7	0.00	29,210,520	9,720,242	13.4	1,892,309	1,978,561	5,747	3,716,092	4,135	0.0	0.0	0.0	0	14.67	0.00	0	20,010	18,078	0	0	0	0
8	0.00	29,227,010	9,741,122	13.3	1,892,309	1,978,960	5,747	3,719,092	4,181	0.0	0.0	0.0	0	13.92	0.00	0	19,513	30,140	0	0	0	0
9	0.00	29,244,380	9,765,856	13.7	1,892,309	1,979,355	5,747	3,719,178	4,224	0.0	0.0	0.0	0	12.42	0.00	0	18,662	17,222	0	0	0	0
10	0.00	29,262,970	9,792,148	13.7	1,892,309	1,979,780	5,748	3,723,193	4,268	0.0	0.0	0.0	0	12.08	0.00	0	0	0	0	0	0	0
11	0.00	*29,272,390*	*9,811,831*	*12.9*	*1,892,309*	*1,980,188*	*5,748*	*3,723,176*	*4,312*	0.0	0.0	0.0	0	*12.7*	0.0	0	0	0	0	0	0	0
12	0.00	29,281,810	9,831,514	12.0	1,892,309	1,980,595	5,748	3,723,159	4,355	0.0	0.0	0.0	0	13.25	0.00	0	0	30,079	0	0	0	0
13	0.00	29,301,620	9,856,128	14.0	1,892,309	1,980,990	5,748	3,727,705	4,396	0.0	0.0	0.0	0	11.25	0.00	0	0	30,104	0	0	0	0
14	0.00	29,318,340	9,880,554	14.3	1,892,309	1,981,412	5,748	3,728,541	4,439	0.0	0.0	0.0	0	11.58	0.00	0	0	6,031	0	0	0	0
15	0.00	29,337,330	9,904,702	13.4	1,892,309	1,981,931	5,749	3,728,791	4,483	0.0	0.0	0.0	0	11.67	0.00	0	0	0	0	0	0	0
16	0.00	29,356,360	9,929,758	13.4	1,892,309	1,982,361	5,749	3,729,705	4,527	0.0	0.0	0.0	0	12.00	0.00	0	0	18,104	0	0	0	0
17	0.00	29,375,410	9,953,986	13.4	1,892,309	1,982,774	5,750	3,730,911	4,572	0.0	0.0	0.0	0	12.00	0.00	0	0	0	0	0	0	0
18	0.00	*29,384,230*	*9,974,530*	*13.5*	*1,892,309*	*1,983,415*	*5,751*	*3,736,380*	*4,618*	0.0	0.0	0.0	0	*12.8*	0.0	0	0	0	0	0	0	0
19	0.00	29,393,050	9,995,074	13.6	1,892,309	1,984,055	5,752	3,741,848	4,663	0.0	0.0	0.0	0	13.67	0.00	0	0	30,466	0	0	0	0
20	0.00	29,411,590	22,053	12.4	1,892,309	1,984,470	5,752	3,741,849	4,709	0.0	0.0	0.0	0	13.50	0.00	0	0	24,206	0	0	0	0
21	0.00	29,431,070	50,015	13.3	1,892,309	1,984,892	5,752	3,741,849	4,756	0.0	0.0	0.0	0	13.67	0.00	0	0	30,416	0	0	0	0
22	1.07	29,449,040	73,870	12.2	1,892,309	1,985,348	5,753	3,741,849	4,795	0.0	0.0	0.0	0	12.58	0.00	2,263	0	30,134	0	0	0	0
23	0.00	29,467,210	98,203	14.0	1,892,309	1,985,825	5,753	3,743,123	4,840	0.0	0.0	0.0	0	11.58	1.17	31,111	0	12,043	0	0	0	0
24	0.00	29,484,460	128,018	14.2	1,892,309	1,986,292	5,754	3,743,239	4,884	0.0	0.0	0.0	0	11.25	2.00	27,645	0	0	0	0	0	0
25	0.00	*29,492,910*	*154,312*	*13.5*	*1,892,309*	*1,986,938*	*5,754*	*3,747,117*	*4,930*	0.0	0.0	0.0	0	*11.4*	*2.9*	29,003	0	0	0	0	0	0
26	0.00	29,501,360	180,606	12.7	1,892,309	1,987,583	5,754	3,750,995	4,976	0.0	0.0	0.0	0	11.50	3.83	28,107	0	30,102	0	0	0	0
27	0.00	29,518,730	205,956	13.8	1,892,309	1,988,009	5,754	3,750,994	5,023	0.0	0.0	0.0	0	10.50	4.67	27,966	0	30,081	0	0	0	0
28	0.00	29,535,950	227,044	14.0	1,892,309	1,988,362	5,754	3,753,922	5,072	0.0	0.0	0.0	0	9.42	5.42	22,262	0	30,066	0	0	0	0
29	0.00	29,554,750	250,875	13.0	1,892,309	1,988,794	5,755	3,753,921	5,119	0.0	0.0	0.0	0	8.33	6.50	26,818	0	29,324	0	0	0	0
30	0.00	29,574,010	276,606	11.8	1,892,309	1,989,235	5,755	3,756,798	5,166	0.0	0.0	0.0	0	7.42	7.42	28,149	0	24,062	0	0	0	0
31	0.27	29,593,120	302,503	12.2	1,892,309	1,989,633	5,755	3,756,811	5,213	0.0	0.0	0.0	0	6.50	8.17	26,610	0	0	0	0	0	0
Totals	1.34										0		0			249,934	226,545	505,131	0	0	0	0

projects\balance\2009\01-09bal.xls (JDW 04/03/12)

Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Column IV includes quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, F, G, H, I, J, L, N, Q, R-V and W are quantities from flow meters.
6. Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	0	0	5
Intermediate	139.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

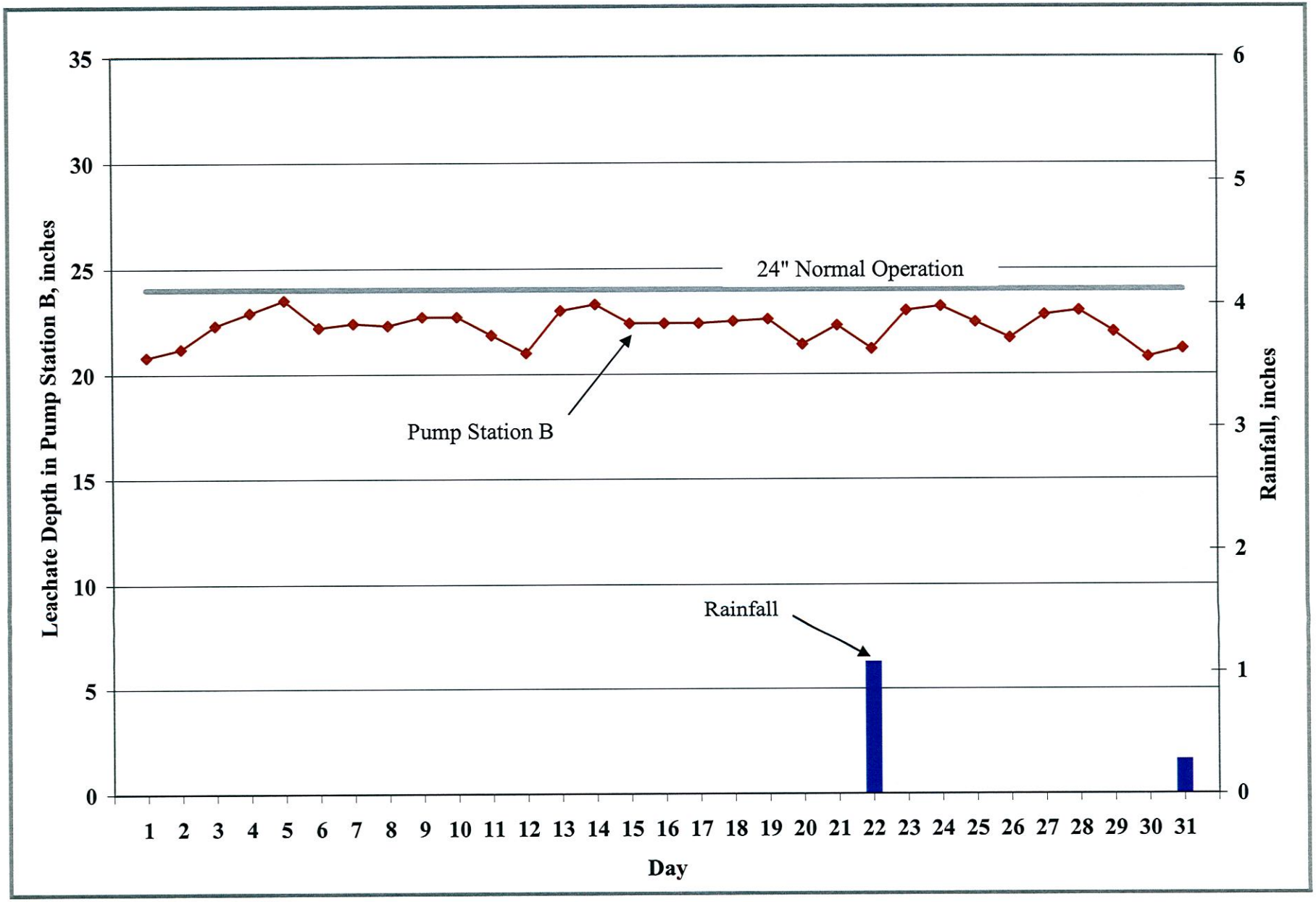

Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2012.