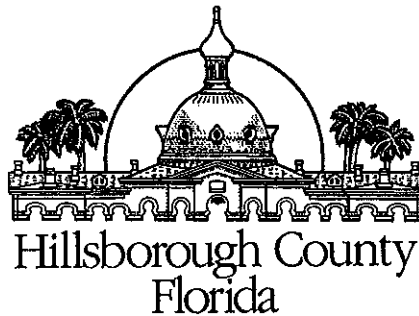


BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



Office of the County Administrator  
Michael S. Merrill

CHIEF ADMINISTRATIVE OFFICER  
Helene Marks

CHIEF FINANCIAL ADMINISTRATOR  
Bonnie M. Wise

DEPUTY COUNTY ADMINISTRATORS  
Lucia E. Garsys  
Sharon D. Subadan

April 13, 2011

Dept. Of Environmental Protection

APR 19 2011

Southwest District

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 April 15, 2011.

The data is being submitted as separate monthly reports for January, March, and April 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 January 15, and March 9 and 12 due to pump malfunctions. These malfunctions were immediately corrected.

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

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

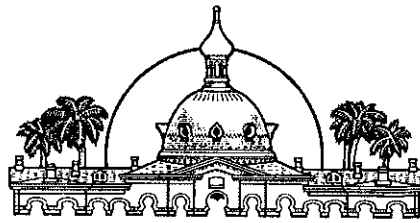
Sincerely,

A handwritten signature in cursive script, reading "Patricia V. Berry".

Patricia V. Berry  
Section Manager  
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

Dept. Of Environmental Protection

APR 19 2011

Southwest District

ADMINISTRATORS

Lucia E. Garsys  
Eric R. Johnson  
Edith M. Stewart  
J. Eugene Gray, Acting  
Sharon D. Subadan, Interim  
Mark J. Thornton, Interim

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe

February 28, 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 – January 2011 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Department's (SWMD) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMD is providing the Landfill's Water Balance Report for the month of January 2011. In addition, the SWMD is providing the January 2011 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

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

As initiated with the April 1996 report, the Landfill leachate information for January 2011 includes an evaluation by SWMD staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches except for January 15 due to a pump malfunction. The average depth of leachate in the PS-B sump for the recorded days in January 2011 was 22.3 inches.

Ms. Susan J. Pelz  
February 28, 2011  
Page Two

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

Sincerely,



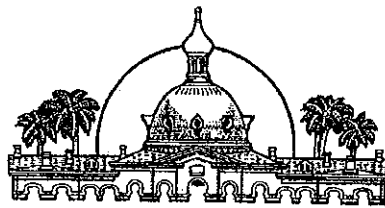
Patricia V. Berry  
Landfill and Environmental Services Section Manager  
Solid Waste Management Division

Attachments

glfs/lea0211.dep

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



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

ADMINISTRATORS

Lucia E. Garsys  
Eric R. Johnson  
Edith M. Stewart  
J. Eugene Gray, Acting  
Sharon D. Subadan, Interim  
Mark J. Thornton, Interim

MEMORANDUM

**DATE:** February 16, 2011

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

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

**SUBJECT:** Leachate Water Balance Report Forms for January 2011  
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 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 3.6 inches of rainfall at the Southeast County Landfill (SCLF).

**Depth in Pond A (Column III)**

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average depth of effluent stored in Pond A was 1.6 feet.

**Depth in Pond B (Column IV)**

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

**Estimated Depth at Pump Station B Sump (PS-B) (Column V)**

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. This month PS-B was below the normal operation level of 24-inches except for January 15 due a pump malfunction. The average recorded depth of leachate in the PS-B sump was 22.3 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 14,320 gallons. A total of 443,930 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 23,858 gallons. A total of 739,603 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 460 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 39,496 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 779,099 gallons of leachate was pumped to the LTRF.

**Leachate Pumped to LTRF from Section 9 (Column XI)**

Column XI presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 24,312 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 39 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 192,000 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 SWMD began storing leachate in this tank until the inspection of the leachate tank is completed. This month an average of 372,800 gallons of *leachate* was stored in the tank.

**Leachate Treated at LTRF (Column XV)**

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. The treatment plant began shut-down procedures in preparation of tankage inspection. The plant shutdown 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 894,048 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 42,104 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 44,600 gallons of effluent were stored in Pond A.

MEMORANDUM

February 16, 2011

Page 5 of 6

**Pond B Storage (Column XIX)**

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

**Effluent Sprayed at Pond B (Column XX)**

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

**Effluent Irrigation (Column XXI)**

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

**Effluent Dust Control Sprayed (Column XXII)**

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

**Total Effluent Hauled (Column XXIII)**

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

**Total Evaporation (Column XXIV)**

Column XXIV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. The total evaporation estimated for this month was 33,700 gallons.



MEMORANDUM  
February 16, 2011  
Page 6 of 6

**TABLE 2**

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

**TABLE 3**

**Leachate Balance Summary**

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 803,450 gallons. Total outflow quantity from the LTRF was 936,152 gallons. The change in storage for the month decreased by 132,702 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**  
**JANUARY 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	1.5	0.0	22.4	8,160	22,448	22	6,001	23,449	87	4	192,000	430,000	0	0	0	40,000	0	0	0	0	0	0
2	0.00	1.5	0.0	22.6	8,200	23,536	20	1,476	23,012	0	0	192,000	475,000	0	30,718	6,007	40,000	0	0	0	0	0	4,800
3	0.00	1.5	0.0	23.0	17,330	27,316	20	19	27,335	0	0	192,000	461,000	0	19,506	6,003	40,000	0	0	0	0	0	4,800
4	0.01	1.5	0.0	22.7	13,655	22,512	17	20	22,532	0	0	192,000	458,000	0	30,819	3,002	40,000	0	0	0	0	0	2,400
5	1.00	1.5	0.0	22.5	21,970	32,280	17	5	32,285	323	1	192,000	458,000	0	36,509	0	40,000	0	0	0	0	0	0
6	0.00	1.5	0.0	23.0	19,035	30,597	13	7,377	37,974	918	2	192,000	456,000	0	31,158	0	40,000	0	0	0	0	0	0
7	0.00	1.5	0.0	21.7	24,130	35,319	17	1,289	36,608	2,809	6	192,000	468,000	0	31,009	3,000	40,000	0	0	0	0	0	2,400
8	0.00	1.5	0.0	22.3	17,155	19,573	18	108	19,681	1,840	1	192,000	477,000	0	41,179	0	40,000	0	0	0	0	0	0
9	0.00	1.5	0.0	21.0	9,830	20,374	25	3,136	23,510	0	0	192,000	456,000	0	42,744	2,997	40,000	0	0	0	0	0	2,400
10	0.00	1.5	0.0	22.7	11,850	18,375	17	154	18,529	0	0	192,000	432,000	0	42,472	0	40,000	0	0	0	0	0	0
11	0.00	1.5	0.0	22.9	13,160	18,110	15	2	18,112	0	0	192,000	401,000	0	54,441	0	40,000	0	0	0	0	0	0
12	0.00	1.5	0.0	22.3	13,790	18,773	12	2,547	21,320	0	0	192,000	365,000	0	48,436	8,998	40,000	0	0	0	0	0	7,200
13	0.00	1.5	0.0	25.0	11,060	13,280	24	514	12,794	309	1	192,000	317,000	0	32,124	0	40,000	0	0	0	0	0	0
14	0.01	1.5	0.0	22.9	17,215	29,218	6	2	29,220	7,791	8	192,000	372,000	0	33,850	0	40,000	0	0	0	0	0	0
15	1.02	1.5	0.0	22.8	17,715	29,818	6	2	29,820	1,791	8	192,000	307,000	0	33,850	0	40,000	0	0	0	0	0	0
16	0.01	1.5	0.0	22.0	16,525	29,758	18	3,487	33,245	1,543	0	192,000	355,000	0	36,011	0	40,000	0	0	0	0	0	0
17	0.00	1.5	0.0	21.8	14,135	25,224	8	199	25,423	0	0	192,000	343,000	0	37,639	0	40,000	0	0	0	0	0	0
18	0.30	1.5	0.0	23.1	15,905	25,411	18	0	25,411	0	0	192,000	326,000	0	37,242	3,000	40,000	0	0	0	0	0	2,400
19	0.00	1.7	0.0	22.1	13,195	26,100	21	0	26,100	222	1	192,000	319,000	0	34,693	0	48,000	0	0	0	0	0	0
20	0.00	1.7	0.0	21.1	15,200	28,148	7	3,112	31,260	530	0	192,000	307,000	0	31,941	0	48,000	0	0	0	0	0	0
21	0.00	1.7	0.0	22.7	15,675	21,493	12	7,397	29,080	3,586	3	192,000	322,000	0	35,150	0	48,000	0	0	0	0	0	0
22	0.00	1.7	0.0	23.0	15,015	22,393	11	1,597	23,990	3,066	3	192,000	336,000	0	36,231	0	48,000	0	0	0	0	0	0
23	1.30	1.7	0.0	22.8	17,350	24,478	10	224	24,702	0	0	192,000	329,000	0	36,239	0	48,000	0	0	0	0	0	0
24	0.00	1.9	0.0	17.9	14,990	28,046	16	21	28,067	0	0	192,000	322,000	0	36,351	0	57,000	0	0	0	0	0	0
25	0.00	1.9	0.0	21.1	9,820	20,540	15	27	20,567	0	0	192,000	297,000	0	36,025	0	57,000	0	0	0	0	0	0
26	0.00	1.9	0.0	21.2	11,540	16,347	9	3,058	19,405	0	0	192,000	288,000	0	30,466	6,100	57,000	0	0	0	0	0	4,900
27	0.00	1.9	0.0	22.6	12,690	13,433	11	560	13,993	4,162	1	192,000	274,000	0	30,505	0	57,000	0	0	0	0	0	0
28	0.00	1.9	0.0	22.7	12,911	27,800	19	690	28,491	0	0	192,000	273,000	0	36,326	2,997	57,000	0	0	0	0	0	2,400
29	0.00	1.9	0.0	22.8	12,215	25,898	9	690	26,587	16	0	192,000	269,000	0	36,326	2,997	57,000	0	0	0	0	0	2,400
Total	3.65				443,930	739,603	460	39,496	779,099	24,312	39			0	894,048	42,104							33,700
Daily Average		1.6	0.0	22.3	14,320	23,858	15	1,274	25,132	784	1	192,000	372,800				44,600						
Mo. Average															1,400								1,090

- Notes:
1. NR = No Record, 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 total days measured in the month.
  4. Monthly average is 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. Column III and IV, field measured at staff gauges.

7. Column V, PPS-B sensor reading plus 9 inches.
8. Column 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. Column 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 9% of the daily values from column XX.

**TABLE 2. FIELD DATA ENTRY FORM**  
**JANUARY 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 Contractor (gal.)	Leachate Hauled County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	Effluent Hauled County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.00	22,673,340	7,654,973	13.4	1,824,256	1,406,998	1,647	2,650,348	76	0.0	0.0	1.5	0	6.67	14.92	0	0	0	0	0	0	0
2	0.00	22,695,750	7,702,044	13.8	1,824,256	1,406,998	1,647	2,653,300	116	0.0	0.0	1.5	0	6.67	16.50	0	18,704	12,014	6,007	0	0	0
3	0.00	22,713,080	7,729,360	14.0	1,824,256	1,406,998	1,647	2,653,319	136	0.0	0.0	1.5	0	6.67	16.00	0	19,500	0	6,003	0	0	0
4	0.01	22,726,735	7,751,872	13.7	1,824,256	1,406,998	1,647	2,653,339	153	0.0	0.0	1.5	0	6.67	15.92	0	18,791	12,028	3,002	0	0	0
5	1.00	22,748,705	7,784,152	13.5	1,824,579	1,406,998	1,648	2,653,344	170	0.0	0.0	1.5	0	6.67	15.92	0	24,479	12,030	0	0	0	0
6	0.00	22,767,740	7,814,749	14.0	1,825,497	1,406,998	1,650	2,650,721	183	0.0	0.0	1.5	0	6.67	15.83	0	25,174	6,024	0	0	0	0
7	0.00	22,791,870	7,850,068	12.7	1,826,075	1,409,229	1,656	2,662,010	200	0.0	0.0	1.5	0	6.67	16.25	0	31,099	0	3,000	0	0	0
8	0.00	22,818,180	7,889,214	13.9	1,826,075	1,412,909	1,657	2,662,225	236	0.0	0.0	1.5	0	6.67	16.58	0	23,959	17,220	0	0	0	0
9	0.00	22,828,010	7,909,588	12.0	1,826,075	1,412,909	1,657	2,665,361	261	0.0	0.0	1.5	0	6.67	15.83	0	18,686	24,058	2,997	0	0	0
10	0.00	22,839,860	7,927,963	13.7	1,826,075	1,412,909	1,657	2,665,515	278	0.0	0.0	1.5	0	6.67	15.00	0	24,433	18,039	0	0	0	0
11	0.00	22,853,020	7,946,073	13.9	1,826,075	1,412,909	1,657	2,665,517	293	0.0	0.0	1.5	0	6.67	13.92	0	24,394	30,047	0	0	0	0
12	0.00	22,866,810	7,964,846	13.3	1,826,075	1,412,909	1,657	2,668,064	305	0.0	0.0	1.5	0	6.67	12.67	0	19,077	29,359	8,998	0	0	0
13	0.00	22,877,870	7,977,126	16.0	1,826,384	1,412,909	1,658	2,668,578	329	0.0	0.0	1.5	0	6.67	11.00	0	32,124	0	0	0	0	0
14	0.01	22,913,300	8,036,762	13.8	1,826,838	1,416,036	1,674	2,668,582	341	0.0	0.0	1.5	0	6.67	10.67	0	33,850	0	0	0	0	0
15	0.01	22,929,825	8,066,520	13.0	1,826,838	1,417,579	1,674	2,672,069	359	0.0	0.0	1.5	0	6.67	12.33	0	18,962	17,049	0	0	0	0
16	0.00	22,943,960	8,091,744	12.8	1,826,838	1,417,579	1,674	2,672,268	367	0.0	0.0	1.5	0	6.67	11.92	0	19,617	18,022	0	0	0	0
17	0.30	22,959,865	8,117,155	14.1	1,826,838	1,417,579	1,674	2,672,268	385	0.0	0.0	1.5	0	6.67	11.33	0	19,216	18,026	3,000	0	0	0
18	0.00	22,973,060	8,143,255	13.1	1,827,060	1,417,579	1,675	2,672,268	406	0.0	0.0	1.7	0	6.67	11.08	0	18,707	15,986	0	0	0	0
19	0.00	22,988,260	8,171,403	12.1	1,827,590	1,417,579	1,675	2,675,380	413	0.0	0.0	1.7	0	6.67	10.67	0	31,041	0	0	0	0	0
20	0.00	23,005,225	8,193,706	9.9	1,827,857	1,423,444	1,681	2,678,574	435	0.0	0.0	1.7	0	6.67	11.67	0	18,324	18,007	0	0	0	0
21	1.30	23,035,640	8,240,667	13.8	1,827,857	1,423,444	1,681	2,678,798	445	0.0	0.0	1.7	0	6.67	11.42	0	18,301	18,028	0	0	0	0
22	0.00	23,050,630	8,269,613	8.9	1,827,857	1,423,444	1,681	2,678,819	461	0.0	0.0	1.9	0	6.67	11.17	0	18,329	18,022	0	0	0	0
23	0.00	23,060,450	8,290,553	12.1	1,827,857	1,423,444	1,681	2,678,846	476	0.0	0.0	1.9	0	6.67	10.33	0	18,307	17,718	0	0	0	0
24	0.00	23,071,990	8,306,900	12.2	1,827,857	1,423,444	1,681	2,681,904	485	0.0	0.0	1.9	0	6.67	10.00	0	18,310	12,156	6,100	0	0	0
25	0.00	23,084,680	8,320,333	13.6	1,827,857	1,427,606	1,682	2,682,464	496	0.0	0.0	1.9	0	6.67	9.50	0	30,505	0	0	0	0	0
26	0.00	23,092,693	8,343,336	23.9	1,827,857	1,427,606	1,682	2,683,156	514	0.0	0.0	1.9	0	6.67	9.33	0	18,308	18,018	2,997	0	0	0
27	0.00	23,109,110	8,372,128	13.8	1,827,857	1,427,633	1,682	2,683,843	514	0.0	0.0	1.9	0	6.67	9.33	0	18,308	18,018	2,997	0	0	0
Totals	3.65										0		0			0	562,197	331,851	42,104	0	0	0

projects\balance\2009-01-09bal.xls (for 2/13/09)

**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**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		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 <sup>3</sup> (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														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	3.65	0	24,351	39,496	739,603	894,048	42,104	0	0	0	0	803,450	936,152	-132,702

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.

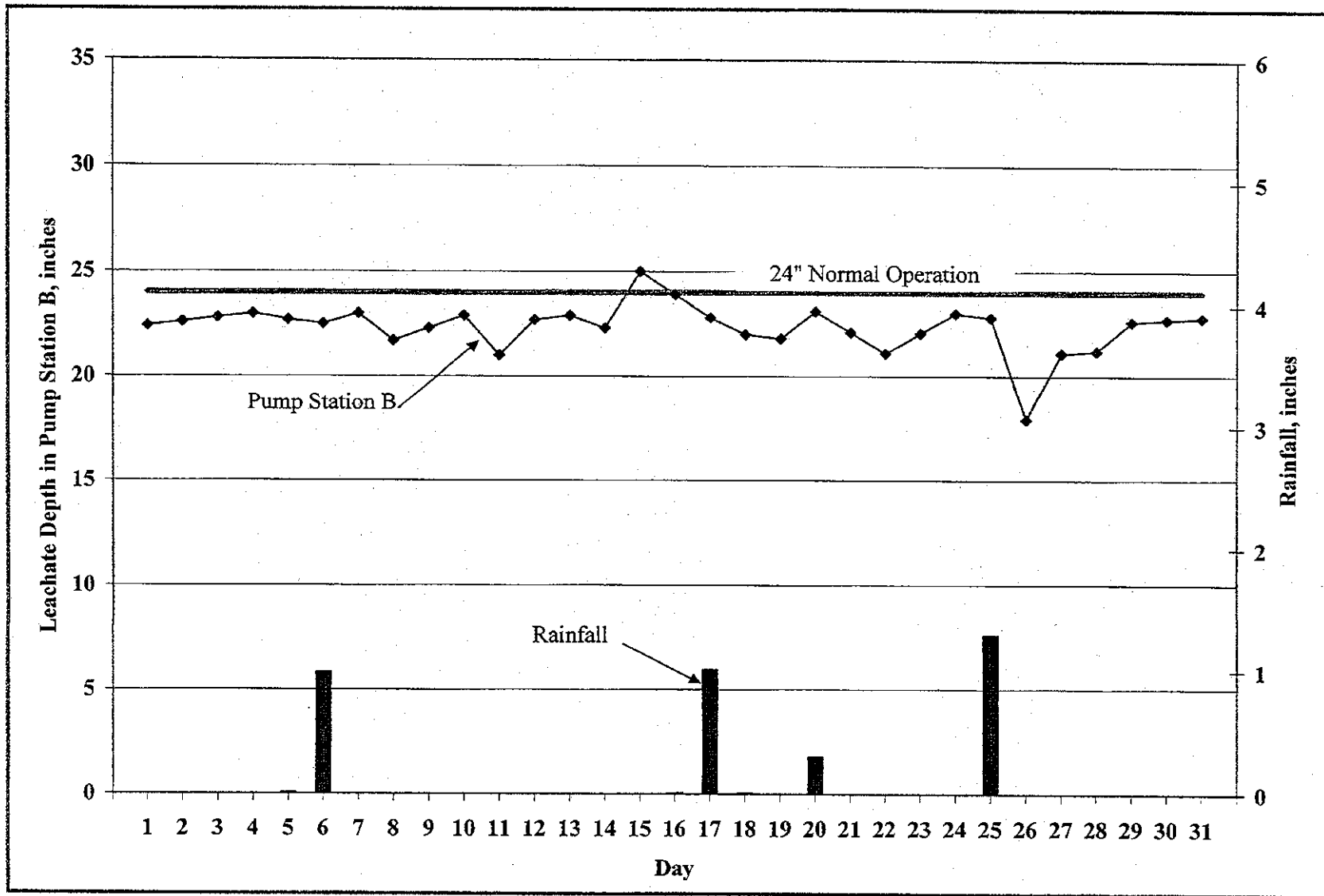


Figure 1. Leachate Levels in Pump Station B and Rainfall for January 2011.

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



Office of the County Administrator  
Michael S. Merrill

Dept. Of Environmental Protection

APR 19 2011

Southwest District  
CHIEF ADMINISTRATIVE OFFICER  
Helene Marks

CHIEF FINANCIAL ADMINISTRATOR  
Bonnie M. Wise

DEPUTY COUNTY ADMINISTRATORS  
Lucia E. Garsys  
Sharon D. Subadan

April 1, 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 – February 2011 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Group (SWMG) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMG is providing the Landfill's Water Balance Report for the month of February 2011. In addition, the SWMG is providing the February 2011 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

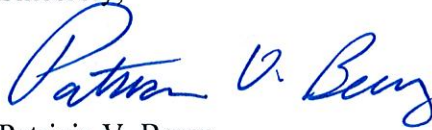
This information is being provided to the Florida Department of Environmental Protection (FDEP) and the Hillsborough County Environmental Protection Commission as part of the quarterly Leachate Water Balance report on the Landfill leachate management efforts in accordance with Permit No. 35435-014-SO,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

As initiated with the April 1996 report, the Landfill leachate information for February 2011 includes an evaluation by SWMG staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches for the month of February. The average depth of leachate in the PS-B sump for the recorded days in February 2011 was 22.2 inches.

Ms. Susan J. Pelz  
April 1, 2011  
Page Two

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

Sincerely,

A handwritten signature in blue ink, reading "Patricia V. Berry". The signature is fluid and cursive, with the first name "Patricia" being the most prominent part.

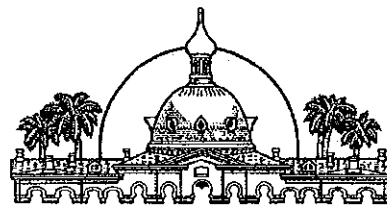
Patricia V. Berry  
Landfill and Environmental Services Section Manager  
Solid Waste Management Group

Attachments

glfs/lea0211.dep

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



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

ADMINISTRATORS

Lucia E. Garsys  
Eric R. Johnson  
Edith M. Stewart  
J. Eugene Gray, Acting  
Sharon D. Subadan, Interim  
Mark J. Thornton, Interim

MEMORANDUM

**DATE:** March 31, 2011

**TO:** Patricia Berry, Section Manager, Solid Waste Management Group

**FROM:** *LR* 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 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 0.8 inches of rainfall at the Southeast County Landfill (SCLF).



MEMORANDUM

March 31, 2011

Page 2 of 6

**Depth in Pond A (Column III)**

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average depth of effluent stored in Pond A was 2.2 feet.

**Depth in Pond B (Column IV)**

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

**Estimated Depth at Pump Station B Sump (PS-B) (Column V)**

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. This month PS-B was below the normal operation level of 24-inches. The average recorded depth of leachate in the PS-B sump was 22.2 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 12,718 gallons. A total of 356,100 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 22,294 gallons. A total of 624,230 gallons of leachate was pumped this month.

MEMORANDUM

March 31, 2011

Page 3 of 6

**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 313 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 20,193 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 644,423 gallons of leachate was pumped to the LTRF.

**Leachate Pumped to LTRF from Section 9 (Column XI)**

Column XI presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 23,170 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 193 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 36,500 gallons of leachate was stored in the tank. On February 9<sup>th</sup> the tank was emptied in preparation for inspection.

MEMORANDUM

March 31, 2011

Page 4 of 6

**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 334,400 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 treatment plant began shut-down procedures in preparation of tankage inspection. 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 759,786 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 13,056 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 71,800 gallons of effluent/stormwater were stored in Pond A.

MEMORANDUM

March 31, 2011

Page 5 of 6

**Pond B Storage (Column XIX)**

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

**Effluent Sprayed at Pond B (Column XX)**

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

**Effluent Irrigation (Column XXI)**

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases I-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month 20,035 gallons of effluent/stormwater was 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 26,400 gallons.

MEMORANDUM

March 31, 2011

Page 6 of 6

**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 667,786 gallons. Total outflow quantity from the LTRF was 772,842 gallons. The change in storage for the month decreased by 105,056 gallons.

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

**TABLE I. LEACHATE WATER BALANCE REPORT FORM**  
**FEBRUARY 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 Phase 1-V (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	21.9	23,400	32,454	9	750	33,204	0	0	180,000	269,000	0	36,067	6,046	57,000	0	0	0	0	0	4,800
2	0.00	1.9	0.0	21.8	11,300	17,310	9	747	18,057	0	0	145,000	274,000	0	30,041	0	57,000	0	0	0	0	0	0
3	0.00	1.9	0.0	21.7	12,500	21,090	10	717	21,247	0	0	127,000	278,000	0	36,076	0	57,000	0	0	0	0	0	0
4	0.00	1.9	0.0	22.5	14,940	22,324	12	491	22,815	0	0	115,000	278,000	0	36,033	0	57,000	0	0	0	0	0	0
5	0.10	1.9	0.0	23.5	1,970	11,704	24	306	12,010	765	1	106,000	281,000	0	0	2,901	57,000	0	0	0	0	0	1,600
6	0.11	1.9	0.0	22.9	19,845	29,250	8	145	29,395	723	2	96,000	295,000	0	36,046	0	57,000	0	0	0	0	0	0
7	0.28	1.9	0.0	21.9	15,865	29,250	8	145	29,395	723	2	96,000	295,000	0	36,046	0	57,000	0	0	0	0	0	0
8	0.00	1.9	0.0	21.8	12,890	24,440	25	562	25,002	867	2	79,000	391,000	0	36,102	2,095	57,000	0	0	0	0	0	1,600
9	0.00	2.5	0.0	21.8	11,700	20,120	1	864	20,984	4,477	1	70,000	401,000	0	36,566	3,000	83,000	0	0	0	0	0	2,400
10	0.28	2.5	0.0	22.6	12,010	23,706	13	1,034	23,740	1,164	0	0	398,000	0	30,239	0	83,000	0	0	0	0	0	0
11	0.00	2.5	0.0	21.5	12,900	23,334	12	838	24,172	0	0	0	401,000	0	36,772	0	83,000	0	0	0	0	0	0
12	0.00	2.5	0.0	22.9	8,190	18,496	11	291	18,787	0	0	0	379,000	0	31,674	0	83,000	0	0	0	0	0	0
13	0.00	2.5	0.0	21.2	13,375	18,499	9	86	18,583	0	0	0	389,000	0	36,640	0	83,000	0	0	0	0	0	0
14	0.00	2.5	0.0	21.6	13,895	21,684	10	97	21,781	550	1	0	372,000	0	35,442	0	74,000	0	0	0	0	0	0
15	0.00	2.3	0.0	21.4	12,325	20,998	10	173	21,171	623	159	0	358,000	0	37,385	0	74,000	0	0	0	0	0	0
16	0.00	2.3	0.0	22.7	11,790	21,316	10	101	21,417	1,501	8	0	345,000	0	37,896	0	74,000	0	0	0	0	0	0
17	0.00	2.2	0.0	23.0	11,610	20,940	10	8	20,948	852	5	0	331,000	0	34,754	0	70,000	0	0	0	0	0	0
18	0.00	2.4	0.0	23.6	11,860	22,778	11	0	22,778	1,825	4	0	326,000	0	31,387	0	79,000	0	0	0	0	0	0
19	0.00	2.2	0.0	22.0	12,180	23,121	18	0	23,121	0	0	0	338,000	0	31,278	0	79,000	0	0	0	0	0	0
20	0.00	2.4	0.0	23.2	15,680	26,638	12	6,231	32,869	5	1	0	343,000	0	36,055	0	79,000	0	0	0	0	0	0
21	0.00	2.4	0.0	21.6	11,790	22,002	11	0	22,002	898	1	0	343,000	0	36,827	0	79,000	0	0	0	0	0	0
22	0.00	2.4	0.0	21.3	11,480	21,834	7	0	21,834	888	3	0	317,000	0	36,880	0	79,000	0	0	0	0	0	0
23	0.00	2.4	0.0	22.6	11,330	21,658	6	0	21,658	495	1	0	295,000	0	37,724	0	79,000	0	0	0	0	0	0
24	0.00	2.2	0.0	22.4	13,540	23,550	23	0	23,550	1,816	2	0	295,000	0	0	0	70,000	0	0	0	0	0	0
25	0.00	2.2	0.0	22.1	13,080	23,567	5	3,262	25,849	2,334	1	0	343,000	0	31,179	0	70,000	0	0	20,055	0	0	16,000
26																							
27																							
28	0.76				356,100	624,230	313	10,193	644,423	23,170	193	7	36,500	334,400	0	759,786	13,056	71,800	0	0	20,055	0	26,400
Daily Average		2.2	0.0	22.2	12,718	22,294	11	721	23,015	828	7						500			700			240
Mo. Average																							

**Notes:**

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitutes 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, FPS-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 XXVII, XXI, and XXII plus 5% of the daily values from column XX.

project:\landfill\2011\02-11\bal.xls (rev 03/04/2011)

**TABLE 2. FIELD DATA ENTRY FORM**  
**FEBRUARY 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	23,132,510	8,404,582	12.9	1,827,857	1,427,638	1,682	2,684,593	523	0.0	0.0	1.9	0	6.25	9.33	0	18,040	18,027	6,046	0	0	0
2	0.00	23,143,810	8,421,892	12.8	1,827,857	1,427,638	1,682	2,685,340	532	0.0	0.0	1.9	0	5.08	9.50	0	18,035	12,006	0	0	0	0
3	0.00	23,156,310	8,442,922	12.7	1,827,857	1,427,638	1,682	2,686,057	542	0.0	0.0	1.9	0	4.42	9.67	0	18,034	18,042	0	0	0	0
4	0.00	23,171,250	8,465,246	13.5	1,827,857	1,427,638	1,682	2,686,548	554	0.0	0.0	1.9	0	4.00	9.67	0	18,035	18,018	0	0	0	0
5	0.10	23,173,220	8,476,950	14.5	1,828,622	1,427,638	1,683	2,686,854	578	0.0	0.0	1.9	0	3.67	9.75	0	0	0	2,001	0	0	0
6	0.00	23,188,788	8,506,200	13.7	1,830,934	1,427,638	1,683	2,688,900	585	0.0	0.0	2.5	0	3.15	10.69	0	18,029	18,017	0	0	0	0
7	0.28	23,204,950	8,535,450	12.9	1,830,967	1,427,638	1,686	2,687,143	594	0.0	0.0	1.9	0	3.42	10.25	0	18,036	18,066	2,009	0	0	0
8	0.00	23,217,340	8,559,890	12.8	1,830,934	1,427,638	1,688	2,687,705	619	0.0	0.0	1.9	0	2.75	13.58	0	24,557	12,009	3,000	0	0	0
9	0.00	23,229,540	8,580,010	12.8	1,831,200	1,431,849	1,689	2,688,569	620	0.0	0.0	2.5	0	2.42	13.92	0	19,191	11,748	0	0	0	0
10	0.28	23,241,550	8,602,716	13.6	1,831,200	1,433,013	1,689	2,689,603	637	0.0	0.0	2.5	0	0.00	13.83	0	18,600	18,172	0	0	0	0
11	0.00	23,254,450	8,626,050	12.5	1,831,200	1,433,013	1,689	2,690,441	645	0.0	0.0	2.5	0	0.00	13.92	0	31,674	0	0	0	0	0
12	0.00	23,262,640	8,644,546	13.9	1,831,200	1,433,013	1,689	2,690,732	656	0.0	0.0	2.5	0	0.00	13.17	0	0	0	0	0	0	0
13	0.00	23,276,612	8,667,705	13.1	1,831,200	1,433,013	1,689	2,690,903	673	0.0	0.0	2.5	0	0.00	13.50	0	18,597	18,043	0	0	0	0
14	0.00	23,289,390	8,681,544	12.2	1,831,200	1,433,013	1,689	2,690,903	673	0.0	0.0	2.5	0	0.00	12.92	0	18,843	16,599	0	0	0	0
15	0.00	23,303,285	8,703,228	12.6	1,831,495	1,433,268	1,690	2,691,000	683	0.0	0.0	2.3	0	0.00	12.42	0	19,354	18,034	0	0	0	0
16	0.00	23,315,610	8,724,226	12.4	1,831,843	1,433,545	1,849	2,691,173	693	0.0	0.0	2.3	0	0.00	12.00	0	18,848	19,048	0	0	0	0
17	0.00	23,327,400	8,745,542	13.7	1,832,109	1,435,080	1,857	2,691,274	703	0.0	0.0	2.3	0	0.00	11.50	0	18,754	6,000	0	0	0	0
18	0.00	23,339,010	8,766,482	14.0	1,832,109	1,435,962	1,862	2,691,282	713	0.0	0.0	2.2	0	0.00	11.33	0	31,387	0	0	0	0	0
19	0.00	23,350,870	8,789,260	14.6	1,832,109	1,437,787	1,866	2,691,282	724	0.0	0.0	2.4	0	0.00	11.75	0	19,271	12,007	0	0	0	0
20	0.00	23,365,910	8,812,387	13.8	1,832,109	1,437,787	1,866	2,691,282	759	0.0	0.0	2.4	0	0.00	11.92	0	18,789	17,266	0	0	0	0
21	0.00	23,375,230	8,835,502	13.0	1,832,114	1,437,787	1,867	2,691,513	771	0.0	0.0	2.4	0	0.00	11.92	0	18,807	18,020	0	0	0	0
22	0.00	23,390,910	8,862,140	14.2	1,832,756	1,438,043	1,868	2,691,513	782	0.0	0.0	2.4	0	0.00	11.00	0	18,858	18,022	0	0	0	0
23	0.00	23,402,700	8,884,142	12.6	1,833,644	1,438,043	1,871	2,691,513	789	0.0	0.0	2.4	0	0.00	10.25	0	31,722	6,002	0	0	0	0
24	0.00	23,414,180	8,905,976	12.3	1,833,902	1,438,280	1,872	2,691,513	795	0.0	0.0	2.4	0	0.00	10.25	0	0	0	0	0	0	0
25	0.00	23,425,510	8,927,634	13.6	1,833,902	1,440,096	1,874	2,691,513	818	0.0	0.0	2.2	0	0.00	11.92	0	13,116	18,063	0	0	0	0
26	0.00	23,439,050	8,951,184	13.4	1,833,902	1,444,763	1,875	2,704,036	827	0.0	0.0	2.2	20,035	0.00	11.92	0	0	0	0	0	0	0
27	0.00	23,452,130	8,975,827	13.2	1,833,902	1,444,763	1,875	2,704,036	827	0.0	0.0	2.2	20,035	0.00	11.92	0	0	0	0	0	0	0
28	0.00	23,465,210	8,996,358	13.1	1,833,902	1,444,763	1,875	2,704,036	827	0.0	0.0	2.2	20,035	0.00	11.92	0	0	0	0	0	0	0
Totals	0.76									0			20,035			0	448,577	311,209	13,056	0	0	0

projects\balance\2011\02-11\bal.xls (jdw 03/04/2011)

**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**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		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 <sup>1</sup> (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														
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	4.41	0	47,714	59,689	1,363,833	1,653,834	55,160	0	0	0	20,035	1,471,236	1,708,994	-237,758

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.



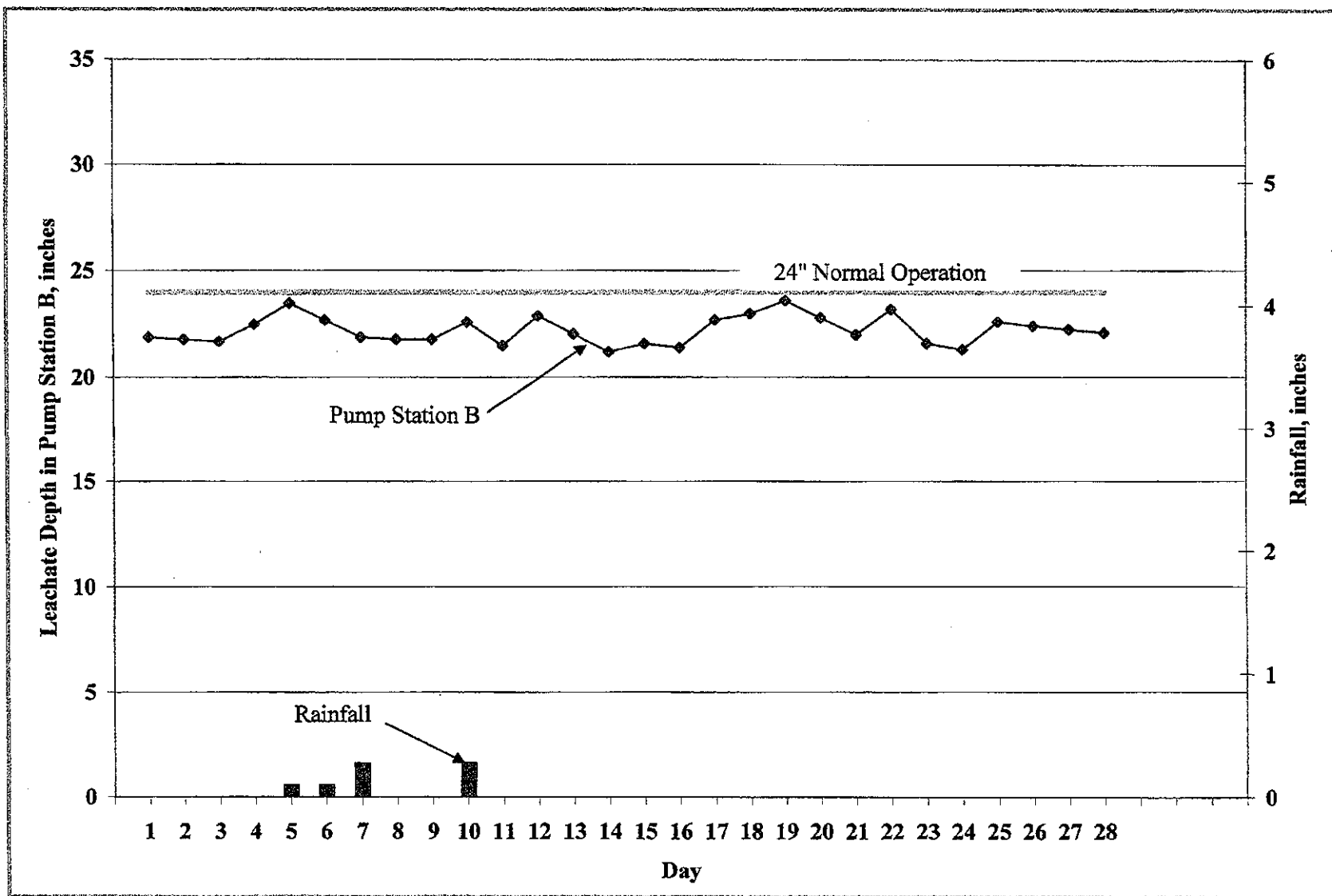
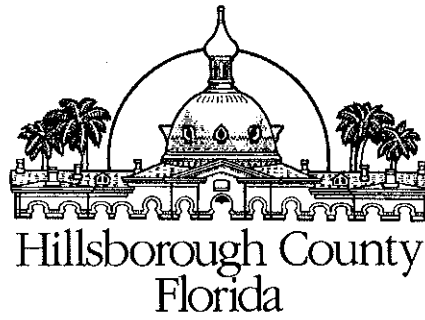


Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2011.

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



Office of the County Administrator  
Michael S. Merrill

Dept. Of Environmental Protection

APR 19 2011

Southwest District  
CHIEF ADMINISTRATIVE OFFICER  
Helene Marks

CHIEF FINANCIAL ADMINISTRATOR  
Bonnie M. Wise

DEPUTY COUNTY ADMINISTRATORS  
Lucia E. Garsys  
Sharon D. Subadan

April 13, 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 – March 2011 Leachate Data

Dear Ms. Pelz:

In accordance with the Hillsborough County Solid Waste Management Group (SWMG) Leachate Management Plan (LMP) for the Southeast County Landfill (Landfill), the SWMG is providing the Landfill's Water Balance Report for the month of March 2011. In addition, the SWMG is providing the March 2011 field data forms for the Landfill, the daily leachate and collection system evaluation reports and the Year-to-Date Leachate Balance Summary.

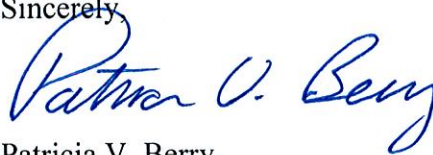
This information is being provided to the Florida Department of Environmental Protection (FDEP) and the Hillsborough County Environmental Protection Commission as part of the quarterly Leachate Water Balance report on the Landfill leachate management efforts in accordance with Permit No. 35435-014-SO,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

As initiated with the April 1996 report, the Landfill leachate information for March 2011 includes an evaluation by SWMG staff of the monthly data. The report includes a figure depicting the leachate levels in Pump Station B (PS-B) and rainfall. PS-B was below the normal operation level of 24 inches except for March 9 and 12 due to pump malfunctions. The average depth of leachate in the PS-B sump for the recorded days in March 2011 was 22.3 inches.

Ms. Susan J. Pelz  
April 13, 2011  
Page Two

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

Sincerely,



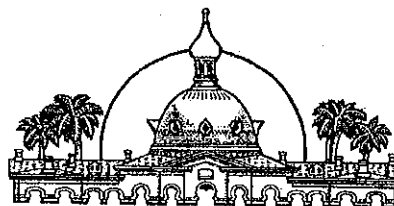
Patricia V. Berry  
Section Manager  
Solid Waste Management Group  
Public Utilities Department

Attachments

glfs/lea0311.dep

BOARD OF COUNTY COMMISSIONERS

Kevin Beckner  
Victor D. Crist  
Ken Hagan  
Al Higginbotham  
Lesley "Les" Miller, Jr.  
Sandra L. Murman  
Mark Sharpe



Hillsborough County  
Florida

Office of the County Administrator  
Michael S. Merrill

ADMINISTRATORS

Lucia E. Garsys  
Eric R. Johnson  
Edith M. Stewart  
J. Eugene Gray, Acting  
Sharon D. Subadan, Interim  
Mark J. Thornton, Interim

MEMORANDUM

**DATE:** April 11, 2011

**TO:** Patricia Berry, Section Manager, Solid Waste Management Group

**FROM:** *for* 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 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 7.7 inches of rainfall at the Southeast County Landfill (SCLF).

## MEMORANDUM

April 11, 2011

Page 2 of 6

### **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 1.4 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 March 9 and 12 due to pump malfunctions. The average recorded depth of leachate in the PS-B sump was 22.3 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 14,625 gallons. A total of 453,390 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 22,078 gallons. A total of 684,412 gallons of leachate was pumped this month.

MEMORANDUM

April 11, 2011

Page 3 of 6

**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 328 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 20,672 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 705,084 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 20,717 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 2,945 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 9<sup>th</sup> the tank was emptied in preparation for inspection.

MEMORANDUM

April 11, 2011

Page 4 of 6

**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 313,000 gallons of *leachate* was stored in the tank.

**Leachate Treated at LTRF (Column XV)**

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. 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 755,806 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 12,009 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 38,200 gallons of effluent/stormwater were stored in Pond A.

MEMORANDUM

April 11, 2011

Page 5 of 6

**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 27,337 gallons of effluent/stormwater was 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 31,500 gallons.



MEMORANDUM

April 11, 2011

Page 6 of 6

**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 728,746 gallons. Total outflow quantity from the LTRF was 767,815 gallons. The change in storage for the month decreased by 39,069 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**  
**MARCH 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 (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 MLPS (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	1.6	0.0	20.3	15,810	26,950	7	687	27,637	0	0	0	353,000	0	12,010	0	44,000	0	0	0	0	0	0
2	0.00	1.8	0.0	18.4	15,090	25,018	8	975	25,993	0	0	0	358,000	0	30,942	0	52,000	0	0	0	0	0	0
3	0.00	1.8	0.0	23.2	13,830	17,758	8	0	17,758	0	0	0	350,000	0	36,910	0	52,000	0	0	27,337	0	0	21,900
4	0.00	1.3	0.0	21.4	14,520	20,942	5	0	20,942	2,948	2	0	329,000	0	36,966	0	36,000	0	0	0	0	0	0
5	0.13	1.3	0.0	22.5	16,890	22,322	7	0	22,322	804	2	0	307,000	0	32,796	0	36,000	0	0	0	0	0	0
6	0.00	1.3	0.0	22.3	17,055	25,185	7	0	25,185	278	1	0	318,000	0	0	0	36,000	0	0	0	0	0	0
7	0.00	1.3	0.0	22.1	17,055	25,185	7	0	25,185	278	1	0	329,000	0	30,517	0	36,000	0	0	0	0	0	0
8	0.33	1.3	0.0	21.6	15,220	24,328	5	0	24,328	1,160	2	0	329,000	0	30,998	0	36,000	0	0	0	0	0	0
9	0.00	1.3	0.0	26.1	15,275	21,156	5	0	21,156	1,178	7	0	317,000	0	18,879	0	36,000	0	0	0	0	0	0
10	1.43	1.3	0.0	21.4	13,225	18,510	0	0	18,510	3,130	2	0	319,000	0	31,383	0	36,000	0	0	0	0	0	0
11	0.00	1.3	0.0	22.7	10,600	19,056	13	0	19,056	0	0	0	305,000	0	31,799	0	36,000	0	0	0	0	0	0
12	0.00	1.3	0.0	25.1	8,480	11,084	0	0	11,084	0	0	0	297,000	0	0	0	36,000	0	0	0	0	0	0
13	0.00	1.3	0.0	24.3	10,665	18,683	0	0	18,683	0	0	0	312,000	0	0	0	36,000	0	0	0	0	0	0
14	0.00	1.3	0.0	23.4	10,665	18,683	0	0	18,683	0	0	0	326,000	0	32,243	0	36,000	0	0	0	0	0	0
15	0.00	1.3	0.0	23.8	4,590	21,100	0	3,232	24,332	0	0	0	319,000	0	12,507	0	36,000	0	0	0	0	0	0
16	0.00	1.3	0.0	21.3	0	18,430	0	0	18,430	644	2	0	324,000	0	31,296	0	36,000	0	0	0	0	0	0
17	0.00	1.3	0.0	9.0	0	0	0	0	0	661	2	0	302,000	0	30,765	0	36,000	0	0	0	0	0	0
18	0.00	1.3	0.0	24.0	8,670	15,854	40	1,637	17,491	609	5	0	271,000	0	37,310	0	36,000	0	0	0	0	0	0
19	0.00	1.3	0.0	23.4	15,820	23,282	0	0	23,282	698	3	0	276,000	0	0	0	36,000	0	0	0	0	0	0
20	0.00	1.3	0.0	23.5	14,590	21,251	0	0	21,251	2,527	1,457	0	296,000	0	0	0	36,000	0	0	0	0	0	0
21	0.00	1.3	0.0	23.5	14,590	21,251	0	0	21,251	2,527	1,457	0	317,000	0	37,037	0	36,000	0	0	0	0	0	0
22	0.00	1.3	0.0	22.6	25,100	31,888	67	4,202	36,090	0	1	0	314,000	0	37,131	0	36,000	0	0	0	0	0	0
23	0.00	1.3	0.0	21.3	16,870	23,060	19	3	23,063	0	0	0	314,000	0	37,213	0	36,000	0	0	0	0	0	0
24	0.00	1.3	0.0	23.5	21,270	29,022	14	2,984	32,006	509	1	0	297,000	0	36,964	6,001	36,000	0	0	0	0	0	4,800
25	0.00	1.3	0.0	22.8	21,640	28,958	29	0	28,958	1,411	1	0	286,000	0	31,481	3,008	36,000	0	0	0	0	0	2,400
26	0.00	1.3	0.0	21.9	17,730	22,524	6	60	22,584	0	0	0	278,000	0	0	3,000	36,000	0	0	0	0	0	2,400
27	0.00	1.4	0.0	22.8	18,450	25,255	23	5	25,260	300	1	0	301,000	0	0	0	36,000	0	0	0	0	0	0
28	2.28	1.4	0.0	23.7	18,450	25,255	23	5	25,260	300	1	0	324,000	0	31,447	0	36,000	0	0	0	0	0	0
29	0.00	1.6	0.0	23.9	16,820	21,348	11	4,089	25,437	200	0	0	322,000	0	37,706	0	44,000	0	0	0	0	0	0
30	0.78	1.6	0.0	23.7	20,280	30,180	9	3	30,183	0	0	0	305,000	0	38,345	0	44,000	0	0	0	0	0	0
31	2.74	1.7	0.0	22.8	24,140	30,894	17	2,791	33,685	557	0	0	307,000	0	31,161	0	48,000	0	0	0	0	0	0
Total	7.69				453,390	684,412	328	20,672	705,084	20,717	2,945			0	755,806	12,009			0	27,337	0	0	31,500
Daily Average		1.4	0.0	22.3	14,625	22,078	11	667	22,745	668	95	0	313,000				38,200	0					
Mo. Average															400					900	0	0	1,020

projects\balance\2011\03-11bal.xls (jdw 4/05/11)

**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**  
**MARCH 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	23,481,020	9,023,308	11.3	1,833,902	1,444,763	1,875	2,704,723	834	0.0	0.0	1.6	0	0.00	12.25	0	0	12,010	0	0	0	0
2	0.00	23,496,110	9,048,326	9.4	1,833,902	1,444,763	1,875	2,705,698	842	0.0	0.0	1.8	0	0.00	12.42	0	18,932	12,010	0	0	0	0
3	0.00	23,509,940	9,066,084	14.2	1,833,902	1,444,763	1,875	2,705,698	850	0.0	0.0	1.8	27,337	0.00	12.17	0	18,896	18,014	0	0	0	0
4	0.00	23,524,460	9,087,026	12.4	1,834,258	1,447,355	1,877	2,705,698	855	0.0	0.0	1.3	0	0.00	11.42	0	18,938	18,028	0	0	0	0
5	0.13	23,541,350	9,109,348	13.5	1,834,258	1,448,159	1,879	2,705,698	862	0.0	0.0	1.3	0	0.00	10.67	0	32,796	0	0	0	0	0
6	0.00	23,558,405	9,134,533	13.3	1,834,536	1,448,159	1,880	2,705,698	869	0.0	0.0	1.3	0	0.00	11.0	0	0	0	0	0	0	0
7	0.00	23,575,460	9,159,718	13.1	1,834,813	1,448,159	1,880	2,705,698	875	0.0	0.0	1.3	0	0.00	11.42	0	12,505	18,012	0	0	0	0
8	0.33	23,590,680	9,184,046	12.6	1,835,973	1,448,159	1,882	2,705,698	880	0.0	0.0	1.3	0	0.00	11.42	0	18,987	12,011	0	0	0	0
9	0.00	23,605,955	9,205,202	17.1	1,836,881	1,448,429	1,889	2,705,698	885	0.0	0.0	1.3	0	0.00	11.00	0	18,879	0	0	0	0	0
10	1.43	23,619,180	9,223,712	12.4	1,838,521	1,449,919	1,891	2,705,698	885	0.0	0.0	1.3	0	0.00	11.08	0	31,383	0	0	0	0	0
11	0.00	23,629,780	9,242,768	13.7	1,838,521	1,449,919	1,891	2,705,698	898	0.0	0.0	1.3	0	0.00	10.58	0	31,799	0	0	0	0	0
12	0.00	23,638,260	9,253,852	16.1	1,838,521	1,449,919	1,891	2,705,698	898	0.0	0.0	1.3	0	0.00	10.33	0	0	0	0	0	0	0
13	0.00	23,648,925	9,272,535	15.3	1,838,521	1,449,919	1,891	2,705,698	898	0.0	0.0	1.3	0	0.00	10.8	0	0	0	0	0	0	0
14	0.00	23,659,590	9,291,218	14.4	1,838,521	1,449,919	1,891	2,705,698	898	0.0	0.0	1.3	0	0.00	11.33	0	32,243	0	0	0	0	0
15	0.00	23,664,180	9,312,318	14.8	1,838,521	1,449,919	1,891	2,708,930	898	0.0	0.0	1.3	0	0.00	11.08	0	12,507	0	0	0	0	0
16	0.00	23,664,180	9,330,748	12.3	1,839,165	1,449,919	1,893	2,708,930	898	0.0	0.0	1.3	0	0.00	11.25	0	31,296	0	0	0	0	0
17	0.00	23,664,180	9,330,748	0.0	1,839,826	1,449,919	1,895	2,708,930	898	0.0	0.0	1.3	0	0.00	10.50	0	12,602	18,163	0	0	0	0
18	0.00	23,672,850	9,346,602	15.0	1,840,212	1,450,142	1,900	2,710,567	938	0.0	0.0	1.3	0	0.00	9.42	0	31,305	6,005	0	0	0	0
19	0.00	23,688,670	9,369,884	14.4	1,840,216	1,450,836	1,903	2,710,567	938	0.0	0.0	1.3	0	0.00	9.58	0	0	0	0	0	0	0
20	0.00	23,703,260	9,391,135	14.5	1,840,332	1,453,247	3,360	2,710,567	938	0.0	0.0	1.3	0	0.00	10.3	0	0	0	0	0	0	0
21	0.00	23,717,850	9,412,386	14.5	1,840,448	1,455,657	4,816	2,710,567	938	0.0	0.0	1.3	0	0.00	11.00	0	19,027	18,010	0	0	0	0
22	0.00	23,742,950	9,444,274	13.6	1,840,448	1,455,657	4,817	2,714,769	1,005	0.0	0.0	1.3	0	0.00	10.92	0	19,114	18,017	0	0	0	0
23	0.00	23,759,820	9,467,334	12.3	1,840,448	1,455,657	4,817	2,714,772	1,024	0.0	0.0	1.3	0	0.00	10.92	0	19,193	18,020	0	0	0	0
24	0.00	23,781,090	9,496,356	14.5	1,840,957	1,455,657	4,818	2,717,756	1,038	0.0	0.0	1.3	0	0.00	10.33	0	18,943	18,021	6,001	0	0	0
25	0.00	23,802,730	9,525,314	13.8	1,842,368	1,455,657	4,819	2,717,756	1,067	0.0	0.0	1.3	0	0.00	9.92	0	13,472	18,009	3,008	0	0	0
26	0.00	23,820,460	9,547,838	12.9	1,842,368	1,455,657	4,819	2,717,816	1,073	0.0	0.0	1.3	0	0.00	9.67	0	0	0	3,000	0	0	0
27	0.00	23,838,910	9,573,093	13.8	1,842,668	1,455,657	4,820	2,717,821	1,096	0.0	0.0	1.4	0	0.00	10.5	0	0	0	0	0	0	0
28	2.28	23,857,360	9,598,348	14.7	1,842,968	1,455,657	4,820	2,717,825	1,118	0.0	0.0	1.4	0	0.00	11.25	0	13,426	18,021	0	0	0	0
29	0.00	23,874,180	9,619,696	14.9	1,843,168	1,455,657	4,820	2,721,914	1,129	0.0	0.0	1.6	0	0.00	11.17	0	19,687	18,019	0	0	0	0
30	0.78	23,894,460	9,649,876	14.7	1,843,504	1,455,920	4,821	2,721,917	1,138	0.0	0.0	1.6	0	0.00	10.58	0	20,044	18,301	0	0	0	0
31	2.74	23,918,600	9,680,770	13.8	1,844,061	1,455,920	4,821	2,724,708	1,155	0.0	0.0	1.7	0	0.00	10.67	0	19,650	11,511	0	0	0	0
Totals	7.69										0		27,337			0	485,624	270,182	12,009	0	0	0

projects\balance\2011\03-11\bal.xls (jdw 4/05/11)

**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. 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**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Leachate Hauled to LTRF from HHLF/LTRF (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 <sup>3</sup> (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														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	12.10	0	71,376	80,361	2,048,245	2,409,640	67,169	0	0	0	47,372	2,199,982	2,476,809	-276,827

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.

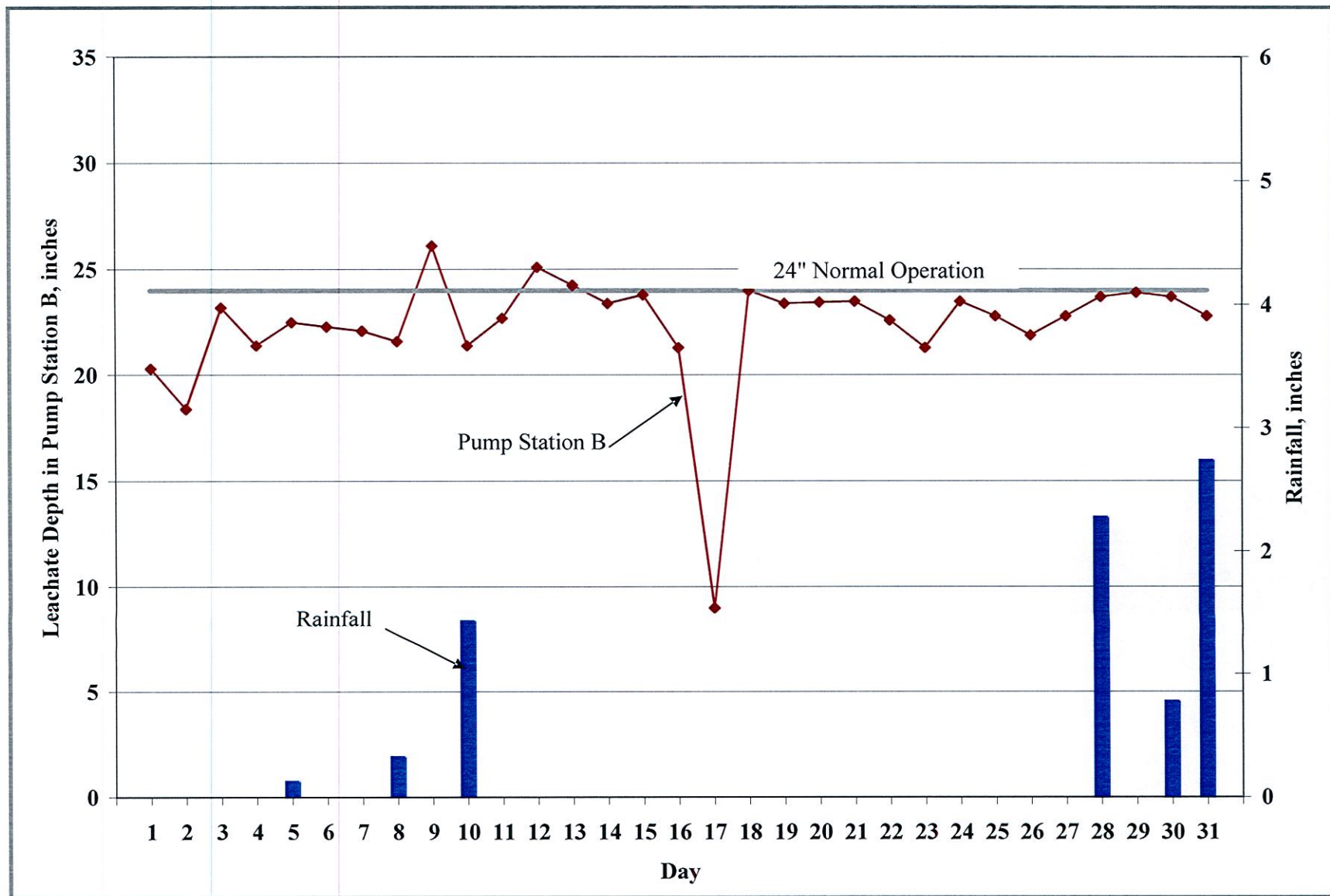


Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2011.