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April 3, 2013

Dept. Of Environmental Protection

APR 10 2013

Southwest District

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

RE: Southeast County Landfill – Leachate Data Quarterly Report

Dear 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, 2013.

The data is being submitted as separate monthly reports for January, February, and March 2013. The information includes the leachate level in Pump Station B (PS-B). This quarter PS-B was below the normal operation level of 24-inches except for January 3rd due to a pump malfunction.

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 blue ink that reads "Larry E. Ruiz".

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

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

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2013**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG System (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	0.48	18,942	18,547	57,380	1,246,781	276,515	6,218	1,095,300	60,111	260,185	911,003	1,341,650	1,378,033	-36,383
February	1.25	19,448	13,754	49,205	1,082,614	186,090	15,008	925,200	34,885	40,044	841,648	1,165,021	1,126,298	38,723
March	1.17	18,868	15,357	51,967	1,042,210	11,998	23,851	1,059,800	0	0	933,302	1,128,401	1,095,649	32,752
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	2.90	57258	47,658	158,552	3,371,605	474,603	45,077	3,080,300	94,996	300,229	2,685,953	3,635,072	3,599,980	35,092

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.

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Southwest District

MEMORANDUM

DATE: February 18, 2013

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

FROM: *CP* Cindy Pelley, Environmental Specialist III, 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 2013 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 0.48 inches of rainfall at the Southeast County Landfill (SCLF).

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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 2.9 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 the daily average depth of effluent stored in Pond B was 1.9 feet.

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 3rd due to a pump malfunction. The average recorded depth of leachate in the PS-B sump was 22.5 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 14,998 gallons. A total of 464,930 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 40,219 gallons. A total of 1,246,781 gallons of leachate was pumped this month.

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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 996 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column IX)

Column IX presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VIII). This month a total of 57,380 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 1,304,161 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 16,923 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 1,624 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 312,600 gallons of leachate was stored in the tank.

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Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month an average of 341,500 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 1,095,300 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 276,515 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 a total of 6,218 gallons of leachate was 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 101,500 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV).

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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 a daily average of 73,100 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases I-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 911,003 gallons of effluent 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 a total of 260,185 gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month a total of 60,111 gallons of effluent was 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 941,800 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 1,341,650 gallons. Total outflow quantity from the LTRF was 1,378,033 gallons. The change in storage for the month decreased by 36,383 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 2013
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	3.1	2.0	21.9	6,260	43,007	44	3,272	46,279	630	3	350,000	426,000	36,200	0	0	113,000	72,000	0	0	0	0	0
2	0.00	2.8	2.0	22.7	6,260	43,007	44	3,272	46,279	630	3	350,000	437,000	35,900	18,090	0	98,000	80,000	0	47,338	27,036	0	59,500
3	0.18	2.5	2.0	34.1	14,960	31,541	24	0.0	31,541	310	1	324,000	417,000	36,400	17,457	0	83,000	80,000	0	32,831	0	0	26,300
4	0.01	2.9	2.0	21.5	7,680	52,264	39	3,261	55,525	597	1	336,000	389,000	35,500	18,092	0	103,000	80,000	0	32,225	0	0	25,800
5	0.00	3.2	2.0	23.2	7,870	37,572	41	2,119	39,691	640	1	324,000	365,000	35,500	0	0	118,000	80,000	0	0	24,006	0	19,200
6	0.00	3.2	2.0	22.5	3,160	41,682	41	2,188	43,870	672	1	331,000	388,000	35,600	0	0	118,000	80,000	0	0	0	0	0
7	0.00	3.2	2.0	21.8	3,160	41,682	41	2,188	43,870	672	1	338,000	410,000	35,200	18,299	0	118,000	80,000	0	42,484	8,002	0	40,400
8	0.00	3.2	2.0	22.7	7,370	40,579	21	3,261	43,840	1,042	2	331,000	394,000	35,500	0	0	118,000	80,000	0	40,412	36,008	0	61,100
9	0.00	2.8	2.0	20.8	7,490	41,040	38	0.0	41,040	0	0	336,000	381,000	36,300	0	0	98,000	80,000	0	57,290	11,998	0	55,400
10	0.00	2.6	2.0	21.3	18,110	38,188	39	3,303	41,491	227	0	338,000	360,000	35,100	12,061	0	88,000	80,000	0	51,520	27,998	6,001	63,600
11	0.00	2.0	2.0	22.5	18,470	39,154	19	3,500	42,654	2,492	1,605	338,000	329,000	31,400	18,073	3,000	61,000	80,000	0	48,501	0	0	41,200
12	0.00	2.3	2.0	23.0	19,000	41,392	38	0	41,392	0	0	324,000	300,000	31,400	0	3,218	74,000	80,000	0	0	0	0	2,600
13	0.00	2.6	2.0	22.8	19,940	42,819	28	1,641	44,459	159	0	337,000	307,000	31,400	0	0	88,000	80,000	0	0	0	0	0
14	0.00	2.9	2.0	22.6	19,940	42,819	28	1,641	44,459	159	0	350,000	314,000	31,400	18,187	0	103,000	80,000	0	53,188	0	0	42,600
15	0.00	2.9	2.0	22.6	18,300	40,022	35	3,391	43,413	496	1	343,000	295,000	36,200	18,059	0	103,000	80,000	0	55,297	0	0	44,200
16	0.00	2.7	2.0	23.2	19,770	42,806	36	3,251	46,057	321	0	329,000	281,000	36,100	18,059	0	93,000	80,000	0	0	0	0	0
17	0.00	3.3	2.0	21.7	20,170	43,706	17	2	43,708	757	2	326,000	283,000	37,700	12,032	0	123,000	80,000	0	8,448	0	0	6,800
18	0.01	3.3	2.0	22.3	18,040	39,308	35	3,230	42,538	351	1	317,000	293,000	36,500	18,020	0	123,000	80,000	0	41,748	0	0	33,400
19	0.01	3.1	2.0	22.7	15,560	34,874	17	0.0	34,874	343	0	295,000	300,000	36,600	0	0	113,000	80,000	0	0	21,842	0	17,500
20	0.00	3.1	2.1	22.8	19,095	41,066	25	3,277	44,342	802	0	303,000	323,000	36,400	0	0	113,000	80,000	0	0	0	0	0
21	0.00	3.1	2.1	22.9	19,095	41,066	25	3,277	44,342	802	0	314,000	345,000	37,000	0	0	113,000	88,000	0	32,095	23,186	0	44,200
22	0.00	2.1	2.1	21.9	18,600	41,541	33	0	41,541	2,935	1	322,000	358,000	36,400	18,032	0	65,000	88,000	0	35,271	0	0	28,200
23	0.00	2.8	2.1	20.9	15,240	34,691	19	3,320	38,011	0	0	302,000	336,000	36,500	18,016	0	98,000	88,000	0	54,981	20,048	0	60,000
24	0.00	2.8	2.1	21.5	15,540	34,252	15	79	34,331	0	0	286,000	324,000	36,000	18,024	0	98,000	88,000	0	46,387	0	0	37,100
25	0.00	3.1	1.7	21.4	17,430	36,551	13	3,525	40,076	0	0	269,000	307,000	36,300	18,010	0	113,000	57,000	0	48,404	0	0	38,700
26	0.00	3.4	1.5	20.0	17,080	38,462	57	3,997	42,459	0	0	269,000	290,000	36,300	0	0	129,000	44,000	0	0	20,045	0	16,000
27	0.00	3.3	1.5	21.0	17,010	37,580	32	139	37,719	353	1	267,000	314,000	32,200	0	0	123,000	44,000	0	0	0	0	0
28	0.00	3.2	1.5	21.9	17,010	37,580	32	139	37,719	353	1	266,000	338,000	35,900	18,004	0	118,000	44,000	0	50,526	0	0	40,400
29	0.13	2.9	1.5	21.7	17,860	36,819	49	110	36,929	381	0	257,000	343,000	36,500	0	0	103,000	44,000	0	46,527	16,015	18,413	50,000
30	0.10	2.3	1.5	23.4	19,130	43,021	21	0	43,021	334	1	257,000	336,000	35,300	0	0	74,000	44,000	0	57,515	24,001	17,688	65,200
31	0.04	2.1	1.5	20.9	20,330	46,693	53	0	46,693	469	1	261,000	302,000	34,600	0	0	65,000	44,000	0	28,015	0	18,009	22,400
Total	0.48				464,930	1,246,781	996	57,380	1,304,161	16,923	1,624			1,095,300	276,515	6,218			0	911,003	260,185	60,111	941,800
Daily Average		2.9	1.9	22.5	14,998	40,219	32	1,851	42,070	546	52	312,600	341,500				101,500	73,100					
Mo. Average																200				29,400	8,000	1,900	30,380

projects\balance\2013\01-13\bal.xls (dad 2/4/13)

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 2013
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	33,247,570	2,374,750	12.9	2,028,217	2,093,770	10,081	5,018,495	45,489	2.0	0.0	3.1	0	12.17	14.80	36,202	0	0	0	0	0	0
2	0.00	33,253,830	2,417,756	13.7	2,028,846	2,093,770	10,083	5,021,767	45,532	2.0	0.0	2.8	47,338	12.17	15.17	35,881	0	18,090	0	0	0	27,036
3	0.18	33,268,790	2,449,297	25.1	2,029,156	2,093,770	10,084	5,021,764	45,556	2.0	0.0	2.5	32,831	11.25	14.50	36,364	0	17,457	0	0	0	0
4	0.01	33,276,470	2,501,561	12.5	2,029,753	2,093,770	10,085	5,025,025	45,595	2.0	0.0	2.9	32,225	11.67	13.50	35,546	0	18,092	0	0	0	0
5	0.00	33,284,340	2,539,133	14.2	2,030,393	2,093,770	10,086	5,027,144	45,636	2.0	0.0	3.2	0	11.25	12.67	35,486	0	0	0	0	0	24,006
6	0.00	33,287,500	2,580,815	13.5	2,031,065	2,093,770	10,087	5,029,332	45,677	2.0	0.0	3.2	0	11.50	13.46	35,623	0	0	0	0	0	0
7	0.00	33,290,660	2,622,497	12.8	2,031,736	2,093,770	10,087	5,031,520	45,717	2.0	0.0	3.2	42,484	11.75	14.25	35,168	0	18,299	0	0	0	8,002
8	0.00	33,298,030	2,663,076	13.7	2,032,778	2,093,770	10,089	5,034,781	45,738	2.0	0.0	3.2	40,412	11.50	13.67	35,512	0	0	0	0	0	36,008
9	0.00	33,305,520	2,704,116	11.8	2,032,778	2,093,770	10,089	5,034,779	45,776	2.0	0.0	2.8	57,290	11.67	13.25	36,324	0	0	0	0	0	11,998
10	0.00	33,323,630	2,742,304	12.3	2,033,005	2,093,770	10,089	5,038,082	45,815	2.0	0.0	2.6	51,520	11.75	12.50	35,103	0	12,061	0	0	6,001	27,998
11	0.00	33,342,100	2,781,458	13.5	2,034,765	2,094,502	11,694	5,041,582	45,834	2.0	0.0	2.0	48,501	11.75	11.42	31,371	0	18,073	3,000	0	0	0
12	0.00	33,361,100	2,822,850	14.0	2,034,765	2,094,502	11,694	5,041,582	45,872	2.0	0.0	2.3	0	11.25	10.42	31,377	0	0	3,218	0	0	0
13	0.00	33,381,040	2,863,669	13.8	2,034,924	2,094,502	11,694	5,043,223	45,900	2.0	0.0	2.6	0	11.71	10.67	31,396	0	0	0	0	0	0
14	0.00	33,400,980	2,908,487	13.6	2,035,082	2,094,502	11,694	5,044,863	45,928	2.0	0.0	2.9	53,188	12.17	10.92	31,359	0	18,187	0	0	0	0
15	0.00	33,419,280	2,948,509	13.6	2,035,578	2,094,502	11,695	5,048,254	45,963	2.0	0.0	2.9	55,297	11.92	10.25	36,167	0	18,059	0	0	0	0
16	0.00	33,439,050	2,991,315	14.2	2,035,899	2,094,502	11,695	5,051,505	45,999	2.0	0.0	2.7	0	11.42	9.75	36,124	0	18,059	0	0	0	0
17	0.00	33,459,220	3,035,021	12.7	2,036,656	2,094,502	11,697	5,051,507	46,016	2.0	0.0	3.3	8,448	11.33	9.83	37,712	0	12,032	0	0	0	0
18	0.01	33,477,260	3,074,329	13.3	2,037,007	2,094,502	11,698	5,054,737	46,051	2.0	0.0	3.3	41,748	11.00	10.17	36,481	0	18,020	0	0	0	0
19	0.01	33,492,820	3,109,203	13.7	2,037,350	2,094,502	11,698	5,054,738	46,068	2.0	0.0	3.1	0	10.25	10.42	36,600	0	0	0	0	0	21,842
20	0.00	33,511,915	3,150,269	13.8	2,038,152	2,094,502	11,698	5,058,015	46,093	2.1	0.0	3.1	0	10.59	11.21	36,439	0	0	0	0	0	0
21	0.00	33,531,010	3,191,334	13.9	2,038,953	2,094,502	11,698	5,061,291	46,118	2.1	0.0	3.1	32,095	10.92	12.00	36,996	0	0	0	0	0	23,186
22	0.00	33,549,610	3,232,875	12.9	2,041,888	2,094,502	11,699	5,061,291	46,151	2.1	0.0	2.1	35,271	11.17	12.42	36,387	0	18,032	0	0	0	0
23	0.00	33,564,850	3,267,566	11.9	2,041,888	2,094,502	11,699	5,064,611	46,170	2.1	0.0	2.8	54,981	10.50	11.67	36,471	0	18,016	0	0	0	20,048
24	0.00	33,580,390	3,301,818	12.5	2,041,888	2,094,502	11,699	5,064,690	46,185	2.1	0.0	2.8	46,387	9.92	11.25	36,001	0	18,024	0	0	0	0
25	0.00	33,597,820	3,338,369	12.4	2,041,888	2,094,502	11,699	5,068,215	46,198	1.7	0.0	3.1	48,404	9.33	10.67	36,286	0	18,010	0	0	0	0
26	0.00	33,614,900	3,376,831	11.0	2,041,888	2,094,502	11,699	5,072,212	46,255	1.5	0.0	3.4	0	9.33	10.08	36,308	0	0	0	0	0	20,045
27	0.00	33,631,910	3,414,411	12.0	2,042,241	2,094,502	11,700	5,072,351	46,287	1.5	0.0	3.3	0	9.29	10.92	32,194	0	0	0	0	0	0
28	0.00	33,648,920	3,451,991	12.9	2,042,594	2,094,502	11,700	5,072,489	46,318	1.5	0.0	3.2	50,526	9.25	11.75	35,906	0	18,004	0	0	0	0
29	0.13	33,666,780	3,488,810	12.7	2,042,975	2,094,502	11,700	5,072,599	46,367	1.5	0.0	2.9	46,527	8.92	11.92	36,482	0	0	0	0	18,413	16,015
30	0.10	33,685,910	3,531,831	14.4	2,043,309	2,094,502	11,701	5,072,599	46,388	1.5	0.0	2.3	57,515	8.92	11.67	35,282	0	0	0	0	17,688	24,001
31	0.04	33,706,240	3,578,524	11.9	2,043,778	2,094,502	11,702	5,072,599	46,441	1.5	0.0	2.1	28,015	9.08	10.50	34,631	0	0	0	0	18,009	0
Totals	0.48										0		911,003			1,095,179	0	276,515	6,218	0	60,111	260,185

projects/balance/2013/01-13bal.xls (dad 2/4/13)

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

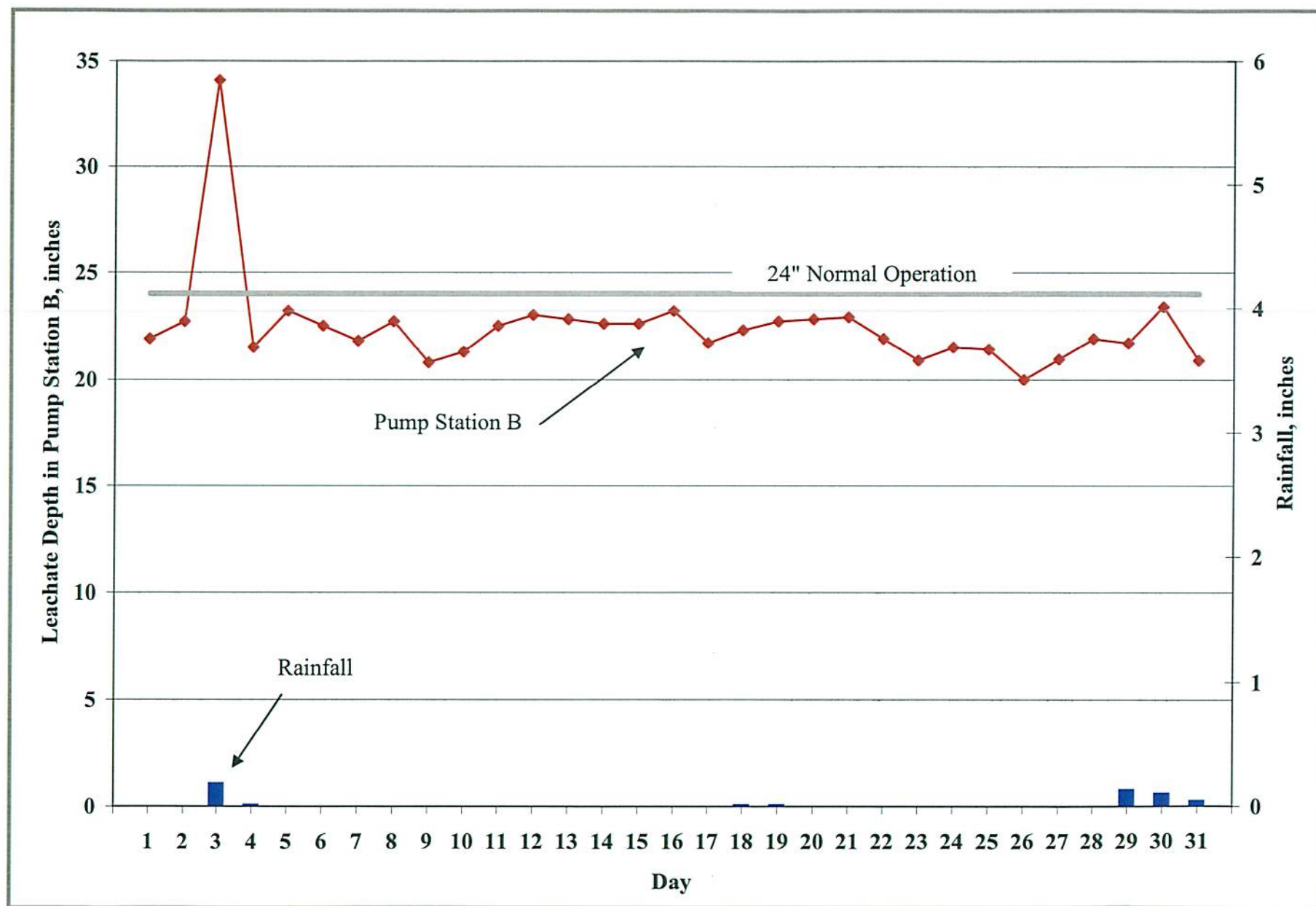


Figure 1. Leachate Levels in Pump Station B and Rainfall for January 2013.

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MEMORANDUM

DATE: March 15, 2013

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

FROM: *CP* Cindy Pelley, Environmental Specialist III, 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 2013 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 1.25 inches of rainfall at the Southeast County Landfill (SCLF).

MEMORANDUM

March 15, 2013

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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 2.6 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 the daily average depth of effluent stored in Pond B was 0.9 feet.

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 20.0 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 14,698 gallons. A total of 455,650 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 34,923 gallons. A total of 1,082,614 gallons of leachate was pumped this month.

MEMORANDUM

March 15, 2013

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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 1,061 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 49,205 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 1,131,819 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 13,740 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 14 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 243,400 gallons of leachate was stored in the tank.

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March 15, 2013

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Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month an average of 224,600 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 925,200 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 186,090 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 a total of 15,008 gallons of leachate was 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 93,700 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV).

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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 a daily average of 21,600 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases I-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 841,648 gallons of effluent 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 a total of 40,044 gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIII)

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month a total of 34,885 gallons of effluent was 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 717,500 gallons.

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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 1,165,021 gallons. Total outflow quantity from the LTRF was 1,126,298 gallons. The change in storage for the month increased by 38,723 gallons.

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

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

projects balance 2013-02-13 bal.xls (dad 3/5/13)

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 2013
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	33,720,670	3,613,205	13.4	2,044,444	2,094,502	11,702	5,072,599	46,490	1.5	0.0	2.6	25,451	9.17	9.42	33,996	0	0	0	0	16,847	0
2	0.00	33,735,810	3,646,686	13.5	2,044,785	2,094,502	11,702	5,075,996	46,515	1.5	0.0	2.4	0	9.25	9.42	34,088	0	0	0	0	0	28,041
3	0.00	33,752,810	3,686,378	13.9	2,045,468	2,094,502	11,703	5,077,672	46,563	1.5	0.0	2.4	0	9.46	10.05	34,523	0	0	0	0	0	0
4	0.00	33,769,810	3,726,069	14.2	2,046,151	2,094,502	11,704	5,079,348	46,610	1.5	0.0	2.3	40,125	9.67	10.67	34,361	0	18,017	0	0	0	0
5	0.00	33,783,320	3,766,486	13.5	2,046,548	2,094,502	11,704	5,082,660	46,633	1.5	0.0	2.8	50,014	9.50	9.58	35,467	0	0	0	0	18,038	12,003
6	0.00	33,801,450	3,808,584	11.2	2,047,143	2,094,502	11,705	5,082,659	46,681	1.3	0.0	2.6	51,831	10.00	8.67	34,324	0	18,009	0	0	0	0
7	0.03	33,816,490	3,850,282	12.3	2,047,399	2,094,502	11,705	5,085,944	46,731	0.5	0.0	3.4	48,308	9.50	7.83	36,022	0	18,007	0	0	0	0
8	0.00	33,836,780	3,895,880	14.3	2,047,939	2,094,502	11,706	5,085,959	46,752	0.5	0.0	2.6	52,614	9.25	9.00	35,347	0	0	0	0	0	0
9	0.00	33,853,430	3,935,928	13.8	2,048,243	2,094,502	11,706	5,089,263	46,804	0.7	0.0	2.6	0	9.33	8.17	10,045	0	0	0	0	0	0
10	0.00	33,868,235	3,970,685	13.0	2,048,804	2,094,502	11,707	5,090,881	46,842	0.7	0.0	2.6	0	10.46	8.17	0	0	0	0	0	0	0
11	0.00	33,883,040	4,005,441	12.2	2,049,365	2,094,502	11,707	5,092,498	46,880	0.7	0.0	2.6	0	11.58	8.17	0	0	12,023	3,005	0	0	0
12	0.00	33,900,050	4,045,667	11.5	2,049,655	2,094,502	11,707	5,095,778	46,931	0.7	0.0	3.1	48,941	11.25	8.33	32,076	0	18,037	3,009	0	0	0
13	0.12	33,918,520	4,089,862	11.5	2,050,299	2,094,502	11,707	5,095,778	46,958	0.7	0.0	2.8	60,000	10.67	8.50	41,127	0	18,000	3,004	0	0	0
14	0.48	33,936,970	4,133,705	14.1	2,050,826	2,094,502	11,708	5,099,070	47,002	0.7	0.0	2.0	39,125	10.08	8.92	38,815	0	18,007	0	0	0	0
15	0.12	33,954,560	4,173,486	12.0	2,051,296	2,094,502	11,708	5,099,071	47,034	0.0	0.0	2.5	0	9.50	8.33	38,986	0	6,003	0	0	0	0
16	0.00	33,971,310	4,212,029	13.1	2,051,760	2,094,502	11,709	5,102,371	47,065	0.0	0.0	3.4	0	9.67	7.75	39,122	0	0	0	0	0	0
17	0.00	33,984,715	4,244,161	13.5	2,052,290	2,094,502	11,709	5,104,004	47,103	0.8	0.0	3.4	0	9.46	7.71	39,374	0	0	0	0	0	0
18	0.00	33,998,120	4,276,292	13.8	2,052,819	2,094,502	11,709	5,105,636	47,141	1.5	0.0	3.4	21,756	9.25	7.67	38,236	0	17,993	2,998	0	0	0
19	0.00	34,012,850	4,309,792	12.6	2,053,208	2,094,502	11,710	5,108,687	47,194	1.3	0.0	3.4	56,845	8.42	8.92	39,019	0	0	2,992	0	0	0
20	0.00	34,029,320	4,349,002	14.3	2,053,771	2,094,502	11,710	5,108,904	47,217	1.4	0.0	3.3	53,575	8.25	8.25	35,682	0	0	0	0	0	0
21	0.00	34,045,820	4,387,820	12.0	2,053,780	2,094,651	11,710	5,109,136	47,265	1.4	0.0	3.4	58,351	8.42	7.50	36,379	0	0	0	0	0	0
22	0.00	34,062,060	4,426,328	14.1	2,054,293	2,094,651	11,711	5,109,132	47,291	1.1	0.0	2.7	51,620	8.42	8.75	36,904	0	0	0	0	0	0
23	0.00	34,078,490	4,465,755	13.4	2,054,978	2,094,651	11,712	5,113,449	47,340	0.0	0.0	2.9	0	8.58	8.75	37,231	0	0	0	0	0	0
24	0.00	34,095,180	4,505,172	13.7	2,055,362	2,094,651	11,713	5,113,449	47,373	0.6	0.0	3.2	0	8.67	9.17	37,662	0	0	0	0	0	0
25	0.00	34,111,870	4,544,588	14.0	2,055,746	2,094,651	11,713	5,113,449	47,406	1.2	0.0	3.5	43,744	8.75	9.58	35,546	0	0	0	0	0	0
26	0.50	34,130,950	4,587,960	12.7	2,056,540	2,094,651	11,715	5,113,449	47,432	1.3	0.0	3.3	26,877	9.00	8.33	35,783	0	17,999	0	0	0	0
27	0.00	34,147,130	4,627,915	13.6	2,056,775	2,094,651	11,715	5,113,449	47,474	1.6	0.0	3.5	55,194	8.67	7.58	36,912	0	17,997	0	0	0	0
28	0.00	34,161,890	4,661,138	13.4	2,057,369	2,094,651	11,716	5,121,799	47,502	1.6	0.0	2.4	57,277	7.92	8.67	38,267	0	5,998	0	0	0	0
Totals	1.25										0		841,648			925,294	0	186,090	15,008	0	34,885	40044

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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

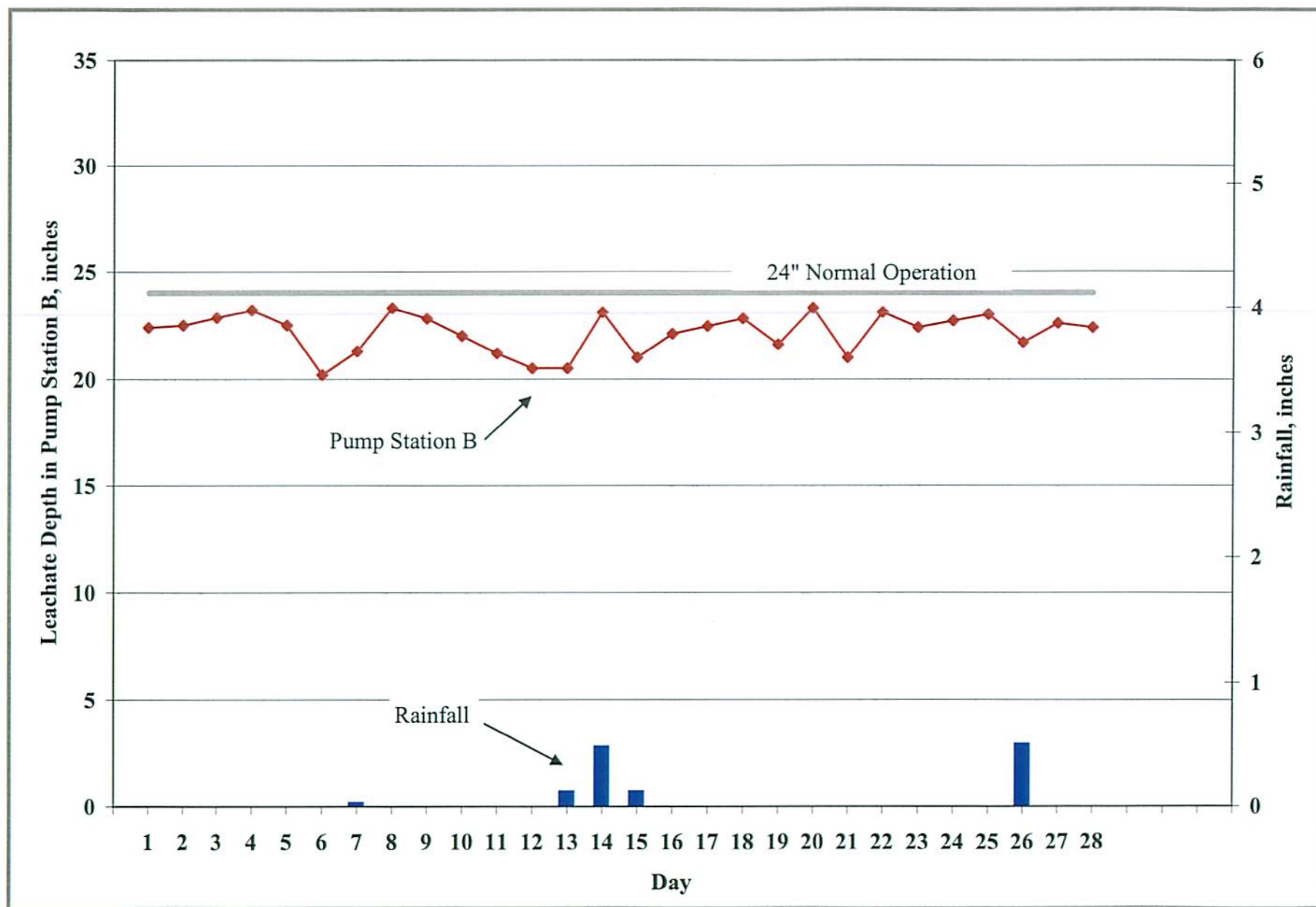


Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2013.

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MEMORANDUM

DATE: April 3, 2013

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

FROM: *CP* Cindy Pelley, Environmental Specialist III, 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 2013 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 1.17 inches of rainfall at the Southeast County Landfill (SCLF).

MEMORANDUM

April 3, 2013

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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 2.7 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 the daily average depth of effluent stored in Pond B was 1.3 feet.

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 21.6 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 14,164 gallons. A total of 439,075 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 33,620 gallons. A total of 1,042,210 gallons of leachate was pumped this month.

MEMORANDUM

April 3, 2013

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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 1,329 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 51,967 gallons of leachate was pumped from Sections 7-8.

Leachate Pumped to LTRF from the MLPS (Column X)

Column X presents the total quantity of leachate pumped to the LTRF from Phases I-VI and Sections 7-8. This month a total of 1,094,177 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 15,343 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 79 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 222,600 gallons of leachate was stored in the tank.

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April 3, 2013

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Effluent in 575,000-Gallon Tank (Column XIV)

Column XIV presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank at the LTRF. The amount of effluent stored in the tank is calculated based on the circumference of the tank and the daily level reading. This month an average of 239,700 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XV)

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 1,059,800 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 11,998 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 a total of 23,851 gallons of leachate was 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 95,800 gallons of effluent was stored in Pond A.

Pond B Storage (Column XIX)

Column XIX presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of effluent in Pond B (Column IV).

MEMORANDUM

April 3, 2013

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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 a daily average of 39,200 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XX)

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

Effluent Irrigation (Column XXI)

Column XXI presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases I-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 933,302 gallons of effluent 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 765,700 gallons.

MEMORANDUM

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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 1,109,533 gallons. Total outflow quantity from the LTRF was 1,095,649 gallons. The change in storage for the month increased by 13,884 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 2013
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-6 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	3.3	1.0	21.2	14,560	35,647	44	2,946	38,593	548	0	228,000	230,000	37,300	0	0	123,000	19,000	0	44,519	0	0	35,600
2	0.00	2.7	1.0	22.8	14,420	33,185	35	0	33,185	519	0	223,000	252,000	39,100	0	0	93,000	19,000	0	0	0	0	0
3	0.00	3.1	1.3	23.0	13,740	32,023	40	1,412	33,434	601	0	223,000	214,000	36,400	0	0	113,000	33,600	0	0	0	0	0
4	0.00	3.5	1.6	23.1	13,740	32,023	40	1,412	33,434	601	0	223,000	216,000	33,700	5,993	0	140,000	51,000	0	59,729	0	0	47,800
5	0.00	2.5	1.7	20.4	13,100	30,225	23	2,879	33,104	294	0	218,000	245,000	36,100	0	0	83,000	57,000	0	33,243	0	0	26,600
6	0.00	2.8	1.7	22.2	14,740	35,703	41	2,903	38,606	492	0	218,000	223,000	35,900	6,005	0	98,000	57,000	0	14,797	0	0	11,800
7	0.00	2.5	1.7	20.3	14,380	33,515	23	189	33,704	441	77	218,000	250,000	35,600	0	0	83,000	57,000	0	35,704	0	0	28,600
8	0.00	2.9	1.7	22.4	12,590	29,479	40	3,019	32,498	267	0	216,000	225,000	35,200	0	0	103,000	57,000	0	48,775	0	0	39,600
9	0.00	1.9	1.7	21.9	13,300	31,475	22	0	31,475	558	0	216,000	257,000	35,100	0	0	57,000	57,000	0	0	0	0	0
10	0.00	2.7	1.7	21.9	14,205	34,048	32	2,957	37,005	522	0	216,000	247,000	35,300	0	0	91,000	57,000	0	0	0	0	0
11	0.00	3.4	1.7	21.9	14,205	34,048	32	2,957	37,005	522	0	216,000	238,000	35,500	0	0	129,000	57,000	0	0	0	0	0
12	0.40	2.8	1.7	21.0	16,300	39,302	21	0	39,302	274	1	216,000	242,000	35,000	0	0	98,000	57,000	0	0	0	0	0
13	0.00	3.5	2.0	21.4	16,080	37,313	38	2,880	40,193	817	0	218,000	216,000	33,800	0	0	140,000	80,000	0	59,655	0	0	47,700
14	0.00	2.8	1.8	22.6	12,830	29,928	20	0	29,928	305	0	218,000	247,000	32,700	0	2,926	98,000	64,000	0	57,289	0	0	48,200
15	0.00	3.4	1.4	21.6	12,420	29,880	37	2,991	32,871	726	0	218,000	221,000	31,300	0	2,997	129,000	38,000	0	52,843	0	0	44,700
16	0.00	2.1	1.4	22.6	14,050	30,680	22	0	30,680	487	0	214,000	252,000	33,700	0	0	65,000	38,000	0	0	0	0	0
17	0.00	2.7	1.4	21.8	15,210	36,330	31	2,954	39,284	292	0	221,000	252,000	33,900	0	0	91,000	38,000	0	0	0	0	0
18	0.00	3.3	1.4	21.0	15,210	36,330	31	2,954	39,284	292	0	228,000	252,000	34,200	0	0	123,000	38,000	0	55,183	0	0	44,100
19	0.00	3.3	1.4	9.0	0	2,205	21	0	2,205	777	0	202,000	228,000	33,300	0	0	123,000	38,000	0	35,648	0	0	28,500
20	0.10	2.6	1.4	22.8	18,720	54,280	28	3,242	57,522	406	0	216,000	259,000	36,500	0	0	88,000	38,000	0	36,185	0	0	28,900
21	0.00	3.0	1.4	20.6	19,930	44,429	147	6	44,435	838	0	221,000	233,000	36,700	0	0	108,000	38,000	0	60,947	0	0	48,800
22	0.67	2.1	1.4	21.2	16,330	39,681	155	0	39,681	527	0	228,000	242,000	36,800	0	0	65,000	38,000	0	59,956	0	0	48,000
23	0.00	1.8	1.4	21.7	16,130	38,059	49	2,627	40,686	540	0	233,000	238,000	36,700	0	0	52,000	38,000	0	0	0	0	0
24	0.00	2.5	1.4	22.5	18,330	42,291	2	2,417	44,708	469	0	241,000	240,000	36,800	0	0	83,000	38,000	0	0	0	0	0
25	0.00	3.1	1.4	23.3	18,330	42,291	2	2,417	44,708	469	0	250,000	242,000	36,900	0	0	113,000	38,000	0	59,624	0	0	47,700
26	0.00	2.7	1.4	22.6	12,890	31,661	4	0	31,661	448	0	247,000	230,000	34,800	0	0	93,000	38,000	0	57,084	0	0	45,700
27	0.00	2.0	1.4	22.3	11,140	24,094	182	2,645	26,739	398	0	238,000	259,000	34,600	0	0	61,000	38,000	0	56,171	0	0	44,900
28	0.00	3.0	0.0	22.3	11,520	26,644	117	3	26,644	486	1	233,000	233,000	35,600	0	8,961	108,000	0	0	52,049	0	0	48,800
29	0.00	2.1	0.0	22.4	11,860	29,137	31	2,445	31,582	488	0	216,000	250,000	35,600	0	8,967	65,000	0	0	53,901	0	0	50,300
30	0.00	2.0	0.0	22.5	13,030	30,684	0	2,547	33,231	460	0	214,000	238,000	35,700	0	0	61,000	0	0	0	0	0	0
31	0.00	2.6	0.0	22.9	15,785	35,625	23	1,168	36,793	481	0	214,000	240,000	0	0	0	88,000	0	0	0	0	0	0
Total	1.17				439,075	1,042,210	1,329	51,967	1,094,177	15,343	79			1,059,800	11,998	23,851			0	933,302	0	0	765,700
Daily Average	2.7	1.3	21.6		14,164	33,620	43	1,676	35,296	495	3	222,600	239,700				95,800	39,200					
Mo. Average																800				30,100	0	0	24,700

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, 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 XVII, XXI, and XXII plus 5% of the daily values from column XX.

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**TABLE 2. FIELD DATA ENTRY FORM
MARCH 2013
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	34,176,450	4,696,785	12.2	2,057,917	2,094,651	11,716	5,124,745	47,546	1.0	0.0	3.3	44,519	7.92	8.0	37,336	0	0	0	0	0	0
2	0.00	34,190,870	4,729,970	13.8	2,058,436	2,094,651	11,716	5,124,745	47,581	1.0	0.0	2.7	0	7.75	8.75	39,065	0	0	0	0	0	0
3	0.00	34,204,610	4,761,993	14	2,039,037	2,094,651	11,716	5,126,157	47,621	1	0	3	0	8	8	36,389	0	0	0	0	0	0
4	0.00	34,218,350	4,794,015	14.1	2,059,637	2,094,651	11,716	5,127,568	47,660	1.6	0.0	3.5	59,729	7.75	7.50	33,713	0	5,993	0	0	0	0
5	0.00	34,231,450	4,824,240	11.4	2,059,931	2,094,651	11,716	5,130,447	47,683	1.7	0.0	2.5	33,243	7.58	8.50	36,072	0	0	0	0	0	0
6	0.00	34,246,190	4,859,943	13.2	2,060,423	2,094,651	11,716	5,133,350	47,724	1.7	0.0	2.8	14,797	7.58	7.75	35,911	0	6,005	0	0	0	0
7	0.00	34,260,570	4,893,458	11.3	2,060,638	2,094,877	11,793	5,133,539	47,747	1.7	0.0	2.5	35,704	7.58	8.67	35,620	0	0	0	0	0	0
8	0.00	34,273,160	4,922,937	13.4	2,060,905	2,094,877	11,793	5,136,558	47,787	1.7	0.0	2.9	48,775	7.50	7.83	35,244	0	0	0	0	0	0
9	0.00	34,286,460	4,954,412	12.9	2,061,463	2,094,877	11,793	5,136,558	47,809	1.7	0.0	1.9	0	7.50	8.92	35,086	0	0	0	0	0	0
10	0.00	34,300,665	4,988,460	13	2,061,985	2,094,877	11,793	5,139,515	47,841	2	0	3	0	8	9	35,301	0	0	0	0	0	0
11	0.00	34,314,870	5,022,508	12.9	2,062,507	2,094,877	11,793	5,142,471	47,872	1.7	0.0	3.4	0	7.50	8.25	35,515	0	0	0	0	0	0
12	0.00	34,331,170	5,061,810	12.0	2,062,781	2,094,877	11,794	5,142,471	47,893	1.7	0.0	2.8	0	7.50	8.42	35,013	0	0	0	0	0	0
13	0.00	34,347,250	5,099,123	12.4	2,063,598	2,094,877	11,794	5,145,351	47,931	2.0	0.0	3.5	59,655	7.58	7.50	33,805	0	0	0	0	0	0
14	0.00	34,360,080	5,129,051	13.6	2,063,903	2,094,877	11,794	5,145,351	47,951	1.8	0.0	2.8	57,289	7.58	8.58	32,653	0	0	2,926	0	0	0
15	0.00	34,372,500	5,158,931	12.6	2,064,629	2,094,877	11,794	5,148,342	47,988	1.4	0.0	3.4	52,843	7.58	7.67	31,256	0	0	2,997	0	0	0
16	0.00	34,386,550	5,189,611	13.6	2,065,116	2,094,877	11,794	5,148,342	48,010	1.4	0.0	2.1	0	7.42	8.75	33,704	0	0	0	0	0	0
17	0.00	34,401,760	5,225,941	13	2,065,408	2,094,877	11,794	5,151,296	48,041	1	0	3	0	8	9	33,929	0	0	0	0	0	0
18	0.00	34,416,970	5,262,271	12.0	2,065,699	2,094,877	11,794	5,154,249	48,071	1.4	0.0	3.3	55,183	7.92	8.75	34,154	0	0	0	0	0	0
19	0.00	34,416,970	5,264,476	0.0	2,066,476	2,094,877	11,794	5,154,249	48,092	1.4	0.0	3.3	35,648	7.00	7.92	33,289	0	0	0	0	0	0
20	0.10	34,435,690	5,318,756	13.8	2,066,882	2,094,877	11,794	5,157,491	48,120	1.4	0.0	2.6	36,185	7.50	9.0	36,492	0	0	0	0	0	0
21	0.00	34,455,620	5,363,185	11.6	2,067,720	2,094,877	11,794	5,157,497	48,267	1.4	0.0	3.0	60,947	7.67	8.08	36,722	0	0	0	0	0	0
22	0.67	34,471,950	5,402,866	12.2	2,068,247	2,094,877	11,794	5,157,497	48,422	1.4	0.0	2.1	59,956	7.92	8.42	36,751	0	0	0	0	0	0
23	0.00	34,488,080	5,440,925	12.7	2,068,787	2,094,877	11,794	5,160,124	48,471	1.4	0.0	1.8	0	8.08	8.25	36,705	0	0	0	0	0	0
24	0.00	34,506,410	5,483,216	14	2,069,256	2,094,877	11,794	5,162,541	48,473	1	0	2	0	8	8	36,801	0	0	0	0	0	0
25	0.00	34,524,740	5,525,506	14.3	2,069,725	2,094,877	11,794	5,164,958	48,474	1.4	0.0	3.1	59,624	8.67	8.42	36,896	0	0	0	0	0	0
26	0.00	34,537,630	5,557,167	13.6	2,070,173	2,094,877	11,794	5,164,958	48,478	1.4	0.0	2.7	57,084	8.58	8.0	34,826	0	0	0	0	0	0
27	0.00	34,548,770	5,581,261	13.3	2,070,571	2,094,877	11,794	5,167,603	48,660	1.4	0.0	2.0	56,171	8.25	9.0	34,640	0	0	0	0	0	0
28	0.00	34,560,290	5,607,902	13.3	2,071,057	2,094,877	11,795	5,167,606	48,777	0.0	0.0	3.0	52,049	8.08	8.08	35,553	0	0	8,961	0	0	0
29	0.00	34,572,150	5,637,039	13.4	2,071,545	2,094,877	11,795	5,170,051	48,808	0.0	0.0	2.1	53,901	7.50	8.67	35,633	0	0	8,967	0	0	0
30	0.00	34,585,180	5,667,723	13.5	2,072,005	2,094,877	11,795	5,172,598	48,808	0.0	0.0	2.0	0	7.42	8.25	35,746	0	0	0	0	0	0
31	0.00	34,600,965	5,703,348	14	2,072,486	2,094,877	11,795	5,173,766	48,831	0	0	3	0	7	8	0	0	0	0	0	0	0
Totals	1.17										0		933,302			1,059,819	0	11,998	23,851	0	0	0

projects/balance/2009/01-09bal.xls (ler 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

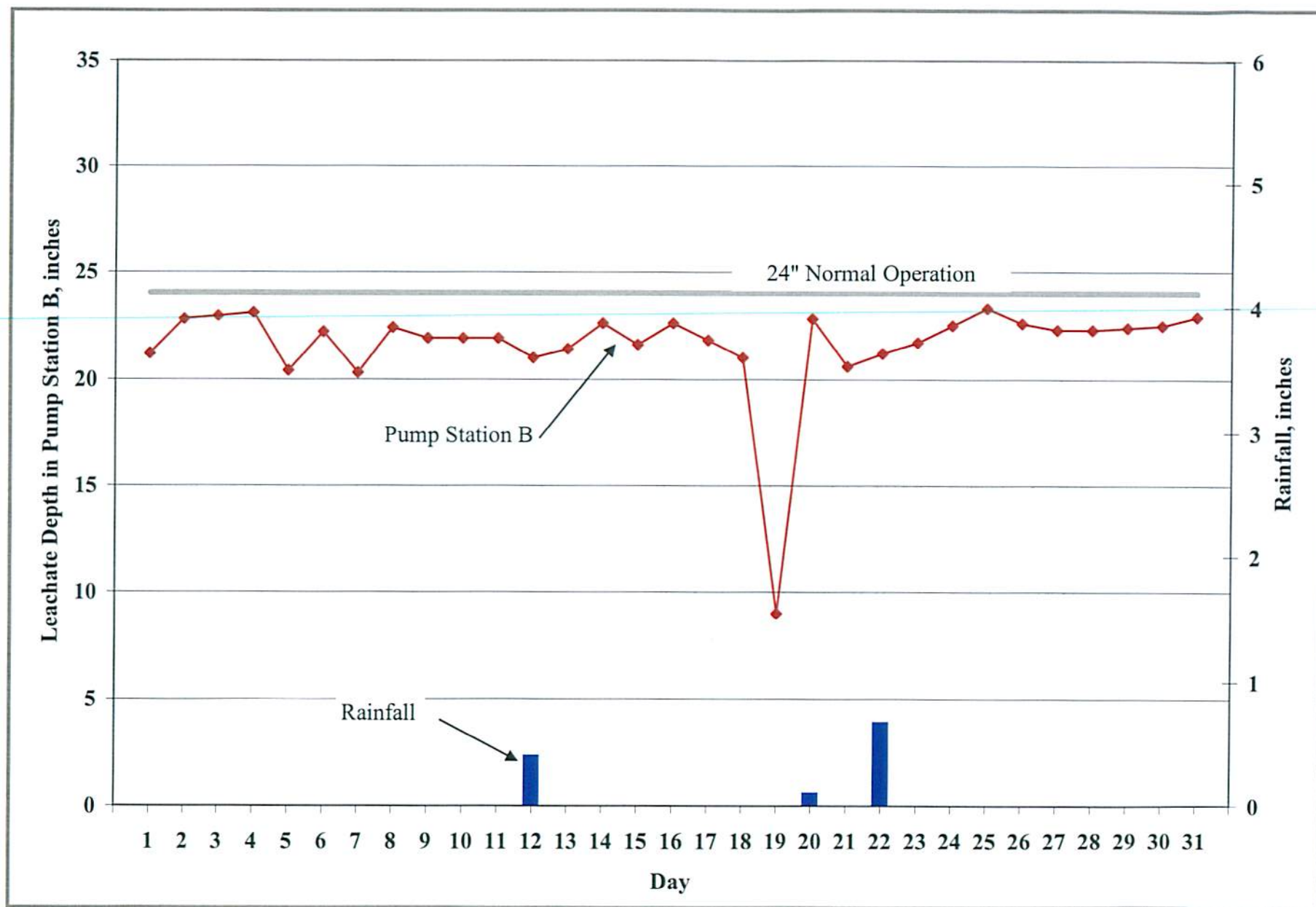


Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2013.